AGRICULTURAL TRADE POLICY FORMATION WITHIN THE GATT: THE ROLE OF THE UNITED STATES AND EUROPEAN COMMUNITY PUBLIC DECISION PROCESSES

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ABSTRACT

AGRICULTURAL TRADE POLICY FORMATION WITHIN THE GATT: THE ROLE OF THE UNITED STATES AND EUROPEAN COMMUNITY PUBLIC DECISION PROCESSES

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Many factors influence the formation of agricultural trade policy. One such factor is individual countries' public decision processes. The structure of the political process in each country may affect the outcome of trade negotiations.

This research focuses on the role of the U.S. and EC political processes in agricultural negotiations under the General Agreement on Tariffs and Trade (GATT). This is achieved through a case study of the Tokyo round of GATT negotiations using interviews with policy process participants and an empirical analysis of market access options currently under discussion in the GATT.

A detailed picture of Tokyo round events is achieved, along with data from four scenarios simulating new market access rules developed on the Michigan State University Agriculture Model. Policy participants have varying concerns about the new proposals, but one common chord is that ideology plays as great a role as quantitative analysis in their decision making.

ACKNOWLEDGEMENTS

In conducting this research I have benefited from the support and assistance of a number of people. They deserve full acknowledgement for their varied contributions.

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My final thanks go to those who have been there since the beginning, and continue to be there for me, even if they had their doubts that the thesis would ever be finished: my family.

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CHAPTER ONE

INTRODUCTION

1.1 Nature of the Research

1.1.1 General

The purpose of this research is to contribute to the understanding of the determinants of agricultural trade policies. Many factors influence agricultural trade, but this research focuses on one in particular; namely the public decision processes of given nation states or trading blocks. The specific context of the research is the role that the U.S. and EC public decision processes play in shaping the outcomes of agricultural negotiations held under the auspices of the General Agreement on Tariffs and Trade (GATT).

While most individuals and most governments would agree that liberalization of trade in agriculture is desirable, there is little consensus on how it might be achieved. The problem is that liberalization is desirable from a global perspective, but not necessarily from a particular interest group's perspective. Thus the nature of the political process of a country can create a national position inconsistent with global goals -- the situation is that of a "social trap."

A result of this trap has been that within the GATT, dedicated to the promotion of trade liberalization, agriculture has been granted exceptional status under most

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of the key provisions that have been negotiated. This research has as a general premise, acceptance of the rationale for agricultural trade liberalization, as well as the more specific premise of accepting the GATT as one appropriate forum in which to attempt to achieve such liberalization. Thus any answers as to what influence national public decision processes have had, and might have, on the GATT's attempts to deal with world agricultural trade are considered to be useful.

Before outlining the specific context of the research, it is useful to put the subject matter into a broader perspective.

1.1.2 Current Context of the Research

As a result of the revolution in production and productivity that has occurred worldwide in agriculture, more and more countries have and are becoming self-sufficient in a wide variety of agricultural products. Major importers of the past have become new exporters, while at the same time effective demand on world markets has become stagnant. The result since the early 1980s has been burgeoning surpluses. The presence of surpluses has had a depressing effect on world prices and dumping often occurs. The creation of surpluses in the U.S. and EC can largely be attributed to domestic farm policies aimed at farm income maintenance and food security goals, which have encouraged over-production.

Unfortunately, as the costs of farm policies continue to rise for the major developed nations, such as the U.S. and EC, tensions between the trading partners also rise; the potential gains and losses from a change in trading practices are becoming ever greater. Agricultural trade relations around the world and particularly between the U.S. and EC are at their worst, certainly since the second World War. The rest of the world now blames the U.S. and EC for depressing world prices and the EC for increasing the instability of world markets, while at the same time the U.S. and EC continue to fight over access to third markets.

Meanwhile the volume of agricultural products traded on world markets is still substantial and most observers agree that there are potentially many gains to be derived from a liberalization of trade practices. However there could be losses, particularly for farmers in developed countries. It is hypothesized that the political power of this group has much to do with the lack of progress to date in liberalizing agricultural trade. Thus, study of both policy and the political process itself is of interest and importance.

1.1.3 Research Orientation

Against this background, this research aims to analyze the roles that the U.S. and EC public decision processes have played in the negotiation of international agricultural agreements under the GATT. A knowledge of how these processes have influenced past outcomes might then be used

to assess how the U.S. and EC political systems might influence future negotiations.

The research takes the events of the Tokyo round of GATT negotiations as a case study for examining the role in GATT of the public decision processes of the U.S. and the EC. The knowledge of the policy processes gained from this analysis is then applied to a particular set of new trade proposals to try to see how the process might influence the passage of such future proposals in a new round of trade negotiations. This is achieved by modeling the new proposals quantitatively and making the results of this analysis available to policy participants for comment. In this way some measure of a likely reaction from the policy process to these proposals, if they were presented in a new round of negotiations, might be gained. The manner in which policy processes influence actual outcomes of negotiations might thus be gauged.

The specific policy proposals for achieving liberalization that will be analyzed are contained in the GATT's Committee on Trade in Agriculture (CTA) recommendations concerning the new round of multilateral trade negotiations. The broader knowledge of the U.S. and EC public decision processes as they relate to GATT is developed through the case study of Tokyo round events. Pursuit of the questions raised in the research concerning the impact of the policy process itself is framed around an empirical analysis of the CTA proposals. Knowledge of the

process is then used, together with the calculations of economic impacts of the proposals, to analyze more thoroughly the economic and political feasibility of implementing the CTA proposals.

The CTA proposals are principally concerned with two areas; subsidies on primary products (currently addressed by Article XVI of the GATT) and market access and the use of quantitative restrictions on access (Article XI of the GATT). The committee has proposed that both Articles be considerably reinforced. To limit the scope of this research, the analysis focuses only on the market access proposals.

1.2 Research Methods

1.2.1 Building the Broader Conceptual Framework

The research calls for a political economy model (in addition to the techniques utilized in the empirical analysis). As such there is no well-established, appropriate body of theory from which to develop a framework capable of answering all the questions a research endeavour of this nature may seek to ask. At best, various concepts must be drawn together from political science, economics and other relevant disciplines, to establish a set of hypotheses that may be tested and further specified by the case studies that comprise this research.

In this respect, decision and political exchange theories (as developed by such authors as Allison, Neustadt,

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Buchanan and Tullock, and Olson) are particularly useful. Other bodies of literature such as organization, regulation and interest group theories have also contributed.

From such theoretical sources it is possible to build a conceptual framework consisting of a series of hypotheses in a manner similar to and building on the work of Petit (1985). Petit's framework is built upon two hypotheses:

1. Policies are the outcome of a dynamic process driven by conflicts of economic interest regulated by political institutions; and

2. In the long run, economic forces play a critical role in determining the evolution of agricultural policies, but their influence does not obey a purely economic rationality.

Petit talks of policy decisions coming "out of a black box called "political bargaining," a process that takes place among organizations shaped by the state of economic interests and of institutions" (1985, p. 18). By developing a case study of the decision processes of the U.S. and the EC for establishing international agricultural trade policies and domestic agricultural policies, it is hoped to reveal something of the internal nature of the "black box" and to develop more detailed hypotheses regarding the inter-relationships between organizations, political institutions and policy outcomes.

These hypotheses are developed in a process of iteration between a review of the theory and development of

the case study; theory suggests the nature of the hypotheses while case study parameters determine their detail.

Two distinct areas are identified as important to the framework. First is an understanding of how the public decision process works in the context of international agricultural trade negotiation. Within this, the key focus is the distribution of power between the various interests involved, with particular attention being paid to the different classes of bureaucrats and their respective constituencies. A major objective of this research is to describe the involvement and interactions of the various parts of the federal government in the U.S. and the community institutions in the EC that deal with agricultural trade issues. The case study of the events of the Tokyo round will contribute to this goal.

The second area of major importance to the framework is that of perceptions; namely actors' perceptions of political feasibility. Here the key interplay is that between interest groups and bureaucrats. Perceptions are of a temporal nature and have changed considerably from the Tokyo round to the present. Therefore analysis of recent decision making in domestic agricultural policy can be used to gain a measure of present attitudes and perceptions. It can also help in developing an understanding of the relationships between domestic and international policy.

The questions concerning the distribution of power between bureaucrats are analyzed by researching past

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multilateral negotiations in terms of the actors involved and what they did. Attention is focused on the U.S. and EC during the Tokyo round in sufficient detail to answer the relevant questions raised by current circumstances.

1.2.2 Case Study Methods

The analysis of the Tokyo round has focused on two main sources: written accounts of the events and interviews with participants in those events and current agricultural trade policy participants. The majority of the interviewing was conducted in the U.S. and therefore the research is weighted towards analysis of the U.S. decision process and positions. However, it has been possible to interview a number of EC representatives and others knowledgeable of the EC in Washington D.C..

The interviewing was completed between September and November, 1986. A question outline was developed in two parts. The first was inquisitive of the events and procedures of the Tokyo round. The aim has been to outline more accurately the different channels of decision making within the U.S. and EC bureaucracies at that time. The intention of the second series of questions is to identify how the policy process has changed since the Tokyo round and to identify the attitudes of policy participants towards proposals for the new round.

Tokyo round participants interviewed included both individuals that are still involved in agricultural trade

policy as well as those whose only involvement was during the Tokyo round. Additionally, current policy participants that were not a part of the Tokyo round were also interviewed. A full list of interviewees is provided in Appendix B.

The majority of the research was completed by December, 1986, at which point the new round had been announced at the Punta del Este meeting of GATT contracting parties. However, the analysis contained in the concluding chapter also takes note of the events of the first half of 1987, which contained a number of international meetings, the content of which are likely to affect the final outcomes of the round.

1.2.3 Empirical Analysis of the Market Access Proposals

An important element of this research is to identify the countries and interest groups that would be affected by implementation of the changes proposed by the CTA, and the manner in which they would be affected. Time and resources make it impossible to extend the research over all GATT members, so the study is limited to the U.S. and the EC. These two however are probably the most prominent and influential trading members of the GATT (Japan might also have been included in this categorization, but is excluded to contain the scope of the research).

To make the scope of the project more manageable, the quantitative analysis is concerned only with the market access proposals. Trying to define the boundaries of the

subsidies question is outside the scope of a project of this size.

The CTA proposals for reform of the market access provisions follow three lines of action:

1) bringing those quantitative restrictions that currently escape Article XI disciplines under the aegis of a reinforced Article XI;

2) bringing remaining forms of restrictions not specifically covered by the General Agreement under the reinforced Article XI or the most appropriate article; and

3) generally to improve the binding and reduction of tariffs on agricultural products as the major form of allowable protection.

Reinforcement of Article XI:2(c)(i) (see Appendix A for the full text of Article XI) is the most important objective. This is to be done by maintaining the existing domestic "restriction of production" criteria for the introduction of new import restrictions and requiring effective regulation of production as a basis for the continuation of existing non-conforming restrictions.

In general, it is considered that successful negotiation to the point where reinforced Article XI disciplines are observed is as much as can be expected from a new trade round, at least initially. Thus the immediate short run impacts are of most interest and therefore no attention will be given to the possibility of the quantitative restrictions being converted to a tariff base

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and being subject to further downward negotiation over the longer run.

It is recognized that the project must also limit the commodity base of the overall analysis. The criteria that were considered in making the decision on which commodity or commodity group to include in the analysis are:

1) the importance that the commodity has played in past negotiations, such that basing the institutional analysis of the decision process on that commodity is likely to provide useful and interesting results;

2) the degree to which there is or is not balance in the impacts that are felt by the U.S. and the EC through implementation of the proposals, such that negative and positive pressures can be identified and analyzed in the decision processes of both the U.S. and the EC; and

3) the methods that are available for producing the quantitative part of the analysis for the various commodities, such that the maximum number of types of impacts can be identified.

Each of these criteria are considered in turn. Firstly, in the Kennedy and Tokyo rounds of negotiations, a number of commodities were of particular importance. These are the "big three": grains, dairy products and meats. Some duty reductions on individual commodities outside these groups were negotiated in both rounds, but the majority of the negotiating effort focused on these three most important temperate product groups.

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In terms of the second criteria of balanced impacts, given the fact that the institutional analysis focuses exclusively on the U.S. and EC, it would be useful to choose a commodity group that has impacts in both and preferably an interaction of impacts between the two also.

For generating the quantitative analysis of impacts under various scenarios, a number of possibilities exist. Firstly secondary data could be used if it were of sufficient applicability. Studies currently being conducted elsewhere are addressing the same general question, but it is doubtful they are of a specifically similar nature to be the sole source of quantitative input to the analysis. These studies are used instead as a supplement to the analysis that is developed in this research.

An alternative approach would be to use an econometric model, such as the MSU Agriculture Model. The advantage of this approach, as compared to doing some simple price times quantity calculations, is that the assumptions made would be somewhat more controllable and explicit, and the analysis would contain a greater degree of detail. Nonetheless, the assumptions would still be heroic, as is the case in any modeling exercise.

Having given consideration to the above criteria and the particular characteristics of the commodity groups considered, this research focuses on the grains, taking advantage of the capabilities of the MSU Agriculture Model. However, to provide some balance in the likely negotiating

scenarios, dairy products are also considered since there is some likelihood that U.S. - EC negotiations could polarize around a grains/dairy trade-off. As no modeling capability exists at MSU for the international dairy sector, and its development is beyond the scope of this project, secondary data from the sources listed above are relied on, and used in conjunction with the MSU grains scenarios.

It is not intended that exact impacts of the CTA proposals be predicted. Indeed, that is not possible at so early a stage in the negotiations. Rather, a broad picture of impacts is drawn for use in subsequent chapters with the political economy framework in order to develop the analysis of the role of the public decision processes.

The analysis contained in this research is conditionally normative in nature. It combines knowledge of how the policy process works with quantified likely impacts of the CTA proposals, and draws some inferences as to where pressures are likely to occur within the political system when reform proposals are debated. Thus, the research attempts to meet its main objective: creating an understanding of the dynamics of public decision processes as they relate to the formulation of international agricultural trade policies.

1.3 Research Outline

Chapter Two outlines the conceptual framework developed for the political economy analysis. Emphasis is placed on

the work of Allison and Petit, while drawing on many other sources from the economics literature. The resulting framework, embellished by these other contributions builds on the "rational actor," "organizational process" and "governmental politics" models developed by Allison,.

Chapters Three, Four and Five are all concerned with the events of the Tokyo round of negotiations. Chapter Three, drawing on written and interview material, is a descriptive overview of the principal events of the agricultural part of the negotiations. In Chapters Four and Five these events are reinterpreted and analyzed through the three models developed in Chapter Two, relying particularly on interview material. Chapter Four views the events from the perspective of the U.S. decision process. This is repeated from the viewpoint of the EC decision process in Chapter Five.

Chapter Six is taken up with the empirical analysis of the market access proposals. First, the proposals are outlined in detail. This is followed by a description of how the MSU agriculture model was used to model these proposals. Finally the results of the analysis are presented in terms of the impacts these proposals are predicted to have on world trade.

These results are then presented in monetary impact terms at the start of Chapter Seven, which aims to assess the likely position of the U.S. and the EC to the proposals. The results were shown to current policy process

participants to elicit reactions on their implications. The chapter is completed by some observations on the political feasibility of the market access proposals based on these reactions.

In the concluding chapter, Chapter Eight, the analysis is broadened out to assess the positions of the U.S. and the EC to agriculture in the new round as a whole, and not just in relation to the market access proposals. This is followed by a brief discussion of the overall prospects for the new round. Chapter Eight concludes with some comments on the success of the approach of this research and future research needs.

CHAPTER TWO

THE CONCEPTUAL FRAMEWORK

This research calls for a political economy model, in addition to the techniques utilized in the empirical analysis. There is no well-established, appropriate body of theory from which to draw an integrated framework capable of answering all the questions a research endeavor of this nature may seek to ask. At best, various concepts and hypotheses must be drawn together from economics, political science, and other relevant disciplines, to establish a set of hypotheses that may be tested and re-specified further on the basis of the case study element of this research.

Thus it is necessary to review the literature in the areas that are relevant to the research questions at hand. From such theoretical sources it is possible to build a conceptual framework consisting of a series of hypotheses in a manner similar to, and building on, the work of Michel Petit. Petit speaks of policy decisions coming "out of a black box called 'political bargaining,' a process that takes place among organizations shaped by the state of economic interests and of institutions." By developing a case study of the decision processes for establishing international agricultural trade policies of the U.S. and the EC, it is hoped to reveal something of the internal nature of the "black box" and to develop more detailed hypotheses regarding the inter-relationships between

organizations, political institutions and policy outcomes (Petit, 1985, p. 18).

2.1 Literature Review

Petit's approach, which relies heavily on the seminal work of political scientist Graham Allison (1973), includes many elements of the economics literature. Those that are found to be useful are briefly reviewed here followed by a review of Allison's work and finally that of Petit. Organization theory is included in the consideration of Allison's work because of it's central importance to his theses.

2.1.1 Economic Theory Contributions

Economic theory has been primarily concerned with explaining the actions of "economic man" in the marketplace where goods and services are bought and sold. Microeconomic theory provides a model of how decisions are made concerning the utilization of scarce resources in an interdependent world. However, economists have applied the principles of this theory beyond the common conception of the marketplace to include that of the "political marketplace" also.

The definition implied for this "political marketplace" is meant to include a broad range of concepts from the notion of government as a separate actor providing public goods and performing regulatory functions that the marketplace fails to provide, to the processes by which

political power is gained and political decisions are brokered. The contribution of Randall Bartlett is very useful in understanding the manner in which economic theory has been expanded from basic microeconomics to include these elements.

Standard microeconomic theory perceives man as acting rationally in the pursuit of self-interest, either as a consumer aiming to maximize utility or as a producer aiming to maximize profits. Bartlett accepts these premises but adds two new sets of actors that are also self-interested, rational maximizers: government, or perhaps more accurately politicians, who maximize votes, and bureaucrats (who serve the government) that maximize their own security (Bartlett, p. 26).

Bartlett can be accorded credit for the conception of bureaucrats as maximizers of security. However, there is a wealth of ideas drawn from economic theory behind the inclusion of governments as vote maximizers in such an apparently simple expansion of the classical model (notwithstanding its limitations when considering quantitative analysis). The relevant literature will now be addressed chronologically starting with the work of Anthony Downs. In his **Economic Theory of Democracy** Downs aims to provide a behavioral rule for democratic government consistent with general equilibrium theory. Given the fact that in most democracies there are set rules on terms of office regulated by recurring elections, an incumbent

government is constrained by the pressure of future re-election. In the economic sphere there are no such bounds, but it becomes obvious that the economic actions taken by government are chosen based on the perceived ability of these actions to maximize political support since voters to a large extent measure political performance in economic terms. This in turn leads to the conception of government as vote maximizing, since re-election is the rational goal (Downs, p. 20).

Satisfying voter demands and the manner in which preferences are expressed is a similar concern in the work of James Buchanan and Gordon Tullock. In their book **The Calculus of Consent** they provide a framework which is well described by the subtitle of the book: "Logical Foundations of Constitutional Democracy." The authors derive their foundations from the overlapping disciplines of economics and political science, in a search for a method to aggregate both revealed and non-revealed preferences while paying attention to the costs of making decisions. The difference in approach from Downs is the construction of "a model of collective choice-making that is more closely analogous to the theory of private choice embodied in the theory of markets..."(Buchanan and Tullock, p.8).

While Downs has focused largely on the role of the political parties as "government," Buchanan and Tullock emphasize individual motivations, both of the politician and the voter. Thus the notion of individual and group decision-

making costs becomes central. Costs are determined not only by the rules for making decisions but also by the way in which individuals are collectively organized (p. 63). At an early stage there are gains from having decision rules requiring less than unanimity. Thus the analysis leads to the conception of government serving the wishes of the people, who in turn will organize into interest groups to gain adequate representation.

Any model that deals with interest groups, or more generally collective action, must acknowledge the contribution of Mancur Olson. In his book **The Logic of Collective Action**, Olson expands the Buchanan and Tullock analysis by further describing how groups are formed for the purpose of providing public goods. Much of Olson's original analysis relates to the agricultural community, and his description of the general farm organizations illustrates well how his "By-Product" theory of group formation overcomes the "free rider" problem; by providing other desirable services as well as lobbying for public goods, these organizations can form and thrive (p. 157). Similarly his "Special Interest" theory which he applied to an explanation of lobbying in the business community can be applied to agriculture today. With the increasing specialization of agriculture, farming interests can perhaps be better served by smaller groups with more specific goals (p. 143). Thus, in U.S. agriculture this helps to explain

the emergence of the commodity groups as a strong and influential force in the political process.

Another body of literature developed since the time of Bartlett's work helps to shed further light on both the government and the bureaucracy. This literature is concerned with the theories of regulation and rent seeking. Both deal with how preferences are articulated and achieved within the political process.

Examining the demand for and supply of regulation by the policy process, several insights into the determinants of policy can be gained. This is so despite the fact that regulation theory does not take the notion of self-interest to its logical conclusion - such that bureaucrats maximize their own material welfare - as noted by Hirshleifer and Becker. Stigler suggests that while it might be supposed that regulation exists to benefit the national interest, in fact regulation of an industry is generally sought and gained by that industry for its own benefit. This is in part a result of the information costs involved, which dictate the delegation of responsibilities within the bureaucracy, with this smaller group then being subjected to the pressures of interest groups that have stakes in a particular sphere (Stigler, 1970 and 1971).

Peltzman has further refined Stigler's ideas into a model for predicting who will gain or loose from regulation, based in a manner similar to the public choice literature, on the notion that the regulator, i.e. government, is a vote

maximizer (Peltzman, p. 224). As Petit notes the appeal of this regulation theory is the obvious applicability it has to what has occurred in the agricultural policies of developed countries: producers have had a say in designing policies that protect them from the free market, but which are not necessarily in the national interest (Petit, 1985, p. 13).

Rent seeking theory can be seen as a development from regulation theory; for example, the regulations sought by producers described above have provided them with an economic rent that did not previously exist. These ideas were first proposed by Anne Krueger who developed a model of competitive rent seeking to illustrate a condition relevant to this study. In the case where rents are generated through the imposition of quantitative restrictions on international trade, she showed that the economy suffered a welfare loss overall and that this loss was greater than the equivalent loss if tariffs were used (Krueger, p. 291). Thus in agriculture, while domestic producers (and also importers) may gain a rent from import restrictions, society as a whole looses out. The difference in approach from standard international trade theory is the orientation of seeing the regulations as the result of rent-seeking by domestic producers and import license holders.

As Buchanan notes, the attraction of rent seeking theory is its institutional nature, allowing its application to issues of public decision making (Buchanan, Tollison and

Tullock, Eds., p. 14). Yet the theory provides little insight to the nuances of how rent seeking might occur under different forms of institutional design. This aspect is easier to pursue from the perspective of political science and organization theory, to which attention is now turned.

2.1.2 Political Science Contributions

This research endeavor is firmly based in economic theory but has benefitted greatly from exposure to certain political science contributions. These will be reviewed in the context of how they relate to the single most important source, namely Graham Allison's **Essence of Decision**. In this book, Allison defines three policy models and illustrates their merits by analyzing their ability to describe the decisions taken during the 1962 Cuban Missile Crisis.

Allison's first model has the perspective of government as a unitary decision making unit and then suggests that it needs to be "supplemented, if not supplanted, by frames of reference that focus on the governmental machine - the organizations and political actors involved in the policy process" (p. 5). Thus his subsequent approaches go into increasing detail on the organizations and the roles of individuals involved. As this spectrum is spanned, the reliance on economics diminishes while more use is made of other political scientists' contributions. What parallels this, is the amount of information required to do thorough analysis in each framework; as the complexity increases so

do the informational requirements. The different models are outlined below in this order.

The basic properties of the first model, called the Rational Actor model come from economics. The decisions coming out of government are seen to be the decisions of a single unit that aims rationally to maximize particular "payoffs" or "utility". Rational choice implies the ability to rank alternatives and choose between them based upon a knowledge of their separate consequences (Allison, p. 29-30). With such a model two basic propositions result: as the costs of an alternative increase, its likelihood of being chosen decreases, and when the costs decrease, the likelihood of that action being chosen increases. The level of insight gained using this model is akin to what Schelling has called "vicarious problem solving"; the analyst places himself or herself in the shoes of "government" with the perspective of an individual (Allison, p. 35).

A much higher degree of complexity of analysis is obtained in Allison's second model, labelled the Organizational Process model. In this approach government becomes a group of organizations rather than a unitary actor. These organizations are viewed through the lenses of organization theory and economics. Following the early work of Chester Barnard's **The Function of the Executive** and Herbert Simon's **Administrative Behavior**, Allison traces the development of these theories through the seminal books

Organisations by March and Simon, and **A Behavioral Theory of the Firm** by Cyert and March.

Governmental action is seen as the output of "a constellation of loosely allied organizations on top of which government leaders sit" (p. 80). These different organizations have responsibility for different areas of public policy, and as such are responsible for how they approach the tasks in that area; problems are thus factored out amongst and within agencies resulting in fractionated power. As a result of organizations gaining primary responsibility in a particular area, parochialism may inevitably result.

The activities of the organization can be characterized in a number of ways. First, goals are seldom formally mandated but evolve as constraints that define acceptable performance. These goals are attended to in a sequential manner through the use of standard operating procedures that can be combined in different ways to suit the particular problem at hand as best possible. An organization will contain a "repertoire" of "programs" of standard operating procedures to deal with different situations. Standard operating procedures are necessary to coordinate the diverse actions of the individuals within an organization that are important to achieving particular outcomes. It is therefore necessary for reliable performance that these procedures are "standard" and therefore they do not change quickly or easily.

Furthermore action is characterized by avoidance of uncertainty through "negotiated environments" with other organizations such that there are clear demarcations of responsibilities and established practices. Where further uncertainties cannot be dealt with in this way, "standard scenarios" are developed for different eventualities. Where these are perceived to be inadequate, organizations engage in "problem-directed search" which focuses on finding a way to avoid the discomfort of unfamiliar situations. Generally learning and change are slow regardless of whether it comes from routine or search problem-solving. However, change can be rapid as the result of extreme situations such as severe budgetary feast or famine, or dramatic performance failures (Allison, pp. 81-85).

The central coordination of all these organizations is complex and involves most importantly the performance measures and information available to government leaders and the system of rewards and punishments for organization members that are exercisable by higher authorities. The actual influence that leaders have over government behavior is constrained by individual organizations' goals and standard operating procedures.

The output of government at any one time, t, will only be incrementally different from that at time t-1. Thus the best predictor of what will happen at time t+1 is what happens at time t. Thus there is considerable rigidity in possible government behavior which naturally leads to

concern over "administrative feasibility": "A considerable gap separates what leaders choose (or might rationally have chosen) and what organizations implement" (p. 93). Governmental output is seen in the short run as action largely determined by present standard operating procedures and programs, while in the long run it is seen as output importantly affected by organizational goals and standard operating procedures.

While Allison's description in this model of the policy process limits itself to organizations that are a formal part of the government, the framework can be easily extended to include other classes of actors that interact with government, such as interest groups. Already it is apparent that this model of organizational process has added many levels of detail to the rational actor approach and allows the policy process to be viewed in a less static manner.

Allison's third model, a "governmental politics" approach, is richer in both detail and dynamics. It also requires the most information for its application. In model II the leaders of government were viewed as a "monolithic" group sitting on top of the different organizations that make up the government. Model III aims to look more closely at the constituent members of the leadership: "Each individual in this group is, in his own right, a player in a central competitive game. The name of the game is politics: bargaining along regularized circuits among players positioned hierarchically within the government. Government

behavior can thus be understood... as results of these bargaining games" (p. 144).

In developing this model, Allison has drawn on the work of Richard Neustadt whose book **Presidential Power** was one of the first forceful attempts to analyze the exercise of power in government. Neustadt distinguishes between formal power vested by statute, constitution and their interpretation, and power in the sense of the effective influence on the conduct of others. It is the latter that really counts, and is why the central theme of the analysis can be summed up in one phrase: "Presidential power is the power to persuade" (p. 10). As Neustadt notes:

> The constitutional convention of 1787 is supposed to have created a government of "separated powers." It did nothing of the sort. Rather, it created a government of separate institutions **sharing** powers (p. 26).

So while the President may superficially be considered in charge, in fact his authority merely guarantees what Neustadt refers to as "clerkship." To rule, the President must pursue bargaining advantages which arise primarily from "professional reputation" and "public prestige." Despite other advantages the President may have, he is unlikely to persuade unless "the men he would persuade... [are] convinced in their own minds that he has skill and will enough to **use** his advantages. Their judgement of him is a factor in his influence with them" (p. 44). Also, those he would persuade "have more to think about than his professional reputation. They also have to think about his

standing with the public outside Washington. They have to gauge his popular prestige. Because they think about it, public standing is a source of influence for him, another factor bearing on their willingness to give him what he wants" (p. 64).

As Allison observes, "the focus of Neustadt's attention is not action as the result of a bargaining game but rather Presidential **choice**. To understand policy, one must peek over the President's shoulder" (p. 149). But to more fully understand bureaucratic politics one must look beyond the choices before the President, and also consider the wider bargaining among the policy elite. Thus Allison describes the contributions to this in the political science literature with particular reference to the work of Almond, Lindblom, Schilling, Huntington and Hilsman before outlining his own governmental politics paradigm.

In Allison's approach governmental actions are seen as political resultants (in contrast to organizational output in Model II):

> **Resultants** in the sense that what happens is not chosen as the solution to a problem but rather results from compromise, conflict, and confusion of officials with diverse interests and unequal influence; **political** in the sense that the activity from which decisions and actions emerge is best characterized as bargaining along regularized channels among individual members of the government (p. 162).

The organizing concepts of the paradigm can be viewed as strands in the answers to four interrelated questions, which are considered in turn:

1. Who Plays? Rather than viewing government as unitary or a group of organizations, it is individuals in different jobs; chiefs, staffers and ad hoc players. What a particular player must or can do is defined by their position in government.

2. What determines each player's stand (i.e. behavior)? Certain factors are relevant. First, each player is subject to parochial priorities and perceptions. This is compounded by organizational parochialism; in order to motivate members of his organization, a player must be sensitive to the organization's orientation. This in turn can lead to goals and interests that are circumscribed by the needs of the organization, not least of which is its own health and security (similar to Bartlett's formulation). These are some of the dimensions that the individual contemplates in taking a particular stand on an issue requiring decision and action. Depending on the perceived stakes, different actors may well see different faces of a particular issue and their final behavior will usually be the result of deadlines; the need to take action forces a decision on their stand.

3. What determines each player's impact on results? Power, using Neustadt's definition, is the key. Power is a blend of bargaining advantages, professional skills, and other players' perceptions of the two. Allison elaborates that "power wisely invested yields an enhanced reputation for effectiveness. Unsuccessful investments deplete both the stock of capital and the reputation. Thus each player must

pick the issues on which he can play with high probability of success" (p. 169).

4. How does the game combine players' stands, influence, and moves to yield governmental decisions and actions? Much is decided by the individual player's role within "action channels". These are the chains of events that lead to particular outcomes. For example the budget action channel is the chronological series of events from department submissions, Office of Management and Budget (OMB) review, presidential review and submission, congressional review, authorization and appropriation, presidential signature, OMB apportionment, agency obligation, and ultimately to expenditure. With a given action channel for a set of issues, the major players are pre-selected, with their opportunities for influencing different parts of the process already determined. Thus the channel determines "who's got the action" (p.170).

The rules of the game also influence how individuals affect governmental outcomes. Some rules are explicit in the constitution, the law, administrative rules or an agency's standard operating procedures. Others are more subtle. Rules establish roles and action channels and constrict acceptable actions by sanctioning some, and making others illegal or just ungentlemanly. Thus action is a political resultant, where under conditions of uncertainty, "each player pulls and hauls with the power at his discretion for outcomes that

will advance his conception of national, organizational, group, and personal interests" (p. 171).

From these organizing concepts, Allison develops a number of general propositions. Government action does not presuppose government intention. The sum of different behaviors and intentions will provide an outcome more likely than not different from the original intention. Solutions are not achieved by global thinking but by individuals attending to their part of a problem, using the priorities and perceptions that result from their particular position within the policy process. The individual's "task is to persuade other players that his version of what needs to be done is what their own appraisal of their own responsibilities requires them to do in their own interests" (p. 177).

Shortcomings befall the process. Poor perception, wrong expectations and miscommunication can all occur, which, combined with the fact that there are always many issues being dealt with at once, leads to reticence of individuals to speak their mind fully or take a stand until forced to by events or deadlines.

Allison adds finally that style of play can have an influence on outcomes, stating that career bureaucrats, those entering government from the private sector and political appointees all behave differently because of differences in longer-range expectations (p. 179).

Through applying these three models to the events of the Cuban missile crisis, Allison shows what can be learned from each. No one model is right and the others wrong. Rather different aspects of political outcomes and the policy process are illuminated by each. One criticism of Allison's work is that it is excellent for providing ex poste analysis, but less equipped to support prescriptive analysis. In a mechanistic sense this may be true, but it is believed that an ability to describe the workings of the policy process with reference to the past takes one a long way toward understanding how that process will affect future policy decisions.

2.1.3 Michel Petit's Research

While many agricultural political scientists and agricultural economists have written on the agricultural policy process and agricultural policy, most of this writing has been the narrative of the "anointed few" who have been in the profession and the policy environment long enough to be permitted observations that are usually of a personal nature. Michel Petit however has approached the topic from the bottom up, trying to link together in an overall framework, the lessons that can be drawn from the theory provided by both the economics and political science disciplines and only then adding personal experience and

observations as additional analytical tools.[1] The result is an approach that can be used by those analysts wishing to examine the policy process, but unfortunately not sufficiently advanced in their careers to have garnered significant amounts of "hands-on" experience. This approach however does not obviate the need to gain data on the intimate workings of principal organizations and players within the policy process.

Petit takes as his precursor, Dale Hathaway's **Government and Agriculture** which aims to provide a "model of political behavior" when considering political processes. In a world where individuals and groups hold different beliefs and values, Hathaway assumes "that the primary function of the political process is the compromising of these conflicting or competing values and the discerning of the relevant beliefs in a fashion that **maximizes the satisfaction of** the **relevant** groups in society" (p. 185). This assumes as given the current distribution of power but is a clear departure from neo-classical economics where social welfare is maximized. Thus it becomes necessary to develop the distinction between economic and political factors in the policy process (Petit, 1980, p. 41).

The framework that Petit develops is outlined in his 1985 IFPRI Research Report, where he starts out by reviewing much of the same literature that has been covered in this

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1. Others have attempted to endogenize government behavior into econometric models; see Rausser et al.

chapter. "The literature review... offers useful pieces: ideas, concepts and hypotheses that capture important aspects of the phenomena under study. But they must be assembled and completed to form a general, conceptual framework for interpreting the policy making process". This process is at once characterized as being sequential, subject to uncertainty and is organized by the dialectical relationships between economic interests and the organization of these interests to influence policies. Expectations become important and actors "display the whole variety of attitudes identified with human behavior in the face of uncertainty (gambling, hedging, waiting to see, seeking more information, and so forth)" (p. 16).

From this perspective Petit builds his framework on two general hypotheses:

1. In the short run, policies are the outcome of a dynamic process driven by conflicts of economic interest regulated by political institutions; and
2. In the long run, general economic forces play a critical role in determining the evolution of agricultural policies, but their influence does not obey a purely economic rationality, since these forces are exercised through the mediation of the political process (p. 16).

These hypotheses are then expanded on in a descriptive manner. Policy-making is driven by the influence that economic interests exert on government. Often this takes the

form of the information that groups provide in the inevitable situation of uncertainty.[2] Noting Olson's contribution to how interest groups are formed, Petit seeks to review their behavior, which he sees as analogous to the way organizational behavior is described under Allison's second model.

In trying to describe how all the different interest groups and government organizations interact and impact on one another, Petit refers to the contribution, in the case of U.S. agriculture, of Talbot and Hadwiger. In their book **The Policy Process in American Agriculture** the authors present a thorough description of the policy process of the day, but fail to abstract out to a comprehensive conceptual framework of analysis that can carry forward to today.[3] Part of what is missing is the ability to explain how political organizations affect the structure and functioning of interest groups and vice versa. Petit's attempt to elucidate this subject is by way of analogy to the theater:

> The analogy is interesting because a major part of the action is public. There are, however, important events occurring behind the scenes. Groups and government organizations interact through their representatives who are the actors in the policymaking process. The role of each

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[2]. Further consideration of the importance of uncertainty is provided in the next section as an expansion of Petit's work.

[3]. More recently, the best available descriptions of the U.S. agricultural policy process are found in Bonnen, 1980 and 1984, while an excellent collection of essays is found in **The New Politics of Food**, edited by Hadwiger and Browne. In the latter, disparate issues are covered well, but a unifying framework is lacking.

> actor is defined by his position, but his script is not fully written, and he has some room for improvisation[sic]. As in all plays, some actors are more important than others. Perhaps, as in ancient Greek drama, a chorus exists; it is made up of observers and commentators explaining what is going on - not taking part in the action but often lamenting the ending they foresee (p. 18).

From here Petit proceeds by defining the concept of long term economic forces as evolving from a process that agricultural policymakers can only minimally influence, such that they can be considered exogenous variables. In order to explain how these forces affect policies, they must be linked to the conflicts of influence that are inherent in policymaking. The hypothesis is that "long-term economic trends affect the configuration of interests at stake in a policy debate, and this generates pressure for change. For instance, agricultural price declines lead to pressures by farmers for government intervention.... This hypothesis gives a clue for interpreting changes in the position taken by various actors in the policy debate..." (p. 18).

Petit summarizes the main features of the framework with the following description and figure:

> Following Allison's lead, policies are viewed as "political resultants" of a bargaining process in which policy debate plays a central role. Policy decisions during period t (D_t) come out of a black box called "political bargaining," a process that takes place among organizations ($org._t$), shaped in period t by the state of economic interests ($Ec. Int._t$) and of institutions ($Inst._t$). Long term economic forces ($LTEF_t$) at period t influence [economic interests] $Ec. Int._t$. LTEF are assumed to be exogenous, although they are partially influenced by policy decisions. Similarly, institutions are mainly exogenous. Observation of the policy debate reflects the nature of the political bargaining process (pp. 18-19).

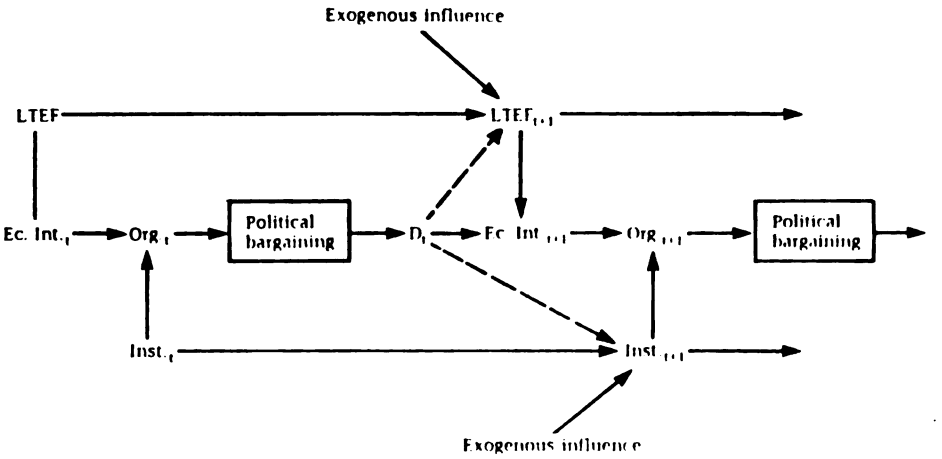

Figure 6.1 Recursive representation of the dynamic policymaking process

It is acknowledged that in the long run political institutions themselves are influenced by the policy process. This is in accord with the concept of induced institutional innovation as developed by Ruttan and Hayami,[4] where institutions change under the effects of economic forces. As Petit states: "This influence can only be exerted through the political process" and may indeed follow "some form of rationality... brought about through a political regulation process" where, "if high public officials feel that the public interest is jeopardized too much by... public interest groups, and if they feel they can politically afford to, they will intervene." The efficiency with which this regulation occurs is the subject of the

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[4]. It also is consistent with the earlier work of Shaffer on institutional obsolescence and innovation.

regulation and rent-seeking theories previously mentioned (p. 19).

In applying the framework to the subject of what Petit terms the "confrontation between the U.S. and the EC on international trade of agricultural products," the analysis, while providing some useful insights, disappoints somewhat; it does not appear to take full advantage of the richness in detail that the framework provides, presumably for a lack of data. This illustrates the point made in connection with the differing data needs of the three models developed by Allison.

Along with a number of co-authors, Petit makes better progress in providing analytical detail in a case study of the agricultural policy formation process in the EC (Petit, et al.).[5] Thus the framework, along with the other theoretical contributions reviewed, are seen as the key elements of the approach followed in this research.

2.2 A Public Decision Process Model

2.2.1 Synthesis of the Literature

The review of the literature illustrates how, in addressing public policy, concepts from economics and political science are intertwined and are best able to answer issues when used together. Both literatures assume self-interested rationality guided by economic measures of

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[5]. The specific insights on agricultural trade policy that are gained from both of Petit's papers are dealt with in subsequent chapters.

performance. Most of the complexities discussed are captured in the simplicity of Bartlett's approach, which is an excellent tool for organizing thought:

1. consumers attempt to maximize utility;
2. government attempts to maximize votes;
3. producers attempt to maximize profits; and
4. bureaucrats attempt to maximize their own security.

He also summarizes the behavioral assumptions:

1. all agents are primarily motivated by self-interest;
2. all agents are rational in pursuit of self-interest;
3. all agents labor under the constraint of uncertainty and hence are subject to influence in the making of market and political choices through the medium of information subsidization (p. 36).

This third assumption concerning uncertainty needs further elaboration. Many of the authors cited above express concern over its influence, but it is thought that, for the purposes of this research, further insights can be found and should be employed.

The contributions of two other economists are important. Though their writings are primarily about the firm and the operation of the marketplace, the lessons are applicable to the organizations that make up the policy process. First, Oliver Williamson shows how firms can mitigate the negative effects of an uncertain world by internalizing within the firm as many decisions as possible. Firms choose to do this because of their finite ability to

assimilate knowledge. Williamson terms this "bounded rationality", and states that when combined with complexity and opportunism, it creates "information impactedness," making for an uncertain decision environment. By internalizing as many functions as possible within the firm these uncertainties are minimized. In the realm of government this explanation of behavior can illustrate why different agencies compete for "turf" so as to minimize their exposure to uncertainties (Williamson, 1975 and 1981).

Ronald Heiner approaches the question of uncertainty from the position of its relationship to standard economic optimization theory. In criticizing standard theory Heiner suggests that:

> ... observed regularities of behavior can be fruitfully understood as "behavioral rules" that arise because of uncertainty in distinguishing preferred from less-preferred behavior. Such uncertainty requires behavior to be governed by mechanisms that restrict the flexibility to choose potential actions, or which produce a selective alertness to information that might prompt particular actions to be chosen. These mechanisms simplify behavior to less-complex patterns, which are easier for an observer to recognize and predict....Thus, it is in the limits to maximizing that we find the origin of predictable behavior (p. 561).

The approach helps to explain the standard operating procedures, programs and repertoires of organization theory and Allison's second model. These are seen as "social institutions" which are "regularities in the interaction between agents that arise because of uncertainty in deciphering the complex interdependencies created by these interactions" (p. 573). Our ability to influence those

institutions - regarded as "political" in that they influence economic outcomes - becomes the sphere of "'constitutionalism,' defined broadly as the design of rule-mechanisms to restrict the flexibility of government to react to whatever influences might prompt it to engage in vulnerable activities" (p.586).

Bartlett's own orientation on the role of uncertainty is closer to the ideas of Williamson. Uncertainty results in the possibility of "influence production" through the use of "information subsidization." It is best summarized by way of analogy to the "Blind Date Problem":

> If my cousin is coming to town and I want my friend to take her out, I subsidize his acquisition of the information that she has a charming personality and beautiful blue eyes. I neglect to tell him that she has three of them and weighs some four hundred pounds. My subsidization of selective information is aimed at leading him to a conclusion he quite possibly would not reach if he had all the relevant facts at his disposal. However, his experiences with me as the source of information in this one case may lead him to distrust somewhat my account of things when I present them at other times in the future.... he may tend to discount the information that I provide him at reduced cost. We can easily include such a discount factor in the analysis... (pp. 33-34).

Though Allison and Petit deal with uncertainty and information costs, the further attention as outlined above, that can be given to the issues adds depth to the models developed. Having described the relevant literature and the relevance of its different elements to one another, it is now possible to turn to a description of how these are combined for the specific purposes of this research.

2.2.2 Structure and Hypotheses of the Framework

General

As has already been noted, the manner in which Petit has utilized his framework in case studies prompts a desire for a more structured approach. Therefore, the approach that is taken in this research follows the methods of application utilized by Allison in his case study. Whereas Petit takes an overall look at a particular case, in this research two separate approaches will be developed, after the basic facts of the case study have first been outlined. While these approaches follow Allison's structure, they utilize the insights of Petit and the other economists not covered in Allison's models.

The first approach will follow the case study using Allison's Organizational Process paradigm set against Petit's recursive model of policymaking. This will be followed by analyzing the case study through Allison's Governmental Politics paradigm, again within Petit's framework. The reasons for this approach are threefold: first it provides greater discipline (and therefore focus), than Petit's narrative approach; second, it allows for the contrasting availability of data on different aspects of the case study; and most importantly, by using Allison's model III, it is suggested that it will be possible to reveal more of the nature of the political bargaining "black box" than has hitherto been the case.

It is not possible to add any more detailed general hypotheses to the framework than provided by Petit, except to say that his hypothesis -- that long-term economic trends affect the configuration of interest at stake in the policy debate thereby generating pressures for change -- may be expanded into specific hypotheses within the context of a particular case study. This aspect will be addressed in the next section.

Agricultural Trade Policy

Within the specific context of the negotiation of international agricultural trade policies, two distinct areas are identified as important to the framework. First is an understanding of the distribution of power between the various organizations involved, with particular attention being paid to the different classes of bureaucrats and their respective constituencies. The case study will describe the involvement and interactions of the various parts of the federal government in the U.S., and the Community and national institutions in the EC that deal with agricultural trade issues.

The second area of major importance to the framework is that of perceptions; namely actors' perceptions of political feasibility. Here the key interplay is that between interest groups and bureaucrats. Perceptions are of a temporal nature and have changed considerably since the Tokyo round to the present. Therefore, a part of the analysis will aim to

consider recent decisions taken over both domestic and international agricultural policy in order to gain a measure of present attitudes and perceptions. This can also help in developing an understanding of the relationships between domestic and international policy.

In elaborating on the long-term economic forces that impact on the trade policymaking process, consideration of the history of this policy arena leads to the inclusion of the following specific hypotheses:

1. Budgetary outlays have become a major force in creating pressures to change policies for the primary goal of limiting expenditures;
2. Agricultural commodity price declines lead to increasing pressures from farmers for government intervention over prices;
3. Declining farm profitability, when perceived to be the result of failure to achieve full potential on world markets, creates pressure for government intervention over trade; and
4. Domestic policies set the limits for negotiation of international agricultural trade policies.

Taken individually, it would not appear difficult to substantiate each of these hypotheses. However, the interaction of the hypotheses has interesting implications for the content and negotiation of agricultural trade policy. While this research aims to test the validity of the framework's hypotheses, it is recognized that

incompatibilities potentially exist between them. The first three hypotheses are not necessarily compatible with the fourth, and the first is not necessarily compatible with the second and third. This points up an interesting question for the research: to what extent is it possible, when studying a particular set of issues within the policymaking process, to outline specific hypotheses any more detailed than the two general hypotheses of Petit's framework?

To a large extent, the outcome of the new round of negotiations will depend on which of the suggested hypotheses are dominant. Will the impact on domestic programs of the need to contain budget costs be larger than the impact of including or not including domestic policies in the package to be discussed in the new round? Through the case study and applied analysis that follows it is hoped that a contribution to the answer of this question can be made. Furthermore the study may contribute to a clearer and more detailed specification of the framework's hypotheses.

CHAPTER THREE

THE TOKYO ROUND OF TRADE NEGOTIATIONS: A CASE STUDY

The aim of this chapter is to outline in general form the history of agriculture in the GATT, with an emphasis on the Tokyo round of negotiations. Much of the detail of the Tokyo round is dealt with in subsequent chapters. Here, the goal is simply to outline the major events in order to set the stage for the analysis of the next chapters. These will analyze the Tokyo round through Allison's Organizational Output and Governmental Politics approaches. The present chapter can, to an extent, be viewed as utilizing Allison's Rational Actor perspective.

3.1 Background and History of Agriculture in the GATT

The General Agreement on Tariffs and Trade (GATT) was one of the products of the post World War II effort to bring a new order to the international economy. It's beginnings originated from the same time as the institution of the World Bank and the International Monetary Fund (IMF) at Bretton Woods in 1947. The GATT, as it evolved, was the residue of a failed negotiation to create a third new international organization which would have been known as the International Trade Organization (ITO) (GATT, 1984).

The ITO was to have been a United Nations agency responsible for the oversight of world trade. However, when

it became clear that the overambitious charter would not be ratified by all, what was salvaged became the GATT: "It began as only one wheel of a larger machine, the ill-fated International Trade Organization, and, when that larger machine fell apart before leaving the assembly line, this wheel became a unicycle on which burdens of the larger machine were heaped" (Jackson, p. 3). Thus the GATT began as a temporary cut and paste job signed by twenty three countries, and has survived to today as the major legal forum for the regulation of international trade, now with ninety one signatories.

The General Agreement is a single document laying out in a series of Articles, rules for the conduct of trade. These Articles cover a few fundamental principles and aims. The first, known as the "most-favored-nation" clause, calls for non-discrimination in the conduct of trade. Other Articles indicate that tariffs are to be the principle tool that is to be permitted when protection is granted, with a ban on the use of quantitative restrictions. Furthermore efforts should be made to "bind" tariffs; that is, agree to maximum tariff levels for each and every item subject to protection. The Agreement also provides for consultation, conciliation and dispute settlement under its own auspices. (GATT, 1984, pp. 2-6).

3.1.1 From Bretton Woods to the Dillon Round

The text of the General Agreement that was signed by the original contracting parties was intended to apply equally to both agricultural and non-agricultural trade. However, at the time of drafting, the "special circumstances of agriculture" were recognized, and several agricultural exceptions to the basic principles were included in the text. Thus, while certain political realities had been ignored in trying to set up the all-encompassing ITO, the GATT at least recognized the political realities of dealing with agriculture.

Two exceptions should be noted. First, Article XI contains a general prohibition on the use of quantitative import and export restrictions such as quotas. However agriculture benefits from three exceptions: (1) temporary export restrictions may be imposed to relieve food shortages; (2) import restrictions can be used where necessary for the enforcement of domestic programs aimed at limiting domestic production or marketings, or for the temporary removal of surpluses; and (3) restrictions may be used in applying classification, grading and marketing standards. The most often used exception is the second, and this is the subject of the applied analysis within this study (Article XI is reproduced in Appendix 1).

The second major exception is contained in Article XVI which prohibits the use of export subsidies but provides an exception for agriculture provided such subsidization does

not result in a "more than equitable share of the world market" being gained by the subsidizer. However, contracting parties should "seek to avoid" the use of such subsidies.

The Agreement provides that contracting parties "can meet from time to time" to pursue the aim of "the substantial reduction of tariffs and other barriers to trade." This has been the objective of the seven "rounds" of multilateral trade negotiations that have taken place to date. The first three rounds - Geneva (1947); Annency (1949); and Torquay (1950-51) - concerned themselves primarily with tariff reductions on nonagricultural products, and therefore need not be mentioned any further (U.S. Senate, 1986, p. 10).

The fourth round in Geneva (1955-56) was similarly concerned with tariff cutting, but had one important agricultural issue. This was the granting of a waiver from the General Agreement, which allowed the U.S. to apply quantitative import restrictions on a range of agricultural products, whether or not U.S. domestic programs had production or marketing controls. The waiver was requested so as to enable the president to fulfill his obligations under Section 22 of the Agricultural Adjustment Act of 1935, as amended in 1951 such that "no trade agreement or other international agreement heretofore or hereafter entered into by the United States shall be applied in a manner inconsistent with the requirements of this section." Thus the waiver permitted the use of import restrictions in

conjunction with any U.S. Department of Agriculture program whenever it was deemed necessary for the smooth operation of such programs (U.S. Senate, 1986, p. 7).

The Dillon Round (1960-62; named after Douglas Dillon, then Secretary of State and leader of the U.S. delegation) was the first round to deal significantly with agriculture, and was the first round in which the EC (at that time named the European Economic Community -- the EEC) negotiated as a single bloc. The negotiations centered on the effects of the newly instituted EC, with the prospect in agriculture of the establishment of a Common Agricultural Policy. The major work of the round was in transforming the tariff rates that had been previously applied by the six member countries into a common schedule, both for agricultural and nonagricultural products. The pending imposition by the EC of the variable levy complicated the negotiations resulting in failure to conclude substantive agreements on wheat, corn, rice, sorghum and poultry. These commodities were however covered by "standstill agreements" that reserved the U.S.'s right to reach agreements at a later date consistent with GATT obligations (Curtis and Vastine, pp.23-26).

A number of concessions, hardly noticed however, were granted by the EC. These were to be of great significance in later years and up to the present time. A duty free binding was granted on entry of soybeans and corn gluten feed, and near duty free bindings were granted on soybean meal, other oilseeds and cotton. At the time these commodities were not

of significant importance in trade between the U.S. and the EC, but are extremely important today.

3.1.2 The Kennedy Round

The Kennedy Round was the first that was referred to as a "trade negotiation" in contrast to the previous rounds which had all been referred to as "tariff negotiations." This was the first time the contracting parties made concerted efforts to deal with nontariff barriers to trade. The impetus for the new round came largely from the U.S., mostly out of concerns over a declining balance of international payments, especially when compared to the EC which by 1961 had increased its reserves by over $6.5 billion since the inception of the Community in 1958 (Evans, p. 134).

Given the lack of progress in the Dillon Round, the U.S. administration began to campaign for new trade legislation that would enable them to proceed with vigor in a new round of negotiations. The 1962 Trade Expansion Act was a significant achievement for the administration. For the first time Congress had granted the president authority to negotiate across the board rather than on a product by product basis. This was considered politically expedient in order to deal with the challenge of the common economic front presented by Western Europe (Dam, p. 67).

As well as emphasizing negotiation of nontariff barriers, the 1962 Act created the position of the Special

Representative for Trade Negotiations within the Executive Office of the President. This was the first time Congress had vested responsibility for the negotiations in a single high ranking official. The Special Representative's staff and office were created by executive order to carry out the congressional mandate of overseeing and coordinating the trade policy activities of the different government agencies (Curtis and Vastine, p. 9).

The GATT Ministerial Declaration of May 21, 1963, launching the new round stated that "the negotiations shall provide for acceptable conditions of access to world markets for agricultural products... in furtherance of a significant development and expansion of world trade in such products." Both the U.S. and the EC were committed to negotiate on agriculture but there tended to be philosophical differences in approach. The U.S. considered that much could be achieved by across the board tariff cutting in addition to work on nontariff barriers, while the EC pursued a more managed approach on a commodity by commodity basis. The U.S. approach reflected the view that agriculture could be successfully brought into a more market orientated environment, whereas the EC felt that legitimate domestic policy considerations interfered to the extent that this was not possible. Thus the EC proposed the concept of the "montant de soutien," the margin of support over world prices given to producers, as being a measure that could be subject to binding negotiation.

This was the first time a proposal had aimed to link domestic policies to the trade negotiations. However the EC proposal was rejected by the US and others for a number of reasons: there was no commitment on access; it preserved the sanctity of the variable levy; and it could have been applied to soybeans, negating the benefits of the previously granted zero duty binding (U.S. Senate, 1986, p. 14).

The U.S. on the other hand had proposed binding access commitments, suggesting that 15% of the EC market be reserved for exporters. The EC listened to this approach but was only prepared to offer 10% of their grain markets, which was not acceptable to the U.S.. With the EC refusing to guarantee a share of their domestic market sufficiently high to satisfy the U.S., and the U.S. rejecting the EC approach, the round was doomed to failure in dealing with nontariff barriers to agricultural trade.

Modest tariff concessions were negotiated in agriculture once it became clear progress would not be made elsewhere. The U.S. granted concessions to the EC on $238 million worth of agricultural imports from the Community, while the EC granted the U.S. concessions on $279 million worth of U.S. agricultural exports to the Community (USDA, 1967, p. 90-91).

Attention also shifted to the negotiation of the renewal of the International Wheat Agreement. It was hoped that this could be expanded to become an International Grains Agreement with additional specific provisions for

food aid. The final outcome at the conclusion of the negotiations in 1967 was an agreement that only had price provisions for wheat (this however fell apart in 1968 as surpluses on world markets forced prices below the agreed minimum). The Food Aid Convention that was negotiated provided that 4.5 million metric tons of grain would be made available annually to the developing countries. This was more successful in operation, and was renewed and expanded in 1971 and 1980.

The lack of progress in the Kennedy Round toward solving some of the fundamental problems in agricultural trade can be attributed, in part, to a practical consideration; the EC was still in the process of designing and implementing its Common Agricultural Policy. While the principles were well established by the time of the negotiations, the exact nature of their implementation was still being resolved amongst the member states (Curtis and Vastine, p. 51). Thus in a sense it was impossible for the Community to negotiate concessions to a policy that was not yet fully in place. This was true given that the mechanisms and design of the policy were not considered by the EC to be subjects for negotiation within the GATT. Alternatively it may be asserted that the status of the Community's internal organization was merely used as a block to achieving agreements. Further, U.S. foreign policy considerations that included maintaining a strong united Western Europe, meant

that the U.S. did not pursue the EC as vigorously as it might, and thus also contributed to the lack of progress.

3.2 Launching the Tokyo Round

3.2.1 The Decision for a New Round

Even as the Kennedy Round came to a close, the contracting parties were considering the prospects for future progress on unresolved issues. Five months after the Kennedy Round Agreements were signed, the GATT contracting parties established a Program of Work to lay the groundwork for a new round (Hudec p. 214).

As preparatory work continued within the GATT secretariat, other steps were taken towards a new round. Internationally, a "High-Level Group on Trade and Related Problems" was established by the Organization for Economic Co-operation and Development (OECD). The Group met throughout 1971 and in August 1972 concluded that a new round was necessary "not only for the direct benefits it will bring but because without it the divisive forces of protectionism will grow stronger, with the risk that the world will slip back into an era of restriction and ultimately of contraction of the international economic system" (OECD, 1972, p. 110).

In the U.S., President Nixon established the Commission on International Trade and Investment Policy (the Williams Commission) to produce "recommendations designed to meet the challenges of the changing world economy" (Williams

Commission Report, p. ix). The final report, published in July 1971, expressed a concern that the U.S. had not benefitted to the full extent from the tariff concessions granted it in previous rounds, mostly because countries used nontariff barriers to negate the effects of tariff obligations. The EC was specifically singled out as a major culprit in this regard. The report concluded that the U.S. could gain most by a renewed attempt at liberalizing international trade through an attack primarily on nontariff trade barriers (Destler, p. 137).

The EC meanwhile was working on the development of an "overall approach" that could form the basis of a common position within any negotiation. There was considerable discord amongst the member states of the recently enlarged Community and agreement was finally reached in June 1973 at Luxembourg only through the use of the now famous Luxembourg compromise. This gave an individual state the right to veto a proposal, if it felt its own national interest was significantly threatened.

The approach that was adopted for agriculture was forthright, though not totally inflexible. The essential elements were twofold. First, the principles and mechanisms of the CAP, charged with upholding the objectives of Article 39 of the Treaty of Rome, "should not be called into question and are therefore in no way a matter for negotiation." Second, the objectives for agriculture could be best realized through stabilization of markets, which

would most readily be achieved by negotiation of commodity agreements; in the words of the "overall approach," the Community would "propose the negotiation of a price mechanism (minimum and maximum prices) accompanied by storage measures in order to regulate supply... for each product" (reproduced in Golt, 1974, p. 65).

Thus, led by U.S. initiative, the major trading nations concurred on the need for a new round of negotiations under GATT auspices, and turned their attention first inward to consider their priorities for the new round and then to the launching of the round itself.

3.2.2 The Tokyo Declaration

The ministerial meeting of September 1973 was preceded by considerable discussions bilaterally amongst the major players both in Geneva and national capitals. Thus a declaration was adopted without too much difficulty. This was possible because generally, and especially as far as agriculture was concerned, any potential conflict was avoided by adopting a very general wording on aims: "The negotiations shall aim to... include, as regards agriculture, an approach to negotiations which, while in line with the general objectives of the negotiations, should take account of the special characteristics and problems in this sector" (CIEP, p. 112-113). All together six areas for negotiation were identified for the new round: tariffs, nontariff measures, multilateral safeguards, tropical

products, the GATT framework itself, and of course, agriculture. The fact that agriculture was identified as a separate agenda item was a significant departure from previous rounds.

3.3 The Nixon/Ford Years

The impetus given to the new round by the U.S. was in part a response of the Nixon Administration to growing protectionist pressures within the country and a sense of crisis with regard to trade policy. In order to stave off protectionist legislation and in order to gain authority to negotiate the Administration turned attention to its own proposals for trade legislation.

The development of enabling legislation was a slow and tedious process that has been excellently documented by I.M. Destler from which the following summary of its features is drawn (Destler, chs. 9-11). The Trade Act of 1974 allowing the President to enter into agreements in the new negotiations was finally signed into law on January 3 1975, by President Ford.

Part of the delay in generating the legislation was attributable to the general legislative slowdown resulting from the turmoil created by the Watergate scandal. However a more significant reason was the contentiousness of the issues, resulting in long hard fights in Congress. What finally emerged exceeded the expectations of the original proponents within the Administration who had been looking

for considerable latitude in negotiating authority. They got it.

The president was authorized to eliminate tariffs on goods carrying duties of 5% or less, and to reduce higher tariffs by up to 60%. On nontariff barriers, agreements negotiated in Geneva were subject to congressional ratification in the form of implementing legislation. The legislation contained no specific provisions for agriculture, Congress having reserved its oversight privileges as regarded nontariff negotiations.

Despite reaching apparent consensus at Luxembourg, the EC was still struggling to reach overall consent on a mandate that covered the now nine members of the community. Complicating the process was the uncertainty created over the issue of UK membership which had been reopened following the election there in February 1974. It took until the following February for the EC to arrive at an agreed directive (Golt, 1978, p. 1).

Substantive progress could not be made in Geneva until all participants had required enabling legislation in place. Thus with the U.S. as the principle instigator of the new round tied up domestically until January of 1975, and the EC similarly indisposed until a month later, little progress was made up until that time. The first year was spent sorting out the procedures for negotiation on the six areas that had been identified in the Tokyo Declaration. Separate groups were set up in each area, which meant a separate

group for agriculture. This group then had three sub-groups; grains, meat and dairy products.

With domestic requirements settled, the Trade Negotiations Committee of the GATT was able to instruct the groups to proceed with substantive negotiations in February 1975. It very soon became clear that little could be achieved immediately for the negotiations as a whole since it would be impossible to conclude the negotiations before the next U.S. presidential election in 1976. And it was obvious that anything negotiated up to that point could be amended by a new Administration.

Within agriculture, philosophical differences in approach between the U.S. and EC arose concerning the nontariff questions. The U.S. did not want to consider commodity agreements or any other form of market sharing within the GATT (although the U.S. did lead in exploring the renegotiation of a wheat agreement within the IWC). But having accepted the EC position on the non-negotiable status of the CAP, it became difficult for the U.S. to make concrete proposals, since other approaches to the basic problems would necessarily include modifications to domestic policies. The EC, for their part, stuck doggedly to the principle of negotiating commodity agreements. Because of this stalemate, attention turned to preparing for the offer and request procedure for tariff reductions, a complicated enough business to keep the negotiators busy.

Thus, a round that had been trumpeted for completion in 1975 was doomed not really to get moving until 1977 for political reasons. Economic conditions also contributed to the slow progress. The problems created by high levels of inflation through this period diverted attention away from Geneva towards finding domestic solutions to the problems created by these inflation levels (Destler, pp. 193-197). It was not until after the U.S. election that the momentum began to pick up.

3.4 The Carter Years

The differences between the U.S. and the EC over agriculture in particular were perceived within the GATT to be the main reason for the lack of progress before the U.S. election. As a result of the blockage over agriculture, little progress was made elsewhere in the negotiations. A sense of urgency developed with the coming of a new administration, since the negotiating authority provided by the 1974 Trade Act would expire within the lifetime of this new administration. Section 331, that allowed the president to waive imposition of countervailing duties while engaged in negotiations expired on January 3, 1979, while overall negotiating authority expired one year later (GATT, 1979, pp. 12-13).

3.4.1 Breaking the Deadlock

Knowing full well that the fate of the negotiations therefore rested upon itself, the Carter Administration resolved to push ahead. With this new administration, there was now less of an atmosphere of adversarial ideological righteousness and more an atmosphere of "can-do" pragmatism. This was felt most directly and immediately in the agriculture negotiations where there was a significant shift in the U.S. strategy towards the negotiations. This strategy encouraged discussion of the approach favored by the EC. The new administration's attitude was that it was worth talking about all possibilities in the attempt to find solutions. Having convinced the other principle players, namely the EC and the Japanese, of this new determination to move forward, an accelerated timetable for the negotiations was agreed to.

In agriculture what this meant was the U.S. would begin to talk to the EC about the principles involved in commodity agreements and market sharing. This was the approach that the EC had been stressing from the start, so it was now possible to consider seriously reaching substantive agreements on nontariff barriers to agricultural trade. However this U.S. strategy did not in any way presuppose that the administration would endorse commodity or market sharing agreements. Just to be talking concretely about different alternatives was a move forward.

3.4.2 Concluding the Negotiations

With this new momentum, the traditional tariff offer and request procedure got under way, and the commodity sub-groups in Geneva began to tackle the international agreements issues. The grains sub-group ceased to meet, having ceded the lead responsibility in this area to the work that was going on in London within the International Wheat Council (IWC) under the auspices of the United Nations Conference on Trade and Development (UNCTAD), the usual forum for discussing commodity agreements. It was believed that at the appropriate time the results achieved in London could be brought into the GATT framework as part of the results of the overall negotiations (USTR, 1978, p. 24).

Both the Dairy and Meat sub-groups moved forward with discussions of international agreements to cover their respective commodities. The Dairy Group prior to 1977 had made progress only on technical, analytical and definitional matters. By the fall of 1977 two proposals had been submitted to the group, one by the EC and one by New Zealand. The EC proposal contained provisions for exchange of trade information, an arrangement for milk powders, butterfat and butter with minimum and maximum prices, and agreed price and access disciplines on cheeses. The New Zealand proposal was somewhat more modest with price provisions only applying to milk powders (USTR,1978, p. 24). The common elements of these proposals were combined into a single document, which underwent a series of revisions with

the price proposals being put in and taken out again and again. By the time the negotiations concluded two separate texts were submitted with no further attempts being made to reconcile them. Thus both were available for signature by the contracting parties (GATT, 1980, p. 13).

Within the Meat subgroup, the EC and Australia submitted proposals. The EC proposal called for a multilateral framework that would provide information, a forum for consultation and the conclusion of specific bilateral and plurilateral agreements that might include export restraints and price agreements.[1] The Australian proposal called for negotiation of access commitments on a bilateral offer and request basis, coupled with a multilateral oversight body designed to disseminate information and provide a forum for discussions (USTR, 1978, p. 24-25). Again the two proposals were combined into a single document and the agreement that finally emerged used the lowest common denominator of the differing proposals. An International Meat Council would be established covering bovine meat as a forum for exchange of information and as a source of recommendations of "possible solutions" to serious imbalances in the world beef market (USTR pp. 38-39).

In the tariff and quota concessions modest gains were made in respect of individual offers and requests. Overall

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1. "Plurilateral" is a term used in GATT negotiations to mean amongst many but not all parties, to be distinguished from "multilateral" meaning involving all parties that are signatories to the GATT.

the U.S gained concessions on exports valued at $3.8 billion while granting concessions on $2.4 billion worth of imports (USDA, 1981, p. 5). Half of the concessions on exports resulted from one action, namely the tariff binding on soybean exports to Japan. The EC granted the U.S. concessions covering trade valued at $960 million while the concessions granted by the U.S. were mostly on increases to Section 22 quotas, and it is therefore difficult to estimate what proportion benefited the EC, since all exporters to the U.S. would be competing for these concessions (U.S. Senate, 1979, p. 46).

It should also be remembered that these figures represent the total value of exports and imports on which concessions were granted, and not the value of the concessions themselves. The value of the concessions varied from product to product between countries but would be a fraction of the trade value involved.

Meanwhile, many of the participants that had entered the GATT grains sub-group were actively involved in the discussions being conducted in the IWC. Given the new momentum of the negotiations as a whole, much energy was invested in concluding a new grains agreement. The International Wheat Agreement of 1971 was due to expire on June 30, 1979 providing an additional deadline to the impending conclusion of the MTN.

It was hoped that the new agreement would contain specific economic provisions in two dimensions, at least in

the wheat market. First it was hoped that minimum and maximum prices could be established, and second, that these would be backed up by agreements on specific levels of stockholding amongst signatory countries. This was to be a classic buffer stock commodity agreement, with agreed upon price triggered stockholding levels.

There was also a hope of negotiating a coarse grain Trade Convention that would mirror the IWC and the councils being set up under the meat and dairy agreements in their roles of providing information and a forum for consultation. The Food Aid Convention was also subject to a renegotiation.

In February 1979 the negotiations were abandoned and the Wheat Trade Convention of the 1971 IWA, with its lack of economic provisions, was extended. The negotiations had foundered on an inability to agree on three factors: the level of each country's reserve stock contributions; separate economic provisions for developing countries to ease the financial burden of their reserve obligations; and the levels of the price triggers for the reserve system (USTR, 1979, pp. 58-59).

By far the most serious reason for failure was not the disagreements that revolved on a North-South axis, but rather a failure to agree between the EC and the U.S. on the trigger prices. Throughout the negotiations, the EC operated as an importing wheat consumer, despite the looming prospect of export refund expenditure in that market. Thus the EC viewed the stock take-up and release prices proposed by the

U.S. as too high, while the U.S. viewed the EC's price proposals as too low.

These views were reinforced in relation to reserve levels. The U.S. felt the EC prices would lead to reserve levels that were excessive, while the EC thought the U.S. levels would not provide for adequate food security. There was also disagreement as to the appropriate size of the spread between take-up and release prices. By the conclusion of the negotiations the gap between the two's proposals had been narrowed to approximately $10 per metric ton, still a substantial way apart. A renewal and extension to the Food Aid Convention was finally agreed under UNCTAD after the GATT negotiations had closed.

One area of the overall negotiations that was not specifically centered on agriculture nonetheless had the potential to have a major impact on agriculture. The Subsidies and Countervailing Duties Sub-Group developed a set of codes as an annex to the General Agreement. During the Kennedy Round the topic was approached, but the EC had only been interested in developing a code on countervailing duties while the U.S. insisted subsidies be included also. Compatible terms of reference could not be found and the project was abandoned.

Overcoming these old differences in approach was difficult in the Tokyo Round. The first years were spent purely on technical and informational matters. It was not until 1978 that substantive negotiation began. At this stage

the U.S. wanted the codes to apply equally to industrial goods and agricultural commodities while the EC sought to exclude agricultural products (GATT, 1979, pp. 54-60).

At the conclusion of the negotiations both the U.S. and the EC had gained and given ground. Agricultural commodities were included in the agreement but not in any significantly binding way. Previously export subsidies in agriculture had been disallowed where they resulted in gaining a "more than equitable share of the world market." The new code sought to clarify and further tighten the definition of this concept. Under the code the use of such subsidies would be disallowed if "used in a manner which displaces the exports of another or involves material price undercutting in a particular market" (USTR, 1980, p. 42).

As the negotiations drew to a close, it became clear that sufficient progress had been made in agriculture for the U.S. not to walk away from the negotiations as a whole, as had been its threat at the start of the round. However it was also clear that many agricultural issues were left unresolved or unsatisfactorily resolved. Therefore an attempt was made within the negotiations to provide some form of framework for further discussion that would continue after the negotiations concluded. The aim would be to monitor the outcome of what agreements had been reached and provide a forum for a continued dialogue on possible improvements to the agricultural trading system. It was out of this element of the negotiations that the GATT Committee

on Trade in Agriculture was instituted, providing a direct link between the Tokyo Round and the Uruguay Round.

3.4.3 Implementing the Agreements

In the U.S. the results that were brought back from Geneva for Congressional approval were greeted with some enthusiasm. The implementing legislation proceeded through Congress with less difficulty than could possibly have been expected. The most visible resistance came from Senators and Representatives from Wisconsin who were concerned with the concessions that had been granted on Section 22 cheese quotas; they accounted for five of the total of only eleven opposing votes (Destler, p. 202).

In the EC there was also much rejoicing at the implementation of the agreements. Within the agricultural sphere, there was a sense of having successfully defended the sanctity of the principles of the CAP. This was perceived to be a wider success, in that the CAP was seen as one of the strongest pillars of the community, and thus to achieve success here was to achieve success for the strength of the Community as a whole.

3.5 Reflections on Agriculture in the GATT

Superficially it would be very easy to review the history of agriculture within the GATT and conclude that the experience has been one long tremendous failure. However this would ignore the realities of the complex economics and

politics of agricultural trade issues. Since before the GATT existed, countries have had domestic programs in place aimed at regulating agriculture in one way or another for what were considered legitimate reasons. It is only as the world has become increasingly interdependent that the effects of such domestic policies have impacted forcefully on international markets.

When the GATT was conceived, the need to coordinate domestic policies internationally was not perceived to the extent it is today. Thus the text of the General Agreement can be excused for its lack of attention to this issue. However, certainly from the Kennedy Round on, the need for considering the international impacts of domestic policies has been acknowledged, and yet little progress has occurred in regulating negative impacts. Can this be explained generally or in the specific case of agriculture?

The reasons are many, but certainly some of them have their origin in the domestic policy processes of the principle participants. It has often been argued that the U.S. State Department has only been prepared to protect foreign policy interests as opposed to foreign economic policy interests. The introduction of the Special Trade Representative was in part a response to this concern. In the EC the agricultural Council of Ministers has been characterized as a group of ministers for agriculture, thus leading to a bias in policy making.

In both the U.S. and the EC, the farm interest groups have managed to maintain a hold over the political process quite incommensurate with their relative contribution to the economy overall. Their evolution is an interesting lesson in institutional innovation at the political level, especially in the U.S.. One of the main differences that had occurred in the political process from the time of the Kennedy Round to the Tokyo Round was the "shift from representative to participatory democracy" in the wake of Vietnam and Watergate. Within the government there was an attempt to make all transactions more public, while at the same time, the Congress became more fractured with a corresponding dispersal of power amongst its members. The response amongst the farm interests was acceleration in the decline in the power of the general farm organizations and the rising prominence of the "single interest" commodity groups (Bonnen, 1984, pp. 62-65).

When these factors are considered together in the context of agricultural trade negotiations, it becomes clearer why a free trade economic rationality has not always won out. Serious attempts have been made within GATT to address the fundamental issues facing world agriculture, but it is domestic political realities that have dominated outcomes. In answering special interest concerns it is more likely that more protectionist, rather than liberal, trade measures are instituted.

It can be seen that the combination of small institutional changes in decision making processes and movements in long term economic forces have led to what changes in outcomes have occurred, as predicted by Petit. A closer examination of domestic policy processes should indicate the relative influence that can be brought to bear when attitudes and positions of key organizations and individuals are modified.

By revealing some of the elements that make up the "black box" of political bargaining, it may be possible to indicate future directions of policy from an examination of the policy process itself. With this in mind, attention is now turned to this subject by way of a more detailed consideration of the agricultural negotiations of the Tokyo Round.

CHAPTER FOUR

THE U.S. PUBLIC DECISION PROCESS FOR AGRICULTURAL TRADE NEGOTIATIONS

4.1 The Actors

In the previous chapter the details of the Tokyo Round of negotiations were described from the perspective of the participation of the U.S. and the EC. In the description, decisions taken were credited to the "U.S." or the "EC" as unitary decision makers, in the manner of Allison's Rational Actor model. The aim here is to develop that analysis beyond such a simple conception of the decision making process.

In order to do that, the different actors that make up the "U.S." or the "EC" must be identified. In this chapter the organizations that make up the U.S. policy making environment will be outlined, after which the events of the Tokyo Round will be analyzed by placing these actors into Allison's second and third models. There can be no generalized or systematic description of the individual high-ranking officials that form part of the Governmental Politics approach, since they are particular to specific events in time. Therefore specific references to this class of actor will only be made as called for in the analysis of the case study events themselves. Here the purpose will be to outline the organizations that are the subject of analysis under the Organizational Output approach. The description of these organizations and the events of the

Tokyo round outlined throughout the chapter are based primarily on the interviews conducted with participants, but also on the secondary materials as cited. Where there are no citations, inferences have been drawn from the interview material and are generally only included if they were corroborated from at least two sources.

4.1.1 The Presidency

The President is the closest approximation of government as a unitary decision-maker. But it is immediately obvious that his ultimate decisions are based on the advice received through a number of coordinating mechanisms and channels. These exist both inside the White House and with other agencies.

The area of agricultural trade policy falls under the broader classifications of foreign economic policy and even foreign policy. It is therefore important to consider the mechanisms that exist to service these wider constituencies. Certain elements such as the Office of the Special Trade Representative (STR, which later became the Office of the U.S. Trade Representative; USTR) and the Council of Economic Advisors (CEA) remained constant over the period of this study, and are dealt with last. However other forums came and went under the three administrations that were occupied with the Tokyo Round.

President Nixon created the Council on International Economic Policy (CIEP), headed by an assistant to the

President for international economic affairs, as his principle policy forum in this area. CIEP's mission was to provide "a clear top-level focus for the full range of international economic policy issues," and to "deal with international economic policies (including trade, investment, balance of payments, and finance) as a coherent whole" (Williams Commission, p. 278). With a large mandate and a correspondingly large staff, CIEP was viewed as unwieldy, competitive for turf, and in business for itself.

President Ford shifted the focus of coordination to the Economic Policy Board (EPB), a smaller group where numbers were contained mostly to five key cabinet-level participants with a staff of four that met frequently amongst themselves and with the President. The strong link to the President accounted for much of its better ability to coordinate issues than had been the case in CIEP (on whose staff the EPB nonetheless had some reliance).

With the Carter administration, the CIEP went out of existence and the EPB was replaced by the Economic Policy Group (EPG). This was conceived on similar lines to the EPB, but very rapidly came to include many more participants at both the cabinet and staff levels. With meetings of often over thirty participants, the President seldom involved himself with the group and relied more on the coordinating and facilitative role played by his Domestic Policy Group (DPG), which would review much of the output of the EPG.

Under these top-level committees, the 1962 and 1974 trade legislation had provided for interagency review mechanisms up to the cabinet level. For the Tokyo Round, with passage of the 1974 Act, this took the form of the Trade Policy Committee, chaired by the Trade Representative, at the Cabinet level. The relationship of this committee to those described above varied over the course of the negotiations, as will be described below.

The Council of Economic Advisors

The importance of the role played by the Council of Economic Advisors (CEA) is often circumscribed by the nature of the other policy coordinating mechanisms employed by the president as described above. In the agricultural sphere it is further defined by the personality of the agricultural economist on the Council and his relationship with the Chairman, whose sense of the priority to be given agriculture is also important. In form, the role of CEA did not change over the period of analysis, but the substance of its contribution changed for the above reasons.

The Office of the U.S. Trade Representative

The above title was created by the 1979 Trade Agreements Act. Previously this position had been "the Office of the Special Representative for Trade Negotiations," and prior to that, simply "the Special Trade Representative (STR)." The increasing grandeur of the title

reflects the increasing importance that the position has played over time. The position was originally created under the 1962 Trade Expansion Act to invest in a single official responsibility for the Kennedy Round of negotiations. The creation of the CIEP under Nixon created a conflict between the two as to who had the lead role, and following much political wrangling, STR was given "Office" status under the 1974 Act and CIEP gradually became subordinated to Ford's EPB (Destler, pp. 154-55).

At the conclusion of the Tokyo Round it was felt that there was a further need for reorganization of trade responsibilities given the moderate performance of Carter's EPG and the success of STR. There was talk of creating a Department of Trade, but this never materialized. Following the demonstrable success of STR both in the Tokyo Round and in concurrent domestic trade complaints cases, the reorganization invested increased responsibilities within STR and providing it with the new name, the Office of the United States Trade Representative (USTR). This reflected the fact that its functions now extended beyond trade negotiations and into all areas of trade policy.

4.1.2 The Congress

As one congressman has observed, "Congress is a collection of committees that come together in a Chamber periodically to approve one another's actions" (cited in Allison and Szanton, p. 103). The main action does not occur

on the floor of the House or of the Senate but in the various committee rooms and conference committees where a few congressmen debate the details of legislation. A number of committees are important in the development of trade policy in general and agricultural trade policy specifically.

In terms of multilateral negotiations within GATT the key committees are the Ways and Means Committee in the House and the Finance Committee in the Senate. Under the 1974 Trade Act each committee had five advisors to the MTN. Both of the committees also have Trade Subcommittees where the primary responsibility for oversight of the negotiations lies. The advisors to the MTN were chosen from both the main committees and the subcommittees.

In terms of agricultural trade issues within the GATT negotiations, final congressional responsibility lies with these committees. However the Agriculture committees can be actively involved in the negotiations, and they have their own agricultural trade or foreign agricultural policy subcommittees. Members and staffers of these committees were actively involved in the interagency review process and often travelled to Geneva to testify throughout the course of the Tokyo Round. The influence of these committees on the outcomes for agriculture can be large.

4.1.3 The Executive Agencies

Almost all departments had some stake in the Tokyo Round. However the size of stakes involved varied enormously, both in absolute terms and in relation to particular issues that arose. The Agencies that could be said to have had a stake in all aspects of the negotiations were State, Treasury and Commerce. Other agencies were important to certain issues, but for the purposes of this research, it will be sufficient to focus on these three. The Department of Agriculture (USDA), of obvious importance, will be dealt with below.

Up until the time of the Kennedy Round the State Department had the lead role in GATT negotiations. The honor had been conferred as an apparently logical outgrowth of State's role in conducting foreign policy. However with each round of negotiations various groups began to complain that their economic interests had been subordinated, at considerable expense, to overall strategic foreign policy goals. For example, in agriculture during the Dillon Round many believed that the U.S. had not been tough enough in trying to limit the trade restrictive aspects of the EC's farm policy. It was believed this weakness had occurred because State did not want to slow the development of the Community, which it considered important to overall U.S. strategic foreign policy goals.

Whether strategic versus economic foreign policy goals should dominate one another is open to debate, but it became

clear that both at least should have an equal chance to be heard and judged. It was such consideration that led to the creation of the Special Trade Representative within the neutral ground of the Executive Office, and the consequent diminution of State's role. Logistically State's role remained strong for two reasons; its foreign service officers constituted the majority of the participants actually in Geneva or seconded to STR, and it controlled the official communications channels between Washington and Geneva. However, the former aspect was weakened under the 1979 reorganization when Commerce was granted authority to organize and administer the U.S. commercial attaches stationed overseas.

The Treasury Department, with its traditional role of conducting overall economic policy has always been keenly interested in countering State's stature in the conduct of trade negotiations. Treasury furthermore was charged with the implementation of a number of aspects of trade policy. The most important of these certainly over the time period under consideration was imposition of countervailing duties in unfair trade practice disputes. However Treasury has been traditionally staffed and administered by economic purists with considerable leanings towards a free trade or **laissez faire** doctrine. It was precisely this laissez faire approach that led to charges of a reluctance to impose duties, with the result that under the reorganization of trade

responsibilities pursuant to the 1979 Act, this area was given over to the Commerce Department (Destler, p. 208).

Prior to this time the Commerce Department had not had very much leverage to represent fully its constituent's views in the trade policy arena, the principle action revolving around a State/Treasury axis governed by presidential mediation. Commerce was usually represented in the various White House cabinet level forums outlined above, but apparently with less absolute influence than State or Treasury.

The Department of Agriculture

In terms of agricultural issues, USDA is the flag-holder for constituent interests. Within USDA trade policy issues have been dealt with by the Foreign Agricultural Service (FAS), since its inception in 1954. Created with the specific mission of increasing U.S. agricultural exports, FAS became the center of trade expertise on agricultural matters, and thus could be considered in this respect suited to the role of international negotiator. And in fact FAS gained that very authority within the GATT negotiations. Before the creation of STR, State had been required to acquiesce to joint negotiation of agricultural trade policy with FAS, and once STR was created, it too shared the spotlight with FAS despite on paper having the clear lead in negotiating authority. USDA also holds responsibility for implementation of other aspects of agricultural trade

policy, such as Section 22 of the Agricultural Adjustment Act.

4.1.4 The Interest Groups

Amongst agricultural interests there are two distinct forms in which they are represented. These are the general farm organizations and the commodity groups. The former date back to the Grange and include most importantly the Farm Bureau. Other newer, but less influential, organizations are the National Farmers Union, the American Agriculture Movement and the National Farmers Organization. General farm organizations have over the years had an immense amount of influence on agricultural policy. They have had a strong presence in Washington and developed close ties to USDA and the agriculture committees in the Congress.

In more recent years, the single-interest commodity groups have risen in prominence. This has occurred because of concurrent trends in agriculture and in the political process. As increasing specialization has occurred in agriculture, a farmers' interests are more often better served by an organization that represents solely the farmers' principle production enterprise. At the same time that these commodity groups were emerging, the political parties were in continuing decline, resulting in a fragmentation of the political process. A key force in this was the reform over the 1970s of electoral and party rules, as well as the rules of Congress, as access to individual

politicians became more important than allegiance to and backing of a party. The commodity groups have been able to target their efforts on key politicians that could be identified specifically with their narrow interests, often through political action committees, while the general farm organizations have struggled to maintain influence over a wide range of interests.[1]

Most observers would agree that since the early 1970s, these groups have had greater influence on agricultural policy than the general farm organizations. Both types of organization were important in the Tokyo Round through their lobbying particularly of USDA and Congress, but also of STR and the White House. The other interest groups affected by agricultural trade policy, namely consumers and taxpayers, as in most areas of political decision-making, have been poorly represented in the trade negotiation process.

4.1.5 Actor Interactions

Before proceeding to the detail of the case study, a brief outline will be given of the mechanisms for dialogue between decision process participants, as they existed during most of Tokyo Round following enactment of the 1974 Trade Act. The Act provided mechanisms for interagency coordination and for government/private interest interactions.

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[1]. For a discussion of both the evolution of the farm groups and the changing nature of the political process, see Bonnen, 1980 and 1984.

The 1974 Act refined the interagency policy coordination mechanism that had been established under the Trade Expansion Act of 1962. The Trade Policy Committee was established as the top tier of a three tier structure, meeting at the cabinet level with individual secretary participation dependant on the particular issues under review. Issues rose to this level only when not resolved at the lower levels. Beneath this committee was the Trade Policy Review Group which meets at the Assistant Secretary level to review those issues that have not been resolved at the most junior level of interagency coordination, the Trade Policy Staff Committee. This committee is comprised of agency representatives at the office director level. Given the breadth of trade policy, this staff level committee is further broken down into subcommittees and taskforces. At the conclusion of the Tokyo Round there were seven geographic subcommittees, twenty five functional subcommittees and eight taskforces at the technical working level (Rossmiller, pp. 166-167). Of greatest importance to agricultural interests in the context of the negotiations were the subcommittees for Agriculture, Agricultural Commodity Agreements, and Antidumping and Subsidies/Countervailing Duty Measures. Also important were the subcommittees for Licensing Code/Quantitative Restrictions, and Western Europe, and also the EC Enlargement Taskforce.

The 1974 Act also established committees to provide a formal channel of communication between the government and private interests. There is a presidentially appointed Advisory Committee for Trade Negotiations to oversee and input to the overall progress of the negotiations. In addition there are committees representing industrial, agricultural and labor interests. In the agricultural sphere there is a policy committee and eight technical committees. The membership of the Agricultural Policy Advisory Committee (APAC) is made up of producers, processors, traders and consumers. The Agricultural Technical Advisory Committees represent the interests of the principle agricultural commodities: cotton, dairy, fruits and vegetables, grain and feed, livestock and livestock products, oilseeds and oilseed products, poultry and eggs, and tobacco.

It is within all of these structures that the various actors within U.S. agricultural trade policy decision making are mandated to operate. The analysis below will outline the extent to which these mechanisms actually influenced policy outcomes over the course of the Tokyo Round negotiations.

4.2 An Organizational Output Approach

4.2.1 Analysis of the Tokyo Round

From the U.S. perspective, once it had been agreed internationally to pursue a new round of negotiations, the most immediate concern was passage of trade legislation that would enable the President to enter into negotiations. The

major agricultural issue was whether negotiations should be conducted across the board or on a sector by sector basis, and, indeed, whether this aspect should be legislatively decided.

The administration, through STR, wanted maximum flexibility, while other interested groups expressed their views directly to Congress. Industry feared that across the board negotiations would lead to industrial concessions at home for the sake of making a breakthrough on access for agricultural exports. Agricultural interests were split between import competing sectors and the exporting sectors. The National Livestock Feeders Association and the American Farm Bureau, in meetings with USDA, expressed the view that agriculture had been "sold down the river in previous negotiations" because of a sector by sector approach, and therefore pushed for across the board negotiations. The National Milk Producers Federation (NMPF) sided with industry, worried that in an across the board negotiation their quotas on imports might be ransomed for access concessions from other countries.

What finally emerged was a compromise position. Industry and the dairy sector had their way in the House with passage of the Karth amendment which provided that the nontariff barrier agreements "shall be negotiated, to the extent feasible, on the basis of each product sector of manufacturing and on the basis of the agricultural sector."

In the Senate, the Finance Committee sided more with STR and the agricultural exporters and incorporated a compromise wording that became the law. The Karth amendment was qualified by the phrase, "to the extent consistent with the objective of maximizing overall economic benefit to the United States." Also a clarification was added with respect to agriculture: "to the maximum extent feasible," agricultural trade liberalization "shall be undertaken in conjunction with" industrial trade liberalization (Destler, pp. 157, 178-179).

One further agricultural issue arose in connection with the Trade Act. This concerned the manner in which any negotiated nontariff barrier agreements were to be implemented. Again the dairy sector, this time joined by the livestock sector, were afraid of having their import protection bargained away. They thus wanted Congress to maintain some oversight over implementation of any agreements, so as to protect themselves since they exerted some influence over congressional outcomes. This view was similarly shared by industry creating a significant pressure on Congress. The provision was included in the bill, but in such a manner that it would have been extremely difficult for Congress not to have implemented agreements concluded by the President.

From where had such fears in the agricultural community arisen? The National Milk Producers Federation, in making its case cited the results of the so-called "Flanigan

report." This was a study that had been conducted at the request of Peter Flanigan, the chairman of CIEP, by FAS within the Department of Agriculture. Although the study was designed to look at alternative scenarios of possible outcomes of the negotiations for agriculture, it implicitly sided with a proposal for removing import barriers that largely served to protect the U.S. dairy and livestock sectors in exchange for access to European grain markets.

The report claimed three potential gains from such a course of action: improvement in the balance of payments; reduction in government expenditure; and a significant increase in farm incomes. Exports would rise by $9.5 billion and imports by $1.3 billion giving an improvement to the balance of trade of about $8 billion (Flanigan Report, p. 10). However the increased imports would be almost entirely in the dairy sector, resulting in what NMPF secretary Patrick B. Healy testified would be the "studied destruction of the American dairy industry" (Destler p. 176).

How had an agency such as FAS managed to upset its constituency so much? The Tokyo Round of negotiations was the first time that nontariff barriers had been so explicitly dealt with in agriculture. In previous rounds, the kind of analysis that FAS had been used to submitting had been rather drier fair concerned with the impacts of different levels of tariff cuts on individual commodities. This was the first time analysis had been conducted in the GATT context with an emphasis on domestic policies and thus

such a strongly political dimension. In pursuing its standard operating procedures for conducting analysis, the results were presented straightforwardly, and FAS failed to recognize the considerable political impact of the report siding so strongly with one position in their findings.

The impact this incident had on passage of the Trade Act was small compared to the long lasting effect it had on the way USDA, and FAS in particular, conducted themselves in the negotiations as they got underway. While publicly standing tall and acknowledging that Section 22 quotas might still be subject for negotiation, in private dealings with the agricultural interests, the Department was at pains to assure that the report did not constitute an administration position, but was just one possible option. In so doing, the possibility of this option ever becoming the USDA position was effectively ruled out.

With passage of the 1974 Act and the establishment of the advisory committees, USDA avoided further discomfort in their dealings with constituents by relying, without resistance, on the advice proffered in the meetings by the commodity groups. They especially listened to the NMPF from then on. Thus the events can be seen as having been shaped by the rigidity of FAS' goals and operating procedures.

Putting this episode behind, the administration was now charged with focusing on concrete work within the Geneva negotiations. This did not prove to be any easier, with the administration appearing to be caught between a rock and a

hard place. On the one hand, USDA wanted to reaffirm its market oriented approach but did not want to further offend the commodity interests. On the other hand, amongst the agencies there were differences of opinion as to the overall approach to take for agriculture.

One of the first issues where this became apparent was in grain policy. There was at this time growing pressure from third world countries for the establishment of international grain reserves, a concept that was logically subscribed to by the State Department, in the context of its overall foreign policy goals. Should such a policy initiative be pushed under the auspices of GATT or the IWC? STR thought GATT was appropriate, since concessions on grains could be traded in other parts of the negotiations, while State and Agriculture sided for the IWC. Inclusion of the Soviet Union, not a GATT member, was one obvious reason shared by both. Further State felt the less developed countries would appreciate the gesture of operating in the IWC, under UNCTAD auspices, where it was perceived they had a larger say than in Geneva under GATT. Agriculture did not want the topic discussed under GATT for precisely the reason STR wanted it; USDA did not want to lose leverage on other agricultural issues. STR was outnumbered and the talks were proposed for London under the IWC, although informational discussions continued in the GATT (Destler, p. 88-96).

With talks initiated under this forum, attention was then focused on remaining agricultural issues that could be

addressed in the GATT. Here the basic differences in country approaches began to emerge; the U.S. wanted agriculture to be treated no differently than industrial goods, whereas the EC clearly wanted a separation. This is how it appeared in Geneva, but such a U.S. position resulted from the differing inputs of a number of organizations, many of whose positions have been stated above.

State was still pushing for global negotiations, and elements of USDA were also. But after the Flanigan affair FAS was taking a low profile approach, and listening hard to the advice of the technical committees that were divided on commodity lines. While STR had the lead role in negotiations, in terms of technical expertise and therefore negotiating back-up, they were very dependent on USDA and FAS in particular. Thus with FAS not strongly pushing overall negotiations, and the EC very much holding to their view that the negotiations should be separated out, it was easy for a gradual acquiescence toward the European approach. By the time the Trade Bill had been passed and meaningful negotiation could begin, the U.S. was ready to accept setting up subgroups in GATT to deal with the three major commodity areas.

Acquiescence to the EC was not total, since there was still within USDA and STR a resistance to contemplation of commodity agreements or market sharing schemes. Thus most of 1975 was spent in arguments between the U.S. and the EC on

just exactly what issues the subgroups were competent to address.

In an attempt to break the deadlock in 1976, talks focused on those commodities outside these groups for which adverse trade effect findings had been reported in the initial stages of the negotiations. By the end of the year many bilateral and plurilateral consultations had been communicated to all participants. However "the exercise was, of course, essentially one of notification, examination and dialogue, with no commitment as to how or where the actual negotiations would be undertaken" (GATT, 1979, pp. 22-23).

With the 1976 election results came a change from a Republican to a Democratic administration as Jimmy Carter took over the Presidency. Immediately, timing became a key influence, with negotiating authority due to expire within the lifetime of the new administration, just two years away. In order to achieve any success in the negotiations as a whole, the deadlock in agriculture had to be broken. With less of a commitment to free trade ideology, the Democrats were able to take a major change in policy direction: they agreed to talk with the EC about the possibility of arranging commodity agreements. This created a major storm in Europe, with the Europeans being completely caught off-guard. In the U.S. there was some reorientation of goals and objectives such that the agencies involved had to adapt to new ground rules.

It was agreed that the work on grains should continue to be conducted under IWC auspices entirely for the time being, and so the GATT grains subgroup ceased to meet, many of the participants simply relocating to London. The same U.S. agencies that had been involved in the original food reserve proposal debate took up positions again over the grains talks. However this time there was considerably more consensus. Further since the talks were outside GATT, lead responsibility was given to USDA. What emerged as a U.S. position was mostly consistent with the Department of Agriculture position; there was to be no talk of market sharing, but an attempt would be made to conclude a buffer stock type of wheat agreement, with specific stockholding and price trigger requirements. All agencies agreed that feed grains be excluded, as their was little to be gained there from the U.S. perspective. However it was agreed that feed grains might be covered by a convention without economic provisions.

How was it that just by changing the administration, there appeared to be so much more harmony among the different agencies' approaches to the agricultural negotiations? One significant common goal had been established: the negotiations had to be concluded in a manner that would be seen as a success for the incoming administration; there was very little time to do it in, and therefore agency differences should be kept to a minimum. In spite of what parochialism inherently existed, after a

period of indirection, most organizations were willing and able to get behind a common goal. There was little need to change the nature of agencies' day to day operations; rather just a reorientation of policy perspectives to accompany any analysis conducted.

One factor that aided smooth progress was the delineation of responsibility for particular commodity areas. During the Nixon/Ford period State had been very involved in grain policy formulation and had thus forced some mediation by STR. Now however, with some encouragement from STR, State concentrated on sugar negotiations, leaving Agriculture to deal with grains. STR was thus happy and able to take a back seat on both.

Long term economic factors had also had an influence on actors' perceptions of the stakes involved. The disharmony within the Nixon and Ford Administrations was partly a reflection of the unstable and depressed nature of the world economy. The uncertainties that had been created between 1971 and 1973 by the move to floating exchange rates, world food shortages and the oil price shock, heightened the sense of what was at stake in the negotiations. An adverse and uncertain world led agencies to play their cards closer to their chest and rely more heavily on standard responses to situations. In contrast, by the time the Carter administration arrived, the monetary system had somewhat stabilized or at least people had got used to its new behavior, commodity markets had become more predictable with

prices returning closer to historical levels, and the impact of higher oil prices had been figured into peoples' expectations. Although inflation continued to be a problem this could at least be factored into calculations of negotiation strategies. In this more stable environment the stakes in the negotiations seemed and indeed perhaps had become less critical in absolute economic terms. Thus the perceived value of differences among constituent interests diminished in intensity, making for smoother working relationships.

In the agricultural negotiations FAS was able to concentrate on the familiar details of the offer and request procedures of the tariff negotiations that now got underway seriously. Parts of the nontariff negotiations, mostly over quotas on specific commodities outside the three main groups, also were included in these negotiations. As progress was made on these items the sense that the negotiations could be made a success slowly began to surface.

However the success that was perceived in this more traditional area of the negotiations helped to create an impression that failure to make substantial progress on the more contentious nontariff barrier issues would be more easily accepted. Thus the negotiations in the dairy and meats subgroups became more of a face-saving operation, from STR's and even FAS' perspective, than a serious attempt to resolve the fundamental economic issues. This was

particularly so, since at this stage it was still believed by all agencies that a meaningful wheat agreement could be concluded, which would be the crown of the agricultural negotiations.

It was because of these attitudes that, for the first time in the negotiations, the U.S. delegation did not table concrete proposals or counter-proposals. The proposals for dairy were submitted by the EC and New Zealand while the meat proposals were submitted by the EC and Australia. In the grains negotiations however, the U.S. was at the forefront since it was still believed there was a lot left to play for.

Thus the negotiations drew to a close with a reasonable consensus within the U.S. government on what could or should be achieved. The provisions of the Dairy and Meat agreements were primarily of a consultative nature, and therefore would not offend the economic interests of any agencies' constituents. A consensus also existed between STR and USDA that the differences that remained between the EC and the stated U.S. position over the wheat agreement were sufficiently large to justify admitting failure in this area. Enough had been achieved elsewhere, as well as in other agricultural areas, for the negotiations to be considered a success overall.

Throughout this active period of negotiation under the Carter Administration, the interest groups had voiced their concerns in the political and technical advisory committees.

The working relationships between the groups and their government counterparts continued to be as good as they had been under the Republican administrations. Relations were good, even though the advice of the interest groups was not so blindly heeded, because in very few instances were U.S. interests going to lose out under the new administration's approach. Also, the groups were listened to without any direct feedback being provided as to where their concerns ranked amongst the administration's priorities. If a group did not feel it was getting heard it could always try and influence the process in another way. This usually meant making its case to Congress. Over the course of the negotiations only two organizations, the National Milk Producers Federation and the National Cattlemans' Association felt compelled to do this formally.

STR had specific responsibility for the subsidy negotiations which included their impact on agriculture. The position taken over the treatment agriculture should receive under the Countervailing Duties and Subsidies Code was shaped in part by one other development in the agriculture group negotiations. While recognizing that many agricultural issues had been unresolved, USDA and STR also realized that many good working relationships had developed amongst their own officials and between other countries' officials including those from the EC. It was thus felt that there could be a profitable continuation of dialogue after the round was concluded, that might aim to resolve some of these

issues. Thus STR did not push as hard as it might to bring agriculture more fully under the stricter disciplines of the code. It was felt that this could be the subject of future discussions, since it was not worth risking losing the whole code for the sake of agriculture when the U.S. negotiating deadline was so rapidly approaching. Thus the U.S., through both USDA and STR, pushed for what became the Multilateral Agricultural Framework. In turn this led to the creation of the GATT Committee on Trade in Agriculture, which provided an appropriate forum for some of the preparatory work now being discussed for the new round.

With the negotiations in Geneva concluded all that remained was the passage of the requisite implementing legislation. Because of excellent relationships between STR and Congress throughout the course of the negotiations, what had been agreed to in Geneva was, almost without exception, already known to be acceptable to the Congress. Thus the 1979 Trade Agreements Act went through what participants termed "nonmarkups" in the Finance and Ways and Means committees, follow by a "nonconferance" between them, before proceeding to an almost unanimous vote of approval: 395 to 7 in the House and 90 to 4 in the Senate (Destler, p. 202).

4.2.2 Adequacy of the Framework

The foregoing analysis illustrates how expanding the conception of government as a unitary decision maker to include both politicians and bureaucrats as distinct classes

of actors adds considerable depth to policy outcome explanations. The strategies followed in the Tokyo Round negotiations were clearly not the outcome of a single line of logic or point of view, but resulted from the mix of ideas and orientations of a number of different organizations. Each had a particular input to the whole that emerged.

The analysis permitted the explanation of how it was that a change in the U.S. position in the negotiations could occur, while at the same time the day to day operations of most participants were little changed. As Allison notes, the framework, as well as providing new answers to the same questions as raised before, asks a whole set of new questions also.

One factor that emerges is the strength of the hypothesis that domestic policy considerations constrain the options open for negotiation of international trade policy. By viewing government as a unitary decision maker this is less than apparent, but when the goals of different organizations are addressed it becomes more obvious. The operation of domestic USDA programs had an effect on the latitude of approaches that were available to negotiators.

While many new questions have been raised and addressed it will be seen that further insights can be gained by subjecting the events of the Tokyo Round to an analysis using Allison's third or Governmental Politics model as the basis.

4.3 A Governmental Politics Approach

4.3.1 Analysis of the Tokyo Round

A closer examination of the dynamics of Tokyo Round events that this framework allows, will reveal additional insights into how final outcomes were reached and what their primary determinants were. One of the first issues that arose was the position taken by USDA in and over the Flanigan report. In the analysis above it was easy to see how this situation created an awkwardness for the administration, but it does not explain how this was allowed to occur. An examination of the personalities involved does point to an explanation.

The report had been prepared as an internal document for use by CIEP. The report's coordinator, Howard Worthington, Associate Administrator of FAS, philosophically agreed with the free trade orientation of the report. However the content of the analysis went against the grain of many peoples' orientation at FAS, so it was not altogether surprising that the report ended up in the hands of Senator Hubert H. Humphrey, Chairman of the Senate Agriculture Subcommittee on Foreign Agricultural Trade. Once Humphrey made it public by placing its contents in the Congressional Record, the administration, with USDA in concurrence, disavowed the report saying that it was in no sense an administration position (Saylor, p.260). FAS was thereby placed back in a more familiar light with their constituents. It also served Humphrey's purpose of being

seen to protect his constituents, who happened to be similar to if not the same as those of FAS. Worthington later left FAS to join closer philosophical soulmates in the Treasury Department.

That the White House so vehemently disowned the report was in some sense due to the overly cumbersome nature of CIEP. While the report may have said what Flanigan wanted, the sheer number of people involved in the council made it difficult to reach consensus in its meetings. As one observer noted, at a CIEP meeting to discuss agriculture at around that time there were fourteen people present; one each from Agriculture, State, Treasury and Commerce, and then ten from the White House!

In order to understand how STR was preempted on where grain reserve negotiations were to be conducted, it is necessary to consider who the principle players were in each agency. The key here, was the role played by Henry Kissenger, then Secretary of State, who considered the issue a useful and important way of reestablishing credibility after the 1973 soybean embargo, where State had been preempted by George Schultz at Treasury. Thus Kissenger took the initiative by announcing at a speaking engagement that an administration reserve proposal would soon be tabled, despite the fact that there had been no inter-agency discussion of the issue up to that time. Such action forced the issue onto USDA's agenda, which would have preferred not to deal with reserve stock proposals at all, since this

would have backed up the EC commodity agreements approach to the MTN. But having been preempted, USDA was more prepared to side with State and call for talks under the IWC, than allow STR to have the talks conducted under GATT.

Thus Kissenger, following his parochial interests and using his undoubted influence with the President, was able to set and dominate the agenda for discussion of the issue. Secretary of Agriculture, Earl Butz, siding with Kissenger rather than fight the issue, was thus better placed to influence the final outcome of the proposal than if USDA had opposed State from the start. And in fact, the final proposal submitted to the IWC was a watered down version of State's original intentions that better suited USDA's goals (Destler p. 95).

Attention was then turned to events in Geneva. The position taken by STR over procedures and coverage as outlined above, with its apparent indecisiveness, was further compounded in agriculture by feuding amongst some of the senior administrators at FAS. There was no great pressure from above to remedy the inherent lack of direction, since this fitted well with White House goals at that time. A presidential election year was approaching, as well as elections in Germany and Japan. It was inevitable that no substantial agreements could be concluded in the time remaining before the elections. Any tentative agreements that were reached could easily be undone by a change in administration. Thus until the elections were

resolved there was little incentive to push hard on difficult issues; let the next crowd handle it, and if it was going to be the same people, then after the election would be the appropriate time.

After the election, as the Carter team began to fill vacated offices the sense of listlessness became apparent. Upon entering FAS, the new administration officials were quite candidly told by senior staffers that their presently available staff resources were being underutilized at that time. Further, in trying to establish what policy positions had been adopted within the agency with regard to the negotiations, the picture that emerged was that the only policy direction as such was that which was provided by the commodity groups through the technical advisory committees.

The new attitudes to change all this that began to prevail were as much a reflection of one man as anything else. Putting such a political "supremo" as Robert S. Strauss in the position of Special Trade Representative indicated to the world that the administration meant business in the negotiations. Strauss had been chairman of the Democratic National Committee for the previous five years. Only a person with such undoubted public standing and professional reputation could, as one participant recalls, in an early meeting with his European counterparts intone "I didn't get rich being stupid; let's cut a deal," and be respected for it. Such a pragmatic approach was to invade

all levels of the U.S. decision making process, and thereby to a large extent the negotiations themselves.

The clout that Strauss embodied enabled him to dictate to an extent the direction and policy content of the negotiations. Approaches were put forward for agriculture by Strauss that were often news to most if not all of USDA and FAS. Staffers have noted that the initial list of agricultural commodities over which agreement was necessary for a successful negotiation that Strauss presented to the Europeans, had not been openly debated amongst the U.S. agencies. At least if the top officials were being consulted, they were not indicating this to their staffs. Strauss' personal standing, within the administration and especially with the Congress, enabled him to behave in this way.

But as noted, it was a sense of pragmatic teamwork that established itself rather than dictatorship. This could not simply be ascribed to newly shared common organizational goals. To a large extent it was due to the personalities of the people involved in the various agencies. By luck or design, or a combination of the two, there soon developed mutual respect amongst the key administrators, and amongst different agency staffs. Strauss was the apex of this, given his undoubted access to the President and the force of his personality and reputation. His task was to get deals made, often leaving the details to others since he acknowledged that his trade expertise was limited. Within STR, in most

instances on agriculture, Strauss was happy to delegate authority in Washington to his deputy STR. This was Alan W. Wolff, who served as a source of continuity and institutional memory within STR, having survived from the Republican administrations. He developed strong working relationships with his chief counterparts in State, Agriculture, and to a lesser extent Treasury. These were respectively, Julius L. Katz, State's long time commodity specialist, now Assistant Secretary for Economic and Business Affairs, Dale E. Hathaway, Under Secretary of Agriculture for International Affairs and Commodity Programs, and C. Fred Bergsten, Assistant Secretary of the Treasury.

Hathaway himself was in a somewhat unique position in that the Secretary of Agriculture, Bob Bergland, a former Minnesota congressman, was neither that interested in or knowledgeable about trade and thus delegated most of the responsibility for the negotiations to Hathaway. Hathaway also developed strong working ties, as did Katz, with Jim Starkey who was the assistant STR for agriculture. Starkey had previously been director of Trade Operations at FAS and thus had the confidence of that agency. While the inter agency committee procedure functioned smoothly and usefully over this period, a lot of the key inter agency negotiations were handled strictly between these three. It was this close personal rapport that enabled the delineation of responsibilities over the grain and sugar negotiations.

While each agency might have had organizational goals that would direct them to protect turf and be involved in both, Katz and Hathaway, who were already friends of many years, were able to get each organization out of the other's way. Katz personally was the greater sugar expert and Hathaway knew the grain markets better.

The backgrounds of the individuals involved also ensured a good relationship with the congress. From STR's perspective, there couldn't have been anyone more suited than Strauss. At State, Katz by virtue of his long track record there, had mustered respect on the Hill. Within USDA, Bergland as a former Congressman was well suited for dealings with Congress, as was his Administrator of FAS, Tom Hughes, who was part of the Minnesota political scene. The Deputy Administrator of FAS, Thomas R. Saylor, had worked on the Senate Agriculture Committee for Hubert Humphrey for the previous four years, and thus had a good rapport with and many contacts in the Congress.

Despite the apparent harmony at home the picture in Geneva was not quite as rosy for two reasons. The most obvious reason was that the EC were still tough negotiating adversaries, despite the shift towards their position by the U.S.. This was further compounded by a less than harmonious relationship between the STR and agriculture representatives present. The Deputy STR in Geneva, Alonzo L. McDonald, had taken to heart the idea of coming round to the EC position considerably more seriously than anyone else. This made it

difficult for the senior FAS representative present, Ernest Keonig, to pursue a course for agriculture consistent with the wishes of Washington.

The specific situation was that in agriculture McDonald was prepared to talk about market sharing schemes, while in Washington all agencies, including STR, were prepared only to consider commodity agreements. McDonald could pull rank on Keonig thus putting FAS at a disadvantage in representing agriculture's views in the actual negotiations. It took the intervention of Strauss, through requests from Keonig via Hathaway, to remedy the situation periodically, but this left a continuing scar on working relationships within the U.S. delegation in Geneva for the remainder of the negotiations.

As the substantive elements of the negotiations proceeded, the convergence towards a general consensus of views within the U.S. administration allowed a conclusion to be reached. The only area where there might have been some friction was in the grains negotiations. As original proposers of the grain reserves scheme, the State Department might well have pushed closer to the EC position on the wheat proposals. However this did not create a problem because of the gentlemanly nature in which State had bowed out of those negotiations in return for Agriculture bowing out of the sugar negotiations.

Throughout the negotiations the influence exerted by the interest groups was mitigated in one important respect.

FAS and USDA were able to avoid serious responsibility for defending constituent interests because of the presence of Strauss as STR. Who could legitimately stand up to him? If the interest groups had a serious gripe they were better off taking it to the Congress, where there was more chance of influencing the STR. And after all, STR did have the lead in the negotiations. With a weaker STR it would not have been as easy for USDA to have sidestepped issues, certainly with the NMPF.

Having said this, some observers have also noted that the show made by the dairy lobby was precisely that. After the Flanigan affair they were quite happy to accept that nothing worse than a marginal renegotiation of Section 22 quotas would occur. Thus their noise was mostly for the sake of creating a show for their own constituents, the individual dairy farmer members.

At the end of the negotiations one of the outcomes on which much stock was placed for the solution of future and unresolved problems was the Multilateral Agricultural Framework. This finally led to the work of the CTA in preparation for the new round, but failed to create any real achievements in the interim. The basis of establishing the mechanism for discussion had been the good working relationships among most participants that had developed in the last two years of the negotiations. However these personal bonds soon began to break down as over time people changed positions or moved out of government both in the

U.S. and the EC. The earlier basis for success thus slowly disappeared explaining why so little was achieved between 1980 and 1983. It was not until there was a new action-forcing agenda that progress was again made. This did not occur until November 1982, following the GATT ministerial meeting at which time it was decided to push forward toward a new round.

The smooth passage of the implementing legislation through Congress at the conclusion of the Tokyo round, served as further testament to the critical role played by Strauss and several other key officials in the various agencies who had maintained good working relationships with the relevant congressman over the course of the negotiations. An additional outcome of the respect that STR had garnered with Congress was that the legislation provided for a reorganization of trade responsibilities within the government which was fully intended to further cement STR's position. The debate ranged as far as transforming STR into a fully fledged Department of Trade, but in the end the changes were considerably more modest. The details of these changes and their impact on the policy process will be further dealt with below.

4.3.2 Adequacy of the Framework

This third look at the events of the Tokyo Round has raised yet more questions and provided additional answers. The focus on key decision makers in each of the

organizations influencing the decision process has further shown how agency positions are shaped, often reflecting the particular biases or expertise of top administrators.

By examining how the interest groups exert their influence on individuals, both in Congress and other organizations within the decision making process, it becomes easier to verify and expand on specific hypotheses of the framework. Interest group pressure has over time lead to the creation of many domestic programs that aim to support the rural community, particularly through raising farm incomes. Where these programs fail to provide adequate support, pressures develop for protectionist legislation. It was in such a situation that the Nixon Administration took the initiative and turned the momentum around into an initiative for trade liberalization.[2] However the domestic farm lobby was able to constrain severely the approaches taken in Geneva, once the Flanigan report was made public.

4.4 Reflections on the U.S. Public Decision Process

First some general observations will be made about the function of the U.S. public decision process at the time of the Tokyo Round. This will be followed by some observations on how that process is different today. This will provide the necessary background for the later analysis of how the

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2. The final outcome of the 1974 act exceeded all expectations. Most observers had expected more protectionist legislation, with less negotiating authority for the new round. See Destler, chs. 9-12.

policy process itself may impact the upcoming round of negotiations.

4.4.1 The Public Decision Process During the Tokyo Round

Interviewing past and present participants in U.S. agricultural trade policy, one fact becomes very clear. Regardless of individuals' positions within the process, all observers agree that the nature of the inter-agency review process is something to cherish. It provides an excellent opportunity to air and hammer out differences in approach. Regardless of the pursuit of individual and organizational self-interest that inevitably takes place within the process, it is felt that what emerges at the end is likely to be as close as one could ever get to the so called "national interest."

Although the three tier committee structure was outlined before the analysis, little specific reference was made to it in describing the details of the events as they occurred. The reason for this is that existence of the process and the precedent it sets for communication is what is important rather than the form in which communication occurs. As many observers have noted, the meetings that occurred did not always follow a textbook description of how the process might have been supposed to work. The most important thing is that inter-agency discussion exists. As the case study illustrates, the personalities involved often

influence outcomes more than the formal structures under which they are brought together.

An example of this is the top tier, the cabinet level Trade Policy Committee. Over the course of the negotiations this group rarely if ever met. During the Nixon years it was supplanted by CIEP, while in the Ford administration most decisions were made in the EPB. In the Carter Administration the locus of cabinet level decision was the EPG. The players were the same, so it made little difference where the decisions were taken.

One point of possible significance on this issue however, is the importance of the role of committee chairmanship. The TPC would be chaired by the STR, while the EPB or EPG would be chaired by the Secretary of the Treasury. Before the Carter Administration this was less crucial since no major decisions were going to be taken, and in the case of Strauss as STR, the matter made little difference since he possessed as much political weight as his cabinet level counterparts regardless of the formalities of committee chairmanship.

Over the course of the Tokyo Round some changes in the process did occur, mostly concerning the role of the STR. After surviving the threat of being merged with and becoming subordinate to CIEP, the role of the STR grew in significance over the course of the round. The position was originally conceived as being that of a mediator and arbiter between constituent interests who was answerable directly

only to the president and Congress. The major views to be balanced were those of national security and foreign policy, domestic economic interests and trade policy itself.

In theory if decisions were taken in the TPC such neutrality might have been possible, but in practice it would have been difficult. In any event most cabinet level decisions were taken in economic policy councils thereby creating the need for STR to take stands on particular issues. This development was probably for the better as without it the position of STR would not have provided the opportunity for leadership that it gained under Strauss.

The leadership role of the position was further cemented by the reorganization that followed passage of the 1979 Trade Agreements Act. The creation of the Office of the United States Trade Representative (USTR) and its subsequent evolution will affect the functioning of the policy process in the upcoming negotiations.

4.4.2 The Public Decision Process Today

USTR today has an even stronger lead in trade policy. In the intervening years since the conclusion of the Tokyo Round, the agency has become increasingly involved in all aspects of trade policy, not just multilateral negotiations. On the familiar ground of negotiations, USTR has organized many bilateral talks including the recently concluded free trade area negotiations with Canada. USTR has been increasingly involved in domestic trade injury cases in

conjunction with the International Trade Commission (ITC) and other agencies.

The 1979 Act also affected the roles of a number of other agencies. Treasury lost control of enforcement of countervailing duty decisions to Commerce, who also gained the foreign commercial service role formerly played by the State Department. However, it is felt by present observers that in the context of international negotiations, the role played by Commerce will be no more important than in the past. State and Treasury with their prerogatives on foreign and economic policy will maintain their prominence.

Under the Act, Agriculture retained its rights over implementation of agricultural trade policy while USTR has over time further solidified its control over policy formulation. It has been noted that this is partially a result of the combination of weak leadership within FAS and strong agricultural support within USTR. The appointment to the position of trade representative of Clayton K. Yeutter, an agricultural economist and previous Under Secretary of Agriculture and Deputy Trade Representative, further ensures that USTR will take a lead role in agricultural matters.

An important change that has occurred in the policy process is the manner in which issues are managed. Throughout the Tokyo Round issues were dealt with in the classic bottom-up manner of government. Those issues amongst agencies that could not be resolved at the staff level were brought to the attention of the Trade Policy Staff

Committee. Any unresolved issues coming from there were then dealt with in the TPRG and, if still unresolved, in the TPC or economic policy forum at the cabinet level, with the occasional final involvement of the President.

Most interviewed observers agree that today in the Reagan Administration this pyramid-like arrangement has been inverted. Policy positions are now more often formulated in a top-down manner. Today, as one staffer observes, rather than providing the relevant analysis for a set of issues for higher level debate, staff get requests for supporting analysis on an issue decided upon and communicated down from above. With the return of a Republican administration, there has also been a return to policy more dictated by philosophical values rather than analysis and pragmatism. Thus the balance of power that exists amongst the top cabinet level players becomes a more crucial issue. This too would appear to be significantly different than in either the Republican or Democratic administrations that were involved in the Tokyo Round.

Today access to the President appears to most observers to be even more difficult to obtain than it was during the final reclusive days of the Nixon White House. A close tab is kept on the hierarchy that exists amongst the various cabinet ministers. The key players for agriculture in the present administration along with Yeutter are: the Secretary of State, George P. Shultz; the Secretary of the Treasury, James Baker; and obviously the Secretary of Agriculture,

Richard Lyng. Daniel Amstutz, the Chief Negotiator for Agriculture and former Under Secretary of Agriculture for International Affairs and Commodity Programs will also play an important role, given his personal standing within USDA and Lyng's apparent willingness to delegate to him. Some observers went as far as to call Amstutz the "real Secretary of Agriculture," while he was Under Secretary.

The access these players have to the President and therefore their ability to set a top-down agenda is very much influenced by the nature of White House organization as implemented by the Chief of Staff. Howard Baker, while viewed not to be so obsessed over access as his predecessor Donald Regan was, is nonetheless said to be the access controlling gate-keeper to the President. Only Shultz and perhaps Baker are thought to have direct access. Lyng through his California connections to Reagan is thought to have a better relationship than many others, while Yeutter in the key position of Trade Representative appears less well placed, although the regard with which his technical abilities are held improve his position.

As in previous administrations most cabinet level discussion of trade issues occurs in the Economic Policy Council (EPC), as opposed to the TPC. It is difficult to say much more in terms of what impact these personalities may have on the new round, especially given the turmoil over the Reagan Administration's foreign policy that exists at the time this is being written. The fact that there is a

presidential election in 1988 will limit the real progress that can be made, though certainly a lot of preparatory work has been and will be done.

Some comments however can be made regarding the likely impacts on the policy process of changes that have occurred in economic factors. Since the time of the Tokyo Round the federal budget deficit has become the most important economic fact of life for the U.S.. This is the case both in terms of economic reality and in terms of perceptions. If the issue was not already focused before, it became so with the enactment of the Gramm-Rudman-Hollings legislation. The deficit situation has altered the decision calculus of all participants in the policy process.

Its impact on the agricultural negotiations of the new round is going to be realized in terms of the connection between the cost of commodity programs and the status of world commodity markets. It is being increasingly asserted that the hypothesis that budget pressures will impact the range of what can be legislated, is going to be realized with increasing meaning in agriculture. Budget pressures, coupled with the most expensive agricultural legislation of all time, are going to force domestic agricultural policies more firmly on the GATT negotiating agenda.

This situation is reinforced by one of the other economic changes that has occurred. After the brief food crisis of 1973/74, world agriculture entered into and has remained in chronic overcapacity. With every third U.S. acre

grown for export, the pressure of this situation is especially acute. The resulting depression of world prices and continued low returns in farming despite unprecedented program expenditures, means that international solutions are all the more necessary. There is a sense amongst participants that the new round will be a last chance to stave off a U.S. drift towards agricultural protectionism. The necessity to deal with the overcapacity question forces domestic policy issues onto the GATT agenda.[3]

Recently it was possible for then Under Secretary Amstutz to say that Section 22 quotas are a definite bargaining chip and nobody flinches. This is quite a contrast to the sentiments that pervaded the Flanigan affair. Thus, it can clearly be seen how changing economic circumstances have altered the policy process by affecting what is perceived as being politically feasible or even necessary.

All these events clearly illustrate the validity of Petit's hypothesis that in the long run economic factors influence outcomes. And having considered the issues from the perspective of the different organizations that make up the government it easy to understand why the final effects of that influence may not always follow an economic rationality. The understandings gained of how the policy process has worked in the past and works presently will be

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[3]. For an excellent set of papers on some of the issues and their economic background that will be faced by the U.S. and the EC, see the Curry Foundation, 1985.

useful in analyzing the political feasibility of some of the agricultural proposals currently under consideration for the new round.

CHAPTER FIVE

THE EC PUBLIC DECISION PROCESS FOR AGRICULTURAL TRADE NEGOTIATIONS

The analysis in this chapter has been constrained by data limitations. By comparison to the analysis of the U.S. decision process, data was less available both in respect of written material and policy participants that were available to be interviewed, since it was possible only to interview EC representatives now present in Washington. It has therefore been impossible to carry the analysis as far as was done in the previous chapter.

As has been noted, in following Allison's approach of applying different models, each model used has different data requirements. It was concluded that insufficient data had been obtained to conduct an analysis using the Governmental Politics approach. Therefore this chapter will be limited to a discussion of the principle organizational actors involved and an analysis using the Organizational Output approach.

Secondary sources are quoted where they have been used throughout the chapter. However the principle source has been interview material, relying on both EC representatives and U.S. representatives' knowledge of the EC. Most observations or inferences have been corroborated by at least two interviewees.

5.1 The Actors

5.1.1 The EC Commission

The Commission, though not having the power of decision that is vested in other community institutions, is the central player in community policy in that it is the originator of policy proposals and implementor of policies once decisions have been taken. The Commission is made up of a number of branches or departments known as Directorates General that are overseen by the President of the Commission and Commissioners that are appointed by the member states.

In agricultural trade policy there are two Directorates General that are of importance; DG VI, the Directorate General for Agriculture, and DG I, the Directorate General for External Relations. DG VI is one of the largest entities within the Commission accounting for approximately 10 percent of the administrative staff. Its size and the importance that agriculture plays in overall community matters has lead to a display by DG VI of a degree of aloof separateness from the rest of the Commission. This is reflected in its internal structure which somewhat mirrors the structure of the whole Commission (Petit et al., p. 103).

The primary responsibility of DG VI is the development and implementation of agricultural policy as embodied in the Common Agricultural Policy (CAP). It is through the maintenance of the CAP that the bureaucratic security of the members of DG VI can be assured. High priority is placed on

this task by others outside of DG VI, since the CAP is the most tangible product and visible element of European unity that the EC has managed to produce. Its survival reflects the health of the Community as a whole. Thus those within DG VI are sometimes viewed with a degree of deference by those elsewhere in the Commission.

Despite such exalted status, technically when it comes to the negotiation of international agreements, DG I has an unequivocal lead in all matters. Indeed, under the Treaty of Rome the Commission is invested with sole responsibility for negotiations on behalf of the Community and therefore also its member states. And this authority is invested within the Commission in DG I. In practice, because of the division of technical expertise among the Directorates General, when agricultural issues are under discussion DG I relies heavily on input from DG VI. This usually goes as far as DG VI preparing the original policy position papers, which are then subject to review by DG I. More often than not the position adopted by DG I is a close reflection of the wishes of DG VI.

Above the Directorates General are the Commission President and the Commissioners, whose overall objective is to be guardian of the Community's achievements in the institutional, political, economic and social domains. The primary power enabling such guardianship is the Commission's institutional right to be the proposer of policy initiatives. In recent years this has to some degree been

subordinated to the member states meeting in the various Councils of Ministers, and at summits of the Heads of State now referred to as the European Council (Swann, p. 63).

The agenda that the Commission pursues is influenced by the Presidency of the Community. Although the President of the Commission occupies a two year term, the Presidency of the Community as a whole rotates between the member states on a six month basis. A previous President of the Commission, Gaston Thorn, has observed that there is a tendency for each member state as it occupies the chair to "behave as if it were controlling the destinies of the Community." The concerns of a particular country can be promoted while that country holds the presidency and thus the realization of national interests can be influenced considerably in this manner.

5.1.2 The Council of Ministers

There is in fact no single Council of Ministers, but a series of Councils. Each Council represents a particular policy area. The Council has the major political role within the Community through its power of decision over Commission recommendations. The Council is the most visible point at which the conflict between EC and member state interests can become apparent. Ministers must aim to balance Community interests with those of their own member states, through which they were elected to their positions.

In the context of agricultural trade, there are three councils that are of interest. The first is the Council of Agricultural Ministers. This is made up of the Ministers of Agriculture from each of the member states. In its dealings with other actors at the Community level, the agricultural council can be viewed as behaving as a unitary actor. In contrast the decision making that goes on within the Council is characterized by the personalities of the different Ministers of Agriculture and their respective member state constituencies. As a unitary actor the Council aims to defend the principles and workings of the CAP, while internally Ministers aim to defend their individual national gains under the CAP. In dealing with agricultural trade this dichotomy still exists but is less important because of the common external protection afforded by the CAP. Protecting the national interest is almost analogous to protecting the CAP in this situation. Differences will occur because of different national commodity mixes.

The second Council of Ministers that is important is the Foreign Affairs Council made up of member state Foreign Ministers. This council is responsible for the EC's external relations and thus reviews and acts on the proposals of DG I. Because of the political nature of external affairs, this Council may also consider any other area of policy that has international implications. Thus it will be vitally interested in agricultural proposals that affect international markets and any agricultural trade

negotiations. While DG I conducts negotiations, the Council will play an important role in developing the Commission's negotiating mandate.

The Financial Council of Ministers has become of increasing importance to agricultural and agricultural trade policy over the years, because of the growing budgetary consequences of such policies. Like the agricultural council, individual council members play a dual role: externally protecting the budget from the demands of specific councils, such as agriculture for the CAP, and internally ensuring that the member state represented gets a fair deal in respect of the costs and benefits of programs. Their role relates directly to the hypothesis that budgetary considerations place limits on policy outcomes.

As previously noted, the emergence of what is known as the European Council, namely summit meetings of Community Heads of State, is playing an increasingly important part in Community decision making. This is a role that was neither provided for nor predicted by the Treaty of Rome but has become an important and accepted part of the operating procedures of the EC.

5.1.3 The EC Parliament

Originally representatives were appointed to the Parliament by the member states, but today it is made of elected representatives, following reforms of the Treaty of Rome. Despite the involvement of the community voters in its

composition, the Parliament is the least powerful of the Community institutions. The Parliament is consultative rather than legislative. Before the Councils make decisions they are obliged to consult with the Parliament. However in most cases they are not obliged to let the opinions proffered affect the content of their decisions.

The one power the Parliament does have is the authority to dismiss the Commission, should it fail in the Parliament's eyes, to fulfil its obligations. However the parliament has no role in the appointment of new Commissioners. This power has never been exercised, and as Swann notes, this is because most of the displeasure of the Parliament derives from the decisions of the Councils of Ministers rather than the Commission (p. 70).

5.1.4 The Interest Groups

Interest groups are specifically connected to the structures of the Community through the Economic and Social Committee. This is a consultative body of representatives from the member states from different sectoral backgrounds representing economic and social life. Members are selected by the Council from lists presented by the member states. Like the Parliament, in certain instances the Council and Commission are obliged to consult the committee. But similar to the Parliament it has no real power and does not play a significant role.

Within agriculture, one Community structure is of some significance to how member state governments pursue their agricultural interests. This is the Special Committee for Agriculture. The Committee was originally established by the Council of Agriculture Ministers to expedite review of the proposals for the establishment of the CAP in 1960 (Tracy, p. 270). Today it still exists as a group of permanent representatives from the member states that report directly to the agricultural Council. It is asserted that this institutional body is where the basis for consensus between member states on agricultural issues is initially verified at the government level (Petit et al., p. 105).

Outside of government the agricultural interest groups have an input to issues that affect the agricultural community. They are represented together by COPA, which is the french acronym for the Committee of Agricultural Organizations. The aim of this body is to present as common a stand as possible for the various national farm organizations. As such COPA is continually consulted formally and informally by the Commission and the Council to test the acceptance among the farm population of specific policy proposals.

For COPA to represent a common stand is by no means easy. Community farmers are frequently divided by national and commodity differences. Therefore most of the largest national general farm organizations and some commodity organizations have their own offices in Brussels.

Negotiations occur amongst these organizations in an attempt to project a common stance, but they also operate on their own, consulting directly with the Commission and Council, to represent their particular membership.

5.2 An Organizational Output Approach

5.2.1 Analysis of the Tokyo Round

The EC communicated its willingness to enter into a new round of negotiations with a Council declaration to that end in December 1971. This was followed in February 1972 by a joint declaration with the U.S. confirming their intention "to begin, and give active support to, wide-ranging negotiations in GATT." From this point until the Tokyo Ministerial meeting the EC concerned itself with preparing the approaches it would follow in the negotiation.

Given that the Commission had unique responsibility for the negotiations it was important for the member states to feel that their national interests were adequately represented before commitment to a particular approach. Once commitments were entered into by the Commission in Tokyo it would be very hard for member states to alter their direction. Thus the EC planned the preparation of a documentary description of an "overall approach" to the negotiations that would have to be agreed upon by the European Council according to the principles of the Luxembourg compromise.

The compromise was a decision that had been reached several years earlier allowing a member state to veto a Community decision if it felt the decision significantly undermined its national interest. Thus in all matters of major concern the EC operated on the basis of unanimity. In order to reach unanimity policy statements such as this "overall approach" would often reach toward the lowest common denominator.

In agriculture, the Commission developed a set of proposals for the new round. The proposals originated in DG VI and then were reviewed by DG I. The essence of the overall proposal was that elements basic to the Community's unity could not be called into question. In agriculture the CAP was viewed as one such element, its form justified by the special characteristics of agriculture. Thus the proposal was that "its principles and mechanisms should not be called into question and are therefore in no way a matter for negotiation." Thus the objective for the new round would be to expand world agricultural trade "in accordance with existing agricultural policies." The way foreseen to do this was through market sharing and commodity agreements, which would be the elements of EC proposals in the negotiations.

The approach suggested by DG VI was perfectly acceptable to DG I. The latter were quite aware of the difficulties this would likely cause with the U.S. and other agricultural exporters. However the CAP was viewed by all as essential to EC unity and on these grounds alone should not

be called into question. The interest groups also found the approach to be favorable as at the time the proposals were put forward, European farmers were doing better under the CAP than if they were receiving world prices.[1] Therefore it was moderately easy to reach unanimity within the agricultural Council, and overall unanimity on all aspects of the proposals was reached at the Luxembourg summit on June 25-26 1973. The text of the "overall approach" was then released (reproduced in Golt, 1974, pp. 59-68).

The Tokyo Declaration in no way compromised the approach developed by the EC, and was also open enough in its references to agriculture to leave the U.S. with some hope of achieving their own goals. Quite what latitude existed for the EC is open to debate, but as Golt noted in 1974, after a virtual negotiation between the nine member states to reach unanimity prior to the Geneva negotiations, the possibilities for the Commission negotiators to make changes to the approach were severely constrained. The EC had less room for maneuver, but Golt concluded at the time that "the effects of these constraints on the ultimate outcome should not be exaggerated.... But they are bound to influence the pace of the process" (1974, p. 11).

Indeed, most actors within the EC did not exaggerate this fact, believing that there was every likelihood that

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[1]. It is interesting to note that just a few months after agreement on this approach was reached, world commodity prices soared above EC levels. The outcome of internal EC negotiations might have been quite different if they had started just a few months later.

the Commission negotiators might be swayed in some small way from the "overall approach." Thus DG VI had permanent representation in Geneva, as did national ministries of agriculture and the interest groups; although the internal negotiation was supposed to have been concluded in Luxembourg in June 1973, in reality it continued in Geneva, Brussels and the national capitals throughout the negotiations.

In commenting on the roles played by the different actors, given the data uncovered by this research, it is difficult to say much more than the following. All appeared to share the primary goal of ensuring that outcomes did correspond to the "overall approach." In agriculture this meant an intransigency in position in the face of the strong free trade orientation of Republican administrations in the U.S. over the first years of the negotiations. Once progress began in 1977, DG VI was accorded full responsibility for the grains negotiations in London thereby reducing the number of active EC players. The interest groups had their input to these negotiations both directly to the negotiators and through their agriculture ministers, meeting as the Council.

In Geneva DG VI took the technical lead in backing up DG I over the remaining areas of negotiation. By the conclusion of the negotiations all actors could feel satisfied in having kept the principle negotiators true to the original "overall approach." Golt's prediction that the

rigidity of the approach might not affect the final outcome was for the most part proved wrong. Over the course of the negotiations the EC position changed little if any. Although a grains agreement was not concluded, the round was considered a moderate success. In agriculture the preservation of the sanctity of the CAP was announced to be an implicit recognition by other countries of the validity of the EC and its mechanisms.

5.2.2 Adequacy of the Framework

While the level of explanation in this analysis has not been comparable to the treatment of the U.S., this is in no sense a diminution of the framework. Two factors have contributed. The first, previously mentioned, is a lack of data. With more information on the specific activities of the organizations involved, further insights would undoubtedly be gained.

However the second factor relates to the positions of the various actors involved. Compared to the U.S. situation, the EC actors had considerably more homogeneous goals both from economic and political perspectives. Thus, it is likely that the organizational outputs of the different actors would be in the same direction. Part of the success of the framework is its ability to show how differences in organizational outputs contributes to final overall outcomes. Where there is little difference to begin with, it

is hard for the framework to increase understanding of the process.

5.3 Reflections on the EC Public Decision Process

Like most occurrences within the EC, change in institutions is slow. Since the time of the Tokyo Round there has been little if any substantive change to the EC political process itself. There have been some reforms aimed at increasing the power of the Parliament. At this stage it is too early to say whether these will have any real impact. Most observers believe that they will not. Aside from this, the balance of power and roles of the other Community institutions remains as they were at the time of the Tokyo Round.

Changes in long term economic trends have however created implicit changes in the policy process. For the EC the most significant change has been the transformation from an importer of many key commodities to a surplus producer, at a time of chronic overcapacity in world agriculture. The impact of this situation is most strongly realized by the ever increasing cost of the CAP. Today the CAP represents 70% of the total EC budget, while farmers represent only approximately 10% of the population. This has created strong pressures to limit expenditures and examine the nature of the programs creating the expenditures.

The open ended nature of the support system has been curtailed in recent years. Dairy quotas were imposed

internally in 1984, and co-responsibility levies were introduced for grains in 1985. However it is acknowledged that these have failed to halt the increasing costs of the CAP, as export refund expenditures continue to climb. The solution to this problem is thus inextricably bound to international markets. Thus now more than ever before, the content of those domestic policies seems to be subject for international discussion and negotiation.

The certainty with which all actors within the community got together behind an "overall approach" in the Tokyo round no longer exists in such an environment. One outcome of this, that is affecting the new round already, is that no attempt has been made to develop an overall approach. Individual issues will be dealt with on an ad hoc basis as and when they arise. This element of uncertainty adds to the likelihood that the EC will proceed with a more flexible approach. Faced by this prospect, individual organizations involved will have to resort to protecting their parochial interests for themselves, thereby creating an environment more analogous to the situation that has and does exist in the U.S.. This may lead to a higher likelihood of making substantial progress in the new round.

CHAPTER SIX

ANALYSIS OF THE MARKET ACCESS PROPOSALS FOR THE NEW ROUND

6.1 Outline of the New Proposals

6.1.1 Background to the New Round

In following the development of the Punta Del Este Ministerial Declaration, one could very easily suppose that this was the first time many of the issues of the new round had been pondered. This would be a mistaken assumption, certainly in the case of agriculture. Much effort over a long period of time has gone into trying to develop a suitable approach within GATT for attacking the current problems faced by world agriculture.

At the conclusion of the Kennedy Round, there was already a desire to resume negotiations soon. One of the main areas where this need was felt was agriculture. At the conclusion of the Tokyo Round it was again believed by most involved that insufficient progress had been made in agriculture. Although no explicit agreement was made to plan for a new round, work did continue within the GATT secretariat on elaborating approaches to deal with agriculture. This took concrete shape in the formation of a committee under GATT auspices specifically instituted to develop such approaches.

The Committee on Trade in Agriculture

At the conclusion of the Tokyo Round, attempts were made to establish a Multilateral Agricultural Framework for further consideration of agricultural issues. There was some difficulty in agreeing on the form such a framework might take and the final text simply recommended that the Contracting Parties "further develop active co-operation in the agricultural sector within an appropriate consultative framework" and that "the definition of this framework and its tasks be worked out as soon as possible" (GATT, 1979, p.147).

Work to this end continued within the GATT and at the November 1982 Ministerial Session the GATT Council was instructed to establish a formal Committee on Trade in Agriculture "to make recommendations with a view to achieving greater liberalization in the trade in agricultural products" (GATT, L/5424). By this time the U.S. had expressed its intention to push for a new round of negotiations and it was therefore understood that the new committee would lay the groundwork for this in the agricultural sphere.

The Committee on Trade in Agriculture (CTA) formally came into being by decision of the GATT Council at its meeting on 26th January 1983. The first meeting was set for March when a chairman would be designated. The choice of Chairman was a crucial decision that could have a major influence on the progress of the committee. An early

recognition by all was that no substantial progress could be made in agriculture without the concurrence of the EC, and therefore most agreed the chairmanship should go to a European.

A further concern was the country in the community from which the chairman should come. Given the perception held by many, including the U.S., of the moderation of the Dutch approach to community affairs and its similarities in philosophy to the U.S. and other major agricultural producers, the popular choice became Aart de Zeuuw. One other factor gave this selection appeal to those outside the community: de Zeuuw was not a Commission person and therefore could be expected to have less of a closed mind towards the possibilities of reform of the CAP. Many observers have attributed much of the success of the CTA to date, to an appropriate selection of Chairman. De Zeuuw's subsequent appointment to chair the Uruguay Round Agriculture Committee is a testament to the perception of his success.

The CTA's initial examination of trade measures affecting market access and supplies led to the development of a set of recommendations that were submitted to and approved by the Contracting Parties on 30th November 1984 during their Fortieth Session. The recommendations suggested that:

> 1. The conditions should be elaborated under which all measures affecting trade in agriculture would be brought under more operationally effective GATT rules and disciplines.. . To this end.. as a basis

> for possible future negotiations.. (a) all quantitative restrictions and other related measures affecting imports and exports are brought within the purview of strengthened and more operationally effective GATT rules and disciplines.. ; (b) all subsidies affecting trade in agriculture, including export subsidies and other forms of export assistance, are brought within the purview of.. effective GATT rules and disciplines. With regard to export subsidies and other forms of export assistance.. both the following approaches should be elaborated in parallel:
> - an approach based on improvements in the existing framework of rules and disciplines;
> - an approach based on a general prohibition subject to carefully defined exceptions, in conjunction with improvements in the existing rules and disciplines and their application;.. (GATT, L/5753, pp. 1-2).

The result of this mandate has been a continuing elaboration of a number of recommendations in the form of various possible alternative approaches to tackling the problems of trade in agriculture.

The Punta Del Este Declaration

The complete text of the section of the ministerial declaration dealing with agriculture is reproduced below:

> CONTRACTING PARTIES agree that there is an urgent need to bring more discipline and predictability to world agricultural trade by correcting and preventing restrictions and distortions including those related to structural surpluses so as to reduce the uncertainty, imbalances and instability in world agricultural markets.
>
> Negotiations shall aim to achieve greater liberalization of trade in agriculture and bring all measures affecting import access and export competition under strengthened and more operationally effective GATT rules and disciplines, taking into account the general principles governing the negotiations, by:
>
> (i) improving market access through, inter alia, the reduction of import barriers;

> (ii) improving the competitive environment by increasing discipline on the use of all direct and indirect subsidies and other measures affecting directly or indirectly agricultural trade, including the phased reduction of their negative effects and dealing with their causes;
>
> (iii) minimizing the adverse effects that sanitary and phytosanitary regulations and barriers can have on trade in agriculture, taking into account the relevant international agreements.
>
> In order to achieve the above objectives, the negotiating group having primary responsibility for all aspects of agriculture **will use the Recommendations adopted by the CONTRACTING PARTIES at their Fortieth Session, which were developed in accordance with the GATT 1982 Ministerial Program and take account of the approaches suggested in the work of the Committee on Trade in Agriculture** without prejudice to other alternatives that might achieve the objectives of the negotiations (GATT, MIN(86)/W/19, pp. 11-12, emphasis added).

It is clear from the wording of the text as a whole and particularly from the bold faced clause that the work of the CTA is intended to be used as a starting point and centerpiece of the agricultural negotiations. The recommendations elaborated to date are consistent with the language of the Ministerial Declaration, and can therefore be considered as potential outcomes of the negotiations.

6.1.2 The Overall Nature of the Proposals

Once the objectives of the CTA had been approved at the Fortieth Session of the Contracting Parties, the task became one of making the general recommendations operational "as a basis for possible future negotiations" (GATT, AG/W/9 Rev. 2, p.24). Following the outline of the Recommendations, approaches were developed side by side in the areas of market access, subsidies and sanitary and other technical

barriers. Such a division however was not meant to obscure the desire "to move from the present situation in which only some measures affecting trade in agriculture are subject to GATT rules and disciplines that are either less than effective or are not applied effectively, to a situation in which substantially all measures affecting trade in agriculture are subject to improved and more effectively applied rules and disciplines" (GATT, AG/W/9 Rev. 2, p.2). The coverage was to be comprehensive but necessarily divided by type of trade distorting mechanisms; tariffs and subsidies, for example, would be discussed within their own separate groups.

A further aspect of the comprehensive nature of the coverage was the recognition of the need to reinforce the linkages between domestic agricultural policies and the international market under Articles XI and XVI: "the basic notion is that a balance should be established between legitimate domestic and international trade interests; .. for this purpose, the existing linkages in Articles XI and XVI.. should be developed and strengthened in a manner which more clearly defines the extent to which the pursuit of domestic agricultural policies should be permitted to impact on trade by restricting or displacing imports or increasing exports" (GATT, AG/W/9 Rev. 2, p.2).

From this point therefore specific policy proposals were developed in each separate area while an overall compatibility between them was maintained. The emphasis of

analysis in this research has been placed on the market access proposals for the reasons noted in Chapter One. Thus, detailed description of these proposals is presented in the next section. The aim here is to outline the proposals in broad principle along with some detail on the proposals in other areas, such as subsidies, that are not dealt with at length in the subsequent analysis.

As has been noted, the process of developing specific alternative proposals occurred through time and is in fact an ongoing process. Necessarily this research has had to pick a particular point along that time-path for study. March 1986 has been chosen, the time of publication of the CTA's second draft elaboration of Recommendations (GATT, AG/W/9 Rev. 2). Though work within the CTA has continued past that date, it is probably fair to say that the substance of these proposals has changed little and that they represent the background to the agreements reached in Punta Del Este. They will certainly be part of the starting point of the actual negotiations.

The approaches developed relating to market access, discussed in the next section, can be summarized by quoting the CTA:

> In general two distinct strategies for bringing substantially all measures affecting access under more operationally effective disciplines can be said to have emerged in the course of the elaboration process. One would involve the introduction of tariffs as the sole or principle method of protection. The other would seek to establish an equivalence of commitment or discipline for each category of trade restrictive measures, with a range of approaches having been

suggested as to how this might be achieved (GATT, AG/W/9 Rev. 2, p.4).

The subsidy question is approached in two alternative ways. First a number of options are suggested as means to improve the existing framework of rules and disciplines. The order in which they are listed implies no particular order of merit. The first suggestion calls for establishing a method of pre-determining equitable market shares and then allowing individual countries to apply whatever subsidies they chose so long as the equitable share is not exceeded. Also the effects of the subsidization should not have a depressing effect on world prices (GATT, AG/W/9 Rev. 2, Annex B-I).

A second approach suggests the following interrelated improvements: that obligations to discuss possible adverse effects of subsidies are converted to obligations to take remedial action; that a readily ascertainable indicator of what constitutes an "equitable (market) share" be introduced as a reference; and that a regime should be considered in the case where agricultural primary products are incorporated in processed agricultural products (GATT, AG/W/9 Rev. 2, Annex B-II).

A number of further approaches are developed along similar or complimentary lines. These deal respectively with the issues of serious prejudice, equitable market shares and application of the subsidies code (GATT, AG/W/9 Rev. 2, Annexes B-III through B-V).

The second series of approaches deal with the development of a new framework for limiting the use of export subsidies and their adverse effects. Four specific proposals have been put forward (GATT, AG/W/9 Rev. 2, Annexes C-I through C-IV) and are summarized below by quoting the CTA:

> (i) that all existing export subsidies.. should be prohibited, except food aid. Existing export subsidies would be permitted temporarily so long as a schedule and phase-out rules are established... ;
> (ii) that the entitlement to use export subsidies should be linked to the creation of additional import access opportunities, on the basis of a phasing formula... ;
> (iii) that countries which subsidize their exports.. should negotiate self-sufficiency ratios, with their right to use export subsidies limited to.. movements in domestic consumption;
> (iv) that a "producer-financed export subsidy" exemption should be developed.., with other exceptions or disciplines to be negotiated.. .. (GATT, AG/W/9 Rev. 2, p.19).

A number of other alternative and complimentary suggestions have been made in this area, as well as suggestions for the operation of sanitary and phytosanitary regulations and other technical barriers not covered elsewhere.

It is against this background of the entire work of the CTA, and of the Punta Del Este Declaration as a whole, that a more detailed look at the market access proposals can be made. Although the latter are to be analyzed quantitatively in a **ceteris paribus** manner, the broader analysis requires some knowledge of possible outcomes of other areas of the negotiations.

6.1.3 The Market Access Proposals

General Outline and Approach

Only a certain number of the market access proposals have been developed in sufficient detail to be amenable to quantitative modeling. However, for the purposes of context and completeness all the proposals will be mentioned although emphasis will be given to those that are part of the subsequent empirical analysis in this chapter.

A "tariffs only" approach would have the objective of allowing market forces to operate and thus liberate trade and deal with the overcapacity problem. In essence this would mean eliminating any special treatment of agriculture under Article XI, with all non-tariff barriers being eliminated. A phased transition would likely involve negotiating bound tariffs to replace the eliminated restrictions. Given the speculative shape of any possible outcome, this approach does not lend itself to modeling.

A number of approaches have been suggested for improving the rules of the GATT, ranging from retention and reinforcement to re-definition and modification of the relevant principles and criteria. Three main lines of action that would be needed in any approach have been identified by the CTA. These consist firstly of bringing those quantitative restrictions that currently escape the disciplines of Article XI under a reinforced article. This would undoubtedly mean the U.S. putting its import quotas authorized by Section 22 into the negotiations. Certain

sugar and dairy provisions of the EC, such as those influencing British Commonwealth country exports to the UK, would also have to be included.

Secondly, all measures not at present explicitly provided for in the GATT should also be brought under the reinforced Article XI. Finally, in parallel to this negotiation a further negotiation in the more traditional area of tariff reductions and bindings should also be conducted.

The detail of the approaches developed hinges on the present form of Article XI, which under paragraph 2(c)(i) permits restrictions under two basic conditions (see Appendix A). The first allows restrictions where domestic policy acts to restrict the quantities produced or marketed domestically. The second condition is that import restrictions shall not reduce the proportion of imports to domestic production relative to what that proportion might reasonably be expected to be in the absence of restrictions: "Thus the General Agreement intended that in any case where restrictions are imposed under Article XI:2(c)(i) to protect the operation of a certain class of domestic income or price support policies, a minimum level of access based, inter alia, on a ratio between imports and domestic production, should be respected for each and every product to which restrictions are applied" (GATT, AG/W/9 Rev. 2, p.5).

Variable levies are interpreted as falling under the purview of the reinforced Article. A separate GATT provision

which associates variable levies with the disciplines of the last paragraph of Article XI:2 is envisaged. Thus, while the levy mechanism may not be abolished outright, minimum access requirements would have to be met. Where the "restriction of production" criteria was not met, levies like import quotas would have to be phased out.

This research aims to quantify the economic impacts of implementation of the proposals on a commodity basis. It is assumed that if actions are not taken to reduce domestic production or marketings, the variable levy of the EC or the Section 22 provisions in the U.S. would be deemed illegal. Under this situation, no limitation on imports in any form would be allowed and imports would be allowed to enter unrestricted at the world price. This is in effect a "trade liberalization to world prices" scenario.

The alternative scenarios, the conditions of which would apply equally to the U.S. and the EC, assume that the "restriction of production" criteria are met and that a form of import restriction is allowable. Whether imposed as an import quota or levy, the minimum access commitment is assumed to be at least reached (if not exceeded).

In conformity with this approach, the proposals developed generally have as their core the criterion of effective regulation of production and attempt to define the domestic policies for which restrictions may legitimately be applied. These proposals comprise six annexes in the CTA's

draft elaboration of Recommendations (GATT, AG/W/9 Rev. 2, Annexes A-I through A-VI).

Annexes A-I, A-II and A-VI are modeled in the subsequent analysis and are therefore dealt with in the next section. The approach outlined in Annex A-III aims to strengthen Article XI:2(c) disciplines on quantitative restrictions by creating tighter definitions of exceptions, such as eligible domestic controls and equitable market share. The latter should not be subject to negotiation but should be based on some set criteria laid out in a reinforced article. Those restrictions that did not conform to the new criteria would have to be phased out.

Annex A-IV is the one departure from the overall tone and approach of the CTA's work in this area. This scheme calls for developing "viable and practical rules and disciplines on quantitative restrictions under given realities of trade in agriculture." The basic argument is that since the rules as written have not been working and have been largely ignored it can be assumed that they are already overly rigid given the special circumstances of agriculture and should therefore be relaxed. The philosophy is that it might be better to have weak rules that are respected than to try to develop strict rules that will be ignored.

Annex A-V calls for taking full account of the specificity of agriculture in developing more operationally effective disciplines. Thus measures that are today outside

the purview of Article XI could be brought under effective GATT rules. Beyond noting the food security, world price fluctuation impacts on domestic policies and production instability aspects of agriculture, little is specifically outline in this Annex on how to achieve the stated objectives. In contrast to this situation, it is now possible to examine the proposals that are specific enough to be modeled.

The Modeled Alternatives

Annex A-I can be said to have approached the existing rules with great deference to their original form and intended purpose and meaning. It also forms the basis of some of the other alternative approaches. The basis of the proposal is the concept of the level of production and ratio of imports to production that would have existed in the absence of restrictions and the effective regulation of domestic production.

In dealing with effective regulation of production it is asserted that programs which merely purport to restrict production but which may or may not actually achieve a restriction "would not appear to provide a sound argument for a 'wait and see' approach regarding the imposition of new restrictions.. " (p.1). However the need to regularize existing non-conforming restrictions is acknowledged and therefore the following possible definition of "effective regulation of production" is offered:

> measures which operate, and which are demonstrably designed to operate, to stabilize or control domestic production so as to prevent an undue increase in production relative to trends in domestic consumption, and which are not operated inconsistently with commitments with respect to imports and exports under the General Agreement (p.2).

With such a definition, operational effect would be given to the Article by introducing a minimum access commitment accompanying any restriction on imports. The suggestion is that this commitment should be [x] percent of total domestic production or the existing ratio of imports to exports, whichever is the higher. However the approach suggests that the level of imports should "not be derisory," meaning of no economic significance, and that there should not necessarily be support for the "proposition that recent or historical import levels necessarily represent realistic minima" (p.3). Thus the interpretation suggested is that the minimum access commitment should be equal to [x] percent or the ratio that would have existed in the absence of restrictions.

How the level of production and ratio of imports to production that would have existed in the absence of restrictions is to be determined is not made explicit. Obviously any means developed to establish such a ratio would be subject to negotiation as would, perhaps, the calculated ratio itself.

For practical purposes as well as creating an arbitrary benchmark for dealing with difficult cases it is suggested by way of example that the [x] percent figure might be 10%. This is the figure used in the analysis below. In this

context one question raised by the CTA is whether 90% self-sufficiency in a product would be acceptable. The implication therefore is that the minimum access commitment should be measured in net trade terms.

The next approach that has been modeled is outlined in Annex A-II. The orientation of this approach is "to achieve more secure and predictable access by reinforcing the existing restrictions... through the introduction of a more direct and dynamic relationship between the size of quotas and changes in domestic production" (p.1). While stressing that the criteria should remain measures that effectively restrict production, existing restrictions that were not in full conformity with this could be continued under certain circumstances. These would be that the size of the minimum access commitment is linked to changes in domestic production and that the base ratio is greater than it would have been if the restrictions were in full conformity with Article XI. Thus, there would be a penalty of a higher minimum access commitment in these cases. For these situations it is suggested that some arbitrary level be established for the minimum access commitment and again a level of 10% or the existing ratio, whichever is the higher, is given as an example in the CTA's proposals.

Annex A-VI represents another variation on the same basic principles with an emphasis on developing the distinction between "restriction of production" and

"effective regulation of production" in order to strengthen the operation of the minimum access concept:

> "Restriction of production" would be considered to occur whenever production is lowered below the level that would have prevailed under conditions of free trade.. . "Effective regulation of production," on the other hand, would apply in those categories in which contracting parties give effect to minimum access commitments on the following basis. The minimum access commitment should incorporate two main elements: (a) an across-the-board minimum access opportunity - say 20 per cent of the domestic market - to be phased in over no more than eight years.. ; (b) where the contracting party maintained internal prices above world prices and has a self-sufficiency ratio in excess of 100 per cent, an additional access opportunity would be required (p.1).

It is further suggested that the obligation for contracting parties in category (b) should consist of the 20% minimum access opportunity plus the percentage by which self sufficiency exceeds 100%. If a country's self sufficiency ratio was 110%, the minimum access commitment would be 20% plus 10%, or 30%. Thus, in general, to avoid the additional burden domestic production would have to be reduced so that the self sufficiency fell to or below the 100% level.

6.2 Analysis of the Proposals

6.2.1 The Michigan State University Agriculture Model

Overview of the Model

The MSU Agriculture Model is in fact three separate but linked models which can be operated together or on a stand alone basis. There are two U.S. domestic components, one covering the major grains and the other the livestock sector. The third component is the international model and

is the component utilized in this study. The scenarios described below are run using the international model with a linkage to the livestock model for building in assumptions regarding U.S. livestock production.

The international component of the model solves simultaneously across the three commodity groups, wheat, coarse grains (corn, sorghum, barley and oats) and the soy complex. The latter is broken down into the constituent forms of beans, meal and oil. The structure of the model is based upon approaches developed by Abbott and Mitchell where it is argued that where governments intervene to set domestic prices different from world prices, trade should not be considered as a residual but estimated directly (Abbott, 1979; Mitchell, 1983; and Shagam, 1987). The model therefore estimates production, consumption, net trade and ending stocks for the three commodity groups. Supplies and prices interact to achieve simultaneous solution across the commodities (however in the Developed Markets region of the model (the EC, other Western Europe, South Africa and Japan) the prices are exogenously given to reflect the price fixing characteristics of the EC Common Agricultural Policy).

The world is divided by the model into eleven regions which are subsequently divided amongst three subroutines: an export, an import and a shared market clearing subroutine. The location of a particular region in one of the subroutines does not influence the performance of the model and is mostly a management convenience. Thus, it is more

useful to describe the regions as either importers or one of three types of exporters. The importing regions of the model are the Soviet Bloc, China, the Newly Industrialized Countries, the Less Developed Countries, the Less Developed Oil Exporting Countries and the Developed Markets. The exporting regions are subdivided as follows: Argentina, Australia and Brazil are surplus exporters (they do not hold stocks in relation to price movements); Canada is considered a contingent surplus exporter (stocks may be held under certain policy conditions); and the U.S. which is viewed as the residual claimant to the world market (Shagam, 1987, ch. 3). In the scenarios that follow the results for the Newly Industrialized Countries, the Less Developed Oil Exporting Countries and Brazil have been aggregated together under the heading of Middle Income Countries to reduce the number of regions under consideration since the primary focus is on the Developed Markets and the U.S..

The baseline and four scenarios developed for this analysis employ the current exogenous macroeconomic and demographic forecast assumptions of the MSU model. Forecasts for income, inflation, exchange rates and population must be prepared for each region of the model. The procedure used has been to generate a trend of the past ten years for each variable and then modify this by the "expert opinion" of the analyst in conjunction with such publications as the **OECD Outlook**, the World Bank's **World Development Report**, U.N. population forecasts and private sector forecasts. (See

Shagam, 1987, ch. 6, for a detailed description and rationale).

In using the model for the purposes of this research, with its focus on the U.S. and the EC, a number of further qualifying assumptions must be made. The most obvious and important assumption concerns interpreting the results for the Developed Markets region of the model. The analysis is primarily concerned with impacts on the EC, but this area is aggregated together with the other Western European countries, Japan and South Africa. The relative size of the other Western European countries and South Africa in world trade of the commodities addressed being small compared to that of the EC, coupled with reliance in the model on EC prices for the whole region, allows one to consider changes occurring as a result of modelled EC policy changes to represent changes in EC production, consumption and trading patterns.

This argument can be extended to Japan given the relatively constant historical patterns of production, consumption and trade in that country. Thus provided the modeled changes take into account the fact that the region covers more than just the EC, it is reasonable to assume that deviations from a baseline as a result of these changes are attributable to the EC. To remind the reader of this assumption all discussion of the scenarios will refer to the region as the Developed Markets.

A further assumption relates specifically to the subject matter aspect of the scenarios. While GATT is a multilateral forum and it's rules apply to all members, it is assumed in the analysis below that in the case of market access, only the Developed Markets and the U.S. are found to have recourse to the specific provisions of Article XI. For the EC this is across the board as the variable levy acts to restrict access in all commodity groups, whereas for the U.S. this only applies to livestock products where there are Section 22 waivers in effect. Thus, where attempts are made to model restriction of production and minimum access commitments, the only regions of the model that are changed are these two. The implicit assumption is that the U.S. and the EC, if not the only offenders, are certainly the significant offenders in world markets.

An additional consideration might be mentioned. This is the extent to which it is possible to assume that the US and the EC could realistically be expected to achieve the "restriction of production" criterion in each of the commodity groups. In the case of dairy, it could be said that the criterion is currently being met by both, in the US by the whole-herd buy-out program and in the EC by the use of production quotas. Whether the criterion is being met in the cases of meats and grains is a little more open to individual interpretation and therefore assumptions are made in the individual scenarios as to how such criteria are met.

6.2.2 Specification of the Scenarios

Four scenarios have been run on the MSU Agriculture model and these will be outlined in turn. In all cases where the CTA cited specific percentage minimum access commitments by way of example, these levels have been used in specifying the scenario. The first scenario attempts to model the proposals contained in Annex A-I, described above.

Since the minimum access commitment in this proposal is described as 10% or the ratio that would have existed in the absence of restrictions, some measure of the latter is needed. This has been achieved by developing a historical scenario to simulate absence of restrictions in the Developed Markets. Since the variable levy of the EC and internal prices above world market levels acts as a restriction on market access, the scenario attempts to estimate that from some point in the past when the Developed Markets operated with world market-clearing prices. This simulates an absence of restrictions.

The date chosen to impose these on the model is 1974. This seems to be sufficient time for the effects to work through the model to provide forecasts for the immediate past period. Also this date seems a good hypothetical choice as it was a time when internal EC market prices equalled or exceeded world prices and would thus have been a more politically feasible time than most for the Community to have returned to a market oriented policy. No special modifications are necessary in the case of the U.S. since

there are no market access restrictions operating in the grain markets.

Thus with EC prices set at the world market-clearing level from 1974 onwards the model has predicted results through 1983. A five year average from 1979 to 1983 of the ratio of imports to domestic production under this scenario will represent that level which might have resulted in the absence of restrictions for the purposes of triggering minimum access commitments in the subsequent scenario. In the case of wheat this ratio as predicted by the model (and the actual historical figure) is less than 10% and therefore the 10% minimum access commitment will be used in forecasts.

For coarse grains the model predicts a figure greater than 10% and therefore this will be used in the subsequent projections (the actual figure is also greater than 10%). Thus it is necessary to outline in some detail how the figure to be used in the forecast is calculated. As has been stated the Developed Market region of the model includes countries other than the EC. It is therefore necessary to try to separate out the EC contribution to the import to production ratio. This is done by taking the actual import and production data for both the Developed Markets and the EC and combining it with the forecast data for the Developed Markets to obtain a forecast of the EC import to production ratio. Thus the forecast ratio attributable to the EC is given by:

$$\frac{[\text{Forecast DM Imports} - \text{Actual DM Imports}] + \text{Actual EC Imports}}{[\text{Forecast DM Prod'n} - \text{Actual DM Prod'n}] + \text{Actual EC Prod'n}}$$

The calculated average for the five year period 1979 to 1983 using this method and the data from the model projection is 45% for coarse grains, which compares to an actual historical figure of 20%. The implication therefore is that in the absence of restrictions, the EC would have been more heavily reliant on coarse grain imports.

Now to calculate the ratio for use in the model for the Developed Markets in the subsequent scenarios, it is necessary to deflate this figure by the proportion of production that the EC represents in the region. This proportion has been calculated as a five year average for the same period, 1979 to 1983, to be 67%. Thus the correct ratio to use in the forecast scenarios is 67% of 45% which equals 30%. Similarly EC wheat production represents 90% of the Developed Markets production and therefore the figure to be used in the forecasts is 90% of 10% which equals 9%.

An assumption of this scenario is that the "effective regulation of production" criterion of a reinforced Article XI is met. Access restrictions exist on both livestock products and grains in the EC and on livestock products in the U.S.. Therefore the model must simulate a regulation of production in these areas. For the U.S. this is straightforward since livestock are explicitly included within the U.S. livestock component of the model. However, for the EC, which is covered by the international component of the model, livestock are only implicitly included by the use of Gross Domestic Product (GDP) as a proxy for livestock

numbers. This proxy is important because of its influence on the consumption equations.

If assumptions are to be made about EC livestock numbers then a direct relationship needs to be established between the actual numbers and the proxy, GDP. Therefore Livestock numbers have been regressed against GDP for the period 1973 to 1983 (which was the largest time period for which continuous data was available) and the relationship has been inverted so that proxy GDP figures can be calculated given assumptions on livestock numbers.

The forecast scenario assumptions for the proposal in Annex A-I can now be fully outlined. As stated previously the "effective regulation of production" criterion is assumed to be met, coming into force in the 1988 crop year using 1987 as a base. Thus it is assumed that in the U.S. livestock numbers do not exceed their 1987 values in the cases of beef, dairy and pork production. Numbers are allowed to go below the 1987 value if so forecast by the model. A similar assumption is made for the Developed Markets: From the relationship described above a 1987 value for GDP is calculated and in subsequent years GDP is constrained not to exceed this value, thus simulating a restraint on livestock production.

It is assumed that crop production is regulated through controls on acreage directly or through a mechanism such as a co-responsibility levy that has the indirect effect of forcing reductions in acreage. Therefore in the model the

constraints are imposed on harvested area. This applies only to the Developed Markets. In an analogous manner to livestock, forecast values of harvested area are constrained to a maximum of the level attained in 1987. Harvested area is allowed to fall below this level if so forecast by the model.

Minimum access commitments are applied in the model only to the Developed Markets. This is done by imposing a constraint on the net import equations for wheat and coarse grains. The specific constraints are that net imports beyond 1987 are to be equal to 9% of Developed Market production of wheat and 30% of coarse grain production, or the value forecast by the model, whichever is the greater. The foregoing set of assumptions and conditions are the basis of Scenario 1.

Scenario 2 is an adaptation of this first run. The only difference between the two is the time allowed to phase in the minimum access commitment. In the first scenario this is done all at once starting in 1987. Scenario 2 is perhaps a more realistic hypothetical case in that the minimum access commitment is phased in over eight years in equal amounts. Thus in 1987 the minimum access commitment on wheat is 12.5% of the 9% of domestic production, or of the forecast value whichever is the higher, and in 1988 it is 25% of this value and so forth, until 1994 when it is fully phased in at the 9% rate.

The proposals embodied in Annex A-II are modelled in Scenario 3. Since these proposals indicate that existing restrictions can be continued provided a minimum access commitment is honored, there is no reason to assume that the level of production is effectively regulated. Thus all the restrictions imposed on livestock numbers and harvested areas in the first two scenarios are relaxed.

The base minimum access commitment suggested is 10% with some additional penalty linked to changes in domestic production. To incorporate the latter principle the formula that is adopted in this scenario constrains the wheat and coarse grain net import equations for the Developed Markets in the following way. Net imports in 1987 are set equal to 10% of domestic production or the forecast value whichever is the higher. Thereafter net imports are set equal to that percentage of domestic production corresponding to 10% plus the additional percentage change in domestic production from the previous year, or the forecast value whichever is the higher.

In modeling Annex A-VI, Scenario 4 assumes that countries would aim for "effective regulation of production" rather than "restriction of production." Thus, no restrictions are placed on livestock numbers or harvested areas in this scenario. Here, as in Scenario 3, the focus is on an alternative formulation of the minimum access concept, corresponding to effective regulation of production. This is clearly outlined in the Annex. Thus for the Developed

Markets, the wheat and coarse grain net import equations are constrained such that net imports equal 20% of domestic production plus the percentage by which self-sufficiency in the product exceeds 100% (but not less than 20%), or the forecast value, whichever is the higher. This is phased in in eight equal amounts over the period 1987 to 1994 in a manner similar to Scenario 2.

6.2.3 The Model Results

Overview

The full results of the model for the four scenarios are presented in Appendix C. The results are presented as differences from a baseline in both absolute (metric tons) and percentage terms. The actual values for the baseline and the scenarios are also given. Coverage in all cases is the period 1987 to 1995 and a figure is also given for the five year average for 1991 to 1995. In the next section a narrative and interpretation of the forecasts for each scenario is given, while the baseline is described immediately below.

Baseline Results

In the wheat market the baseline scenario forecasts continued growth of production largely in the principle importing regions but also to some extent in the U.S., Australia and the Developed Markets. Both Canadian and Argentine production is relatively constant. Utilization

increases most dramatically in the LDC's but does not exceed the growth in their production and thus the level of imports declines for these countries. Soviet Bloc imports continue to rise, but increased utilization is satisfied from domestic production increases and therefore stock levels increase consistent with current Soviet policy. Generally ending stock levels increase as global production continues to exceed demand with the most significant increases occurring in the U.S. and the LDC's. This situation is further reflected in declining U.S. exports over the period while increased exports from Australia and the Developed Markets more than exceed this decline. Canadian and Argentine exports levels remain relatively constant. Throughout the period prices remain firm approximately mirroring changes in inflation.

In the coarse grain market the baseline scenario forecasts increasing levels of production in all regions except for China where there is a modest decline and the Middle Income Countries where production remains roughly constant. This is accompanied by increasing utilization in all regions except China where there is a decline similar in amount to the decline in production and in Canada where it is relatively constant. The major increased users are the Soviet Bloc and the LDC's. These changes in production and utilization result in increased imports by the Soviet Bloc and the Middle Income Countries being met by increased exports from the U.S. primarily, but also from Australia and

Argentina. The increased level of exports from Australia results in that country depleting its stocks entirely over the 1993 to 1995 period. Ending stocks are relatively unchanged in all the other regions except the U.S. where they continue to increase dramatically. This has a depressing effect on world prices over the early part of the period but a recovery has been achieved by 1995.

Within the soy complex baseline forecasts, increases in production are concentrated in Argentina and Brazil and also the U.S., with the U.S. exporting about half of that increase as beans while Argentina and Brazil export it after processing into meal and some oil. U.S. meal and oil exports decline. The Soviet Bloc increases its imports of both beans and meal whereas the other importing markets increase their imports of meal. Ending stock levels remain stable except in the U.S. where there is an appreciable increase in soy bean holdings. Bean and oil prices rise substantially over the period but meal prices merely keep pace with inflation.

This baseline forecast seems to be an acceptable description of the likely trend for world grain and bean production and trade given the current policies of the major nations involved. Thus, starting from this baseline it is now possible to turn to a discussion of the scenario forecasts and their deviations from each other and the baseline.

Scenario One

Assumptions:

- Harvested area of grains held to no higher than 1987 levels in the EC.
- Livestock numbers held to no higher than 1987 levels in the U.S. and the EC.
- Wheat imports to the EC held from 1987 to 10% of domestic production or the level predicted by the model, whichever is the higher.
- Coarse grain imports to the EC held from 1987 to 30% of domestic production or the level predicted by the model, whichever is the higher.

In the wheat market the effects of the rules specified in this scenario are felt dramatically in 1987 with a continuing trend in the directions established over the period to 1995. As the minimum access commitment is imposed in 1987 the Developed Markets become for that year a net importer of wheat to the great advantage of the U.S. and Canada who increase their exports by 9.8 million tons (29.7%) and 3.3 million tons (16.2%) respectively. Much of this is met out of increased production which, together with increased stock holding by the Developed Markets as a necessary measure to increase access, has a negative effect on prices which drop by 7.1%. This makes Australia and Argentina less competitive on world markets and export levels for these two decline. In Australia as a result domestic utilization increases by 22.6%. The lower prices

result in only slightly increased imports from other regions initially.

By 1988 the Developed Markets re-establish themselves as net wheat exporters but ending stocks continue to remain 51.8% above baseline levels, as minimum access commitments are met. All other regions and particularly the U.S. draw down stocks. Production levels in the Developed Markets also continue to decline as a result of aiming to meet the restriction of production criteria, while U.S. and Canadian production increases. All other regions cut back production except the Soviet Bloc where there is a modest growth of 0.6 million tons.

Prices decline further until 1990 and begin to pick up again in 1991 but only exceed the 1986 level in 1994 such that the 1991-95 average price is down $16.70 per ton (14.7%). For this period Developed Market exports are down an annual average of 6.7 million tons (57.1%), but almost as badly affected are the Australians whose exports are down 4.4 million tons (22.7%). The major export gains are made by the U.S. and Canada respectively: up an annual average of 16.8 million tons (60.7%) and 5.4 million tons (27.5%) respectively. Utilization patterns change little in the Developed Markets, but the U.S. declines as more goes for export and Australian utilization increases by 38.4% as export markets are lost and declines in production do not fully cover this shortfall. The LDC's, China and Middle Income Countries increase their imports in response to the

price declines switching their domestic production away from wheat and into coarse grains.

The minimum access commitment imposed on the Developed Markets in coarse grains results in a dramatic 8.7 million ton (38.5%) increase in imports in 1987. The main suppliers of these increased imports are the U.S. and a relatively new entrant to the export market, China. Canada and Argentina also manage to increase their exports. The increase in imports by the Developed Markets is matched by a similar increase in domestic utilization, thus maintaining the firmness of market prices which continue to rise over the entire period. The 1991-95 average price rise is $14.04 per ton, spurring major production increases in the U.S. (14.5 million tons or 5.4%) and China (14.3 million tons or 22%) and smaller increases in Canada, Argentina, the LDC's and the Middle Income Countries.

Imports are down as all regions, except the Developed Markets with their access obligation, switch from coarse grains to wheat. This is further reflected by declining utilization except in the Developed Markets and China. This increased utilization by the Developed Markets explains why despite major increases in imports, stock holding over the period actually marginally declines. The U.S. however experiences a gradual rise in stock levels with a 1991-95 average annual increase of 68.1 million tons (28.1%), which helps to explain the maintenance of firm market prices.

In the soy complex market there is little change in world trading patterns except that Argentina emerges as an even stronger exporting force in all three forms, particularly beans. This is as a result of a switch away from domestic consumption to exports, as bean prices rise by an average 17.6% over the 1991-95 period. This is a result of increased stock holding by the U.S. at the same time that world production remains unchanged. No other discernable impacts occur for the Developed Markets or the U.S..

Scenario Two

Assumptions:

- The same as scenario 1 except import restrictions for the EC are phased in over eight years in equal amounts starting in 1987.

Overall the results for Scenario 2 follow the pattern established in Scenario 1. Therefore rather than re-state these trends emphasis will be placed on how this set of results differs from the results for scenario 1 with these differences being expressed in terms of deviations from the baseline.

In the wheat market by the end of the period the average results for 1991-95 are almost identical to Scenario 1, except for prices which have declined further by an additional $3.28 per ton. This is a result of prices taking longer to recover from the initial drop, only exceeding 1987 levels in 1994. While the end results of trading patterns as

a whole are mostly unchanged, some differences emerge over the period. With the access commitment phased in, the Developed Markets do not become net importers in 1987 as before. This correspondingly reduces the increase in U.S. and Canadian exports for that year by 3.6 and 1.6 million tons respectively. The result for the Developed Markets over the entire period is that for 1991-95, exports of wheat each year are reduced on average 0.7 million tons (12%) less than under Scenario 1.

A very similar pattern emerges for the coarse grains. The result of phasing in the access requirement for the Developed Markets is to diminish the overall increase in imports over the whole period. In 1987 imports are 8.1 million tons below Scenario 1 levels, resulting in lower exports principally in the U.S.. As the access commitment is gradually phased in, imports increase until by 1994 they are equal to Scenario 1 levels, but it means that the average level each year for the 1991-95 period is down 4.6 million tons. As export losses these are borne almost entirely by the U.S., whose exports of feedgrains are now 1.4% below baseline levels. This compares to 4.6% above the baseline under Scenario 1. The only other significant change that occurs in coarse grains is a direct result of this: U.S. ending stocks of coarse grains are correspondingly higher. The 1991-95 yearly average for Scenario 2 is 33.3 million tons higher than Scenario 1, placing ending stocks 41.8% above the baseline as compared to 28.1% above under Scenario

1. There are no significant differences between the two scenarios with respect to the soy complex markets.

Scenario Three

Assumptions:

- No restrictions on harvested areas or livestock numbers.
- Wheat and coarse grain imports to the EC held from 1987 to 10% of domestic production plus any percentage increase in production, or the level predicted by the model, whichever is the higher.

The global impact of the policy conditions of this Scenario are much smaller than in either of the two previous scenarios. In the wheat market the initial shock of the imposition of access commitments turns the Developed Markets into a net importer in 1987 of 1.3 million tons. However in 1988 exports turn positive and over the ensuing years the deviation from the baseline diminishes though exports remain significantly lower: an average of 5.3 million tons per year (44.9%) over 1991-95. These changing trade patterns are almost exclusively taken up by the U.S. and Canada where exports are up an annual average of 5.8 million tons (20.8%) and 1.6 million tons (8.3%) respectively for the 1991-95 period.

The only significant production changes occur in North America where production is up 5.7% in the U.S. and 5.8% in Canada. Utilization remains stable everywhere except the

Developed Markets where it increases 5.7 million tons (7.5%) as a result of the increased access. Despite increased utilization there is also a dramatic increase in stock holding particularly in 1988 (12.7 m.m.t. or 91.4%) and 1989 (11.7 m.m.t. or 80.7%), but this declines to a relatively stable average increase of 7.6 million tons (50.9%) annually for the period 1991-95. Other significant stock holding changes are declines in Canada (4.7%), the U.S. (5.8%) and the Soviet Bloc (5.4%). The overall impact on wheat prices is small with an average decline for the years 1991-95 of $1.94 per ton.

In the coarse grain market the major impacts are confined to the Developed Markets where imports actually decline from 1988 onwards. This decline peaks at 2.6 million tons (11.6%) in 1989 and then diminishes to an average level of 1.7 million tons (7.6%) for the period 1991-95. A decline is possible since imports were already significantly above the minimum access commitment. Thus imports of coarse grains are substituted by the required increase in wheat imports.

Early on in the period, U.S. domestic utilization of coarse grains increases with a resultant decline in ending stocks. However, by 1990 utilization declines and stocks begin to build again, despite some declines in production. Overall for the 1991-95 period the net result is a minimal change from the baseline. There are no significant impacts on the production, consumption and trade of the soy complex products.

Scenario 4

Assumptions:

- No restrictions on harvested areas or livestock numbers.
- Wheat and coarse grain imports to the EC held to 20% plus the additional percentage by which self-sufficiency exceeds 100% of domestic production, or the level predicted by the model, whichever is the higher.

In contrast to the relatively small changes found in the previous scenario, the policy changes adopted in Scenario 4 have some major impacts on world markets. Under this scenario, despite the eight year phase-in of access commitments, the initial shock to the Developed Markets is great: in 1987 and 1988 there are net wheat imports of 11.3 and 4.3 million tons representing changes of 17.8 and 11.8 million tons respectively from the baseline. These increases in imports are met by the U.S. which increases its exports by 13.9 and 9.1 million tons in each year and by Canada (4.8 and 2.8 m.m.t.). The Developed Markets become a net exporter again in 1989 but by 1991 their export position begins to decline again such that, while still a net exporter, the 1991-95 average annual decline is 10.0 million tons (84.6%). These losses have been picked up by the U.S. (10.1 m.m.t.) and Canada (3.2 m.m.t.), who also gain from diminished Argentine exports (down 0.2 m.m.t.).

Developed Market production remains unchanged as no restrictions are imposed but U.S. and Canadian production is up (6.0% and 9%.0) and China and the Middle Income Countries production is down (2.3% and 2.2%). Together with the changes in trade outlined, decreased utilization in the U.S. and China (4.5% and 1.7%) create some differences in stock holding patterns. There is an immediate and dramatic 17.8 million tons increase in stocks in the Developed Markets in 1987 with further increases in 1988 and 1989. The stock level then falls back to an average of 27.0 million tons for 1991-95, representing an average increase of 80.4%.

Canadian and U.S. stock holding follows a mirrored pattern of this, declining at first, then increasing and finally declining over the latter part of the period to attain an average annual decline of 2.3 million tons (12.2%) and 7.7 million tons (10.7%) respectively. The Soviet Bloc as a result of increased utilization also runs down its stocks by an average of 1.2 million tons (22.5%) over the latter part of the period.

There are some dramatic price changes for wheat over the period suggesting the introduction of an increased degree of instability in world wheat markets. The price declines steadily up to 1990, then recovers a little before dropping 26.6% in 1993 and then almost completely recovering in 1995. The relative stability of coarse grain prices at similar levels helps explain the instabilities in trade, utilization and stock holding as substitution occurs between

the two, depending on the price relationship. Despite the noted wheat price instability the average price decline over the period 1991-95 of 11.1% is below the comparable declines for the first two scenarios.

Generally the changes occurring in the coarse grain markets are smaller and less unstable. Developed Market imports decline by an annual average of 2.0 million tons (8.6%) by the latter half of the period and U.S. exports decline even more (3.5 m.t. or 2.2%) as the other exporting nations increase their total exports by 1.2 million tons. Production levels are relatively unchanged with modest increases in Australia, Argentina and China. China again emerges as an exporter despite managing to increase domestic utilization.

The only other significant change is in U.S. stock holding where there is a steady increase. Stocks are up 2.3 million tons (1.5%) in 1987 and this has risen to an increase of 44.4 million tons (13.7%) by 1995. The only significant impact that the policy changes have on the soy complex are a 7.0% increase in U.S. stock holding of beans resulting in a 4.2% price decline over the 1991-95 period. Meal and oil prices are correspondingly somewhat lower.

6.2.4 Overall Analysis of the Results

From the viewpoint of the robustness of the model the results are very satisfactory. The scenarios placed

significant policy shocks on the model, which could possibly have limited its ability to converge. However in all the scenarios the model on balance converged as easily as in the baseline, only exceeding the iteration limit imposed on the model in three individual years out of all years across all of the scenarios. Thus, it can be said that the model took the policy shocks in stride and the results can be regarded as internally consistent.

The most important and also the most obvious element to emerge from the analysis is the polarization of impacts between the Developed Markets and North America. Only in a few instances are major impacts of the policy changes felt by other countries. These instances occur for the most part in Scenarios 1 and 2, somewhat in Scenario 4 but hardly at all in Scenario 3.

The general pattern is one of the U.S. and Canada filling the increased level of imports to the Developed Markets that result as a consequence of policy changes. In coarse grains China emerges as a major beneficiary of the policy changes becoming a major exporter over the period, from an initial position of approximate domestic supply and demand balance.

In the first two Scenarios, Australia is seen to lose out in the export markets relative to other exporters particularly in wheat markets. One interesting result of Scenario 4 is the lack of effect the policy measures have on Australia compared to the first two scenarios. This can

probably be attributed to a particular sensitivity to price, where Australia is at the margin of competitiveness relative to North and South America.

Further interpretation of the effects of the various policies on the U.S. and the Developed Markets, with particular reference to the impacts on domestic farmers, will be given in the next chapter where the study examines policy positions taken on the proposals.

CHAPTER SEVEN

APPLIED ANALYSIS OF THE MARKET ACCESS PROPOSALS

7.1 Summary of the Market Access Proposals Analysis

In the previous chapter a number of scenarios concerned with market access for agricultural products were analyzed empirically using the MSU Agriculture Model. The results were presented in terms of annual tonnage changes in production, consumption, trade and ending stocks. However, to analyze the proposals from a political economy perspective it is helpful to have some measure of the monetary impacts of the proposals, since monetary costs and benefits are an important part of political calculus.

As has been noted, the major impacts of the policy options were felt by the U.S. and the EC. Since these two trading blocs are also the major focus of this research the monetary impacts of the proposals are only described for the U.S. and the EC. A summary of the average annual estimated change in the values of production, trade and ending stocks under the alternative scenarios for the period 1990-95 is given below and in Table 7.1.

7.1.1 Scenario 1

Assumptions:

- Harvested area of grains held to no higher than 1987 levels in the EC.

Table 7.1

Average Annual Changes in the Value of Production, Trade and Ending Stocks for Four MSU Model Scenarios, 1990 - 1995

(In millions of dollars)

	PRODUCTION	EXPORTS	ENDING STOCKS
		Scenario 1	
U.S.			
WHEAT	-313.11	1159.65	-2660.86
COARSE GRAIN	5358.84	1456.57	10870.38
EC			
WHEAT	-1961.67	-847.90	361.48
COARSE GRAIN *	1486.92	1539.08	212.53
		Scenario 2	
U.S.			
WHEAT	-735.40	948.31	-2733.22
COARSE GRAIN	4965.12	861.64	14110.73
EC			
WHEAT	-2232.93	-798.92	329.16
COARSE GRAIN *	1350.84	999.22	192.73
		Scenario 3	
U.S.			
WHEAT	309.67	584.09	-608.69
COARSE GRAIN	-594.39	-292.16	-370.73
EC			
WHEAT	-159.14	-615.96	821.34
COARSE GRAIN *	-241.59	-216.69	-35.24
		Scenario 4	
U.S.			
WHEAT	-475.92	670.86	-1684.91
COARSE GRAIN	-1096.35	-701.46	1799.38
EC			
WHEAT	-1112.43	-1161.21	1023.99
COARSE GRAIN *	-575.93	-296.43	-84.00

* For Coarse Grains in the EC, Export figure is Imports

- Livestock numbers held to no higher than 1987 levels in the U.S. and the EC.
- Wheat imports to the EC held from 1987 to 10% of domestic production or the level predicted by the model, whichever is the higher.
- Coarse grain imports to the EC held from 1987 to 30% of domestic production or the level predicted by the model, whichever is the higher.

In Scenario 1, despite an average annual $1.6 billion increase in the value of all grain exports for the U.S., the average annual value of stocks increases by $8.2 billion, which can mostly be accounted for by a $5.3 billion rise in the value of coarse grain production. The value of wheat production however declines by $0.3 billion. In the EC average annual wheat production and exports are down $2.0 and $0.8 billion respectively while the value of stocks increases by $0.4 billion. The value of coarse grain production increases by $1.5 billion which is approximately equal to the increase in the value of imports. EC stocks increase in value terms to an annual average of $0.2 billion.

7.1.2 Scenario 2

Assumptions:

- The same as scenario 1 except import restrictions for the EC are phased in over eight years in equal amounts starting in 1987.

Scenario 2 in general slightly lessens the adverse impacts on the EC and the beneficial impacts on the US of the first scenario. However, the average annual value of EC wheat and coarse grain production deteriorates by a further $0.25 and $0.13 billion respectively. The value of U.S. wheat production is also adversely affected falling a further $0.42 billion, which can be attributed to the greater decline in wheat prices on the world market under this scenario.

7.1.3 Scenario 3

Assumptions:

- No restrictions on harvested areas or livestock numbers.
- Wheat and coarse grain imports to the EC are held from 1987 onwards to 10% of domestic production plus any percentage increase in production, or the level predicted by the model, whichever is the higher.

The value impacts of Scenario 3 are the smallest of the four alternatives but are considerable nonetheless. The average annual value of production falls in all cases except for U.S. wheat which rises by $0.31 billion. This occurs as exports increase in value by an annual average of $0.58 billion and stock values decline by $0.61 billion. While the value of U.S. coarse grain holdings decline, so also do the value of exports by $0.29 billion. By contrast, wheat creates more problems for the EC than coarse grains. The

value of wheat production and exports are both down, while stock values are up $0.82 billion. The modest gain in the decline in the value of EC coarse grain stocks ($0.03 bn.) and the substantial decrease in the value of imports ($2.2 bn.) are matched by a decline in the value of domestic production of an average of $2.4 billion annually.

7.1.4 Scenario 4

Assumptions:

- No restrictions on harvested areas or livestock numbers.
- Wheat and coarse grain imports to the EC held to 20% plus the additional percentage by which self-sufficiency exceeds 100%, of domestic production, or the level predicted by the model, whichever is the higher.

In Scenario 4, the effect of a sharp decline in wheat prices has mixed blessings for the U.S. and is generally negative for the EC. While, on an average annual basis, U.S. exports increase in value (by $0.67 bn.) and stock values decline (by $1.7 bn.), the value of production declines (by $0.47 bn.). For the EC production and export values are down (both by $1.1 bn.) to the extent that the value of stocks held is up by $1.0 billion. A similar pattern emerges in the U.S. coarse grain market; the value of production and exports are down by the amount that the value of stocks is up ($1.8 bn.). However the impact on the

EC coarse grain market is more balanced with a decline in the value of production (of $0.57 bn.) being matched by a decrease in the value of imports ($0.30 bn.) and stocks ($0.08 bn.).

7.1.5 Synthesis and Supplemental Research

From the above it can be seen that each scenario affects different groups in different ways. In certain cases wheat and coarse grain producers gain together while at other times the two diverge. Sometimes production gains while stockholding decreases and sometimes the reverse is true. Different trading patterns emerge in each scenario. Thus, sometimes farmers and governments gain together both domestically and internationally but more often there are trade-offs both between the U.S. and the EC and also domestically between farmers, consumers and taxpayers. It is in trying to balance these differing interests that an understanding of domestic decision processes can aid in the analysis of the political feasibility of negotiating trade policy options.

Before proceeding to this part of the analysis, it is necessary to introduce a further element to the empirical analysis. It has already been noted that it would be useful to have some idea of the likely impacts of a move towards trade liberalization in other commodity areas. Therefore the results of two other models that contain estimates for the dairy sector will briefly be reviewed.

The Food and Agriculture Model of the International Institute for Applied Systems Analysis (IIASA) and the world model of Tyers and Anderson have both produced a number of different liberalization scenarios. For the purposes of comparison to the work in this research, their scenarios of liberalization of policies in OECD markets are the most relevant. These models have not considered specific GATT proposals on market access or subsidies per se, but have modeled the level of protection afforded in developed countries and then have simulated its removal to produce a liberalization scenario. This makes comparison illustrative rather than definitive.

In the IIASA model trade distortions are represented by the nominal rate of protection which measures the average difference between the domestic and lowest exporter price in 1980-82. Liberalization is achieved by removing this for the OECD countries, and the results presented are for the year 2000. The world effects in the dairy market are increases in prices, production and trade of 31%, 2%, and 13% respectively. The EC remains a net exporter, although exports are down by 60%. However producer and consumer prices continue to rise as production declines, the explanation being that the wholesale removal of resources from the agricultural sector creates a price result that would not be predicted by a static partial equilibrium analysis.

The results of the impact on the U.S. have been criticized: "The liberalization results... appear unusual in terms of what one would expect following the removal of the 80 percent nominal protection rate accorded U.S. dairy. Output declines only 12% upon a producer price decline of 28%. This must be due to the model failing to include production quotas and other rigidities in its measure of protection to be removed... " (Sarko, p. 69). Despite only a small drop in production, imports increase seven-fold.

The results of the Tyers and Anderson analysis show world dairy prices rising 27% and trade increasing by 95%. The surprising result, however, is the large shift in the patterns of trade. The industrial market economies move from a position of exporting 94% of world dairy trade to importing 86% of the total.

While the price effects predicted by the two models are reasonably similar, the predictions on trade patterns are not that close. However it is possible to make some overall inferences on the likely paths of the EC and U.S. dairy industries. Under this kind of liberalization, it is unlikely that the EC dairy industry would profit relative to the U.S. industry. A severe loss of export markets would occur for both and there would be considerable encroachment by imports, particularly from Canada and New Zealand, but also quite probably from a few developing countries.

However, if liberalization was not quite as complete and followed the structure outlined in the GATT market

access proposals, the picture would likely be less bleak for these two. The major disruptions predicted above resulted from the price effects of liberalization. If price supports were maintained in total or in part, but liberalization was partially achieved through increased market access opportunities, the research would suggest that EC dairy products could make inroads to U.S. markets. However it is unlikely they would be large enough to balance the U.S. gains in grain markets, since under the Most Favored Nation principle of the GATT, the EC would be competing against New Zealand and Canada for the increase in access to the U.S.. It is not possible to infer anything more specific than this about the impact of new market access proposals in dairy markets.

One more qualifying consideration needs to be added before proceeding. The analysis of Chapter Six applied only to market access, while the above analysis was for across the board liberalization. In any GATT talks in the new round attention will be focused as much on subsidy questions as market access. Thus the analysis that follows is limited by its ceteris paribus nature, in that subsidy impacts will be a part of the negotiating calculus. These can only be alluded to, since they have not been quantified in this analysis. With this in mind, it is now possible to turn to a consideration of the political dimensions of the proposals.

7.2 Policy Positions Toward the Market Access Proposals

The results of the modeling outlined above were shared with some of the interviewees currently involved in the policy process. The positions described below are based on a combination of the responses received and speculations derived from the predictive capabilities of the political economy analysis of the preceding chapters. Inclusion of a position indicates a corroboration between what might have been expected from the preceding analysis and the actual corroborated responses from the interviews.

7.2.1 The U.S. Position

Looking specifically at the market access proposals, many of the nuances predicted in general policy attitudes are naturally reflected on this specific issue. Reagan Administration general philosophy would dictate that a rather more dramatic approach be taken towards the market access question than is outlined in the scenarios given. As part of an attempt to bring agriculture more fully into the GATT, the ultimate aim would be to remove the special treatment afforded agriculture with respect to market access and subsidies.

However within the administration there appear to be opposing pressures and elements of pragmatism. Therefore the different approaches to the market access question become of interest and relevance. From the perspective of FAS these proposals represent a middle ground between the perceived

"U.S." and "EC" positions. Under ideal circumstances FAS contends a desire to move towards overall agricultural trade liberalization. However, under the reality of an adversary in the form of the EC that would still desire market sharing, this middle ground may become perhaps a suitable area in which to negotiate. It further obviates the chance of FAS coming into conflict with commodity specific interest groups, as would inevitably occur if all import restrictions were put up for abolition. Within USDA as a whole, the rhetoric may be for Section 22 quotas to be considered negotiable, but there is an acceptance of the possibility that the EC will not want to go as far as this would imply on market access, thus making the "middle ground" the likely area of negotiation.

At this stage, Treasury with its free trade orientation would also prefer not to consider such apparent compromises, but is aware that they may necessarily become the essence of the negotiations. State however, always having been more amenable to compromise in agriculture would be more receptive to an immediate recognition of the approach laid out in the CTA proposals, particularly as it concerns market access.

As would be expected from past performance, USTR will hold out longer than others in admitting to the middle ground. At present there is a desire to push beyond the CTA proposals for more sweeping reform of world agricultural trade. Philosophically the market access proposals are seen

presently as too much of an acceptance of the status quo in domestic policies. Given the present lack of a particular agricultural expertise within the White House and the particular interest in agriculture of Clayton Yeutter, this position can be considered representative of the administration.

If the middle ground that these proposals represent is admitted to, the question then becomes that of choosing between the alternatives. There are two aspects to this: one economic and the other political. In economic terms, there is a clear split between wheat and coarse grain farmers, with wheat producers gaining under Scenario 3, and coarse grain producers gaining under Scenarios 1 and 2. No one benefits under Scenario 4, which creates higher valued ending stocks for the government. However government exposure is reduced in terms of stock holding under Scenario 3, but the size of the reduction is small in quantitative terms relative to the absolute increases in stocks in Scenarios 1 and 2. With such mixed results, the political dimensions could be expected to play a large role in forming negotiating perspectives.

All the scenarios reflect an admission of agriculture maintaining exceptional status under Article XI of the GATT. However, the manner and degree of protection afforded differs among them, each suiting different political philosophies. Scenarios 1 and 2 recognize the present emphasis under GATT for only allowing import restrictions

where domestic programs aim to curb domestic production. This moves away from the free trade ideal and is thus not consistent with present administration policy. However this is preferable to the withdrawal of this requirement under Scenarios 3 and 4. Philosophically or strictly politically, within the U.S. there is little reason to distinguish between the different criteria for measuring the minimum access commitment under each scenario.

7.2.2 The EC Position

As was the case in previous sections, much of the EC analysis relies on input from U.S. interviewees as well as the Europeans interviewed. The views of those U.S. participants most familiar with the EC were obviously considered more directly than those of less involved participants. Thus what follows is a combination of corroborated interview material and speculation based on the political economy framework.

The market access proposals come closer to the general orientation of EC approaches to potential GATT outcomes than to those of the U.S.. However they are not what would be expected as EC preferences. There is still within the Commission a commitment to the principles of market sharing and commodity agreements as a method of liberalizing agricultural trade. This position is certainly evident within DG VI and seems sure to be pursued by DG I.

The budgetary considerations of the current CAP make it likely that the Commission would not be as inflexible in negotiations as they were in the Tokyo Round and would therefore more easily consider minimum access commitment proposals. The Agricultural Council of Ministers however is likely to be less willing, although it is thought differences in approach exist among members, with the U.K. at the forefront of initiatives for reform based on budgetary considerations.

The interest groups, individually and through COPA, are concerned with protecting the sanctity of the CAP, and therefore want as uncompromising a negotiating position as was evident in the Tokyo Round. This would involve not admitting to the possibility of minimum access commitments. This view has been directly expressed by the Economic and Social Committee, which stated that in defence of the CAP and in order to reduce export subsidies "the Community should avoid any major changes in its import arrangements. It is not possible to accept a liberalization of imports without exacerbating the surplus problem" (Economic and Social Committee, p. 3).

In economic terms implementation of any of the market access proposals would have a negative effect on Community farmers and the EC budget overall. However EC coarse grain farmers would benefit under Scenarios 1 and 2, but the gain would be less than the loss to wheat farmers. Given the efforts within the Community to end the open-ended nature of

supports through the introduction of milk quotas and cereal coresponsibility levies, Scenarios 1 and 2 would be politically most acceptable because of the explicit necessity to limit production. In choosing between Scenarios 3 and 4, the latter would seem the least acceptable since it has the worst economic impacts as well as appearing to be designed specifically to penalize the EC.

7.3 Observations on the Political Feasibility of the Market Access Proposals

It has been asserted above that the market access proposals are far from representing what either the U.S. or the EC would desire as a way to approach liberalization in the next round. Yet these proposals are emerging from the GATT CTA, which has to a considerable extent been dominated by the U.S. and the EC. The negotiators that have been involved in the committee's work have not been isolated from the political climate of their respective countries. One possible inference from this would be that for all the rhetoric that is being made domestically, these proposals are likely to be a central part of the negotiations.

This being the case, what can be said about the differences between the proposals? The differences take the form of whether efforts are made to control domestic production, whether there is a phase-in period and the method by which the minimum access commitment is calculated. Scenarios 1 and 2 are only distinguishable by the phase-in

period. With no phase-in the gains to the U.S. and the losses to the EC are greater. However while the U.S. gains more under Scenario 1, it is likely there would be acceptance of the need to phase-in the scheme, which undoubtedly would be the EC position.

The largest problem associated with Scenarios 1 and 2, would be reaching agreement on the proportion of imports to domestic production that would have existed in the absence of restrictions. In modeling the scenarios a method was introduced by assumption, but in negotiations reaching a final decision on such a measure would be difficult. The temptation to manipulate the measure in order to change the final result would create problems of confidence in the negotiations. However the work being conducted currently by the OECD to develop a universally acceptable measure of levels of protection could contribute to avoiding this problem. Under the OECD Trade Mandate Study, levels of protection in individual countries are calculated in Producer and Consumer Subsidy Equivalents (PSE's and CSE's). If such a measure were to be accepted by the GATT contracting parties, bearing in mind all of the objections to the economic concepts of consumer and producer surpluses, then this sort of approach might prove to be possible.

Scenario 3 appears to be a more pragmatic approach in that individual countries are left sovereign over any attempts to regulate production, with an arbitrarily fixed form of penalty where such attempts are not made or are not

effective. This relieves negotiators of the responsibility of agreeing to a particular logic or methodology that could be subject to marginal negotiation. The fact that this scenario has the least dramatic impacts of the four suggests that it would receive high consideration.

While appearing to penalize the most blatant "wrong-doers" on international markets, Scenario 4 is less appealing than might have been expected. The proposal contains the kind of rhetoric that has been leveled at the EC by many countries including the U.S.. However as past negotiations have shown, aggressive negotiating strategies seldom if ever work. Little was achieved in the Tokyo Round while the U.S. and EC were so diametrically opposed on approaches. It was only after there was some compromise that progress towards agreements could be made. On this basis, the antagonistic approach outlined in Scenario 4 would seem destined to fail. Furthermore, the impact of Scenario 4 on world markets is the most disruptive of all the proposals, at considerable expense to the U.S. as well as the EC; both U.S. wheat and coarse grain farmers loose under this scenario.

In choosing between these options it is considered that a phase-in period would be essential, controls on production would be preferable and the method of calculating minimum access commitments be as arbitrary as possible. In this way the chances for international and domestic political differences to obstruct progress would be minimized. Thus

Scenarios 2 or 3 or some hybrid would appear to be the most likely choices, when viewed in isolation.

Whether any of these proposals becomes the core of an agreement reached in the new round will depend also on the approaches taken over the subsidies issue. This is likely to be an even harder topic with which the negotiators must come to grips. Whatever might be agreed on subsidies will undoubtedly have an economic impact on the specific outcomes of market access proposals. It would appear that discussion of subsidies and the consequent linkages between domestic policies and international trade is likely to progress in the new round. Recent domestic decisions both in the U.S. and the EC, and international discussions suggest this is the case, if only for domestic budgetary reasons. There is some reason to believe that even the agricultural interest groups are beginning to accept this as an eventuality.

CHAPTER EIGHT

CONCLUSIONS

8.1 Policy Positions Toward the New Round

Having studied the likely positions of the U.S. and the EC toward the market access proposals, indications of the more general attitudes of the two countries toward agriculture in the new round can now be outlined. This will be done both from the perspective of what the analysis of the decision process would predict, the views of the process participants interviewed and what is presently known from the public record.

It appears from the foregoing analysis that some reforms of domestic and international agricultural policy are more likely than they have been in any previous round of negotiations. This statement in one form or another was made at the outset of each of the previous two rounds that attempted seriously to deal with nontariff trade barriers, and yet little substantive progress was made. What makes the situation any different today?

It has been suggested here that it is changes in the policy process itself that may make the difference. The changes that have been identified are not so much changes in the institutions involved, although some such changes have been noted. Rather it is changes in the perceptions of policy participants that will likely make the difference. What is perceived to be a politically feasible outcome of

the policy process today is considerably different from perceived outcomes at the time of the Tokyo Round. Although the agricultural interest groups maintain a strong position within the policy process, their ability to maintain the status quo is changing both in the U.S. and the EC.

The need to integrate domestic and international policies is becoming more apparent within the policy process and as that happens the likelihood of such integration increases. This perception has been created by the effect of changes in long term economic forces, as predicted by the model. In a world economy of increasing interdependence, recent domestic and trade legislation in the U.S. and the EC reflects the realization that the subsidized economics of agriculture is now not only too expensive, in light of U.S. and EC budget deficits, but counterproductive to both domestic and world development.

While this study of the policy processes of the U.S. and the EC does not allow any definitive predictions of outcomes for the new round, some predictive insights can be gained. In discussing the positions of the U.S. and EC, the analysis relies on the product of this research, which was completed at the end of 1986. However, the discussion of overall prospects for the new round, in addition to relying on the foregoing analysis, also presumes a knowledge of the activities of the subsequent six months. These activities included the OECD Ministerial meeting, the Venice Economic

Summit, and the tabling in the GATT of the opening U.S. position on agriculture in the new round.

8.1.1 The U.S. Position

The analysis of Chapter Four provides some insights into the manner in which the U.S. is approaching the new round of negotiations. The existence of the budget deficit and the high cost of farm programs are acknowledged as major influences on the perceptions of policy participants. The Treasury and OMB are concerned about the cost of domestic programs and are therefore looking to the international trading environment and U.S. comparative advantage as opportunities to change the direction of domestic policy in line with liberalization objectives of the GATT. USDA is similarly disposed in a general sense, though there remains a reticence within FAS to move on market access if the negotiations fail to be all-encompassing. The greater benefits are perceived to exist by tackling the subsidy question, while deferring to the traditional protectionist instincts of such interests as the dairy lobby over market access.

These positions are consistent with Reagan Administration ideology within the executive branch. USTR is inclined towards major liberalization efforts in agriculture. The State Department would again seem to be closest to EC hearts with some inclination toward commodity agreements.

Given continued financial stress in the agricultural sector, the interest groups and Congress would be expected to have a somewhat different perspective. Traditionally more subject to the pressures of particular constituents, these actors are more likely to be pushing for protectionist responses to the perceived shortcomings of present programs.

Are these positions consistent with the events of the recent past? The evidence of the 1985 Farm Bill suggests a movement towards a more market oriented approach to agriculture in the U.S., which was led by Reagan Administration philosophy. However as this legislation initially came to be perceived as having failed to alleviate many of the income problems of the farm community, there was a drift in policy discussions towards more market interventionist, if not protectionist policies, both inside and outside of the administration. Certainly the positions of the interest groups and the Congress have moved toward protectionism under the pressure of recent events. There have been and continue to be calls for higher protection for agricultural producers even to the extent of taking U.S. agriculture out of the world market, in as much as this would occur under some of the high internal price support, mandatory production control schemes that have been suggested for major commodities.

The administration response has been to place increased emphasis on the potential of trade negotiations in combination with the 1985 Farm Bill to achieve results

through increased trade performance and liberalization. The spiralling costs of the domestic programs combined with the pressures created by the federal deficit have helped the administration down-play such protectionist possibilities because of their high costs; most observers believe a move to more protectionist policies would likely increase government costs which are already higher now than ever before. At the same time, the farm economy is beginning to pick up with land prices and net farm income firming (albeit with a large government contribution). Therefore the interest groups are beginning to lobby to leave the farm bill alone, feeling that it is perhaps beginning to work.

These events have contributed to providing the right environment for the administration to try to place agriculture on a "fast track" in the GATT negotiations. This is a position pushed by USTR and supported in the White House and USDA, with only measured acceptance from State because of the logistical considerations of an accelerated time-frame. On the one hand it is feared by policy observers and participants that the agricultural community will not believe that anything negotiated under a fast track will help in the short run and will therefore maintain protectionist pressures on the domestic policy scene. On the other hand many believe that improvements in the U.S. farm sector will allow the directions of lower target prices and loan rates and increased overseas competition established in

the 1985 Farm Bill to be developed as an initiative in the new round of trade negotiations.

8.1.2 The EC Position

Several factors appear to be the primary determinants of current policy attitudes within the Community. Budget pressures continue to increase and therefore are affecting perspectives on policy responses. The Commission would clearly be in favor of measures that would limit the expenditures of the CAP. Different member states, in the degree to which they benefit from the CAP relative to its costs, would be expected to have conflicting viewpoints. Thus there likely would be a lack of unanimity within the Agricultural Council of Ministers as well as, to a lesser degree, in the Council of Finance Ministers.

This situation has been reflected in recent policy decisions. Over the last few years the Commission has been proposing cuts in real support levels for most commodities, backed up in large part by the British, the Dutch and, until recently, the Germans. Thus, in 1984 the community introduced quotas for dairy production and in 1986 introduced a co-responsibility levy on cereal production. In real terms, support prices for the major commodities have declined in each of the last four years.

However, in the most recent price negotiations, elections in West Germany resulted in that country withholding support for curtailing the CAP. This has lead to

one development that was not predicted by the analysis of Chapter Five. This has been the introduction of "renationalization of the CAP" as a policy option. Because of the perceived policy differences amongst member states, there is pressure to allow individual member states to take an increasing share of the cost burden of maintaining support levels. This would alleviate the political pressures to reach unanimous decisions at the Community level and avoid the corresponding costs of not reaching decisions. Member states would be freer to support agriculture at differing levels. It is hypothesized, and confirmed by EC representatives interviewed, that this element of the policy environment had some influence on the decision not to prepare an "overall approach" for the new round of negotiations. Under the present circumstances individual countries will have greater flexibility to consider their national trade-offs within the EC/GATT context.

The response of the interest groups to these developments has been to acknowledge more explicitly the costs associated with the support programs, and therefore to accept the possibilities of trade-offs amongst commodities and between sectors. Their hope is that anything lost by negotiation at the community level can be regained through renationalized elements of support policies for which they are well prepared to lobby.

Thus, as the Community begins to reach a maturity in some of the policy areas that will be subject to negotiation

in the new round, it appears for the first time there will be less of a determined effort to present a unified position for the sake of political cohesion. Almost thirty years after its inception, the Community is finally at the point where it appears inherently strong enough for national priorities to openly surface on an international agenda, without the risk of damaging overall cohesion. This could well have a major impact on the outcomes of the new round.

8.2 Prospects for the New Round

Knowledge of the U.S. and EC positions gained in this study may help in predicting outcomes for the round overall, given the influence these two players have. However, since the major part of this research was concluded, a number of important events have occurred. These events bear out some of the preceding analysis, while pointing towards overall prospects for the round.

At the OECD Ministerial meeting in Paris in April 1987, member countries gave the strongest commitment to reform of both domestic and international agricultural policies that has ever been witnessed. The U.S. was seen as the major driving force behind this effort, applying great pressure, particularly on the EC, to get a strong commitment for reform.

In order to achieve such forcefulness, the U.S. demonstrated a comprehensive solidarity on approach between its own agencies by sending the Secretaries of Agriculture

and State and the U.S. Trade Representative in addition to the Secretary of the Treasury, the usual representative at such meetings. One of the agenda items was official publication of the OECD Trade Mandate Study which had calculated overall measures of protection in all member countries, using the Producer and Consumer Subsidy Equivalent concept. The U.S. team, using this agenda item, had given advance notice to other participants that agriculture was a top priority for the meeting.

Given the budgetary pressures of the CAP, and the known desires of at least the British and the Dutch for major reform of agricultural policy, certain pressures existed in the EC to be more open to reform at the OECD meeting. This was particularly true since at this time the British, whose political power within the community had been rising because of their successful negotiations on budget questions, held the EC Presidency. Mrs. Thatcher, the British Prime Minister, exerted pressure to get the EC to lean towards the wide-reaching proposals of the U.S.. Indeed, the final OECD communique reflected greater U.S. influence than that of the EC.

The communique that came out of the meeting held forth the potential for the new round to go far beyond the kinds of proposals put forward by the GATT CTA, both in terms of market access and subsidies. The text stated reform will be based, among others, on the following principles:

> The long-term objective is to allow market signals to influence by way of a progressive and concerted

> reduction of agricultural support, as well as by all other appropriate means, the orientation of agricultural production...
>
> It is necessary on the supply side to implement measures which, by reducing guaranteed prices and other types of production incentives, by imposing quantitative production restrictions, or by other means, will prevent an increase in excess supply.
>
> Rather than being provided through price guarantees or other measures linked to production or factors of production, farm income support should, as appropriate, be sought through direct income support (OECD, 1987).

This new commitment, which represented a substantial fleshing out of the earlier commitments given at the previous year's Tokyo Summit, set the stage for the Venice Summit two months later. Here the U.S. tried to further strengthen commitment to wholesale and all encompassing reform, with President Reagan expressing the wish to see the elimination by the year 2000 of all forms of interference in agriculture that affect trade, both domestic and international. Only those government supports that do not influence production levels or trade would be allowed. While the other participants did not fully endorse this approach, which was very generalized with little reference to specifics such as grades and standards or domestic or international food assistance, there was a renewed commitment to the principals laid down at the OECD Ministerial meeting. This was an important enough achievement, since it illustrated that there was no intention to backslide on the part of the EC or the Japanese.

The broad principals embodied in President Reagan's Venice address were further developed when the U.S. tabled its formal proposal for agricultural reform before the GATT Uruguay Round Agriculture Committee in Geneva on July 6th, 1987. The proposal calls for the elimination of all direct and indirect subsidies to agriculture that affect trade, the elimination of all market access barriers and the improved cooperation in applying health and phytosanitary regulations. All of this is to be achieved over a ten year phase in, starting retroactively from the Punta del Este GATT Ministerial meeting.

This U.S. position is quite different in approach from either the market access or subsidy proposals that were being discussed in the GATT CTA, the former being very broad based and the latter very detail oriented. The analysis in this research would indicate that such a move had become possible because of the continuing shift in perceptions of policy participants both in the U.S. and elsewhere. Most participants interviewed agree that, while protectionism was rife in U.S. politics in general, in agriculture there had been a subtle shift towards a more general acceptance of the move towards market orientation that the 1985 Farm Bill had originated.

This change contributed to the reinforcement of a coherent position among government agencies as well as with the interest groups. At the June 1987 meeting of the Agricultural Political Advisory Committee between Secretary

Lyng and Ambassador Yeutter and the member interest groups, the administration received an overall endorsement for its approach. Observers and this research indicate that such an outcome would have been less likely at the start of the Tokyo Round.

In addition to the general change in perceptions noted, personalities seem to have played a large part in enabling such a radical U.S. position. A striking likeness of mind appears to have developed between Secretary Lyng and Ambassador Yeutter, and also with Ambassador Amstutz who has played as large a role as the two cabinet members up to this time. All three are highly regarded by the agricultural community, both in government and the private sector, which has allowed them to pursue such a sweeping approach.

One other, less positive factor has contributed to the early smooth passage of the U.S. approach, namely cynicism. It is possible that many players, particularly the interest groups, have gone along with the proposal simply because it is so drastic a change that they do not believe that it could ever happen. History suggests that most changes occur marginally and the changes being contemplated here are far from marginal.

Within the administration it is possible that previously reticent players such as State view the proposal as simply a good starting point for negotiation. For the interest groups, support has been prefaced by the condition that the round successfully dismantle many elements of the

EC's CAP. It is possible that these groups believe this will never happen and therefore feel safe in supporting a U.S. position likely to diminish their level of government support. The extent to which this kind of cynicism has influenced player's positions is difficult to ascertain, but it certainly is one important element according to some of the participants interviewed.

The reaction of the EC to the U.S. position was initially very non-committal, stressing the practical difficulties of achieving such radical changes. A negative position could have been expected, given the Community's past approach towards agriculture in the GATT. That the statements made were not more negative can probably be attributed to two factors. First, it would be difficult for anyone to dispute the high ground taken by the U.S. with such a free market approach, except on second best grounds which admit the downside of not achieving all the goals set out; the position represents perhaps the most widely held view of an ideal for the agricultural sector. Second, and perhaps more important, is the shift that has been identified as occurring within the EC towards greater fiscal accountability in the agriculture programs. Major reform of the CAP appears increasingly inevitable, and as this occurs it becomes ever easier to link domestic reform to the imperatives for international reform.

With these unpredictable beginnings, the prospects for the new round become increasingly difficult to outline.

Economic theory has more often been used in more marginal kinds of analysis. While political science has been applied to more drastic discreet situations, such as Allison's analysis of the Cuban missile crisis, this has usually been in ex post situations. In spite of this, the foregoing analysis has at least put these prospects into some degree of perspective.

8.3 Observations on the Research Approach and Concluding Remarks

This research has achieved a number of objectives, some more modest than others. First, in chapters three, four and five the events of the Tokyo Round have been described from the U.S. and EC perspectives more completely than they have apparently been recorded elsewhere. The methodology employed has imparted to this description a cohesiveness that might have been lacking, if the events had merely been described chronologically. Only by understanding the particular constraints that faced each organization or each individual involved in the negotiations, is it possible to appreciate the course of events and their final outcomes.

An understanding of the policy process has been combined with empirical analysis to draw inferences concerning political feasibility of policy options. This has been somewhat successful, although it is considered that the degree of detail that can be inferred from a study of the policy process does not match the degree of detail generated

by the empirical analysis. In choosing between the modeled scenarios concerning market access, knowledge of the policy process helped to a degree that did not match the level of complexity of the empirical analysis. However it should also be remembered that the empirical analysis was itself full of assumptions and thus should be interpreted broadly, not literally. While the analysis is rich in complex elements, the accuracy of each individual detail is open to considerable question.

In responding to the empirical analysis of the CTA options, policy participants interviewed were more interested in the overall philosophical and economic orientation of the alternatives than the actual empirical predictions of outcomes. This could have a number of implications. One is that for this type of research the detail of numerical analysis can be kept to a minimum. Another implication is that the value to policy makers of empirical analysis can sometimes perhaps be over-rated. While it is acknowledged that the empirical analysis of this research was wrought with assumptions making it of indicative value only, this is felt by many policy makers, and was expressed by nearly all participants interviewed, to be the case of most empirical analysis.

The hypotheses of the framework have largely been borne out by the research. It was indicated that incompatibilities potentially existed between the hypotheses; the research would suggest that the hypotheses are of a temporal nature.

Where it was suggested hypotheses might be incompatible it has been found that particular hypotheses apply at different points in time. For example, it is evident today that there is more interaction between domestic and international policies, such that in the new round there is a greater chance that they may be negotiable together than at the time of the Tokyo round.

When comparing the analysis of the U.S. and the EC sides of the Tokyo round, the data requirements of the research become evident. A greater understanding of the U.S. decision process was gained by virtue of being able to apply the Governmental Politics model of analysis. However the flexibility offered by having a number of different approaches illustrates the strength of this research approach. Furthermore, the level of analysis achieved is made explicit by the choice of model.

Upon reviewing the research it is possible to add one further hypothesis that has been implicitly acknowledged but deserves to be explicitly stated, since it will certainly have a major impact on the new round. In studying the events of the Tokyo round it was acknowledged that by the end of 1975 it was clear no real progress would be made until after the U.S. presidential election. The implication is that where a series of negotiations are known to be likely to last for a period of time that approaches or exceeds the length of the political election cycle, that cycle will have a major impact on the timing of the substantive parts of the

overall negotiations and therefore possibly the outcomes. Already within the U.S. and EC, policy makers are speculating on the outcome of the 1988 elections in the U.S. and its likely impact on the outcomes of the new round.

This mortal aspect of the life of an administration or a government may have a great deal to do with the "fast track" or "early harvest" approach being pursued by the U.S. for agriculture. This may be true for two reasons. First, key members of the Reagan Administration perhaps believe that whoever succeeds them may have neither the political inclination or will or both to follow the same course through to a conclusion. Thus it becomes necessary to complete the task before a new President is inaugurated. A supplemental argument to this is that the momentum generated by a "fast track" creates a greater possibility for a successful negotiation. The second possible reason is more personal and relates to individual ambition: the desire to be recognized as the ones that got the job done, from start to finish.

Even if the major components of an agricultural agreement could be concluded within the lifetime of the present U.S. administration, which most interviewed participants both inside the U.S. administration and elsewhere agree is unlikely, much negotiation on its implementation would continue beyond 1988. Thus, the detail and description of the Reagan Administration outlined in this research will help in predicting the initial course of

the negotiations, but it is acknowledged that the final outcome could follow a very different direction.

Explicitly stated as such it becomes clear that in considering the political feasibility of options for the Uruguay Round, questions that need to be answered first are who will win the various national elections between now and the end of 1988. The outcomes of these elections may have as large an impact on final outcomes to the round, as anything that is negotiated by present administrations and governments over the next two years. However the stability and knowledge base of the bureaucracy that remains unchanged between administrations may diminish the election effects.

Such acknowledgements in no way diminish the achievements of this research approach. It is in studying the policy process in such a manner that implicit assumptions can be made explicit and brought into an analytical calculus to aid decision makers. If this research has made it possible for decision makers to view more clearly the possible options in front of them, a major goal will have been achieved. Future research will hopefully further clarify the process.

Obviously one area in which future research is needed is at the descriptive level. In the context of this research it would be useful to extend the analysis of the EC decision making process as it relates to GATT negotiations. More detailed analysis of the Tokyo Round decisions would aid this. In general there is a need to expand the number of

case studies of how major policy decisions are arrived at both in domestic and international environments.

On the analytic level, there continues to be a need to further embody within the research fundamental economic principles. While it is felt that the research adequately adopted the principles of the conceptual framework, it may be possible in future research to make the linkages more explicit. This calls perhaps for a greater coordination of research effort between analysts pursuing the type of research contained in this study and economic modelers who are aiming to endogenize government behavior. It also calls for more multidisciplinary work between economists and political scientists.

As with any pursuit for knowledge, analysis of increasing levels of detail can require increasingly diverse analytical tools. But, as was illustrated by the interviewed policy participants' lack of concern for the empirical detail of the analysis of the CTA options developed using a complex econometric model, use of such tools does not necessarily imply greater understanding of the questions raised by the research; in this case the greater contributions of the research came from the analysis of the policy process itself. Thus, the challenge for extending this kind of analysis lies in balancing the two approaches, political economy analysis and empirical economic analysis, and, in so doing, developing a successively more useful mix of analytical tools.

APPENDICES

APPENDIX A

Article XI of the GATT

General Elimination of Quantitative Restrictions

1. No prohibitions or restrictions other than duties, taxes or other charges, whether made effective through quotas, import or export licenses or other measures, shall be instituted or maintained by any contracting party on the importation of any product of the territory of any other contracting party or on the exportation or sale for export of any product destined for the territory of any other contracting party.

2. The Provisions of paragraph 1 of this Article shall not extend to the following:

(a) Export prohibitions or restrictions temporarily applied to prevent or relieve critical shortages of foodstuffs or other products essential to the exporting contracting party;

(b) Import and export prohibitions or restrictions necessary to the application of standards or regulations for the classification, grading or marketing of commodities in international trade;

(c) Import restrictions on any agricultural or fisheries product, imported in any form,* necessary to the enforcement of governmental measures which operate:

(i) to restrict the quantities of the like domestic product permitted to be marketed or produced, or, if there is no substantial domestic production of the like product, of a domestic product for which the imported product can be directly substituted; or

(ii) to remove a temporary surplus of the like domestic product, or, if there is no substantial domestic production of the like product, of a domestic product for which the imported product can be directly substituted, by making the surplus available to certain groups of domestic consumers free of charge or at prices below the current market level; or

(iii) to restrict the quantities permitted to be produced of any animal product the production of which is entirely dependent, wholly or mainly, on the imported commodity, if the domestic

production of that commodity is relatively negligible.

Any contracting party applying restrictions on the importation of any product pursuant to sub-paragraph (c) of this paragraph shall give public notice of the total quantity or value of the product permitted to be imported during a specified future period and of any change in such quantity or value. Moreover, any restrictions applied under (i) above shall not be such as reduce the total of imports relative to the total of domestic production, as compared with the proportion which might reasonably be expected to rule between the two in the absence of restrictions. In determining this proportion, the contracting party shall pay due regard to the proportion prevailing during a previous representative period and to any special factors* which may have affected or may be affecting the trade in the product concerned.

Ad Article XI

Paragraph 2(c)

The term "in any form" in this paragraph covers the same products when in an early stage of processing and still perishable, which compete directly with the fresh product and if freely imported would tend to make the restriction on the fresh product ineffective.

Paragraph 2, last sub-paragraph

The term "special factors" includes changes in relative productive efficiency as between domestic and foreign producers, or as between different foreign producers, but not changes artificially brought about by means not permitted under the Agreement.

APPENDIX B

List of Interviewees

Current positions are listed with Tokyo round agencies given in parentheses where applicable.

William Barreda, U.S. Treasury Department (Treasury)

Anthony Cruit, USDA, Foreign Agricultural Service (FAS)

Lynn Daft, Abel, Daft and Early (White House)

Sir Roy Denman, EC Mission to the United States (EC Brussels)

Hazen Gale, U.S. Treasury Department (Treasury)

Dale Hathaway, Consultants International (USDA)

John Hudson, USDA, Foreign Agricultural Service (FAS)

Bruno Julien, EC Mission to the United States (French Ministry of Agriculture)

Julius Katz, Consultants International (State)

Ernest Koenig, USDA, Foreign Agricultural Service (FAS)

Jean Lucq, Agriculture Section, GATT Secretariat (GATT)

Eugene Moos, U.S. House of Representatives Agriculture Committee (House of Representatives)

Daniel Morrow, The World Bank (USDA)

Donald Nelson, Philip Morris Inc. (FAS, USTR)

Frank Padavano, USDA, Foreign Agricultural Service (FAS)

Gardner Patterson (GATT)

Derwent Renshaw, EC Mission to the United States (EC Brussels)

George E. Rossmiller, National Center for Food and Agricultural Policy, Resources for the Future (FAS)

Thomas Saylor, Comsort Inc. (Senate Agriculture Committee, FAS)

G. Edward Schuh, The World Bank (CEA, USDA)

Vernon L. Sorenson, Michigan State Unversity (FAS)

James Starkey, Universal Leaf Corporation (FAS, USTR, USDA)

APPENDIX C

Results of the Empirical Analysis of the Market Access Proposals under Four Scenarios Using the MSU Agriculture Model

Baseline Projections of World Wheat Market Balance Sheet, 1987-1995

(In million metric tons)

WHEAT BASELINE	1987	1988	1989	1990	1991	1992	1993	1994	1995	91-95 AVERAGE
US EXPORT PRICE, $/MT	104.70	103.81	101.12	99.96	104.92	110.08	114.49	117.60	122.12	113.84
NET EXPORTS										
CANADA	20.4	20.0	19.3	19.3	19.5	19.6	19.7	19.8	20.0	19.7
AUSTRALIA	13.9	15.3	16.6	17.6	18.4	19.0	19.5	19.9	20.3	19.4
ARGENTINA	7.6	7.8	7.7	7.5	7.1	7.0	7.3	7.7	8.2	7.5
DEVELOPED MARKETS	6.5	7.5	8.8	9.6	10.4	11.1	11.7	12.5	13.3	11.8
U.S.	33.0	31.7	29.9	29.6	29.9	30.0	19.7	29.3	29.4	27.7
NET IMPORTS										
SOVIET BLOC	21.5	21.4	22.1	22.9	23.8	24.6	25.5	26.5	27.6	25.6
LDC'S	22.7	23.0	21.2	20.3	19.4	18.8	17.9	16.9	16.2	17.8
CHINA	13.5	13.5	13.9	14.2	14.7	15.0	15.1	15.5	15.9	15.2
MIDDLE INCOMES	23.8	24.3	25.1	26.2	27.3	28.4	29.4	30.4	31.5	29.4
PRODUCTION										
CANADA	29.1	26.8	26.1	26.0	26.1	26.4	26.8	27.1	27.2	26.7
AUSTRALIA	17.5	18.8	20.0	21.0	21.8	22.4	22.9	23.4	23.8	22.9
ARGENTINA	12.6	12.7	12.7	12.5	12.2	12.1	12.4	12.9	13.5	12.6
U.S.	57.3	66.6	67.9	69.0	69.7	70.4	71.3	72.0	71.9	71.1
SOVIET BLOC	142.8	146.1	147.3	148.5	149.6	150.5	151.3	152.0	152.7	151.2
DEVELOPED MARKETS	77.8	80.7	82.4	83.6	85.0	86.5	87.7	89.3	90.7	87.8
LDC'S	94.8	99.3	104.3	109.6	115.0	120.4	126.1	132.1	138.1	126.3
CHINA	74.4	75.2	76.2	77.3	78.9	81.2	83.8	86.5	89.1	83.9
MIDDLE INCOMES	12.9	13.0	13.4	13.4	13.4	13.4	13.5	13.7	13.8	13.6
DOMESTIC UTILIZATION										
CANADA	6.2	6.3	6.4	6.5	6.6	6.7	6.8	7.0	7.1	6.8
AUSTRALIA	3.1	3.1	3.1	3.2	3.2	3.2	3.3	3.3	3.4	3.3
ARGENTINA	5.0	4.9	5.0	5.0	5.1	5.1	5.1	5.2	5.3	5.2
U.S.	32.9	34.3	35.4	36.5	37.3	38.0	38.6	38.9	39.2	38.4
SOVIET BLOC	162.6	166.9	169.5	171.4	172.9	174.7	176.4	178.2	179.9	176.4
DEVELOPED MARKETS	72.0	72.3	73.0	73.8	74.6	75.3	75.9	76.5	77.2	75.9
LDC'S	115.6	120.3	123.2	127.4	132.0	136.9	141.5	146.3	151.7	141.7
CHINA	88.0	88.6	89.9	91.4	93.4	96.1	99.0	102.0	105.0	99.1
MIDDLE INCOMES	36.1	37.1	38.4	39.5	40.6	41.7	42.8	43.9	45.1	42.8
ENDING STOCKS										
CANADA	17.3	17.8	18.3	18.5	18.6	18.6	18.8	19.2	19.3	18.9
AUSTRALIA	3.8	4.1	4.5	4.8	5.0	5.1	5.3	5.4	5.5	5.3
ARGENTINA	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.0	1.0	0.9
U.S.	56.3	57.0	59.5	62.5	65.0	70.4	70.4	74.1	77.4	71.5
SOVIET BLOC	3.2	3.8	3.8	3.7	4.2	5.2	5.2	5.4	5.8	5.2
DEVELOPED MARKETS	13.1	13.9	14.5	14.7	14.7	14.9	14.9	15.1	15.3	15.0
LDC'S	28.0	30.0	32.3	34.7	37.1	41.9	41.9	44.5	47.2	42.5
CHINA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MIDDLE INCOMES	4.4	4.7	4.8	4.9	5.0	5.3	5.3	5.5	5.8	5.4

Baseline Projections of World Coarse Grain Market Balance Sheet, 1987-1995

(In million metric tons)

FEED BASELINE	1987	1988	1989	1990	1991	1992	1993	1994	1995	91-95 AVERAGE
US EXPORT PRICE, $/MT	94.55	87.93	86.21	86.09	90.14	92.62	94.15	98.13	103.22	95.65
NET EXPORTS										
CANADA	4.7	4.8	4.8	4.7	4.7	4.6	4.5	4.3	4.2	4.5
AUSTRALIA	5.4	5.9	6.5	7.1	7.7	8.3	8.8	9.3	9.8	8.8
ARGENTINA	12.9	13.9	14.4	14.8	15.1	15.4	15.6	15.8	16.1	15.6
CHINA	2.2	1.9	1.6	1.5	1.3	1.0	0.7	0.4	0.2	0.7
U.S.	58.6	60.1	62.4	65.1	68.3	72.1	76.3	80.6	84.6	76.4
NET IMPORTS										
SOVIET BLOC	26.3	27.9	29.4	31.0	32.7	34.5	36.5	38.2	40.1	36.4
DEVELOPED MARKETS	22.6	22.8	22.4	22.1	22.2	22.5	22.8	23.2	23.7	22.9
LDC'S	11.5	11.7	12.0	12.4	12.8	13.3	13.8	14.3	14.8	13.8
MIDDLE INCOMES	23.4	24.2	26.0	27.6	29.3	31.1	32.9	34.7	36.4	32.9
PRODUCTION										
CANADA	24.2	24.5	24.2	24.0	24.1	24.3	24.3	24.3	24.2	24.2
AUSTRALIA	8.6	9.3	10.0	10.6	11.2	11.7	12.2	12.7	13.2	12.2
ARGENTINA	20.8	22.2	23.0	23.5	24.0	24.5	24.8	25.1	25.5	24.8
U.S.	239.8	250.8	252.8	255.6	259.7	264.5	268.5	272.0	277.3	268.4
SOVIET BLOC	174.0	177.9	182.6	187.5	192.5	197.6	202.8	208.2	213.6	202.9
DEVELOPED MARKETS	104.2	105.7	108.0	110.2	111.8	113.1	114.6	115.8	117.0	114.5
LDC'S	116.2	118.5	119.8	121.2	122.8	124.3	125.8	127.3	129.0	125.8
CHINA	73.1	73.1	71.6	70.1	68.6	67.2	65.4	63.2	61.3	65.1
MIDDLE INCOMES	37.9	39.8	39.0	39.8	39.4	39.3	39.5	39.6	40.2	39.6
DOMESTIC UTILIZATION										
CANADA	19.5	19.7	19.6	19.5	19.5	19.6	19.8	19.8	19.9	19.7
AUSTRALIA	3.2	3.4	3.5	3.5	3.6	3.6	3.5	3.5	3.5	3.5
ARGENTINA	7.9	8.3	8.5	8.8	8.9	9.1	9.2	9.3	9.4	9.2
U.S.	167.5	170.0	174.1	177.8	179.7	178.8	175.8	176.0	178.2	177.7
SOVIET BLOC	200.1	205.7	211.9	218.3	224.9	231.8	238.9	246.1	253.4	239.0
DEVELOPED MARKETS	126.9	128.3	130.0	131.9	133.7	135.4	137.1	138.8	140.5	137.1
LDC'S	127.2	129.7	131.7	133.7	135.7	137.8	139.8	141.9	144.1	139.9
CHINA	71.0	71.3	70.0	68.7	67.5	66.3	64.7	62.7	61.1	64.5
MIDDLE INCOMES	61.3	63.8	65.3	67.3	68.8	70.4	72.3	74.2	76.4	72.4
ENDING STOCKS										
CANADA	5.8	5.7	5.5	5.2	5.1	5.2	5.3	5.4	5.5	5.3
AUSTRALIA	0.3	0.4	0.4	0.3	0.3	0.2	0.0	0.0	0.0	0.1
ARGENTINA	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
U.S.	150.8	171.5	187.8	200.6	212.4	226.0	242.5	257.9	272.3	242.2
SOVIET BLOC	7.5	7.6	7.8	8.1	8.4	8.7	9.0	9.3	9.7	9.0
DEVELOPED MARKETS	15.0	15.2	15.6	15.9	16.2	16.5	16.7	16.9	17.1	16.7
LDC'S	11.7	12.2	12.3	12.2	12.0	11.8	11.6	11.3	11.1	11.6
CHINA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MIDDLE INCOMES	2.9	3.2	2.9	3.1	3.0	2.9	3.0	3.0	3.1	3.0

Projections of World Wheat Market under Scenario One
Balance Sheet, 1987-1995

(In million metric tons)

WHEAT: SCENARIO 1	1987	1988	1989	1990	1991	1992	1993	1994	1995	91-95 AVERAGE
US EXPORT PRICE, $/MT	97.31	96.56	91.65	88.32	90.49	93.65	96.35	100.94	104.26	97.14
NET EXPORTS										
CANADA	23.7	23.0	22.8	23.3	23.9	24.5	25.0	25.8	26.5	25.1
AUSTRALIA	12.1	12.8	13.4	13.9	14.3	14.7	15.0	15.4	15.7	15.0
ARGENTINA	7.2	7.4	7.4	7.4	7.3	7.4	7.5	6.8	6.7	7.1
DEVELOPED MARKETS	-2.1	1.6	3.3	4.1	4.4	4.7	4.9	5.4	5.9	5.1
U.S.	42.8	41.2	40.0	40.8	41.9	43.0	44.1	45.9	47.3	44.4
NET IMPORTS										
SOVIET BLOC	21.3	21.4	22.0	22.9	23.8	24.6	25.5	26.5	27.5	25.6
LDC'S	23.5	25.0	23.8	23.5	23.1	23.0	22.5	22.7	22.3	22.7
CHINA	14.4	14.5	15.1	15.7	16.3	16.7	17.4	17.6	18.3	17.3
MIDDLE INCOMES	24.3	25.0	26.0	27.3	28.6	29.9	31.2	32.5	33.8	31.2
PRODUCTION										
CANADA	30.1	29.5	29.8	29.9	30.3	30.8	31.7	32.2	33.2	31.6
AUSTRALIA	16.1	16.9	17.6	18.2	18.7	19.2	19.7	20.1	20.6	19.7
ARGENTINA	11.7	11.9	11.9	11.9	11.9	12.0	12.1	11.5	11.4	11.8
U.S.	68.5	71.5	75.3	77.5	78.5	79.0	79.8	80.7	82.3	80.1
SOVIET BLOC	143.4	146.7	148.1	149.4	150.7	151.8	152.8	153.8	154.5	152.7
DEVELOPED MARKETS	75.3	76.6	77.8	79.1	80.3	81.5	82.7	83.9	85.0	82.7
LDC'S	93.7	97.6	101.9	106.3	110.8	115.3	120.0	124.6	129.4	120.0
CHINA	73.2	74.1	75.2	76.2	77.5	79.5	81.7	84.0	86.6	81.9
MIDDLE INCOMES	12.5	12.5	12.7	12.4	12.2	12.1	12.0	11.9	12.0	12.0
DOMESTIC UTILIZATION										
CANADA	6.1	6.2	6.3	6.4	6.5	6.6	6.8	6.9	7.0	6.8
AUSTRALIA	3.8	3.9	4.0	4.1	4.3	4.4	4.5	4.7	4.8	4.5
ARGENTINA	4.6	4.5	4.5	4.6	4.6	4.6	4.6	4.6	4.7	4.6
U.S.	31.3	32.0	32.5	33.0	33.4	33.7	33.8	33.7	33.5	33.6
SOVIET BLOC	163.1	167.4	170.3	172.5	174.2	176.1	178.0	179.8	181.7	178.0
DEVELOPED MARKETS	72.0	72.7	73.9	75.1	76.2	77.0	77.8	78.4	79.0	77.7
LDC'S	115.7	120.9	123.7	127.8	131.9	136.3	140.5	145.4	149.7	140.8
CHINA	87.6	88.6	90.3	91.8	93.8	96.2	99.0	101.6	104.9	99.1
MIDDLE INCOMES	36.2	37.3	38.6	39.7	40.8	42.0	43.2	44.4	45.7	43.2
ENDING STOCKS										
CANADA	13.3	13.6	14.3	14.5	14.3	14.0	13.9	13.3	13.1	13.7
AUSTRALIA	3.4	3.6	3.8	3.9	4.1	4.2	4.3	4.4	4.6	4.3
ARGENTINA	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.0	1.0	0.9
U.S.	44.5	42.8	45.7	49.4	52.6	54.9	56.9	58.0	59.6	56.4
SOVIET BLOC	2.7	3.4	3.2	3.0	3.3	3.6	3.9	4.3	4.6	3.9
DEVELOPED MARKETS	18.9	21.1	21.7	21.6	21.3	21.1	21.1	21.3	21.5	21.3
LDC'S	27.8	29.6	31.6	33.6	35.6	37.6	39.6	41.6	43.6	39.6
CHINA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MIDDLE INCOMES	4.2	4.4	4.5	4.5	4.6	4.6	4.7	4.8	4.9	4.7

Differences from the Baseline under Scenario One for the World Wheat Market, 1987-1995

(In million metric tons)

WHEAT: SCENARIO 1 (DIF)	1987	1988	1989	1990	1991	1992	1993	1994	1995	91-95 AVERAGE
US EXPORT PRICE, $/MT	-7.39	-7.25	-9.47	-11.64	-14.43	-16.43	-18.14	-16.66	-17.86	-16.70
NET EXPORTS										
CANADA	3.3	3.0	3.5	4.0	4.4	4.9	5.3	6.0	6.5	5.4
AUSTRALIA	-1.8	-2.5	-3.2	-3.7	-4.1	-4.3	-4.5	-4.5	-4.6	-4.4
ARGENTINA	-0.4	-0.4	-0.3	-0.1	0.2	0.4	0.2	-0.9	-1.5	-0.3
DEVELOPED MARKETS	-8.6	-5.9	-5.5	-5.5	-6.0	-6.4	-6.8	-7.1	-7.4	-6.7
U.S.	9.8	9.5	10.1	11.2	12.0	13.0	24.4	16.6	17.9	16.8
NET IMPORTS										
SOVIET BLOC	-0.2	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	-0.1	.0
LDC'S	0.8	2.0	2.6	3.2	3.7	4.2	4.6	5.8	6.1	4.9
CHINA	0.9	1.0	1.2	1.5	1.6	1.7	2.3	2.1	2.4	2.0
MIDDLE INCOMES	0.5	0.7	0.9	1.1	1.3	1.5	1.8	2.1	2.3	1.8
PRODUCTION										
CANADA	1.0	2.7	3.7	3.9	4.2	4.4	4.9	5.1	6.0	4.9
AUSTRALIA	-1.4	-1.9	-2.4	-2.8	-3.1	-3.2	-3.2	-3.3	-3.2	-3.2
ARGENTINA	-0.9	-0.8	-0.8	-0.6	-0.3	-0.1	-0.3	-1.4	-2.1	-0.8
U.S.	11.2	4.9	7.4	8.5	8.8	8.6	8.5	8.7	10.4	9.0
SOVIET BLOC	0.6	0.6	0.8	0.9	1.1	1.3	1.5	1.8	1.8	1.5
DEVELOPED MARKETS	-2.5	-4.1	-4.6	-4.5	-4.7	-5.0	-5.0	-5.4	-5.7	-5.2
LDC'S	-1.1	-1.7	-2.4	-3.3	-4.2	-5.1	-6.1	-7.5	-8.7	-6.3
CHINA	-1.2	-1.1	-1.0	-1.1	-1.4	-1.7	-2.1	-2.5	-2.5	-2.0
MIDDLE INCOMES	-0.4	-0.5	-0.7	-1.0	-1.2	-1.3	-1.5	-1.8	-1.8	-1.5
DOMESTIC UTILIZATION										
CANADA	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0.0	-0.1	-0.1	-0.1
AUSTRALIA	0.7	0.8	0.9	0.9	1.1	1.2	1.2	1.4	1.4	1.3
ARGENTINA	-0.4	-0.4	-0.5	-0.4	-0.5	-0.5	-0.5	-0.6	-0.6	-0.5
U.S.	-1.6	-2.3	-2.9	-3.5	-3.9	-4.3	-4.8	-5.2	-5.7	-4.8
SOVIET BLOC	0.5	0.5	0.8	1.1	1.3	1.4	1.6	1.6	1.8	1.5
DEVELOPED MARKETS	0.0	0.4	0.9	1.3	1.6	1.7	1.9	1.9	1.8	1.8
LDC'S	0.1	0.6	0.5	0.4	-0.1	-0.6	-1.0	-0.9	-2.0	-0.9
CHINA	-0.4	0.0	0.4	0.4	0.4	0.1	0.0	-0.4	-0.1	0.0
MIDDLE INCOMES	0.1	0.2	0.2	0.2	0.2	0.3	0.4	0.5	0.6	0.4
ENDING STOCKS										
CANADA	-4.0	-4.2	-4.0	-4.0	-4.3	-4.6	-4.9	-5.9	-6.2	-5.2
AUSTRALIA	-0.4	-0.5	-0.7	-0.9	-0.9	-0.9	-1.0	-1.0	-0.9	-0.9
ARGENTINA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S.	-11.8	-14.2	-13.8	-13.1	-12.4	-15.5	-13.5	-16.1	-17.8	-15.1
SOVIET BLOC	-0.5	-0.4	-0.6	-0.7	-0.9	-1.6	-1.3	-1.1	-1.2	-1.2
DEVELOPED MARKETS	5.8	7.2	7.2	6.9	6.6	6.2	6.2	6.2	6.2	6.3
LDC'S	-0.2	-0.4	-0.7	-1.1	-1.5	-4.3	-2.3	-2.9	-3.6	-2.9
CHINA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MIDDLE INCOMES	-0.2	-0.3	-0.3	-0.4	-0.4	-0.7	-0.6	-0.7	-0.9	-0.7

Differences from the Baseline under Scenario One for the World Wheat Market, 1987-1995

(Percent change)

WHEAT: SCENARIO 1 (%CHANGE)	1987	1988	1989	1990	1991	1992	1993	1994	1995	91-95 AVERAGE
US EXPORT PRICE, $/MT	-7.1	-7.0	-9.4	-11.6	-13.8	-14.9	-15.8	-14.2	-14.6	-14.7
NET EXPORTS										
CANADA	16.2	15.0	18.1	20.7	22.6	25.0	26.9	30.3	22.5	27.5
AUSTRALIA	-12.9	-16.3	-19.3	-21.0	-22.3	-22.6	-23.1	-22.6	-22.7	-22.7
ARGENTINA	-5.3	-5.1	-3.9	-1.3	2.8	5.7	2.7	-11.7	-18.3	-4.3
DEVELOPED MARKETS	-132.3	-78.7	-62.5	-57.3	-57.7	-57.7	-58.1	-56.8	-55.6	-57.1
U.S.	29.7	30.0	33.8	37.8	40.1	43.3	123.9	56.7	60.9	60.7
NET IMPORTS										
SOVIET BLOC	-0.9	0.0	-0.5	0.0	0.0	0.0	0.0	0.0	-0.4	-0.1
LDC'S	3.5	8.7	12.3	15.8	19.1	22.3	25.7	34.3	37.7	27.4
CHINA	6.7	7.4	8.6	10.6	10.9	11.3	15.2	13.5	15.1	13.3
MIDDLE INCOMES	2.1	2.9	3.6	4.2	4.8	5.3	6.1	6.9	7.3	6.1
PRODUCTION										
CANADA	3.4	10.1	14.2	15.0	16.1	16.7	18.3	18.8	22.1	18.4
AUSTRALIA	-8.0	-10.1	-12.0	-13.3	-14.2	-14.3	-14.0	-14.1	-13.4	-14.0
ARGENTINA	-7.1	-6.3	-6.3	-4.8	-2.5	-0.8	-2.4	-10.9	-15.6	-6.7
U.S.	19.5	7.4	10.9	12.3	12.6	12.2	11.9	12.1	14.5	12.7
SOVIET BLOC	0.4	0.4	0.5	0.6	0.7	0.9	1.0	1.2	1.2	1.0
DEVELOPED MARKETS	-3.2	-5.1	-5.6	-5.4	-5.5	-5.8	-5.7	-6.0	-6.3	-5.9
LDC'S	-1.2	-1.7	-2.3	-3.0	-3.7	-4.2	-4.8	-5.7	-6.3	-5.0
CHINA	-1.6	-1.5	-1.3	-1.4	-1.8	-2.1	-2.5	-2.9	-2.8	-2.4
MIDDLE INCOMES	-3.1	-3.8	-5.2	-7.5	-9.0	-9.7	-11.1	-13.1	-13.0	-11.2
DOMESTIC UTILIZATION										
CANADA	-1.6	-1.6	-1.6	-1.5	-1.5	-1.5	0.0	-1.4	-1.4	-1.2
AUSTRALIA	22.6	25.8	29.0	28.1	34.4	37.5	36.4	42.4	41.2	38.4
ARGENTINA	-8.0	-8.2	-10.0	-8.0	-9.8	-9.8	-9.8	-11.5	-11.3	-10.5
U.S.	-4.9	-6.7	-8.2	-9.6	-10.5	-11.3	-12.4	-13.4	-14.5	-12.4
SOVIET BLOC	0.3	0.3	0.5	0.6	0.8	0.8	0.9	0.9	1.0	0.9
DEVELOPED MARKETS	0.0	0.6	1.2	1.8	2.1	2.3	2.5	2.5	2.3	2.3
LDC'S	0.1	0.5	0.4	0.3	-0.1	-0.4	-0.7	-0.6	-1.3	-0.6
CHINA	-0.5	0.0	0.4	0.4	0.4	0.1	0.0	-0.4	-0.1	0.0
MIDDLE INCOMES	0.3	0.5	0.5	0.5	0.5	0.7	0.9	1.1	1.3	0.9
ENDING STOCKS										
CANADA	-23.1	-23.6	-21.9	-21.6	-23.1	-24.7	-26.1	-30.7	-32.1	-27.4
AUSTRALIA	-10.5	-12.2	-15.6	-18.8	-18.0	-17.6	-18.9	-18.5	-16.4	-17.9
ARGENTINA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S.	-21.0	-24.9	-23.2	-21.0	-19.1	-22.0	-19.2	-21.7	-23.0	-21.1
SOVIET BLOC	-15.6	-10.5	-15.8	-18.9	-21.4	-30.8	-25.0	-20.4	-20.7	-23.6
DEVELOPED MARKETS	44.3	51.8	49.7	46.9	44.9	41.6	41.6	41.1	40.5	41.9
LDC'S	-0.7	-1.3	-2.2	-3.2	-4.0	-10.3	-5.5	-6.5	-7.6	-6.9
CHINA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MIDDLE INCOMES	-4.5	-6.4	-6.2	-8.2	-8.0	-13.2	-11.3	-12.7	-15.5	-12.3

Projections of World Coarse Grain Market under Scenario One
Balance Sheet, 1987-1995

(In million metric tons)

FEED: SCENARIO 1	1987	1988	1989	1990	1991	1992	1993	1994	1995	91-95 AVERAGE
US EXPORT PRICE, $/MT	100.29	96.08	96.25	96.23	100.59	103.43	110.41	113.80	120.23	109.69
NET EXPORTS										
CANADA	5.1	5.2	5.3	5.3	5.4	5.5	5.7	5.9	5.9	5.7
AUSTRALIA	4.9	5.4	5.7	6.1	6.5	6.9	7.2	7.6	7.8	7.2
ARGENTINA	13.9	15.1	15.8	16.4	17.0	17.5	17.9	18.5	18.9	18.0
CHINA	2.9	2.8	2.9	2.9	3.0	2.9	3.1	3.0	3.2	3.0
U.S.	64.4	65.1	67.7	70.0	73.0	76.4	79.6	83.5	86.9	79.9
NET IMPORTS										
SOVIET BLOC	25.7	27.1	28.3	29.8	31.3	33.1	34.5	36.6	38.1	34.7
DEVELOPED MARKETS	31.3	31.7	32.4	32.8	33.2	33.6	34.0	34.4	34.8	34.0
LDC'S	11.2	11.5	11.8	12.2	12.6	13.1	13.7	14.2	14.8	13.7
MIDDLE INCOMES	23.0	23.3	24.8	26.1	27.7	29.4	31.2	33.2	35.0	31.3
PRODUCTION										
CANADA	24.8	25.4	25.4	25.5	25.7	26.0	26.3	26.8	27.2	26.4
AUSTRALIA	8.1	9.0	9.2	9.8	10.3	10.7	10.9	11.4	11.6	11.0
ARGENTINA	21.6	23.2	24.2	25.0	25.7	26.4	27.0	27.7	28.3	27.0
U.S.	243.1	256.7	260.7	265.8	271.2	277.3	282.3	289.4	294.1	282.9
SOVIET BLOC	173.7	177.5	182.1	186.8	191.6	196.6	201.8	206.9	212.4	201.9
DEVELOPED MARKETS	104.2	105.7	107.9	109.3	110.7	112.0	113.4	114.7	116.0	113.4
LDC'S	117.1	119.7	121.3	123.1	124.9	126.7	128.4	130.4	132.2	128.5
CHINA	76.3	77.6	77.5	77.8	78.2	78.8	79.1	80.2	80.9	79.4
MIDDLE INCOMES	38.0	41.1	41.0	42.6	42.6	42.7	42.4	41.8	41.6	42.2
DOMESTIC UTILIZATION										
CANADA	19.9	20.1	20.2	20.3	20.4	20.5	20.7	20.9	21.2	20.7
AUSTRALIA	3.3	3.5	3.5	3.7	3.7	3.8	3.8	3.8	3.8	3.8
ARGENTINA	7.7	8.1	8.3	8.5	8.7	8.9	9.0	9.3	9.4	9.1
U.S.	166.4	165.5	170.4	174.1	175.5	174.8	175.5	177.3	181.0	176.8
SOVIET BLOC	199.1	204.5	210.2	216.3	222.6	229.4	236.0	243.2	250.1	236.3
DEVELOPED MARKETS	135.5	137.2	139.9	141.8	143.6	145.4	147.2	148.9	150.6	147.1
LDC'S	128.0	130.7	133.0	135.2	137.5	139.8	142.2	144.6	147.1	142.2
CHINA	73.4	74.8	74.7	74.9	75.2	75.8	76.1	77.2	77.7	76.4
MIDDLE INCOMES	61.2	64.0	65.9	68.3	70.3	72.1	73.7	75.1	76.7	73.6
ENDING STOCKS										
CANADA	5.9	5.9	5.8	5.7	5.6	5.5	5.4	5.4	5.5	5.5
AUSTRALIA	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8
ARGENTINA	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
U.S.	163.3	189.5	212.1	233.8	256.5	282.6	309.7	338.3	364.4	310.3
SOVIET BLOC	7.6	7.7	8.0	8.2	8.5	8.8	9.2	9.5	9.9	9.2
DEVELOPED MARKETS	15.0	15.2	15.5	15.8	16.0	16.3	16.5	16.7	16.9	16.5
LDC'S	12.0	12.5	12.6	12.7	12.7	12.6	12.5	12.5	12.4	12.5
CHINA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MIDDLE INCOMES	3.0	3.5	3.4	3.7	3.8	3.8	3.7	3.6	3.6	3.7

Differences from the Baseline under Scenario One for the World Coarse Grain Market, 1987-1995

(In million metric tons)

FEED: SCENARIO 1 (DIF)	1987	1988	1989	1990	1991	1992	1993	1994	1995	91-95 AVERAGE
US EXPORT PRICE, $/MT	5.74	8.15	10.04	10.14	10.45	10.81	16.26	15.67	17.01	14.04
NET EXPORTS										
CANADA	0.4	0.4	0.5	0.6	0.7	0.9	1.2	1.6	1.7	1.2
AUSTRALIA	-0.5	-0.5	-0.8	-1.0	-1.2	-1.4	-1.6	-1.7	-2.0	-1.6
ARGENTINA	1.0	1.2	1.4	1.6	1.9	2.1	2.3	2.7	2.8	2.4
CHINA	0.7	0.9	1.3	1.4	1.7	1.9	2.4	2.6	3.0	2.3
U.S.	5.8	5.0	5.3	4.9	4.7	4.3	3.3	2.9	2.3	3.5
NET IMPORTS										
SOVIET BLOC	-0.6	-0.8	-1.1	-1.2	-1.4	-1.4	-2.0	-1.6	-2.0	-1.7
DEVELOPED MARKETS	8.7	8.9	10.0	10.7	11.0	11.1	11.2	11.2	11.1	11.1
LDC'S	-0.3	-0.2	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1	0.0	-0.1
MIDDLE INCOMES	-0.4	-0.9	-1.2	-1.5	-1.6	-1.7	-1.7	-1.5	-1.4	-1.6
PRODUCTION										
CANADA	0.6	0.9	1.2	1.5	1.6	1.7	2.0	2.5	3.0	2.2
AUSTRALIA	-0.5	-0.3	-0.8	-0.8	-0.9	-1.0	-1.3	-1.3	-1.6	-1.2
ARGENTINA	0.8	1.0	1.2	1.5	1.7	1.9	2.2	2.6	2.8	2.2
U.S.	3.3	5.9	7.9	10.2	11.5	12.8	13.8	17.4	16.8	14.5
SOVIET BLOC	-0.3	-0.4	-0.5	-0.7	-0.9	-1.0	-1.0	-1.3	-1.2	-1.1
DEVELOPED MARKETS	0.0	0.0	-0.1	-0.9	-1.1	-1.1	-1.2	-1.1	-1.0	-1.1
LDC'S	0.9	1.2	1.5	1.9	2.1	2.4	2.6	3.1	3.2	2.7
CHINA	3.2	4.5	5.9	7.7	9.6	11.6	13.7	17.0	19.6	14.3
MIDDLE INCOMES	0.1	1.3	2.0	2.8	3.2	3.4	2.9	2.2	1.4	2.6
DOMESTIC UTILIZATION										
CANADA	0.4	0.4	0.6	0.8	0.9	0.9	0.9	1.1	1.3	1.0
AUSTRALIA	0.1	0.1	0.0	0.2	0.1	0.2	0.3	0.3	0.3	0.2
ARGENTINA	-0.2	-0.2	-0.2	-0.3	-0.2	-0.2	-0.2	0.0	0.0	-0.1
U.S.	-1.1	-4.5	-3.7	-3.7	-4.2	-4.0	-0.3	1.3	2.8	-0.9
SOVIET BLOC	-1.0	-1.2	-1.7	-2.0	-2.3	-2.4	-2.9	-2.9	-3.3	-2.8
DEVELOPED MARKETS	8.6	8.9	9.9	9.9	9.9	10.0	10.1	10.1	10.1	10.0
LDC'S	0.8	1.0	1.3	1.5	1.8	2.0	2.4	2.7	3.0	2.4
CHINA	2.4	3.5	4.7	6.2	7.7	9.5	11.4	14.5	16.6	11.9
MIDDLE INCOMES	-0.1	0.2	0.6	1.0	1.5	1.7	1.4	0.9	0.3	1.2
ENDING STOCKS										
CANADA	0.1	0.2	0.3	0.5	0.5	0.3	0.1	0.0	0.0	0.2
AUSTRALIA	0.3	0.3	0.3	0.4	0.5	0.6	0.8	0.9	1.1	0.8
ARGENTINA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S.	12.5	18.0	24.3	33.2	44.1	56.6	67.2	80.4	92.1	68.1
SOVIET BLOC	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2
DEVELOPED MARKETS	0.0	0.0	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
LDC'S	0.3	0.3	0.3	0.5	0.7	0.8	0.9	1.2	1.3	1.0
CHINA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MIDDLE INCOMES	0.1	0.3	0.5	0.6	0.8	0.9	0.7	0.6	0.5	0.7

Differences from the Baseline under Scenario One for the World Coarse Grain Market, 1987-1995

(Percent change)

FEED: SCENARIO 1 (%CHANGE)	1987	1988	1989	1990	1991	1992	1993	1994	1995	91-95 AVERAGE
US EXPORT PRICE, $/MT	6.1	9.3	11.6	11.8	11.6	11.7	17.3	16.0	16.5	14.7
NET EXPORTS										
CANADA	8.5	8.3	10.4	12.8	14.9	19.6	26.7	37.2	40.5	27.4
AUSTRALIA	-9.3	-8.5	-12.3	-14.1	-15.6	-16.9	-18.2	-18.3	-20.4	-18.0
ARGENTINA	7.8	8.6	9.7	10.8	12.6	13.6	14.7	17.1	17.4	15.1
CHINA	31.8	47.4	81.2	93.3	130.8	190.0	342.9	650.0	1500.0	322.2
U.S.	9.9	8.3	8.5	7.5	6.9	6.0	4.3	3.6	2.7	4.6
NET IMPORTS										
SOVIET BLOC	-2.3	-2.9	-3.7	-3.9	-4.3	-4.1	-5.5	-4.2	-5.0	-4.6
DEVELOPED MARKETS	38.5	39.0	44.6	48.4	49.5	49.3	49.1	48.3	46.8	48.6
LDC'S	-2.6	-1.7	-1.7	-1.6	-1.6	-1.5	-0.7	-0.7	0.0	-0.9
MIDDLE INCOMES	-1.7	-3.7	-4.6	-5.4	-5.5	-5.5	-5.2	-4.3	-3.8	-4.8
PRODUCTION										
CANADA	2.5	3.7	5.0	6.3	6.6	7.0	8.2	10.3	12.4	8.9
AUSTRALIA	-5.8	-3.2	-8.0	-7.5	-8.0	-8.5	-10.7	-10.2	-12.1	-10.0
ARGENTINA	3.8	4.5	5.2	6.4	7.1	7.8	8.9	10.4	11.0	9.0
U.S.	1.4	2.4	3.1	4.0	4.4	4.8	5.1	6.4	6.1	5.4
SOVIET BLOC	-0.2	-0.2	-0.3	-0.4	-0.5	-0.5	-0.5	-0.6	-0.6	-0.5
DEVELOPED MARKETS	0.0	0.0	-0.1	-0.8	-1.0	-1.0	-1.0	-0.9	-0.9	-1.0
LDC'S	0.8	1.0	1.3	1.6	1.7	1.9	2.1	2.4	2.5	2.1
CHINA	4.4	6.2	8.2	11.0	14.0	17.3	20.9	26.9	32.0	22.0
MIDDLE INCOMES	0.3	3.3	5.1	7.0	8.1	8.7	7.3	5.6	3.5	6.6
DOMESTIC UTILIZATION										
CANADA	2.1	2.0	3.1	4.1	4.6	4.6	4.5	5.6	6.5	5.2
AUSTRALIA	3.1	2.9	0.0	5.7	2.8	5.6	8.6	8.6	8.6	6.8
ARGENTINA	-2.5	-2.4	-2.4	-3.4	-2.2	-2.2	-2.2	0.0	0.0	-1.3
U.S.	-0.7	-2.6	-2.1	-2.1	-2.3	-2.2	-0.2	0.7	1.6	-0.5
SOVIET BLOC	-0.5	-0.6	-0.8	-0.9	-1.0	-1.0	-1.2	-1.2	-1.3	-1.2
DEVELOPED MARKETS	6.8	6.9	7.6	7.5	7.4	7.4	7.4	7.3	7.2	7.3
LDC'S	0.6	0.8	1.0	1.1	1.3	1.5	1.7	1.9	2.1	1.7
CHINA	3.4	4.9	6.7	9.0	11.4	14.3	17.6	23.1	27.2	18.5
MIDDLE INCOMES	-0.2	0.3	0.9	1.5	2.2	2.4	1.9	1.2	0.4	1.6
ENDING STOCKS										
CANADA	1.7	3.5	5.5	9.6	9.8	5.8	1.9	0.0	0.0	3.4
AUSTRALIA	100.0	75.0	75.0	133.3	166.7	300.0	**	**	**	780.0
ARGENTINA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S.	8.3	10.5	12.9	16.6	20.8	25.0	27.7	31.2	33.8	28.1
SOVIET BLOC	1.3	1.3	2.6	1.2	1.2	1.1	2.2	2.2	2.1	1.8
DEVELOPED MARKETS	0.0	0.0	-0.6	-0.6	-1.2	-1.2	-1.2	-1.2	-1.2	-1.2
LDC'S	2.6	2.5	2.4	4.1	5.8	6.8	7.8	10.6	11.7	8.5
CHINA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MIDDLE INCOMES	3.4	9.4	17.2	19.4	26.7	31.0	23.3	20.0	16.1	23.3

** = Baseline value is zero

Projections of World Wheat Market under Scenario Two
Balance Sheet, 1987-1995

(In million metric tons)

WHEAT: SCENARIO 2	1987	1988	1989	1990	1991	1992	1993	1994	1995	91-95 AVERAGE
US EXPORT PRICE, $/MT	96.75	96.45	92.20	87.77	88.48	90.08	92.51	97.30	100.94	93.86
NET EXPORTS										
CANADA	22.1	22.6	22.5	22.8	23.4	24.1	24.8	25.7	26.2	24.8
AUSTRALIA	12.1	12.8	13.4	13.9	14.3	14.7	15.1	15.4	15.7	15.0
ARGENTINA	7.2	7.4	7.5	7.5	7.4	7.4	7.5	6.8	6.6	7.1
DEVELOPED MARKETS	3.8	3.1	3.7	4.6	5.2	5.6	5.7	5.8	6.8	5.8
U.S.	38.2	39.2	39.0	39.7	40.6	41.9	43.4	45.7	46.9	43.7
NET IMPORTS										
SOVIET BLOC	21.5	21.5	22.1	22.9	23.8	24.7	25.6	26.5	27.5	25.6
LDC'S	23.5	24.5	23.3	22.8	22.6	22.4	22.3	22.5	22.3	22.4
CHINA	14.1	14.3	14.9	15.5	16.1	16.7	17.4	17.9	18.5	17.3
MIDDLE INCOMES	24.2	24.9	25.9	27.2	28.5	29.9	31.2	32.6	33.9	31.2
PRODUCTION										
CANADA	30.1	28.7	28.7	29.2	29.9	30.6	31.3	31.8	33.0	31.3
AUSTRALIA	16.1	16.9	17.6	18.2	18.8	19.3	19.7	20.1	20.6	19.7
ARGENTINA	11.7	12.0	12.0	12.0	12.0	12.0	12.1	11.4	11.3	11.8
U.S.	68.5	69.8	72.7	75.2	76.6	77.4	78.2	79.1	80.9	78.4
SOVIET BLOC	143.4	146.5	148.0	149.3	150.6	151.7	152.8	153.9	154.7	152.7
DEVELOPED MARKETS	75.3	76.6	77.8	79.1	80.3	81.5	82.7	83.9	85.0	82.7
LDC'S	93.7	97.8	102.3	106.9	111.5	116.1	120.7	125.3	130.0	120.7
CHINA	73.2	74.1	75.2	76.2	77.5	79.3	81.3	83.5	86.0	81.5
MIDDLE INCOMES	12.5	12.5	12.8	12.6	12.4	12.2	12.1	11.9	11.9	12.1
DOMESTIC UTILIZATION										
CANADA	6.1	6.2	6.3	6.4	6.5	6.7	6.8	6.9	7.0	6.8
AUSTRALIA	3.8	3.9	4.0	4.2	4.3	4.4	4.5	4.7	4.8	4.5
ARGENTINA	4.3	4.5	4.5	4.5	4.6	4.6	4.6	4.6	4.7	4.6
U.S.	31.3	32.1	32.5	32.9	33.1	33.2	33.1	32.9	32.6	33.0
SOVIET BLOC	163.1	167.3	170.2	172.4	174.3	176.2	178.2	180.0	181.9	178.1
DEVELOPED MARKETS	72.0	71.7	72.0	72.7	73.7	74.8	76.0	77.1	78.2	76.0
LDC'S	115.7	120.5	123.5	127.5	131.9	136.4	141.0	145.9	150.3	141.1
CHINA	87.3	88.4	90.1	91.7	93.6	96.0	98.6	101.4	104.5	98.8
MIDDLE INCOMES	36.2	37.3	38.6	39.8	40.9	42.0	43.2	44.4	45.7	43.2
ENDING STOCKS										
CANADA	14.9	14.8	14.7	14.7	14.6	14.4	14.1	13.3	13.1	13.9
AUSTRALIA	3.4	3.6	3.8	4.0	4.1	4.2	4.3	4.4	4.6	4.3
ARGENTINA	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.0	1.0	0.9
U.S.	49.0	47.5	48.8	51.4	54.3	56.6	58.3	58.8	60.2	57.6
SOVIET BLOC	2.6	3.3	3.2	2.9	3.0	3.3	3.5	4.0	4.3	3.6
DEVELOPED MARKETS	12.9	14.6	16.7	18.5	19.8	20.9	21.9	22.9	22.9	21.7
LDC'S	27.9	29.6	31.7	33.9	36.0	38.0	40.1	42.0	44.0	40.0
CHINA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MIDDLE INCOMES	4.2	4.4	4.5	4.6	4.6	4.7	4.7	4.8	4.9	4.7

Differences from the Baseline under Scenario Two for the World Wheat Market, 1987-1995

(In million metric tons)

WHEAT: SCENARIO 2 (DIF)	1987	1988	1989	1990	1991	1992	1993	1994	1995	91-95 AVERAGE
US EXPORT PRICE, $/MT	-7.95	-7.36	-8.92	-12.19	-16.44	-20.00	-21.98	-20.30	-21.18	-19.98
NET EXPORTS										
CANADA	1.7	2.6	3.2	3.5	3.9	4.5	5.1	5.9	6.2	5.1
AUSTRALIA	-1.8	-2.5	-3.2	-3.7	-4.1	-4.3	-4.4	-4.5	-4.6	-4.4
ARGENTINA	-0.4	-0.4	-0.2	0.0	0.3	0.4	0.2	-0.9	-1.6	-0.3
DEVELOPED MARKETS	-2.7	-4.4	-5.1	-5.0	-5.2	-5.5	-6.0	-6.7	-6.5	-6.0
U.S.	5.2	7.5	9.1	10.1	10.7	11.9	23.7	16.4	17.5	16.0
NET IMPORTS										
SOVIET BLOC	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.0	-0.1	.0
LDC'S	0.8	1.5	2.1	2.5	3.2	3.6	4.4	5.6	6.1	4.6
CHINA	0.6	0.8	1.0	1.3	1.4	1.7	2.3	2.4	2.6	2.1
MIDDLE INCOMES	0.4	0.6	0.8	1.0	1.2	1.5	1.8	2.2	2.4	1.8
PRODUCTION										
CANADA	1.0	1.9	2.6	3.2	3.8	4.2	4.5	4.7	5.8	4.6
AUSTRALIA	-1.4	-1.9	-2.4	-2.8	-3.0	-3.1	-3.2	-3.3	-3.2	-3.2
ARGENTINA	-0.9	-0.7	-0.7	-0.5	-0.2	-0.1	-0.3	-1.5	-2.2	-0.9
U.S.	11.2	3.2	4.8	6.2	6.9	7.0	6.9	7.1	9.0	7.4
SOVIET BLOC	0.6	0.4	0.7	0.8	1.0	1.2	1.5	1.9	2.0	1.5
DEVELOPED MARKETS	-2.5	-4.1	-4.6	-4.5	-4.7	-5.0	-5.0	-5.4	-5.7	-5.2
LDC'S	-1.1	-1.5	-2.0	-2.7	-3.5	-4.3	-5.4	-6.8	-8.1	-5.6
CHINA	-1.2	-1.1	-1.0	-1.1	-1.4	-1.9	-2.5	-3.0	-3.1	-2.4
MIDDLE INCOMES	-0.4	-0.5	-0.6	-0.8	-1.0	-1.2	-1.4	-1.8	-1.9	-1.5
DOMESTIC UTILIZATION										
CANADA	-0.1	-0.1	-0.1	-0.1	-0.1	0.0	0.0	-0.1	-0.1	-0.1
AUSTRALIA	0.7	0.8	0.9	1.0	1.1	1.2	1.2	1.4	1.4	1.3
ARGENTINA	-0.7	-0.4	-0.5	-0.5	-0.5	-0.5	-0.5	-0.6	-0.6	-0.5
U.S.	-1.6	-2.2	-2.9	-3.6	-4.2	-4.8	-5.5	-6.0	-6.6	-5.4
SOVIET BLOC	0.5	0.4	0.7	1.0	1.4	1.5	1.8	1.8	2.0	1.7
DEVELOPED MARKETS	0.0	-0.6	-1.0	-1.1	-0.9	-0.5	0.1	0.6	1.0	0.1
LDC'S	0.1	0.2	0.3	0.1	-0.1	-0.5	-0.5	-0.4	-1.4	-0.6
CHINA	-0.7	-0.2	0.2	0.3	0.2	-0.1	-0.4	-0.6	-0.5	-0.3
MIDDLE INCOMES	0.1	0.2	0.2	0.3	0.3	0.3	0.4	0.5	0.6	0.4
ENDING STOCKS										
CANADA	-2.4	-3.0	-3.6	-3.8	-4.0	-4.2	-4.7	-5.9	-6.2	-5.0
AUSTRALIA	-0.4	-0.5	-0.7	-0.8	-0.9	-0.9	-1.0	-1.0	-0.9	-0.9
ARGENTINA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S.	-7.3	-9.5	-10.7	-11.1	-10.7	-13.8	-12.1	-15.3	-17.2	-13.8
SOVIET BLOC	-0.6	-0.5	-0.6	-0.8	-1.2	-1.9	-1.7	-1.4	-1.5	-1.5
DEVELOPED MARKETS	-0.2	0.7	2.2	3.8	5.1	6.0	7.0	7.8	7.6	6.7
LDC'S	-0.1	-0.4	-0.6	-0.8	-1.1	-3.9	-1.8	-2.5	-3.2	-2.5
CHINA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MIDDLE INCOMES	-0.2	-0.3	-0.3	-0.3	-0.4	-0.6	-0.6	-0.7	-0.9	-0.6

Differences from the Baseline under Scenario Two for the World Wheat Market, 1987-1995

(Percent change)

WHEAT: SCENARIO 2 (%CHANGE)	1987	1988	1989	1990	1991	1992	1993	1994	1995	91-95 AVERAGE
US EXPORT PRICE, $/MT	-7.6	-7.1	-8.8	-12.2	-15.7	-18.2	-19.2	-17.3	-17.3	-17.6
NET EXPORTS										
CANADA	8.3	13.0	16.6	18.1	20.0	23.0	25.9	29.8	31.0	26.0
AUSTRALIA	-12.9	-16.3	-19.3	-21.0	-22.3	-22.6	-22.6	-22.6	-22.7	-22.6
ARGENTINA	-5.3	-5.1	-2.6	0.0	4.2	5.7	2.7	-11.7	-19.5	-4.3
DEVELOPED MARKETS	-41.5	-58.7	-58.0	-52.1	-50.0	-49.5	-51.3	-53.6	-48.9	-50.7
U.S.	15.8	23.7	30.4	34.1	35.8	39.7	120.3	56.0	59.5	58.0
NET IMPORTS										
SOVIET BLOC	0.0	0.5	0.0	0.0	0.0	0.4	0.4	0.0	-0.4	0.1
LDC'S	3.5	6.5	9.9	12.3	16.5	19.1	24.6	33.1	37.7	25.7
CHINA	4.4	5.9	7.2	9.2	9.5	11.3	15.2	15.5	16.4	13.6
MIDDLE INCOMES	1.7	2.5	3.2	3.8	4.4	5.3	6.1	7.2	7.6	6.2
PRODUCTION										
CANADA	3.4	7.1	10.0	12.3	14.6	15.9	16.8	17.3	21.3	17.2
AUSTRALIA	-8.0	-10.1	-12.0	-13.3	-13.8	-13.8	-14.0	-14.1	-13.4	-13.8
ARGENTINA	-7.1	-5.5	-5.5	-4.0	-1.6	-0.8	-2.4	-11.6	-16.3	-6.8
U.S.	19.5	4.8	7.1	9.0	9.9	9.9	9.7	9.9	12.5	10.4
SOVIET BLOC	0.4	0.3	0.5	0.5	0.7	0.8	1.0	1.3	1.3	1.0
DEVELOPED MARKETS	-3.2	-5.1	-5.6	-5.4	-5.5	-5.8	-5.7	-6.0	-6.3	-5.9
LDC'S	-1.2	-1.5	-1.9	-2.5	-3.0	-3.6	-4.3	-5.1	-5.9	-4.4
CHINA	-1.6	-1.5	-1.3	-1.4	-1.8	-2.3	-3.0	-3.5	-3.5	-2.8
MIDDLE INCOMES	-3.1	-3.8	-4.5	-6.0	-7.5	-9.0	-10.4	-13.1	-13.8	-10.8
DOMESTIC UTILIZATION										
CANADA	-1.6	-1.6	-1.6	-1.5	-1.5	0.0	0.0	-1.4	-1.4	-0.9
AUSTRALIA	22.6	25.8	29.0	31.3	34.4	37.5	36.4	42.4	41.2	38.4
ARGENTINA	-14.0	-8.2	-10.0	-10.0	-9.8	-9.8	-9.8	-11.5	-11.3	-10.5
U.S.	-4.9	-6.4	-8.2	-9.9	-11.3	-12.6	-14.2	-15.4	-16.8	-14.1
SOVIET BLOC	0.3	0.2	0.4	0.6	0.8	0.9	1.0	1.0	1.1	1.0
DEVELOPED MARKETS	0.0	-0.8	-1.4	-1.5	-1.2	-0.7	0.1	0.8	1.3	0.1
LDC'S	0.1	0.2	0.2	0.1	-0.1	-0.4	-0.4	-0.3	-0.9	-0.4
CHINA	-0.8	-0.2	0.2	0.3	0.2	-0.1	-0.4	-0.6	-0.5	-0.3
MIDDLE INCOMES	0.3	0.5	0.5	0.8	0.7	0.7	0.9	1.1	1.3	1.0
ENDING STOCKS										
CANADA	-13.9	-16.9	-19.7	-20.5	-21.5	-22.6	-25.0	-30.7	-32.1	-26.5
AUSTRALIA	-10.5	-12.2	-15.6	-16.7	-18.0	-17.6	-18.9	-18.5	-16.4	-17.9
ARGENTINA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S.	-13.0	-16.7	-18.0	-17.8	-16.5	-19.6	-17.2	-20.6	-22.2	-19.3
SOVIET BLOC	-18.8	-13.2	-15.8	-21.6	-28.6	-36.5	-32.7	-25.9	-25.9	-29.8
DEVELOPED MARKETS	-1.5	5.0	15.2	25.9	34.7	40.3	47.0	51.7	49.7	44.7
LDC'S	-0.4	-1.3	-1.9	-2.3	-3.0	-9.3	-4.3	-5.6	-6.8	-5.9
CHINA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MIDDLE INCOMES	-4.5	-6.4	-6.2	-6.1	-8.0	-11.3	-11.3	-12.7	-15.5	-11.9

Projections of World Coarse Grain Market under Scenario Two
Balance Sheet, 1987-1995

(In million metric tons)

FEED: SCENARIO 2	1987	1988	1989	1990	1991	1992	1993	1994	1995	91-95 AVERAGE
US EXPORT PRICE, $/MT	96.90	93.59	93.29	94.10	97.85	102.10	109.16	113.92	119.40	108.49
NET EXPORTS										
CANADA	5.0	5.1	5.0	5.0	5.1	5.2	5.5	5.8	5.9	5.5
AUSTRALIA	4.8	5.3	5.6	5.9	6.4	6.8	7.2	7.7	8.0	7.2
ARGENTINA	13.9	15.0	15.7	16.2	16.8	17.4	18.0	18.6	19.1	18.0
CHINA	2.7	2.7	2.6	2.8	2.8	2.9	3.1	3.1	3.3	3.0
U.S.	57.0	58.0	59.9	61.6	64.0	68.4	75.2	82.8	86.0	75.3
NET IMPORTS										
SOVIET BLOC	25.8	27.2	28.6	29.9	31.5	33.0	34.5	36.4	38.0	34.7
DEVELOPED MARKETS	23.2	23.7	23.2	23.0	23.0	25.2	29.8	34.4	34.8	29.4
LDC'S	11.2	11.5	11.8	12.2	12.6	13.1	13.6	14.1	14.7	13.6
MIDDLE INCOMES	23.1	23.7	25.1	26.4	28.0	29.6	31.2	33.1	34.9	31.4
PRODUCTION										
CANADA	24.8	25.1	25.0	24.9	25.1	25.5	25.9	26.6	27.1	26.0
AUSTRALIA	8.1	8.9	9.1	9.6	10.2	10.6	11.1	11.6	11.8	11.1
ARGENTINA	21.6	23.0	24.0	24.7	25.5	26.3	27.0	27.9	28.5	27.0
U.S.	243.1	254.9	259.0	263.5	269.6	275.8	282.1	289.5	295.0	282.4
SOVIET BLOC	173.7	177.6	182.2	186.9	191.7	196.7	201.7	206.8	212.2	201.8
DEVELOPED MARKETS	104.2	105.7	107.9	109.3	110.7	112.0	113.4	114.7	116.0	113.4
LDC'S	117.1	119.4	121.0	122.7	124.6	126.5	128.4	130.4	132.3	128.4
CHINA	76.3	77.0	76.6	76.5	76.8	77.3	78.1	79.7	81.0	78.6
MIDDLE INCOMES	38.0	40.5	40.5	41.9	42.3	42.5	42.6	42.0	41.9	42.3
DOMESTIC UTILIZATION										
CANADA	19.9	20.1	20.1	20.1	20.2	20.3	20.5	20.8	21.1	20.6
AUSTRALIA	3.3	3.5	3.5	3.6	3.7	3.8	3.8	3.9	3.9	3.8
ARGENTINA	7.7	8.0	8.3	8.5	8.7	8.9	9.0	9.3	9.5	9.1
U.S.	166.8	166.4	170.9	175.0	176.7	176.3	177.1	179.4	-183.7	178.6
SOVIET BLOC	199.3	204.7	210.6	216.5	222.9	229.3	235.8	242.8	249.8	236.1
DEVELOPED MARKETS	127.5	129.2	130.8	132.1	133.4	137.0	142.9	148.9	150.6	142.6
LDC'S	127.9	130.5	132.7	134.9	137.2	139.6	142.0	144.5	147.1	142.1
CHINA	73.5	74.4	74.0	73.7	74.0	74.4	75.1	76.6	77.7	75.6
MIDDLE INCOMES	61.3	63.8	65.7	68.0	70.1	72.0	73.7	75.2	76.8	73.6
ENDING STOCKS										
CANADA	6.1	6.0	5.9	5.7	5.6	5.5	5.4	5.4	5.5	5.5
AUSTRALIA	0.6	0.6	0.6	0.7	0.7	0.8	0.8	0.8	0.8	0.8
ARGENTINA	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
U.S.	170.3	200.7	228.9	255.9	284.9	315.9	345.6	373.0	398.4	343.6
SOVIET BLOC	7.5	7.7	7.9	8.2	8.5	8.8	9.2	9.5	9.9	9.2
DEVELOPED MARKETS	15.0	15.2	15.5	15.8	16.0	16.3	16.5	16.7	16.9	16.5
LDC'S	12.1	12.5	12.6	12.6	12.6	12.6	12.4	12.4	12.3	12.5
CHINA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MIDDLE INCOMES	3.1	3.4	3.3	3.6	3.7	3.7	3.7	3.6	3.7	3.7

Differences from the Baseline under Scenario Two for the World Coarse Grain Market, 1987-1995

(In million metric tons)

FEED: SCENARIO 2 (DIF)	1987	1988	1989	1990	1991	1992	1993	1994	1995	91-95 AVERAGE
US EXPORT PRICE, $/MT	2.35	5.66	7.08	8.01	7.71	9.48	15.01	15.79	16.18	12.83
NET EXPORTS										
CANADA	0.3	0.3	0.2	0.3	0.4	0.6	1.0	1.5	1.7	1.0
AUSTRALIA	-0.6	-0.6	-0.9	-1.2	-1.3	-1.5	-1.6	-1.6	-1.8	-1.6
ARGENTINA	1.0	1.1	1.3	1.4	1.7	2.0	2.4	2.8	3.0	2.4
CHINA	0.5	0.8	1.0	1.3	1.5	1.9	2.4	2.7	3.1	2.3
U.S.	-1.6	-2.1	-2.5	-3.5	-4.3	-3.7	-1.1	2.2	1.4	-1.1
NET IMPORTS										
SOVIET BLOC	-0.5	-0.7	-0.8	-1.1	-1.2	-1.5	-2.0	-1.8	-2.1	-1.7
DEVELOPED MARKETS	0.6	0.9	0.8	0.9	0.8	2.7	7.0	11.2	11.1	6.6
LDC'S	-0.3	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.1	-0.2
MIDDLE INCOMES	-0.3	-0.5	-0.9	-1.2	-1.3	-1.5	-1.7	-1.6	-1.5	-1.5
PRODUCTION										
CANADA	0.6	0.6	0.8	0.9	1.0	1.2	1.6	2.3	2.9	1.8
AUSTRALIA	-0.5	-0.4	-0.9	-1.0	-1.0	-1.1	-1.1	-1.1	-1.4	-1.1
ARGENTINA	0.8	0.8	1.0	1.2	1.5	1.8	2.2	2.8	3.0	2.3
U.S.	3.3	4.1	6.2	7.9	9.9	11.3	13.6	17.5	17.7	14.0
SOVIET BLOC	-0.3	-0.3	-0.4	-0.6	-0.8	-0.9	-1.1	-1.4	-1.4	-1.1
DEVELOPED MARKETS	0.0	0.0	-0.1	-0.9	-1.1	-1.1	-1.2	-1.1	-1.0	-1.1
LDC'S	0.9	0.9	1.2	1.5	1.8	2.2	2.6	3.1	3.3	2.6
CHINA	3.2	3.9	5.0	6.4	8.2	10.1	12.7	16.5	19.7	13.4
MIDDLE INCOMES	0.1	0.7	1.5	2.1	2.9	3.2	3.1	2.4	1.7	2.7
DOMESTIC UTILIZATION										
CANADA	0.4	0.4	0.5	0.6	0.7	0.7	0.7	1.0	1.2	0.9
AUSTRALIA	0.1	0.1	0.0	0.1	0.1	0.2	0.3	0.4	0.4	0.3
ARGENTINA	-0.2	-0.3	-0.2	-0.3	-0.2	-0.2	-0.2	0.0	0.1	-0.1
U.S.	-0.7	-3.6	-3.2	-2.8	-3.0	-2.5	1.3	3.4	5.5	0.9
SOVIET BLOC	-0.8	-1.0	-1.3	-1.8	-2.0	-2.5	-3.1	-3.3	-3.6	-2.9
DEVELOPED MARKETS	0.6	0.9	0.8	0.2	-0.3	1.6	5.8	10.1	10.1	5.5
LDC'S	0.7	0.8	1.0	1.2	1.5	1.8	2.2	2.6	3.0	2.2
CHINA	2.5	3.1	4.0	5.0	6.5	8.1	10.4	13.9	16.6	11.1
MIDDLE INCOMES	0.0	0.0	0.4	0.7	1.3	1.6	1.4	1.0	0.4	1.1
ENDING STOCKS										
CANADA	0.3	0.3	0.4	0.5	0.5	0.3	0.1	0.0	0.0	0.2
AUSTRALIA	0.3	0.2	0.2	0.4	0.4	0.6	0.8	0.9	1.1	0.8
ARGENTINA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S.	19.5	29.2	41.1	55.3	72.5	89.9	103.1	115.1	126.1	101.3
SOVIET BLOC	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2
DEVELOPED MARKETS	0.0	0.0	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
LDC'S	0.4	0.3	0.3	0.4	0.6	0.8	0.8	1.1	1.2	0.9
CHINA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MIDDLE INCOMES	0.2	0.2	0.4	0.5	0.7	0.8	0.7	0.6	0.6	0.7

Differences from the Baseline under Scenario Two for the World Coarse Grain Market, 1987-1995

(Percent change)

FEED: SCENARIO 2 (%CHANGE)	1987	1988	1989	1990	1991	1992	1993	1994	1995	91-95 AVERAGE
US EXPORT PRICE, $/MT	2.5	6.4	8.2	9.3	8.6	10.2	15.9	16.1	15.7	13.4
NET EXPORTS										
CANADA	6.4	6.2	4.2	6.4	8.5	13.0	22.2	34.9	40.5	23.3
AUSTRALIA	-11.1	-10.2	-13.8	-16.9	-16.9	-18.1	-18.2	-17.2	-18.4	-17.8
ARGENTINA	7.8	7.9	9.0	9.5	11.3	13.0	15.4	17.7	18.6	15.3
CHINA	22.7	42.1	62.5	86.7	115.4	190.0	342.9	675.0	1550.0	322.2
U.S.	-2.7	-3.5	-4.0	-5.4	-6.3	-5.1	-1.4	2.7	1.7	-1.4
NET IMPORTS										
SOVIET BLOC	-1.9	-2.5	-2.7	-3.5	-3.7	-4.3	-5.5	-4.7	-5.2	-4.7
DEVELOPED MARKETS	2.7	3.9	3.6	4.1	3.6	12.0	30.7	48.3	46.8	28.7
LDC'S	-2.6	-1.7	-1.7	-1.6	-1.6	-1.5	-1.4	-1.4	-0.7	-1.3
MIDDLE INCOMES	-1.3	-2.1	-3.5	-4.3	-4.4	-4.8	-5.2	-4.6	-4.1	-4.6
PRODUCTION										
CANADA	2.5	2.4	3.3	3.7	4.1	4.9	6.6	9.5	12.0	7.4
AUSTRALIA	-5.8	-4.3	-9.0	-9.4	-8.9	-9.4	-9.0	-8.7	-10.6	-9.3
ARGENTINA	3.8	3.6	4.3	5.1	6.3	7.3	8.9	11.2	11.8	9.1
U.S.	1.4	1.6	2.5	3.1	3.8	4.3	5.1	6.4	6.4	5.2
SOVIET BLOC	-0.2	-0.2	-0.2	-0.3	-0.4	-0.5	-0.5	-0.7	-0.7	-0.6
DEVELOPED MARKETS	0.0	0.0	-0.1	-0.8	-1.0	-1.0	-1.0	-0.9	-0.9	-1.0
LDC'S	0.8	0.8	1.0	1.2	1.5	1.8	2.1	2.4	2.6	2.1
CHINA	4.4	5.3	7.0	9.1	12.0	15.0	19.4	26.1	32.1	20.6
MIDDLE INCOMES	0.3	1.8	3.8	5.3	7.4	8.1	7.8	6.1	4.2	6.7
DOMESTIC UTILIZATION										
CANADA	2.1	2.0	2.6	3.1	3.6	3.6	3.5	5.1	6.0	4.4
AUSTRALIA	3.1	2.9	0.0	2.9	2.8	5.6	8.6	11.4	11.4	7.9
ARGENTINA	-2.5	-3.6	-2.4	-3.4	-2.2	-2.2	-2.2	0.0	1.1	-1.1
U.S.	-0.4	-2.1	-1.8	-1.6	-1.7	-1.4	0.7	1.9	3.1	0.5
SOVIET BLOC	-0.4	-0.5	-0.6	-0.8	-0.9	-1.1	-1.3	-1.3	-1.4	-1.2
DEVELOPED MARKETS	0.5	0.7	0.6	0.2	-0.2	1.2	4.2	7.3	7.2	4.0
LDC'S	0.6	0.6	0.8	0.9	1.1	1.3	1.6	1.8	2.1	1.6
CHINA	3.5	4.3	5.7	7.3	9.6	12.2	16.1	22.2	27.2	17.2
MIDDLE INCOMES	0.0	0.0	0.6	1.0	1.9	2.3	1.9	1.3	0.5	1.6
ENDING STOCKS										
CANADA	5.2	5.3	7.3	9.6	9.8	5.8	1.9	0.0	0.0	3.4
AUSTRALIA	100.0	50.0	50.0	133.3	133.3	300.0	**	**	**	760.0
ARGENTINA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S.	12.9	17.0	21.9	27.6	34.1	39.8	42.5	44.6	46.3	41.8
SOVIET BLOC	0.0	1.3	1.3	1.2	1.2	1.1	2.2	2.2	2.1	1.8
DEVELOPED MARKETS	0.0	0.0	-0.6	-0.6	-1.2	-1.2	-1.2	-1.2	-1.2	-1.2
LDC'S	3.4	2.5	2.4	3.3	5.0	6.8	6.9	9.7	10.8	7.8
CHINA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MIDDLE INCOMES	6.9	6.2	13.8	16.1	23.3	27.6	23.3	20.0	19.4	22.7

** = Baseline value is zero

Projections of World Wheat Market under Scenario Three
Balance Sheet, 1987-1995

(In million metric tons)

WHEAT: SCENARIO 3	1987	1988	1989	1990	1991	1992	1993	1994	1995	91-95 AVERAGE
US EXPORT PRICE, $/MT	106.06	104.17	99.30	97.71	102.27	107.25	112.87	116.60	120.51	111.90
NET EXPORTS										
CANADA	22.8	21.8	20.3	20.6	21.1	21.2	21.3	21.5	21.7	21.4
AUSTRALIA	13.8	15.1	16.3	17.3	18.2	19.0	19.6	20.1	20.4	19.5
ARGENTINA	7.4	7.6	7.4	7.0	6.7	6.9	7.4	8.0	8.4	7.5
DEVELOPED MARKETS	-1.3	1.2	6.5	7.1	6.3	6.0	6.4	6.5	7.3	6.5
U.S.	39.9	37.7	33.2	32.6	33.2	33.5	33.2	33.4	33.8	33.4
NET IMPORTS										
SOVIET BLOC	21.4	21.3	22.0	22.9	23.8	24.7	25.6	26.6	27.6	25.7
LDC'S	23.3	23.8	22.2	21.2	19.6	18.6	17.7	16.8	16.4	17.8
CHINA	13.9	13.7	14.2	14.3	14.6	14.8	15.1	15.5	16.1	15.2
MIDDLE INCOMES	23.8	24.4	25.3	26.4	27.5	28.5	29.5	30.5	31.6	29.5
PRODUCTION										
CANADA	28.9	28.2	28.6	28.1	27.9	28.0	28.3	28.5	28.7	28.3
AUSTRALIA	17.4	18.6	19.8	20.8	21.7	22.4	23.0	23.5	23.9	22.9
ARGENTINA	12.5	12.6	12.4	12.0	11.7	12.0	12.5	13.2	13.8	12.6
U.S.	67.3	69.5	73.5	75.0	75.1	74.8	74.9	75.3	75.6	75.1
SOVIET BLOC	143.0	146.3	147.5	148.7	149.6	150.4	151.3	151.9	152.7	151.2
DEVELOPED MARKETS	77.8	80.7	82.4	83.6	85.0	86.5	87.8	89.3	90.7	87.9
LDC'S	94.6	98.8	103.6	108.6	114.0	119.8	125.6	131.6	137.6	125.7
CHINA	74.5	75.3	76.3	77.1	78.6	80.9	83.5	86.2	88.9	83.6
MIDDLE INCOMES	12.8	12.9	13.2	13.2	13.3	13.4	13.5	13.7	13.8	13.5
DOMESTIC UTILIZATION										
CANADA	6.2	6.2	6.3	6.5	6.6	6.8	6.9	7.0	7.1	6.9
AUSTRALIA	3.2	3.1	3.2	3.2	3.2	3.2	3.3	3.3	3.4	3.3
ARGENTINA	5.1	5.0	5.0	5.0	5.0	5.1	5.1	5.2	5.3	5.1
U.S.	33.0	34.3	35.3	36.5	37.6	38.4	38.9	39.2	39.3	38.7
SOVIET BLOC	162.6	167.0	169.8	171.7	173.0	174.8	176.3	178.2	179.9	176.4
DEVELOPED MARKETS	72.1	73.7	76.3	78.5	79.9	80.9	81.7	82.4	83.2	81.6
LDC'S	116.1	120.7	123.5	127.4	131.3	135.9	140.8	145.8	151.4	141.0
CHINA	88.5	89.0	90.4	91.4	93.3	95.6	98.5	101.7	105.0	98.8
MIDDLE INCOMES	36.1	37.1	38.4	39.5	40.7	41.8	42.9	44.0	45.2	42.9
ENDING STOCKS										
CANADA	14.6	14.8	16.7	17.7	17.9	17.9	18.1	18.1	18.1	18.0
AUSTRALIA	3.7	4.1	4.4	4.7	4.9	5.1	5.3	5.4	5.5	5.2
ARGENTINA	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.0	1.0	0.9
U.S.	48.9	46.5	51.6	57.4	61.7	64.6	67.4	70.1	72.6	67.3
SOVIET BLOC	3.3	4.0	3.7	3.6	4.0	4.4	5.0	5.3	5.7	4.9
DEVELOPED MARKETS	20.8	26.6	26.2	24.2	23.0	22.6	22.2	22.5	22.7	22.6
LDC'S	27.9	29.8	32.0	34.4	36.7	39.2	41.7	44.3	47.0	41.8
CHINA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MIDDLE INCOMES	4.4	4.6	4.8	4.8	5.0	5.1	5.3	5.5	5.7	5.3

Differences from the Baseline under Scenario Three for the World Wheat Market, 1987-1995

(In million metric tons)

WHEAT: SCENARIO 3 (DIF)	1987	1988	1989	1990	1991	1992	1993	1994	1995	91-95 AVERAGE
US EXPORT PRICE, $/MT	1.36	0.36	-1.82	-2.25	-2.65	-2.83	-1.62	-1.00	-1.61	-1.94
NET EXPORTS										
CANADA	2.4	1.8	1.0	1.3	1.6	1.6	1.6	1.7	1.7	1.6
AUSTRALIA	-0.1	-0.2	-0.3	-0.3	-0.2	0.0	0.1	0.2	0.1	.0
ARGENTINA	-0.2	-0.2	-0.3	-0.5	-0.4	-0.1	0.1	0.3	0.2	.0
DEVELOPED MARKETS	-7.8	-6.3	-2.3	-2.5	-4.1	-5.1	-5.3	-6.0	-6.0	-5.3
U.S.	6.9	6.0	3.3	3.0	3.3	3.5	13.5	4.1	4.4	5.8
NET IMPORTS										
SOVIET BLOC	-0.1	-0.1	-0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.1
LDC'S	0.6	0.8	1.0	0.9	0.2	-0.2	-0.2	-0.1	0.2	.0
CHINA	0.4	0.2	0.3	0.1	-0.1	-0.2	0.0	0.0	0.2	.0
MIDDLE INCOMES	0.0	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1
PRODUCTION										
CANADA	-0.2	1.4	2.5	2.1	1.8	1.6	1.5	1.4	1.5	1.6
AUSTRALIA	-0.1	-0.2	-0.2	-0.2	-0.1	0.0	0.1	0.1	0.1	.0
ARGENTINA	-0.1	-0.1	-0.3	-0.5	-0.5	-0.1	0.1	0.3	0.3	.0
U.S.	10.0	2.9	5.6	6.0	5.4	4.4	3.6	3.3	3.7	4.1
SOVIET BLOC	0.2	0.2	0.2	0.2	0.0	-0.1	0.0	-0.1	0.0	.0
DEVELOPED MARKETS	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	.0
LDC'S	-0.2	-0.5	-0.7	-1.0	-1.0	-0.6	-0.5	-0.5	-0.5	-0.6
CHINA	0.1	0.1	0.1	-0.2	-0.3	-0.3	-0.3	-0.3	-0.2	-0.3
MIDDLE INCOMES	-0.1	-0.1	-0.2	-0.2	-0.1	0.0	0.0	0.0	0.0	.0
DOMESTIC UTILIZATION										
CANADA	0.0	-0.1	-0.1	0.0	0.0	0.1	0.1	0.0	0.0	.0
AUSTRALIA	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ARGENTINA	0.1	0.1	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	.0
U.S.	0.1	0.0	-0.1	0.0	0.3	0.4	0.3	0.3	0.1	0.3
SOVIET BLOC	0.0	0.1	0.3	0.3	0.1	0.1	-0.1	0.0	0.0	.0
DEVELOPED MARKETS	0.1	1.4	3.3	4.7	5.3	5.6	5.8	5.9	6.0	5.7
LDC'S	0.5	0.4	0.3	0.0	-0.7	-1.0	-0.7	-0.5	-0.3	-0.6
CHINA	0.5	0.4	0.5	0.0	-0.1	-0.5	-0.5	-0.3	0.0	-0.3
MIDDLE INCOMES	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
ENDING STOCKS										
CANADA	-2.7	-3.0	-1.6	-0.8	-0.7	-0.7	-0.7	-1.1	-1.2	-0.9
AUSTRALIA	-0.1	0.0	-0.1	-0.1	-0.1	0.0	0.0	0.0	0.0	.0
ARGENTINA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S.	-7.4	-10.5	-7.9	-5.1	-3.3	-5.8	-3.0	-4.0	-4.8	-4.2
SOVIET BLOC	0.1	0.2	-0.1	-0.1	-0.2	-0.8	-0.2	-0.1	-0.1	-0.3
DEVELOPED MARKETS	7.7	12.7	11.7	9.5	8.3	7.7	7.3	7.4	7.4	7.6
LDC'S	-0.1	-0.2	-0.3	-0.3	-0.4	-2.7	-0.2	-0.2	-0.2	-0.7
CHINA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MIDDLE INCOMES	0.0	-0.1	0.0	-0.1	0.0	-0.2	0.0	0.0	-0.1	-0.1

Differences from the Baseline under Scenario Three for the World Wheat Market, 1987-1995

(Percent change)

WHEAT: SCENARIO 3 (%CHANGE)	1987	1988	1989	1990	1991	1992	1993	1994	1995	91-95 AVERAGE
US EXPORT PRICE, $/MT	1.3	0.3	-1.8	-2.3	-2.5	-2.6	-1.4	-0.9	-1.3	-1.7
NET EXPORTS										
CANADA	11.8	9.0	5.2	6.7	8.2	8.2	8.1	8.6	8.5	8.3
AUSTRALIA	-0.7	-1.3	-1.8	-1.7	-1.1	0.0	0.5	1.0	0.5	0.2
ARGENTINA	-2.6	-2.6	-3.9	-6.7	-5.6	-1.4	1.4	3.9	2.4	0.3
DEVELOPED MARKETS	-120.0	-84.0	-26.1	-26.0	-39.4	-45.9	-45.3	-48.0	-45.1	-44.9
U.S.	20.9	18.9	11.0	10.1	11.0	11.7	68.5	14.0	15.0	20.8
NET IMPORTS										
SOVIET BLOC	-0.5	-0.5	-0.5	0.0	0.0	0.4	0.4	0.4	0.0	0.2
LDC'S	2.6	3.5	4.7	4.4	1.0	-1.1	-1.1	-0.6	1.2	-0.1
CHINA	3.0	1.5	2.2	0.7	-0.7	-1.3	0.0	0.0	1.3	-0.1
MIDDLE INCOMES	0.0	0.4	0.8	0.8	0.7	0.4	0.3	0.3	0.3	0.4
PRODUCTION										
CANADA	-0.7	5.2	9.6	8.1	6.9	6.1	5.6	5.2	5.5	5.8
AUSTRALIA	-0.6	-1.1	-1.0	-1.0	-0.5	0.0	0.4	0.4	0.4	0.2
ARGENTINA	-0.8	-0.8	-2.4	-4.0	-4.1	-0.8	0.8	2.3	2.2	0.2
U.S.	17.5	4.4	8.2	8.7	7.7	6.2	5.0	4.6	5.1	5.7
SOVIET BLOC	0.1	0.1	0.1	0.1	0.0	-0.1	0.0	-0.1	0.0	.0
DEVELOPED MARKETS	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	.0
LDC'S	-0.2	-0.5	-0.7	-0.9	-0.9	-0.5	-0.4	-0.4	-0.4	-0.5
CHINA	0.1	0.1	0.1	-0.3	-0.4	-0.4	-0.4	-0.3	-0.2	-0.3
MIDDLE INCOMES	-0.8	-0.8	-1.5	-1.5	-0.7	0.0	0.0	0.0	0.0	-0.1
DOMESTIC UTILIZATION										
CANADA	0.0	-1.6	-1.6	0.0	0.0	1.5	1.5	0.0	0.0	0.6
AUSTRALIA	3.2	0.0	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ARGENTINA	2.0	2.0	0.0	0.0	-2.0	0.0	0.0	0.0	0.0	-0.4
U.S.	0.3	0.0	-0.3	0.0	0.8	1.1	0.8	0.8	0.3	0.7
SOVIET BLOC	0.0	0.1	0.2	0.2	0.1	0.1	-0.1	0.0	0.0	.0
DEVELOPED MARKETS	0.1	1.9	4.5	6.4	7.1	7.4	7.6	7.7	7.8	7.5
LDC'S	0.4	0.3	0.2	0.0	-0.5	-0.7	-0.5	-0.3	-0.2	-0.5
CHINA	0.6	0.5	0.6	0.0	-0.1	-0.5	-0.5	-0.3	0.0	-0.3
MIDDLE INCOMES	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.2
ENDING STOCKS										
CANADA	-15.6	-16.9	-8.7	-4.3	-3.8	-3.8	-3.7	-5.7	-6.2	-4.7
AUSTRALIA	-2.6	0.0	-2.2	-2.1	-2.0	0.0	0.0	0.0	0.0	-0.4
ARGENTINA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S.	-13.1	-18.4	-13.3	-8.2	-5.1	-8.2	-4.3	-5.4	-6.2	-5.8
SOVIET BLOC	3.1	5.3	-2.6	-2.7	-4.8	-15.4	-3.8	-1.9	-1.7	-5.4
DEVELOPED MARKETS	58.8	91.4	80.7	64.6	56.5	51.7	49.0	49.0	48.4	50.9
LDC'S	-0.4	-0.7	-0.9	-0.9	-1.1	-6.4	-0.5	-0.4	-0.4	-1.7
CHINA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MIDDLE INCOMES	0.0	-2.1	0.0	-2.0	0.0	-3.8	0.0	0.0	-1.7	-1.1

Projections of World Coarse Grain Market under Scenario Three
Balance Sheet, 1987-1995

(In million metric tons)

FEED: SCENARIO 3	1987	1988	1989	1990	1991	1992	1993	1994	1995	91-95 AVERAGE
US EXPORT PRICE, $/MT	99.07	92.72	89.27	84.15	85.46	88.67	91.67	97.41	104.50	93.54
NET EXPORTS										
CANADA	4.8	4.9	4.9	4.8	4.7	4.5	4.3	4.1	4.0	4.3
AUSTRALIA	5.5	6.0	6.6	7.2	7.8	8.4	8.9	9.4	9.9	8.9
ARGENTINA	13.0	14.1	14.7	15.0	15.2	15.3	15.5	15.7	16.1	15.6
CHINA	2.4	2.1	2.0	1.6	1.3	1.0	0.6	0.4	0.3	0.7
U.S.	57.2	57.3	58.3	61.8	66.4	70.9	75.3	79.4	82.8	75.0
NET IMPORTS										
SOVIET BLOC	26.0	27.7	29.2	31.0	32.9	34.6	36.5	38.2	39.9	36.4
DEVELOPED MARKETS	22.7	21.2	19.8	19.7	20.1	20.7	21.1	21.7	22.1	21.1
LDC'S	11.4	11.6	11.9	12.3	12.8	13.3	13.8	14.3	14.8	13.8
MIDDLE INCOMES	23.0	23.8	25.5	27.4	29.6	31.5	33.1	34.7	36.3	33.0
PRODUCTION										
CANADA	24.4	24.8	24.6	24.3	24.1	24.1	24.0	24.0	24.0	24.0
AUSTRALIA	8.6	9.4	10.0	10.7	11.3	11.8	12.3	12.7	13.2	12.3
ARGENTINA	20.9	22.5	23.4	23.9	24.2	24.4	24.7	25.0	25.5	24.8
U.S.	241.7	253.2	255.9	258.7	260.1	263.3	267.7	271.7	277.8	268.1
SOVIET BLOC	173.8	177.7	182.5	187.3	192.4	197.6	202.9	208.3	213.6	203.0
DEVELOPED MARKETS	104.2	105.7	108.0	110.2	111.8	113.1	114.6	115.8	117.0	114.5
LDC'S	116.5	118.9	120.4	121.8	123.0	124.2	125.7	127.2	129.0	125.8
CHINA	73.8	74.3	73.4	72.3	70.2	67.8	65.4	62.9	61.1	65.5
MIDDLE INCOMES	38.4	40.5	39.8	40.1	38.7	38.7	39.2	39.6	40.4	39.3
DOMESTIC UTILIZATION										
CANADA	19.6	19.9	19.9	19.8	19.6	19.6	19.6	19.7	19.8	19.7
AUSTRALIA	3.1	3.3	3.5	3.6	3.6	3.6	3.6	3.5	3.5	3.6
ARGENTINA	7.9	8.3	8.6	8.9	9.0	9.1	9.2	9.3	9.4	9.2
U.S.	173.9	177.4	181.6	177.7	175.0	174.9	175.1	178.5	183.9	177.5
SOVIET BLOC	199.6	205.4	211.4	218.1	225.0	231.9	239.1	246.2	253.2	239.1
DEVELOPED MARKETS	126.9	126.7	127.4	129.5	131.7	133.6	135.5	137.3	138.9	135.4
LDC'S	127.4	129.9	132.1	134.1	136.0	137.8	139.8	141.9	144.1	139.9
CHINA	71.3	72.2	71.4	70.6	68.9	66.9	64.8	62.4	60.7	64.7
MIDDLE INCOMES	61.2	63.9	65.5	67.4	68.6	70.2	72.2	74.3	76.5	72.4
ENDING STOCKS										
CANADA	5.9	5.9	5.7	5.5	5.2	5.2	5.3	5.4	5.5	5.3
AUSTRALIA	0.3	0.4	0.4	0.3	0.3	0.2	0.0	0.0	0.0	0.1
ARGENTINA	0.7	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
U.S.	138.9	157.5	173.6	192.8	211.5	229.1	246.4	260.3	271.3	243.7
SOVIET BLOC	7.6	7.7	7.9	8.0	8.3	8.6	8.9	9.3	9.7	9.0
DEVELOPED MARKETS	15.0	15.2	15.6	15.9	16.2	16.5	16.7	16.9	17.1	16.7
LDC'S	11.6	12.2	12.4	12.5	12.2	12.0	11.7	11.4	11.1	11.7
CHINA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MIDDLE INCOMES	3.0	3.3	3.1	3.2	2.9	2.8	2.9	3.0	3.1	2.9

Differences from the Baseline under Scenario Three for the World Coarse Grain Market, 1987-1995

(In million metric tons)

FEED: SCENARIO 3 (DIF)	1987	1988	1989	1990	1991	1992	1993	1994	1995	91-95 AVERAGE
US EXPORT PRICE, $/MT	4.52	4.79	3.06	-1.94	-4.68	-3.95	-2.48	-0.72	1.28	-2.11
NET EXPORTS										
CANADA	0.1	0.1	0.1	0.1	0.0	-0.1	-0.2	-0.2	-0.2	-0.1
AUSTRALIA	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
ARGENTINA	0.1	0.2	0.3	0.2	0.1	-0.1	-0.1	-0.1	0.0	.0
CHINA	0.2	0.2	0.4	0.1	0.0	0.0	-0.1	0.0	0.1	0.0
U.S.	-1.4	-2.8	-4.1	-3.3	-1.9	-1.2	-1.0	-1.2	-1.8	-1.4
NET IMPORTS										
SOVIET BLOC	-0.3	-0.2	-0.2	0.0	0.2	0.1	0.0	0.0	-0.2	.0
DEVELOPED MARKETS	0.1	-1.6	-2.6	-2.4	-2.1	-1.8	-1.7	-1.5	-1.6	-1.7
LDC'S	-0.1	-0.1	-0.1	-0.1	0.0	0.0	0.0	0.0	0.0	0.0
MIDDLE INCOMES	-0.4	-0.4	-0.5	-0.2	0.3	0.4	0.2	0.0	-0.1	0.2
PRODUCTION										
CANADA	0.2	0.3	0.4	0.3	0.0	-0.2	-0.3	-0.3	-0.2	-0.2
AUSTRALIA	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1
ARGENTINA	0.1	0.3	0.4	0.4	0.2	-0.1	-0.1	-0.1	0.0	.0
U.S.	1.9	2.4	3.1	3.1	0.4	-1.2	-0.8	-0.3	0.5	-0.3
SOVIET BLOC	-0.2	-0.2	-0.1	-0.2	-0.1	0.0	0.1	0.1	0.0	.0
DEVELOPED MARKETS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LDC'S	0.3	0.4	0.6	0.6	0.2	-0.1	-0.1	-0.1	0.0	.0
CHINA	0.7	1.2	1.8	2.2	1.6	0.6	0.0	-0.3	-0.2	0.3
MIDDLE INCOMES	0.5	0.7	0.8	0.3	-0.7	-0.6	-0.3	0.0	0.2	-0.3
DOMESTIC UTILIZATION										
CANADA	0.1	0.2	0.3	0.3	0.1	0.0	-0.2	-0.1	-0.1	-0.1
AUSTRALIA	-0.1	-0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.0	.0
ARGENTINA	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	.0
U.S.	6.4	7.4	7.5	-0.1	-4.7	-3.9	-0.7	2.5	5.7	-0.2
SOVIET BLOC	-0.5	-0.3	-0.5	-0.2	0.1	0.1	0.2	0.1	-0.2	0.1
DEVELOPED MARKETS	0.0	-1.6	-2.6	-2.4	-2.0	-1.8	-1.6	-1.5	-1.6	-1.7
LDC'S	0.2	0.2	0.4	0.4	0.3	0.0	0.0	0.0	0.0	0.1
CHINA	0.3	0.9	1.4	1.9	1.4	0.6	0.1	-0.3	-0.4	0.3
MIDDLE INCOMES	-0.1	0.1	0.2	0.1	-0.2	-0.2	-0.1	0.1	0.1	-0.1
ENDING STOCKS										
CANADA	0.1	0.2	0.2	0.3	0.1	0.0	0.0	0.0	0.0	.0
AUSTRALIA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ARGENTINA	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S.	-11.9	-14.0	-14.2	-7.8	-0.9	3.1	3.9	2.4	-1.0	1.5
SOVIET BLOC	0.1	0.1	0.1	-0.1	-0.1	-0.1	-0.1	0.0	0.0	-0.1
DEVELOPED MARKETS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LDC'S	-0.1	0.0	0.1	0.3	0.2	0.2	0.1	0.1	0.0	0.1
CHINA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MIDDLE INCOMES	0.1	0.1	0.2	0.1	-0.1	-0.1	-0.1	0.0	0.0	-0.1

Differences from the Baseline under Scenario Three for the World Coarse Grain Market, 1987-1995

(Percent change)

FEED: SCENARIO 3 (%CHANGE)	1987	1988	1989	1990	1991	1992	1993	1994	1995	91-95 AVERAGE
US EXPORT PRICE, $/MT	4.8	5.4	3.5	-2.3	-5.2	-4.3	-2.6	-0.7	1.2	-2.2
NET EXPORTS										
CANADA	2.1	2.1	2.1	2.1	0.0	-2.2	-4.4	-4.7	-4.8	-3.1
AUSTRALIA	1.9	1.7	1.5	1.4	1.3	1.2	1.1	1.1	1.0	1.1
ARGENTINA	0.8	1.4	2.1	1.4	0.7	-0.6	-0.6	-0.6	0.0	-0.3
CHINA	9.1	10.5	25.0	6.7	0.0	0.0	-14.3	0.0	50.0	0.0
U.S.	-2.4	-4.7	-6.6	-5.1	-2.8	-1.7	-1.3	-1.5	-2.1	-1.9
NET IMPORTS										
SOVIET BLOC	-1.1	-0.7	-0.7	0.0	0.6	0.3	0.0	0.0	-0.5	0.1
DEVELOPED MARKETS	0.4	-7.0	-11.6	-10.9	-9.5	-8.0	-7.5	-6.5	-6.8	-7.6
LDC'S	-0.9	-0.9	-0.8	-0.8	0.0	0.0	0.0	0.0	0.0	0.0
MIDDLE INCOMES	-1.7	-1.7	-1.9	-0.7	1.0	1.3	0.6	0.0	-0.3	0.5
PRODUCTION										
CANADA	0.8	1.2	1.7	1.3	0.0	-0.8	-1.2	-1.2	-0.8	-0.8
AUSTRALIA	0.0	1.1	0.0	0.9	0.9	0.9	0.8	0.0	0.0	0.5
ARGENTINA	0.5	1.4	1.7	1.7	0.8	-0.4	-0.4	-0.4	0.0	-0.1
U.S.	0.8	1.0	1.2	1.2	0.2	-0.5	-0.3	-0.1	0.2	-0.1
SOVIET BLOC	-0.1	-0.1	-0.1	-0.1	-0.1	0.0	.0	.0	0.0	.0
DEVELOPED MARKETS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LDC'S	0.3	0.3	0.5	0.5	0.2	-0.1	-0.1	-0.1	0.0	.0
CHINA	1.0	1.6	2.5	3.1	2.3	0.9	0.0	-0.5	-0.3	0.5
MIDDLE INCOMES	1.3	1.8	2.1	0.8	-1.8	-1.5	-0.8	0.0	0.5	-0.7
DOMESTIC UTILIZATION										
CANADA	0.5	1.0	1.5	1.5	0.5	0.0	-1.0	-0.5	-0.5	-0.3
AUSTRALIA	-3.1	-2.9	0.0	2.9	0.0	0.0	2.9	0.0	0.0	0.6
ARGENTINA	0.0	0.0	1.2	1.1	1.1	0.0	0.0	0.0	0.0	0.2
U.S.	3.8	4.4	4.3	-0.1	-2.6	-2.2	-0.4	1.4	3.2	-0.1
SOVIET BLOC	-0.2	-0.1	-0.2	-0.1	.0	.0	0.1	.0	-0.1	.0
DEVELOPED MARKETS	0.0	-1.2	-2.0	-1.8	-1.5	-1.3	-1.2	-1.1	-1.1	-1.2
LDC'S	0.2	0.2	0.3	0.3	0.2	0.0	0.0	0.0	0.0	.0
CHINA	0.4	1.3	2.0	2.8	2.1	0.9	0.2	-0.5	-0.7	0.4
MIDDLE INCOMES	-0.2	0.2	0.3	0.1	-0.3	-0.3	-0.1	0.1	0.1	-0.1
ENDING STOCKS										
CANADA	1.7	3.5	3.6	5.8	2.0	0.0	0.0	0.0	0.0	0.4
AUSTRALIA	0.0	0.0	0.0	0.0	0.0	0.0	**	**	**	0.0
ARGENTINA	-12.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S.	-7.9	-8.2	-7.6	-3.9	-0.4	1.4	1.6	0.9	-0.4	0.6
SOVIET BLOC	1.3	1.3	1.3	-1.2	-1.2	-1.1	-1.1	0.0	0.0	-0.7
DEVELOPED MARKETS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LDC'S	-0.9	0.0	0.8	2.5	1.7	1.7	0.9	0.9	0.0	1.0
CHINA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MIDDLE INCOMES	3.4	3.1	6.9	3.2	-3.3	-3.4	-3.3	0.0	0.0	-2.0

** = Baseline value is zero

Projections of World Wheat Market under Scenario Four
Balance Sheet, 1987-1995

(In million metric tons)

WHEAT: SCENARIO 4	1987	1988	1989	1990	1991	1992	1993	1994	1995	91-95 AVERAGE
US EXPORT PRICE, $/MT	102.02	94.90	88.62	88.92	98.33	107.65	84.00	91.45	124.41	101.17
NET EXPORTS										
CANADA	25.2	22.8	21.2	21.0	21.6	22.3	22.8	23.9	24.1	22.9
AUSTRALIA	13.9	15.3	16.6	17.7	18.6	19.2	19.7	20.1	20.4	19.6
ARGENTINA	7.6	7.7	7.6	7.3	7.0	7.0	7.2	7.2	7.8	7.2
DEVELOPED MARKETS	-11.3	-4.3	2.6	6.0	5.1	2.0	0.8	0.5	0.7	1.8
U.S.	46.1	40.8	34.7	32.3	33.5	36.2	38.0	40.9	40.3	37.8
NET IMPORTS										
SOVIET BLOC	21.5	21.5	22.2	23.1	24.0	24.8	25.6	26.9	27.9	25.8
LDC'S	22.6	23.0	21.2	20.3	19.3	18.3	17.3	18.1	17.2	18.0
CHINA	13.5	13.4	14.0	14.4	14.8	15.0	15.7	16.5	16.2	15.6
MIDDLE INCOMES	23.8	24.4	25.4	26.5	27.7	28.6	29.9	31.2	32.1	29.9
PRODUCTION										
CANADA	29.1	30.0	30.9	29.7	28.0	27.5	28.6	29.9	31.6	29.1
AUSTRALIA	17.5	18.8	20.1	21.1	22.0	22.6	23.2	23.5	23.8	23.0
ARGENTINA	12.6	12.7	12.5	12.3	12.1	12.1	12.5	12.6	13.0	12.5
U.S.	67.3	72.1	77.1	77.9	75.5	73.3	73.7	75.0	79.1	75.3
SOVIET BLOC	142.8	146.1	147.5	148.8	149.9	150.7	151.3	153.1	153.9	151.8
DEVELOPED MARKETS	-77.8	80.7	82.4	83.6	85.0	86.5	87.7	89.3	90.7	87.8
LDC'S	94.8	99.3	104.3	109.5	114.9	120.5	126.4	131.8	137.4	126.2
CHINA	74.4	74.9	75.4	76.0	77.5	80.2	83.3	83.3	85.4	81.9
MIDDLE INCOMES	12.9	13.0	13.3	13.2	13.2	13.3	13.5	13.2	13.1	13.3
DOMESTIC UTILIZATION										
CANADA	6.2	6.2	6.4	6.6	6.7	6.8	6.9	6.9	7.1	6.9
AUSTRALIA	3.1	3.1	3.1	3.1	3.2	3.2	3.3	3.3	3.4	3.3
ARGENTINA	5.0	4.9	5.0	5.0	5.0	5.1	5.3	5.3	5.2	5.2
U.S.	32.9	33.7	34.4	35.3	36.2	36.7	37.3	37.1	36.1	36.7
SOVIET BLOC	162.8	167.5	170.1	171.8	173.0	174.6	176.8	179.4	178.8	176.9
DEVELOPED MARKETS	72.0	75.4	80.0	83.8	85.9	86.6	87.2	87.7	88.0	87.1
LDC'S	115.5	120.1	123.1	127.4	131.9	136.6	140.7	147.3	152.7	141.8
CHINA	87.9	88.3	89.2	90.2	92.2	95.0	98.9	99.7	101.5	97.5
MIDDLE INCOMES	36.1	37.3	38.6	39.7	40.7	41.7	43.3	44.2	45.0	43.0
ENDING STOCKS										
CANADA	12.6	13.5	16.8	18.9	18.7	17.2	16.2	15.2	15.7	16.6
AUSTRALIA	3.8	4.1	4.5	4.8	5.0	5.2	5.3	5.4	5.5	5.3
ARGENTINA	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.0	1.0	0.9
U.S.	43.3	40.9	49.0	59.3	65.1	65.5	63.9	60.9	63.5	63.8
SOVIET BLOC	3.0	3.1	2.7	2.8	3.6	4.5	2.6	3.2	6.1	4.0
DEVELOPED MARKETS	30.9	40.5	40.2	34.1	28.0	26.0	25.7	26.7	28.7	27.0
LDC'S	28.1	30.2	32.7	35.1	37.3	39.6	42.7	45.2	47.1	42.4
CHINA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MIDDLE INCOMES	4.4	4.6	4.7	4.8	4.9	5.1	5.1	5.4	5.6	5.2

Differences from the Baseline under Scenario Four for the World Wheat Market, 1987-1995

(In million metric tons)

WHEAT: SCENARIO 4 (DIF)	1987	1988	1989	1990	1991	1992	1993	1994	1995	91-95 AVERAGE
US EXPORT PRICE, $/MT	-2.68	-8.91	-12.50	-11.04	-6.59	-2.43	-30.49	-26.15	2.29	-12.67
NET EXPORTS										
CANADA	4.8	2.8	1.9	1.7	2.1	2.7	3.1	4.1	4.1	3.2
AUSTRALIA	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.1	0.2
ARGENTINA	0.0	-0.1	-0.1	-0.2	-0.1	0.0	-0.1	-0.5	-0.4	-0.2
DEVELOPED MARKETS	-17.8	-11.8	-6.2	-3.6	-5.3	-9.1	-10.9	-12.0	-12.6	-10.0
U.S.	13.1	9.1	4.8	2.7	3.6	6.2	18.3	11.6	10.9	10.1
NET IMPORTS										
SOVIET BLOC	0.0	0.1	0.1	0.2	0.2	0.2	0.1	0.4	0.3	0.2
LDC'S	-0.1	0.0	0.0	0.0	-0.1	-0.5	-0.6	1.2	1.0	0.2
CHINA	0.0	-0.1	0.1	0.2	0.1	0.0	0.6	1.0	0.3	0.4
MIDDLE INCOMES	0.0	0.1	0.3	0.3	0.4	0.2	0.5	0.8	0.6	0.5
PRODUCTION										
CANADA	0.0	3.2	4.8	3.7	1.9	1.1	1.8	2.8	4.4	2.4
AUSTRALIA	0.0	0.0	0.1	0.1	0.2	0.2	0.3	0.1	0.0	0.2
ARGENTINA	0.0	0.0	-0.2	-0.2	-0.1	0.0	0.1	-0.3	-0.5	-0.2
U.S.	10.0	5.5	9.2	8.9	5.8	2.9	2.4	3.0	7.2	4.3
SOVIET BLOC	0.0	0.0	0.2	0.3	0.3	0.2	0.0	1.1	1.2	0.6
DEVELOPED MARKETS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LDC'S	0.0	0.0	0.0	-0.1	-0.1	0.1	0.3	-0.3	-0.7	-0.1
CHINA	0.0	-0.3	-0.8	-1.3	-1.4	-1.0	-0.5	-3.2	-3.7	-2.0
MIDDLE INCOMES	0.0	0.0	-0.1	-0.2	-0.2	-0.1	0.0	-0.5	-0.7	-0.3
DOMESTIC UTILIZATION										
CANADA	0.0	-0.1	0.0	0.1	0.1	0.1	0.1	-0.1	0.0	.0
AUSTRALIA	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0
ARGENTINA	0.0	0.0	0.0	0.0	-0.1	0.0	0.2	0.1	-0.1	.0
U.S.	0.0	-0.6	-1.0	-1.2	-1.1	-1.3	-1.3	-1.8	-3.1	-1.7
SOVIET BLOC	0.2	0.6	0.6	0.4	0.1	-0.1	2.4	1.2	-1.1	0.5
DEVELOPED MARKETS	0.0	3.1	7.0	10.0	11.3	11.3	11.3	11.2	10.8	11.2
LDC'S	-0.1	-0.2	-0.1	0.0	-0.1	-0.3	-0.8	1.0	1.0	0.2
CHINA	-0.1	-0.3	-0.7	-1.2	-1.2	-1.1	-0.1	-2.3	-3.5	-1.6
MIDDLE INCOMES	0.0	0.2	0.2	0.2	0.1	0.0	0.5	0.3	-0.1	0.2
ENDING STOCKS										
CANADA	-4.7	-4.3	-1.5	0.4	0.1	-1.4	-2.6	-4.0	-3.6	-2.3
AUSTRALIA	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	.0
ARGENTINA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S.	-13.0	-16.1	-10.5	-3.2	0.1	-4.9	-6.5	-13.2	-13.9	-7.7
SOVIET BLOC	-0.2	-0.7	-1.1	-0.9	-0.6	-0.7	-2.6	-2.2	0.3	-1.2
DEVELOPED MARKETS	17.8	26.6	25.7	19.4	13.3	11.1	10.8	11.6	13.4	12.0
LDC'S	0.1	0.2	0.4	0.4	0.2	-2.3	0.8	0.7	-0.1	-0.1
CHINA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MIDDLE INCOMES	0.0	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.1	-0.2	-0.2

Differences from the Baseline under Scenario Four for the World Wheat Market, 1987-1995

(Percent change)

WHEAT: SCENARIO 4 (%CHANGE)	1987	1988	1989	1990	1991	1992	1993	1994	1995	91-95 AVERAGE
US EXPORT PRICE, $/MT	-2.6	-8.6	-12.4	-11.0	-6.3	-2.2	-26.6	-22.2	1.9	-11.1
NET EXPORTS										
CANADA	23.5	14.0	9.8	8.8	10.8	13.8	15.7	20.7	20.5	16.3
AUSTRALIA	0.0	0.0	0.0	0.6	1.1	1.1	1.0	1.0	0.5	0.9
ARGENTINA	0.0	-1.3	-1.3	-2.7	-1.4	0.0	-1.4	-6.5	-4.9	-2.9
DEVELOPED MARKETS	-273.8	-157.3	-70.5	-37.5	-51.0	-82.0	-93.2	-96.0	-94.7	-84.6
U.S.	39.7	28.7	16.1	9.1	12.0	20.7	92.9	39.6	37.1	36.6
NET IMPORTS										
SOVIET BLOC	0.0	0.5	0.5	0.9	0.8	0.8	0.4	1.5	1.1	0.9
LDC'S	-0.4	0.0	0.0	0.0	-0.5	-2.7	-3.4	7.1	6.2	1.1
CHINA	0.0	-0.7	0.7	1.4	0.7	0.0	4.0	6.5	1.9	2.6
MIDDLE INCOMES	0.0	0.4	1.2	1.1	1.5	0.7	1.7	2.6	1.9	1.7
PRODUCTION										
CANADA	0.0	11.9	18.4	14.2	7.3	4.2	6.7	10.3	16.2	9.0
AUSTRALIA	0.0	0.0	0.5	0.5	0.9	0.9	1.3	0.4	0.0	0.7
ARGENTINA	0.0	0.0	-1.6	-1.6	-0.8	0.0	0.8	-2.3	-3.7	-1.3
U.S.	17.5	8.3	13.5	12.9	8.3	4.1	3.4	4.2	10.0	6.0
SOVIET BLOC	0.0	0.0	0.1	0.2	0.2	0.1	0.0	0.7	0.8	0.4
DEVELOPED MARKETS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LDC'S	0.0	0.0	0.0	-0.1	-0.1	0.1	0.2	-0.2	-0.5	-0.1
CHINA	0.0	-0.4	-1.0	-1.7	-1.8	-1.2	-0.6	-3.7	-4.2	-2.3
MIDDLE INCOMES	0.0	0.0	-0.7	-1.5	-1.5	-0.7	0.0	-3.6	-5.1	-2.2
DOMESTIC UTILIZATION										
CANADA	0.0	-1.6	0.0	1.5	1.5	1.5	1.5	-1.4	0.0	0.6
AUSTRALIA	0.0	0.0	0.0	-3.1	0.0	0.0	0.0	0.0	0.0	0.0
ARGENTINA	0.0	0.0	0.0	0.0	-2.0	0.0	3.9	1.9	-1.9	0.4
U.S.	0.0	-1.7	-2.8	-3.3	-2.9	-3.4	-3.4	-4.6	-7.9	-4.5
SOVIET BLOC	0.1	0.4	0.4	0.2	0.1	-0.1	1.4	0.7	-0.6	0.3
DEVELOPED MARKETS	0.0	4.3	9.6	13.6	15.1	15.0	14.9	14.6	14.0	14.7
LDC'S	-0.1	-0.2	-0.1	0.0	-0.1	-0.2	-0.6	0.7	0.7	0.1
CHINA	-0.1	-0.3	-0.8	-1.3	-1.3	-1.1	-0.1	-2.3	-3.3	-1.7
MIDDLE INCOMES	0.0	0.5	0.5	0.5	0.2	0.0	1.2	0.7	-0.2	0.4
ENDING STOCKS										
CANADA	-27.2	-24.2	-8.2	2.2	0.5	-7.5	-13.8	-20.8	-18.7	-12.2
AUSTRALIA	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.4
ARGENTINA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S.	-23.1	-28.2	-17.6	-5.1	0.2	-7.0	-9.2	-17.8	-18.0	-10.7
SOVIET BLOC	-6.3	-18.4	-28.9	-24.3	-14.3	-13.5	-50.0	-40.7	5.2	-22.5
DEVELOPED MARKETS	135.9	191.4	177.2	132.0	90.5	74.5	72.5	76.8	87.6	80.4
LDC'S	0.4	0.7	1.2	1.2	0.5	-5.5	1.9	1.6	-0.2	-0.3
CHINA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MIDDLE INCOMES	0.0	-2.1	-2.1	-2.0	-2.0	-3.8	-3.8	-1.8	-3.4	-3.0

Projections of World Coarse Grain Market under Scenario Four
Balance Sheet, 1987-1995

(In million metric tons)

FEED: SCENARIO 4	1987	1988	1989	1990	1991	1992	1993	1994	1995	91-95 AVERAGE
US EXPORT PRICE, $/MT	93.25	84.15	81.25	80.43	84.54	88.34	89.61	93.02	97.58	90.62
NET EXPORTS										
CANADA	4.7	4.8	4.7	4.6	4.6	4.4	4.3	4.5	4.5	4.5
AUSTRALIA	5.4	5.9	6.5	7.2	7.9	8.5	9.0	9.7	10.3	9.1
ARGENTINA	12.9	13.9	14.6	15.1	15.4	15.5	15.5	16.8	17.2	16.1
CHINA	2.2	2.0	1.9	1.7	1.3	0.9	1.5	1.4	0.3	1.1
U.S.	58.5	56.1	56.2	63.8	63.8	69.6	71.8	76.4	82.7	72.9
NET IMPORTS										
SOVIET BLOC	26.2	27.7	29.1	30.9	32.8	34.7	35.0	37.3	40.9	36.1
DEVELOPED MARKETS	22.6	19.0	16.8	16.7	18.1	19.6	20.4	23.1	23.4	20.9
LDC'S	11.5	11.6	11.9	12.2	12.6	13.2	13.8	14.0	14.4	13.6
MIDDLE INCOMES	23.4	24.3	26.1	27.7	29.6	31.5	33.0	34.4	36.4	33.0
PRODUCTION										
CANADA	24.2	24.5	24.2	24.0	23.9	24.0	24.0	24.6	24.8	24.3
AUSTRALIA	8.6	9.4	10.1	10.8	11.4	11.9	12.4	13.1	13.8	12.5
ARGENTINA	20.8	22.3	13.3	23.9	24.4	24.6	24.7	26.3	27.0	25.4
U.S.	239.7	250.8	253.5	257.2	260.8	264.5	267.8	279.2	283.5	271.2
SOVIET BLOC	174.0	177.9	182.5	187.3	192.3	197.6	202.9	207.4	212.9	202.6
DEVELOPED MARKETS	104.2	105.7	108.0	110.2	111.8	113.1	114.6	115.8	117.0	114.5
LDC'S	116.2	118.5	120.0	121.6	123.0	124.3	125.6	128.3	130.2	126.3
CHINA	73.1	73.2	72.0	70.9	69.5	67.6	65.1	66.2	66.3	66.9
MIDDLE INCOMES	37.8	39.9	39.2	40.0	39.2	38.8	38.9	40.8	41.1	39.8
DOMESTIC UTILIZATION										
CANADA	19.5	19.7	19.7	19.6	19.6	19.6	19.6	20.0	20.2	19.8
AUSTRALIA	3.2	3.4	3.5	3.6	3.6	3.6	3.6	3.6	3.6	3.6
ARGENTINA	7.9	8.3	8.6	8.9	9.0	9.1	9.2	9.5	9.7	9.3
U.S.	166.3	168.9	174.1	178.4	180.5	179.7	177.5	178.6	180.5	179.4
SOVIET BLOC	200.0	205.5	211.5	217.9	224.8	231.9	237.6	244.4	253.5	238.4
DEVELOPED MARKETS	126.9	124.6	124.4	126.5	129.6	132.5	134.8	138.7	140.2	135.2
LDC'S	127.2	129.6	131.7	133.8	135.8	137.7	139.6	142.2	144.7	140.0
CHINA	70.9	71.2	70.2	69.3	68.2	66.7	63.7	64.8	66.1	65.9
MIDDLE INCOMES	61.3	63.9	65.5	67.6	69.0	70.5	71.9	74.7	77.4	72.7
ENDING STOCKS										
CANADA	5.8	5.8	5.6	5.4	5.2	5.2	5.3	5.4	5.5	5.3
AUSTRALIA	0.3	0.4	0.4	0.4	0.3	0.2	0.0	0.0	0.0	0.1
ARGENTINA	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
U.S.	153.1	178.9	202.1	222.0	238.5	253.7	272.2	296.3	316.7	275.5
SOVIET BLOC	7.5	7.6	7.7	8.0	8.3	8.6	8.9	9.2	9.5	8.9
DEVELOPED MARKETS	15.0	15.2	15.6	15.9	16.2	16.5	16.7	16.9	17.1	16.7
LDC'S	11.8	12.3	12.5	12.4	12.2	11.9	11.6	11.7	11.6	11.8
CHINA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MIDDLE INCOMES	2.9	3.2	3.0	3.2	3.0	2.9	2.8	3.3	3.4	3.1

Differences from the Baseline under Scenario Four for the World Coarse Grain Market, 1987-1995

(In million metric tons)

FEED: SCENARIO 4 (DIF)	1987	1988	1989	1990	1991	1992	1993	1994	1995	91-95 AVERAGE
US EXPORT PRICE, $/MT	-1.30	-3.78	-4.96	-5.66	-5.60	-4.28	-4.54	-5.11	-5.64	-5.03
NET EXPORTS										
CANADA	0.0	0.0	-0.1	-0.1	-0.1	-0.2	-0.2	0.2	0.3	0.0
AUSTRALIA	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.4	0.5	0.3
ARGENTINA	0.0	0.0	0.2	0.3	0.3	0.1	-0.1	1.0	1.1	0.5
CHINA	0.0	0.1	0.3	0.2	0.0	-0.1	0.8	1.0	0.1	0.4
U.S.	-0.1	-4.0	-6.2	-1.3	-4.5	-2.5	-4.5	-4.2	-1.9	-3.5
NET IMPORTS										
SOVIET BLOC	-0.1	-0.2	-0.3	-0.1	0.1	0.2	-1.5	-0.9	0.8	-0.3
DEVELOPED MARKETS	0.0	-3.8	-5.6	-5.4	-4.1	-2.9	-2.4	-0.1	-0.3	-2.0
LDC'S	0.0	-0.1	-0.1	-0.2	-0.2	-0.1	0.0	-0.3	-0.4	-0.2
MIDDLE INCOMES	0.0	0.1	0.1	0.1	0.3	0.4	0.1	-0.3	0.0	0.1
PRODUCTION										
CANADA	0.0	0.0	0.0	0.0	-0.2	-0.3	-0.3	0.3	0.6	.0
AUSTRALIA	0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.4	0.6	0.3
ARGENTINA	0.0	0.1	-9.7	0.4	0.4	0.1	-0.1	1.2	1.5	0.6
U.S.	-0.1	0.0	0.7	1.6	1.1	0.0	-0.7	7.2	6.2	2.8
SOVIET BLOC	0.0	0.0	-0.1	-0.2	-0.2	0.0	0.1	-0.8	-0.7	-0.3
DEVELOPED MARKETS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LDC'S	0.0	0.0	0.2	0.4	0.2	0.0	-0.2	1.0	1.2	0.4
CHINA	0.0	0.1	0.4	0.8	0.9	0.4	-0.3	3.0	5.0	1.8
MIDDLE INCOMES	-0.1	0.1	0.2	0.2	-0.2	-0.5	-0.6	1.2	0.9	0.2
DOMESTIC UTILIZATION										
CANADA	0.0	0.0	0.1	0.1	0.1	0.0	-0.2	0.2	0.3	0.1
AUSTRALIA	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1
ARGENTINA	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.2	0.3	0.1
U.S.	-1.2	-1.1	0.0	0.6	0.8	0.9	1.7	2.6	2.3	1.7
SOVIET BLOC	-0.1	-0.2	-0.4	-0.4	-0.1	0.1	-1.3	-1.7	0.1	-0.6
DEVELOPED MARKETS	0.0	-3.7	-5.6	-5.4	-4.1	-2.9	-2.3	-0.1	-0.3	-1.9
LDC'S	0.0	-0.1	0.0	0.1	0.1	-0.1	-0.2	0.3	0.6	0.1
CHINA	-0.1	-0.1	0.2	0.6	0.7	0.4	-1.0	2.1	5.0	1.4
MIDDLE INCOMES	0.0	0.1	0.2	0.3	0.2	0.1	-0.4	0.5	1.0	0.3
ENDING STOCKS										
CANADA	0.0	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	.0
AUSTRALIA	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
ARGENTINA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S.	2.3	7.4	14.3	21.4	26.1	27.7	29.7	38.4	44.4	33.3
SOVIET BLOC	0.0	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.1
DEVELOPED MARKETS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LDC'S	0.1	0.1	0.2	0.2	0.2	0.1	0.0	0.4	0.5	0.2
CHINA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MIDDLE INCOMES	0.0	0.0	0.1	0.1	0.0	0.0	-0.2	0.3	0.3	0.1

Differences from the Baseline under Scenario Four for the World Coarse Grain Market, 1987-1995

(Percent change)

FEED: SCENARIO 4 (%CHANGE)	1987	1988	1989	1990	1991	1992	1993	1994	1995	91-95 AVERAGE
US EXPORT PRICE, $/MT	-1.4	-4.3	-5.8	-6.6	-6.2	-4.6	-4.8	-5.2	-5.5	-5.3
NET EXPORTS										
CANADA	0.0	0.0	-2.1	-2.1	-2.1	-4.3	-4.4	4.7	7.1	0.0
AUSTRALIA	0.0	0.0	0.0	1.4	2.6	2.4	2.3	4.3	5.1	3.4
ARGENTINA	0.0	0.0	1.4	2.0	2.0	0.6	-0.6	6.3	6.8	3.1
CHINA	0.0	5.3	18.7	13.3	0.0	-10.0	114.3	250.0	50.0	50.0
U.S.	-0.2	-6.7	-9.9	-2.0	-6.6	-3.5	-5.9	-5.2	-2.2	-4.6
NET IMPORTS										
SOVIET BLOC	-0.4	-0.7	-1.0	-0.3	0.3	0.6	-4.1	-2.4	2.0	-0.7
DEVELOPED MARKETS	0.0	-16.7	-25.0	-24.4	-18.5	-12.9	-10.5	-0.4	-1.3	-8.6
LDC'S	0.0	-0.9	-0.8	-1.6	-1.6	-0.8	0.0	-2.1	-2.7	-1.4
MIDDLE INCOMES	0.0	0.4	0.4	0.4	1.0	1.3	0.3	-0.9	0.0	0.3
PRODUCTION										
CANADA	0.0	0.0	0.0	0.0	-0.8	-1.2	-1.2	1.2	2.5	0.1
AUSTRALIA	0.0	1.1	1.0	1.9	1.8	1.7	1.6	3.1	4.5	2.6
ARGENTINA	0.0	0.5	-42.2	1.7	1.7	0.4	-0.4	4.8	5.9	2.5
U.S.	.0	0.0	0.3	0.6	0.4	0.0	-0.3	2.6	2.2	1.0
SOVIET BLOC	0.0	0.0	-0.1	-0.1	-0.1	0.0	.0	-0.4	-0.3	-0.2
DEVELOPED MARKETS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LDC'S	0.0	0.0	0.2	0.3	0.2	0.0	-0.2	0.8	0.9	0.3
CHINA	0.0	0.1	0.6	1.1	1.3	0.6	-0.5	4.7	8.2	2.8
MIDDLE INCOMES	-0.3	0.3	0.5	0.5	-0.5	-1.3	-1.5	3.0	2.2	0.4
DOMESTIC UTILIZATION										
CANADA	0.0	0.0	0.5	0.5	0.5	0.0	-1.0	1.0	1.5	0.4
AUSTRALIA	0.0	0.0	0.0	2.9	0.0	0.0	2.9	2.9	2.9	1.7
ARGENTINA	0.0	0.0	1.2	1.1	1.1	0.0	0.0	2.2	3.2	1.3
U.S.	-0.7	-0.6	0.0	0.3	0.4	0.5	1.0	1.5	1.3	0.9
SOVIET BLOC	.0	-0.1	-0.2	-0.2	.0	.0	-0.5	-0.7	.0	-0.2
DEVELOPED MARKETS	0.0	-2.9	-4.3	-4.1	-3.1	-2.1	-1.7	-0.1	-0.2	-1.4
LDC'S	0.0	-0.1	0.0	0.1	0.1	-0.1	-0.1	0.2	0.4	0.1
CHINA	-0.1	-0.1	0.3	0.9	1.0	0.6	-1.5	3.3	8.2	2.2
MIDDLE INCOMES	0.0	0.2	0.3	0.4	0.3	0.1	-0.6	0.7	1.3	0.4
ENDING STOCKS										
CANADA	0.0	1.8	1.8	3.8	2.0	0.0	0.0	0.0	0.0	0.4
AUSTRALIA	0.0	0.0	0.0	33.3	0.0	0.0	**	**	**	0.0
ARGENTINA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S.	1.5	4.3	7.6	10.7	12.3	12.3	12.2	14.9	16.3	13.7
SOVIET BLOC	0.0	0.0	-1.3	-1.2	-1.2	-1.1	-1.1	-1.1	-2.1	-1.3
DEVELOPED MARKETS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LDC'S	0.9	0.8	1.6	1.6	1.7	0.8	0.0	3.5	4.5	2.1
CHINA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MIDDLE INCOMES	0.0	0.0	3.4	3.2	0.0	0.0	-6.7	10.0	9.7	2.7

** = Baseline value is zero

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