UNITED STATES GRADES FOR PERISHABLE AGRICULTURAL COMMODITIES

A STUDY OF THE HISTORICAL DEVELOPMENT IN RELATION TO CONSUMER USE AND RECOGNITION OF THESE GRADES

Thesis for the Degree of M. A.

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UNITED STATES GRADES FOR PERISHABLE AGRICULTURAL COMMODITIES

A Study of the Historical Development in Relation to Consumer Use and Recognition of these Grades

By

Robert T. Kennedy

AN ABSTRACT

Submitted to the School of Graduate Studies of Michigan State University of Agriculture and Applied Science in partial fulfillment of the requirements for the degree of

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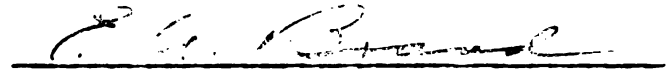
Approved 

ABSTRACT

The writer has prepared this thesis in order to consider the correlation between United States grades for perishable agricultural commodities and consumer quality preferences for these items.

A study of the historical development of these grades has revealed that they were established primarily at the request of the producers of such products. The grades were based chiefly on established trade practices, and have become an important factor in facilitating trading in these commodities. Both growers and middlemen benefit from the uniform standards established by grades and they have made extensive use of the Federal standards. However, the grades have not been used widely at the retail level. Due to the consumer's traditional preference for personal observation of these products before purchase, the retailer has not received customer demand for the use of grades. However, with future improvements in the preservation and packaging of perishables consumer demand for the use of grades may increase.

Present investigations reveal that consumers have limited knowledge of grades and do not consider the same factors as do experts when rating products. Therefore, some adjustment may be necessary in order to develop extensive use of grades at the retail level. Grades based upon consumer preferences will effectively aid the shopper in

The Food Distribution program at Michigan State University is under the sponsorship of the National Association of Food Chains

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CHAPTER I

INTRODUCTION

Purpose of Thesis

United States grades for agricultural products have been used principally by growers, buyers, and wholesalers, and these grades have had little use by retailers. This restricted use is easily understood in the case of agricultural products such as grains or other commodities which must be refined and changed in form before sale at retail. However, the more perishable items such as fresh fruits, vegetables, and meats generally pass from grower to consumer without change in form. This thesis will investigate the historical development of the United States grading system and the Department of Agriculture's inspection service in order to discover the factors which led to the use of Federal grades principally at the producing and wholesale level. An attempt will be made to discover why these grades have apparently failed to follow through the entire marketing system from grower to consumer, and have received little recognition by retailers and consumers.

As a result of the uses of grades principally at the wholesale level, trade terms have usually been adopted as

the terms used for the official United States grades. An example is the use of prime, choice, good, and similar terms to describe the relative qualities of beef. For this reason, considerable consumer education is necessary to acquaint the retail customer with the relative qualities indicated by each grade. In an attempt to determine if the reason for the limited use of grades at retail has been due to confusing grade terms, simplified consumer grades have been established for some products. Thus far, the consumer grades have been limited in use, for consumers still tend to buy perishable food commodities principally through visual inspection. However, improved packaging and preservation of perishable agricultural products may significantly increase volume for these commodities. A result of increased volume may be consumer demand for the use of grades at the retail level as an aid to selecting the quality desired.

The U.S. Department of Agriculture is sponsoring investigations to determine what factors influence consumer decisions in the purchase of perishable products with the possibility of relating these preferences to consumer grades. This paper will consider some of the factors revealed by a consumer panel investigation conducted under the auspices of the Michigan Agriculture Experiment Station. The principal areas investigated by the panel study were consumer recognition of quality in relation to existing grades, and the factors which influenced the panel members' preferences regarding the perishable agricultural products considered.

Preliminary results of this study will be used to determine consumer quality preferences, together with future possibilities for more extensive use of consumer grades at the retail level.

Method

In order to consider the development of U.S. grades for agricultural products, a study of legislation related to grading will be undertaken. The principal source of this information is the Congressional Record.

Consumer recognition of the established grades and quality preferences will be considered in the light of a monthly consumer panel survey conducted in Detroit by Dr. Henry Larzelere of Michigan State University. The project is under the auspices of Michigan State University Agriculture Experiment Station. The results from three of the monthly panels will be used to analyze consumer ratings for five types of agricultural products.

Scope

This study will deal chiefly with perishable agricultural products used for food and sold in a fresh or unprocessed state. The development of grades for non-food products as well as grades for processed, canned, or frozen food commodities is beyond the scope of this paper.

CHAPTER II

DEVELOPMENT OF FEDERAL GRADING STANDARDS

The need for the establishment of Federal grading standards became apparent early in this century. As the market for various agricultural products widened, the potential buyers and sellers of these products found themselves geographically separated by great distances. Buying on personal inspection became less satisfactory, and some system of objective grading became necessary in order to provide a common language for both the buyer and seller. The growth of large terminal wholesale markets, and the sale of farm products by telegraph and by futures contract emphasized the need for a system of uniform grading. Because grain and cotton were the first agricultural products to be traded in large volume over long distances, they were the first products to be sold on the basis of grades. Before Federal grades were established for these products each grain and cotton exchange formulated its own set of grades. In addition, some grain producing states also established their own grades. These sundry methods were not satisfactory for much confusion resulted from the various interpretations of the standards. Frequent conflicts arose with abuses and defrauding, such as short-weights or under-grading, common.

Early Action

This problem came to the attention of the Federal government, and in 1902 funds were allotted to the Bureau of Plant Industry, "to investigate the varieties of wheat in order to standardize the naming of varieties as an assistance in commercial grading."[1] In 1906, the Bureau was authorized to carry on special investigations in the grading of grain. This authority has been gradually widened, and each annual appropriation act allots funds to the Bureau of Agricultural Economics for carrying on research in the use of uniform grades for farm products generally. In addition, the following acts of Congress contain provisions relating to grading and labeling.

1. The Standard Apple Barrel Act of 1912
2. The Cotton Futures Act of 1914 [revised and re-enacted in 1916]
3. The Grain Standards Act of 1916
4. The Warehouse Act of 1916
5. The Cotton Standards Act of 1923
6. The Special Appropriation Act of May 17, 1928--relating to the promption of Federal Wool Grades

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[1]Taylor, Burtis, and Waugh, Barriers to Internal Trade in Farm Products, Bureau of Agricultural Economics, United States Department of Agriculture, Special Report (Washington: U.S. Government Printing Office, March, 1939), p. 68.

7. The Tobacco Statistics Act of 1929
8. The Perishable Agricultural Commodities Act of 1930
9. The Export Apple and Pear Act of 1933
10. The Tobacco Inspection Act of 1935
11. The Commodity Exchange Act of 1936
12. The Peanut Stocks and Standards Act of 1936

There were also several acts related to grading and the inspection of perishable products passed during World War I as emergency measures. In addition to this formidable Federal list, every state has legislation prescribing grade standards for at least one farm product, or requiring or authorizing the establishment of such standards.[2]

Extended Coverage

These acts and the standards established have helped reduce the multiplicity of grades and the confusion resulting from conflicting grading by private marketing establishments and the various agricultural states. As markets further broadened, products other than grain became important, and additional standards were established. As improvements were made in cold storage facilities and in rapid refrigerated transit, perishables such as dairy products, fruits, and vegetables were shipped longer distances.

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[2] Ibid., p. 68.

As a result, the amount of these items produced increased, and the need for the establishment of Federal grades for these products was accentuated.

Among the earliest, and the most important Federal acts were the Cotton Futures Act of 1914, the Grain Standards Act of 1916, and the Cotton Standards Act of 1923. All three have compulsory features, and the bulk of trading in grain and cotton is carried on in terms of the grades established under these acts. The only other act with compulsory features is the Commodity Exchange Act of 1936, which requires the use of grades for all butter traded on futures markets. All other grading legislation provides for optional compliance.

Legislative Action

A study of Congressional action early in this century will help emphasize the factors which led to the establishment of a uniform grading system for agricultural products used for food. While the laws related to agricultural products other than foodstuffs are important, consideration of them will not be undertaken in this paper.

As previously mentioned, funds were first allocated to the Bureau of Plant Industry in 1902 in order to consider standardizing grading procedures for wheat. In 1905, the Bureau was authorized to investigate the grading of grains. The following excerpts from a report prepared by the Secretary of Agriculture and delivered to Congress on January 26, 1907 will help indicate early sentiments regarding grading.

> From time to time during the past five years demands have been made upon the Department for aid in grading and handling of grain. It has been fully recognized that this is a matter which demands most careful investigation, as both our home and foreign markets are involved. Grain grading as now practiced by the various State and other organized bodies has not been satisfactory, chiefly on account of lack of uniformity. The Department has consistently held the ground that some system of standardization is absolutely necessary as a first step toward securing uniform methods of grain grading. With a view to eventually bringing about this standardization, Congress at its last session authorized the establishment of laboratories for the purpose of examining and reporting upon the nature, quality, and condition of any sample, parcel, or consignment of seed or grain entering into interstate or foreign commerce. After a careful study of the situation two laboratories, all the funds at hand would permit, have been established--one at Baltimore, Md., the other at New Orleans, La. It will be the object of these laboratories to make a thorough study of present systems of grain grading with a view to reaching, if practicable, conclusions which will make standardization possible.[3]

Debate following this report further emphasized the increasing realization by members of Congress that some method of uniform grading was necessary due to the steadily increasing volume of interstate and foreign shipments of grain. This was emphasized by the rapid development of grain boards of trade with resulting increased reliance on telegraphic and futures sales. The first steps toward establishing Federal grading standards were accomplished by Congressional authorization placed in the annual Agricultural

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[3]Report Prepared by the Secretary of Agriculture for Delivery to United States Congress, Congressional Record, Volume 41, Part 2, 59th Congress, 2nd Session, January 26, 1907, p. 1773.

appropriation bills which permitted investigation of grain grading by the Bureau of Plant Industry and the Bureau of Agricultural Economics. The first Federal act, other than appropriation bills, which dealt with uniform grading standards was the Standard Apple Barrel Act of 1912. In addition to establishing uniform grades for apples, this act was designed to standardize container size and content.

Standard Apple Barrel Act

William Sulzer, Representative from New York, introduced a bill on March 7, 1912, which eventually was passed as the Standard Apple Barrel Act of 1912. When introduced, the stated intent of this bill was "to establish a standard barrel and standard grade for apples when packed in barrels, and for other purposes."[4] The bill consisted of seven sections. The first section listed the required dimensions for barrels used to ship apples in interstate commerce. Section two listed the important requirements of the act which dealt with the establishment of grading standards.

> That the standard grade for apples when packed in barrels which shall be shipped or delivered for shipment in interstate or foreign commerce or which shall be sold or offered for sale within the District of Columbia or the territories of the United States shall be as follows: Apples of one variety, which are well grown specimens, hand picked, of good color

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[4]United States Congress, Congressional Record, Volume 48, Part 10, 62nd Congress, 2nd Session, March 7, 1912, p. 2997.

> for the variety, normal shape, practically free from insect and fungous injury, bruises, and other defects, except such as are necessarily caused in the operation of packing, or apples of one variety which are not more than 10 per cent below the foregoing specifications shall be 'U. S. Standard, minimum size 2-1/2 inches,' if the minimum size of the apples is 2-1/2 inches in transverse diameter; 'U. S. Standard, minimum size 2-1/4 inches,' if the minimum size of the apples is 2-1/4 inches in transverse diameter; or 'U. S. Standard, minimum size 2 inches', if the minimum size of the apples is 2 inches in transverse diameter.[5]

Section three stated, "that apples packed in barrels in accordance with the provisions of this act may be branded in accordance with section 2 of this act."[6]

Section four required that such barrels must be full, or they must be clearly marked if they were only partially filled.

Section five stated that the barrel would be misbranded if the barrel marking indicated that the contents of the barrel were "U.S.Standard" grade when they really were not. The variety, locality where grown, and the name of the packer or person by whose authority the apples were packed and the barrel was marked were also required to be listed on the barrel if the "U.S. Standard" term was affixed to the barrel.

Section six listed the penalty for violations by packer or seller as follows:

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[5]United States Congress, Congressional Record, Volume 48, Part 10, 62d Congress, 2d Session, June 17, 1912, pl 8294.

[6]Ibid., p. 8294.

> One dollar for each barrel so sold or offered for sale, to be recovered at the suit of the United States in any court of the United States having jurisdiction. This penalty to be recovered under the provisions of an act approved June 30, 1906, entitled 'An act for preventing the manufacture, sale, or transportation of adulterated or misbranded or poisonous or deleterious foods, drugs, medicine, and liquors, and the regulating traffic therein, and for other purposes.' (34 Slat, p. 768).[7]

Section seven gave the effective date which was July 1, 1913.

Following the introduction of this bill, Representative Sulzer clarified the intent and purpose of his bill during discussion before the House of Representatives on June 17, 1912. The main purpose was to prevent fraud and deception throughout the apple trade in order to benefit both producers, consumers and honest distributors. The bill was not compulsory and was designed to closely resemble legislation already in effect in some of the leading agricultural states in order to standardize practices throughout the country.

Discussion and debate concerning this bill centered around problems of enforcement, the extent of coverage, and the almost unanimous desire of both apple growers and dealers to deliver apples as represented. The support for this legislation throughout the apple trade and among members of Congress was surprising since this was the first specific act dealing with the establishment of grades and

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[7] Ibid., p. 8295.

standards. The purpose of the act was to assure an honest pack and grade with resulting benefits to the consumer. Thus, although this act principally dealt with the producing, packing, and wholesaling operations, the importance of dealing fairly with the consumer was fully realized. The act unanimously passed the House of Representatives and was referred to the Senate for consideration.[8]

The bill was introduced to the Senate by Clarence Watson, Senator from West Virginia. After limited debate, the Senate eliminated the "U.S." designation before the term "Standard" and added the word grade so that the term read "Standard Grade" rather than "U.S. Standard." In addition, regarding violations, the word "knowingly" was inserted in order to protect those making honest mistakes.[9] The House agreed to these amendments and the bill was approved and signed by the President on August 3, 1912.[10] Thus, this act became the first legislation, aside from the Department of Agriculture appropriation bills, which attempted to standardize grading procedures. An important factor in the passage of this act was the almost unanimous

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[8]United States Congress, Congressional Record, Volume 48, Part 8, 62nd Congress, 2nd Session, June 17, 1912, p. 8299.

[9]Ibid., p. 9542.

[10]Ibid., p. 10165.

desire of the apple trade to secure legislation that would tend to establish uniform standards, and would benefit the producer and the packer, as well as the consumer. Compliance was optional and violations could occur only when the apple barrels were misbranded with regard to the quality or quantity of the contents as established by the act. Therefore, those who wished to guarantee the quality and quantity of their product had ample opportunity, while those interested in selling in bulk, in other type or size containers, or unbranded, had freedom to do so. This act established the optional compliance feature found in most of the succeeding grading bills with the exception of grain and cotton legislation. In addition, it emphasized the desire for uniformity found among both the producer, packer or wholesaler, and the ultimate consumer, and paved the way for additional legislation covering other agricultural products.

Grain Standards Act of 1916

In addition to an amendment dealing with cotton in the Agriculture Appropriations Bill of 1916, there were two amendments dealing with grading regulations. The first was the Grain Standards Act, and the other was the Warehouse Act. The grading provisions proposed for the Grain amendment authorized the Secretary of Agriculture to investigate the handling, grading and transportation of grain and to establish standards for grain. After the grades were

established, no transactions involving the sale of grain by grade would be authorized unless the grain was inspected and graded under the United States standards thus established.

The amendment further made provision for enforcement and established penalties for violations. Any person who knowlingly violated any of the provisions of the act was liable to a $1,000 fine or one year in prison or both.[11] Combined with regulations that had been established for cotton, Federal grading provisions were thus made mandatory for a large portion of the nation's agricultural product. Since grains and cotton were important factors in both domestic and foreign trade, the effects of these grading regulations were felt throughout the world.

Warehouse Act of 1916

The Warehouse amendment provided for bonded warehouses and required that grain, flax seed and other fungible agricultural products be inspected and graded by a person duly licensed by the Secretary of Agriculture. The jurisdiction of the Department of Agriculture was extended to, "every building, structure or other protected inclosures in which any agricultural product is or may be stored for

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[11] United States Statutes at Large, Public Laws, Volume 39, Part 1, 1915-1917, U.S. Government Printing Office, Washington, D.C., p. 485.

interstate or foreign commerce."[12] Further, receipts for products stored in these bonded warehouses were required to list the grade of the product received and the standard in accordance with which the classification was made.[13]

The intent of this Act was to safeguard the grower from possible abuses such as grade switching, whereby dishonest warehousemen substituted lower quality products for those deposited by the producer, and to insure against loss whenever possible.

From 1916 to 1930, there was no legislation dealing specifically with the grading problem. However, as a result of war time needs, provisions for the grading of perishable food products were instituted in emergency legislation. These will be considered in the following chapter.

Perishable Agricultural Commodity Act

In 1930, the Perishable Agricultural Commodity Act was instituted to relieve the farmer and to prevent malpractice by middlemen. It was also designed to benefit consumers, since the products covered were in the form found at final consumption. The Act was designed to suppress unfair and fraudulent practices in the marketing of

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[12] Ibid., p. 485.

[13] Ibid., p. 486.

perishable agricultural commodities in interstate commerce and defined unfair practices on the part of dealers, commission merchants, and brokers in handling perishable agricultural products. The Act stated that it was unfair to misrepresent the quality, market price, or condition of a product, or to dump the product without permission. It further provided that the handlers of perishable farm products should be licensed by the Secretary of Agriculture for a fee of ten dollars yearly, and that violators' licenses would be suspended or forfeited.

The Act was intended to benefit the producer, consumer, honest dealers, and a number of dealer organizations supported the bill. Previously, some dealers took advantage of the distance between them and the producer to arbitrarily downgrade quality, falsify market and final sales prices, claim the necessity of dumping merchandise that was really sold, and insist on discounts before accepting the merchandise. Under legislation existing at the time, violators had to be taken to court. Since most claims would range from one to three hundred dollars, the legal expenses did not justify suit. The following special message to Congress by the President of the United States recommending legislation indicates his recognition of the problem:

> to provide for licensing of handlers of some perishable products so as to eliminate unfair practices. Every penny of waste between farmer and consumer that we can eliminate, whether it arises from

> methods of distribution or from hazard or speculation will be a gain to both farmer and consumer.[14]

Debate on the measure centered upon the need for changes in existing legislation. Some Congressmen felt that the development of excessive licensing throughout the agricultural economy would prove costly and restrictive and would interfere with state coverage. However, the Act specifically stated that it would not effect existing legislation. Poultry and eggs which were originally added to the list of products covered, were later removed due to controversy over their inclusion. A perishable agricultural commodity was described as follows: "means any one of the following, whether or not frozen or packed in ice: Fresh fruits and fresh vegetables of every kind and character."[15]

While specific grading standards were not listed, quality was given important consideration in the following sections of the final Act which authorized inspection by the Department of Agriculture:

> The Secretary of Agriculture shall by regulation provide for the making of prompt investigations and the issuing of certificates as to the quality and condition of produce received in interstate commerce or in the District of Columbia, upon application of any person, firm, association, or corporation shipping, receiving, or financially interested in such product.[16]

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[14]Congressional Record, Volume 72, Part 8, 71st Congress, 2nd Session, May 7, 1930, p. 8538.

[15]Congressional Record, Volume 72, Part 9, 72nd Congress, 2nd Session, June 3, 1930, p. 9975.

[16]Congressional Record, Volume 72, Part 8, 71st Congress, 2nd Session, June 7, 1930, p. 8545.

> For any commission merchant, dealer, or broker, for a fraudulent purpose, to remove, alter, or tamper with any card, stencil, stamp, tag, or other notice, placed upon any container or railroad car containing any perishable agricultural commodity, if such card, stencil, stamp, tag, or other notice contains a certificate under authority of any Federal or State inspector as to the grade or quality of the commodity contained in such container or railroad car or the State or country in which such commodity was produced.[17]

With this legislation, recognition was given to the authority of the Department of Agriculture to regulate a substantial portion of the farm crop designed for immediate use and shipped in the form for final consumption. The desired effect of restricting malpractice and restricting dishonest dealers was achieved through license forfeiture. The effect of the Act was to protect the producer when shipping to distant points, the honest dealer against unfair competitive practices, and the consumer against excessive prices.

Export Apple and Pear Act

In 1933, a bill was introduced by Representative Robertson of Virginia

> to promote the foreign trade of the United States in apples and/or pears in foreign markets, to prevent deception or misrepresentation as to the quality of such products moving in foreign commerce,

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[17] Congressional Record, Volume 72, Part 9, 72nd Congress, 2nd Session, June 3, 1930, p. 9976.

> to provide for the commercial inspection of such products entering into commerce, and for other purposes.[18]

The purpose of the bill was to promote the export of apples and pears by assuring foreign nations that nothing except standard grades of fruit would be shipped. In the preceding two years, twenty-six nations had imposed restrictions on these two American exports due to varied qualities shipped.[19] The bill provided for

> an inspection of export apples and pears by the Department of Agriculture and required that every shipment be accompanied by a certificate issued under the authority of the Secretary of Agriculture showing that such apples and pears meet the requirements of the established United States grades or the requirements of the country to which shipped.[20]

The Act, known as the Export Apple and Pear Act of 1933, passed with little debate and highlighted the importance of grading standards in easing trade over long distances, in this case, foreign shipments. Provisions were made to finance the inspection from fees collected and violators were subject to fines from one hundred to ten thousand dollars.[21]

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[18]Congressional Record, Volume 77, Part 2, 73rd Congress, 1st Session, April 10, 1933, p. 1453.

[19]Statement by Mr. Robertson, Congressional Record, Volume 77, Part 2, 73 rd Congress, 1st Session April 10, 1933, p. 1563.

[20]Ibid., p. 4186.

[21]Ibid., p. 4186.

Commodity Exchange Act of 1936

The Grain Futures Act of 1922 was amended by an Act introduced in 1936. The new act eliminated a loophole in the original law which permitted abuses in futures trading.[22]

The amendment also broadened the coverage from a limited number of grains to include, wheat, cotton, rice, corn, oats, barley, ryes, flaxseed, grain sorghums, mill feeds, butter, eggs, and potatoes.[23] In addition provision for the use of grading standards was introduced, and the bill which became known as the Commodity Exchange Act of 1936,

> required contract markets to require that all futures contracts in a commodity made on that market provide for delivery of grades of that commodity conforming to United States Standards, if such standards have been officially promulgated.[24]

Thus, the original legislation was corrected while coverage was broadened and the use of Federal grading standards was provided for.

Peanut Stocks and Standards Act of 1936

Standards were further extended to cover peanuts by the Peanut Stocks and Standards Act of 1926 which dealt

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[22]Congressional Record, Volume 79, Part 11, 74th Congress, 1st Session, July 25, 1935, p. 11993.

[23]Congressional Record, Volume 80, Part 6, 74th Congress, 2nd Session, May 29, 1936, p. 8293.

[24]Congressional Record, Volume 79, Part 8, 74th Congress, 1st Session, June 3, 1935, p. 8593.

with the compilation of statistics regarding the quality of peanuts held by anyone other than the original producer. The Secretary of Agriculture was also, "authorized to establish and promulgate grades, and standards for the classification of peanuts, whenever in his discretion he may see fit."[25]

Recent Acts

Recent legislation has dealt with a broader coverage of the quality of agricultural products rather than specific commodities as in previous acts. The Agriculture Marketing Act of 1946 is an example. The purpose of this act was:

> To inspect, certify, and identify the class, quality, quantity, and condition of agricultural products when shipped or received in interstate commerce, under such rules and regulations as the Secretary of Agriculture may prescribe, including assessment and collection of such fees as will be reasonable and as nearly as may be to cover the cost of the service rendered, to the end that agricultural products may be marketed to the best advantage, that trading may be facilitated, and that consumers may be able to obtain the quality product which they desire, except that no person shall be required to use the service authorized by this subsection.[26]

The annual Agricultural Appropriation Bills contain sections which provide for investigation of the quality of products being shipped in interstate commerce as shown by the Department of Agriculture Act, 1951.

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[25]Congressional Record, Volume 80, Part 10, 74th Congress, 2nd Session, June 19, 1936, p. 10212.

[26]Code of Federal Regulations 1949, Title 7, Agriculture, Parts 1-209, 1952 Cumulative Pocket Supplement for Use During 1953, Government Printing Office, Washington,D.C., 1953, p. 52.3.

Market inspection and farm products.[sic] For the investigation and certification, in one or more jurisdictions, to shippers and other interested parties of the class, quality, and condition of any agricultural commodity or food product, whether raw, dried, canned, or otherwise processed, and any product containing an agricultural commodity or derivative there of when offered for interstate shipment or when received at such important central markets as the Secretary may from time to time designate, or at points which may be conveniently reached therefrom under such rules and regulations as he may prescribe including payment of such fees as will be reasonable and as nearly as may be to cover the cost for the services rendered.

Marketing farm products.[sic] For acquiring and diffusing among the people of the United States useful information relative to the needed supplies, standardization, classification, grading, preparation for market, handling, transportation, storage, and marketing of farm and food products, including the demonstration and promotion of uniform standards of classification of American farm and food products through the world.[27]

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[27] Ibid., p. 52.3.

CHAPTER III

DEVELOPMENT OF STANDARDS FOR PERISHABLE PRODUCTS

The previous chapter dealt primarily with early legislation devoted to specific products. This chapter will deal more directly with the development of grades for perishables. This type of product generally passes through the trade from producer to consumer without change of form. Therefore, the formation of grades for these products will be of more interest to consumers, for the grades may help them obtain the quality product they desire.

Most early grading legislation and sections of the annual Agricultural Appropriations Bills dealing with the grading problem were devoted to agricultural products such as cotton, grain, tobacco, and wool. Such products required refining or processing before they were ready for retailing or final consumption. However, fresh fruits and vegetables presented a somewhat different problem. They were generally highly perishable, and their condition could quickly deteriorate. Therefore, quality or lack of it could be determined more easily by the consumer through visual means and personal handling.

The first step toward establishing uniform Federal grading standards for these products was incorporated in

the Standard Apple Barrel Act of 1912. This Act, described in Chapter II, was instituted to overcome abuses in the trade, and consumer benefits were not the primary factors behind the passage of the act. While the act was aimed toward protecting both grower and buyer, the extent of coverage was limited, and size was the differentiating factor between the three grades provided for.

The real beginning of concentrated effort by the Federal Government to aid the fruit and vegetable industry in the marketing of their products occurred in 1913. The Agricultural Appropriations Act of that year authorized "The Secretary of Agriculture to diffuse among the people useful information on subjects connected with the marketing and distribution of farm products."[1] Each year since 1913 a similar provision has been approved authorizing investigations with a view to establishing standards for farm products.

Shortly after this authorization, the Secretary of Agriculture created the Office of Markets to carry out the investigations. During the first two years, major efforts were devoted to field investigations of potatoes, tomatoes, strawberries, cantaloups, and peaches. The importance of

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[1] Raymond Spangler, Standardization and Inspection of Fresh Fruits and Vegetables, U.S.D.A., Production and Marketing Administration, Miscellaneous Publication No. 604, Washington:Government Printing Office, October, 1946, p. 5.

uniform standards was emphasized by the increased volume of long distance shipments brought about by the improved methods of refrigeration and transportation for these perishable products. This led to year round rather than seasonal consumption. In 1915, the Department of Agriculture inaugurated a telegraphic market news service. The need for uniformity of product quality was quickly apparent because of price variations in different markets. Progress was slow in the formulating of these grades, but by the time the United States entered World War I the marketing of potatoes by grade was thought to be practical.[2]

Food Production Act of 1917 and Succeeding Legislation

A wartime measure, the Food Production Act of 1917, provided authority for the establishment of standards and for permissive inspection of fruits and vegetables. The full title of this act was, "The Food Production Act to Provide Further for the National Security and Defense by Stimulating Agriculture and Facilitating the Distribution of Agriculture Products." It authorized the Secretary of Agriculture to investigate and certify to shippers the condition as to soundness of fruits and vegetables and other commodities. After the passage of this act, a broad

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[2] Ibid., p. 5.

national policy began to take shape, and the confusion caused by conflicting trade terms and practices abated rapidly as commercial grades were developed.[3]

The first recorded request for this type of legislation dealing with inspection and grading of fruits and vegetables was reported by Representative McLaughlin of Michigan on February 10, 1916 during a "Hearing before the Committee on Agriculture, House of Representatives, Sixty-Fourth Congress, First Session on the Agriculture Appropriations Bill." He reported that a grange in his district, located at Traverse City, suggested the advisability of Federal legislation for inspection of fruits at their shipping point in order to eliminate some of the grading difficulties that growers encountered when relying on terminal market inspection.[4]

As a result of the hearing and producer demand throughout the country, Senator Bryan proposed an amendment on February 3, 1917 to the Department of Agriculture Appropriations Bill for the fiscal year ending June 30, 1918. This amendment was the origin of the movement for an official Inspection Service for fruits and vegetables.

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[3]Merritt Baker, Grades and Grading, Agriculture Yearbook (Washington: Government Printing Office, 1954), p. 158.

[4]Wells A. Sherman, Merchandising Fruit and Vegetables (Chicago: A. W. Shaw Company, 1928), p. 211.

The purpose of the amendment was:

> To enable the Secretary of Agriculture to investigate and certify to shippers the condition as to soundness of fruits and vegetables when received at market under such rules and regulations as he may provide; Provided, That the certificates issued by the authorized agents of the department shall be received in all courts as prima facie evidence of the truth of the statements therein contained.[5]

The amendment failed to pass as part of the Appropriations bill, but was incorporated in the Food Production Act (HR 4188) previously mentioned and passed later that year.

During debate on the Food Production bill, Representative Summers of Texas offered the following amendment.

> The Secretary of Agriculture, as rapidly and completely as practicable, shall establish and promulgate standards, not otherwise provided for by law, for foods, food material, and farm products, and for the containers and packages in which foods, food materials, and farm products are shipped.[6]

This proposal which provided for extensive coverage failed to get out of committee. However, in 1918, the coverage of the Agriculture Appropriations Act was broadened to include other perishable farm products and inspection was made self supporting through the authorization of the collection of fees.[7]

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[5] Ibid., p. 219.

[6] Amendment offered by Representative Summers of Texas, Congressional Record, Volume 55, Part 3, 65th Congress, 1st Session, May 25, 1917, p. 2908.

[7] Sherman, op. cit., p. 227.

In the meantime, desire for shipping point inspection mounted and an amendment dealing with this problem was offered by Representative Summers of Washington, March 11, 1922. This amendment to the Agriculture Appropriations Act of that year passed as follows:

> For enabling the Secretary of Agriculture to investigate and certify to shippers and other interested parties the quality and condition of fruits, vegetables, poultry, butter, hay, and other perishable farm products, when offered for interstate shipment or when received in such important central markets as the Secretary of Agriculture may from time to time designate, or at points which may be conveniently reached therefrom:[8]

Therefore, Federal legislation provided for an inspection service to deal with the quality and condition of perishables even though it failed to authorize the establishment of specific standards for these products.

First Official Standards

In 1917, the potato crop was large and since this product was relatively durable, the Federal Reserve Board authorized its member banks to accept warehouse receipts as collateral security for loans on potatoes that had been properly packaged, stored, and insured.[9] Following this action, the United States Food Administration requested the

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[8] Ibid., p. 241.

[9] Spangler, op. cit., p. 5.

Department of Agriculture to recommend standard grades for potatoes, and then ordered all handlers of potatoes to operate on the basis of the grades assigned.[10] This ruling was not lifted until after the Armistice.

With this action, the first official U. S. grade for a perishable fruit or vegetable commodity was established. Since that time, commercial grades have been assigned to eighty-two fresh market commodities with frequent revision and adjustment of standards whenever necessary.[11]

The commercial grades developed by the Department of Agriculture were generally a compromise between conflicting state opinions, for many states had previously instituted standards that were almost impossible to meet. In these states, no tolerances were allowed for high speed packing, and therefore, little use could be made of the standards. The reasons for such high standards were generally competitive as part of the general promotion and publicity given to differences between neighboring states. By establishing more logical grades, abuses by packers as well as by buyers were overcome in the interest of better marketing.[12] The Federal grades set a minimum quality below which no offical

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[10] Sherman, op. cit., p. 199.

[11] George Motts, Extract from Unpublished Material Relating to Fresh Fruit and Vegetable Grading, Chapter 4.

[12] Sherman, op. cit., p. 194.

grades would apply, and any portion of the product falling below the line was referred to officially as unclassified and became known in the trade parlance as "culls."[13] The Department of Agriculture has continued to be the major agency promoting the development and use of grades in business transactions involving food products, and has developed permissive grades for those farm products for which it seems desirable and technically feasible. In addition, inspection and grading services have been provided on a fee basis at suitable points for those desiring it.[14]

At present, terminal market inspection of the grade and condition of fresh fruits and vegetables is provided for by the Agriculture Marketing Service of the United States Department of Agriculture, while shipping point inspection is available through the Federal-State Inspection Service on a cooperative basis between the Federal and State Departments of Agriculture.[15] Terminal market inspection offices are located in most larger cities. If inspections are made at other points, the total cost will include travel expense from the nearest office.

Both shipping point and terminal market inspection certificates provide the following information concerning

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[13]Edward Gallahue, Price is a Nexus and a Symbol, Agriculture Yearbook (Washington: Government Printing Office, 1954), p. 155.

[14]Day Monroe, Hazel Kirk, and Ursula Stone, Food Buying and Our Markets (New York: Mr. Barrows and Company, Inc., 1946), p. 148.

[15]Motts, op. cit.

the produce shipment, whether by rail or truck.

1. Inspection certificate serial number
2. Inspection point
3. Billing point
4. Date
5. Applicants name and address
6. Shippers name and address
7. Car initial and number
8. Kind of car
9. Time when inspection was begun and completed
10. Car equipment and condition at completion of inspection including
    a. products
    b. loading
    c. pack
    d. size
    e. quality and condition
    f. grade
11. Fee and Expenses
12. Signature of inspector[16]

While Federal inspection and grading of fruits and vegetables is permissive rather than mandatory, those growers, shippers, or dealers who indicate a U.S. grade on the package or container of produce become legally responsible that the contents conform to the Federal standards

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[16] Ibid.

for the indicated grade. The wide use of such grades indicates the benefits of uniform standards to those in the trade. From 1922 to 1923, the first fiscal year of shipping point inspections, there were 72,466 inspections performed. An idea of the increased use made of this service may be gained by a comparison with the figures for 1945-1946 when 684,894 carlots were inspected at shipping points. In addition, 96,863 carlots of raw products were inspected at processing plants and 113,528 carloads were inspected at terminal receiving markets for a total of 895,785.[17] This is an impressive figure considering the fact that inspection is voluntary and is paid for by those requesting the service.

The majority of inspections take place at shipping points in order to establish the grade, condition, and pack of the product at the point of origin. This provides a sound foundation on which to make a contract sale and f.o.b. sales to buyers in distant markets are facilitated. Rejections are minimized and a fair basis is established for settling disputes between financially interested parties. Waste is generally decreased for only properly conditioned products will be transported and transportation claims for damage may be settled more easily. Cooperative sale by groups of growers is facilitated and all parties in long

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[17] Spangler, op. cit., p. 6.

range transactions may more logically make use of market price quotations.

Requests for inspections at receiving markets are generally made by receivers who believe that the condition of the produce has changed while in shipment. When deterioration has occured, the information on the terminal inspection certificate may be used in making final settlement with the shipper and for the purpose of aiding in fixing responsibility for the deterioration of the produce. When a receiver requests an appeal inspection for a shipment which was graded at a shipping point, two inspectors are usually assigned and at least twice the usual number of samples are examined. No charge for this inspection is made if it is found that the shipping point inspection was in error and the report is changed. However, a double charge is levied if the original grade is sustained.[18] Therefore, both producer and dealer are protected by the various steps of the inspection service which help verify the grades of the produce being shipped. In addition, the presence of the inspection service influences standardization, for there is always someone to appeal to for final decision on disputes related to quality or condition of perishable merchandise.

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[18] Ibid., p. 24.

Standards for Meats

Interest in grading legislation developed much later for meats than for other perishable agricultural commodities. Early emphasis was centered primarily on safeguarding the wholesomeness of meat through the institution of sanitary requirements for meat handling. Public sentiment had been aroused early in this century through disclosures related to the lack of sanitary precautions prevailing in the slaughtering industry. Popular writers emphasized these abuses through various channels of communication. As a result of the aroused public indignation, both the Meat Inspection Act and the Food and Drug Act were passed on the same day, June 30, 1906. These two acts were designed to assure the wholesomeness of certain agricultural products destined for consumer use through legislative action and Federal inspection. While interest in the quality and condition of meat was thus apparent early in the century, official United States standards for market classes and grades of beef were not set until 1926.[19] The original standards for beef were modified in 1939 to provide for grading of all steer, heifer, and cow beef on a single standard. In 1951, grades for veal and lamb were established.[20] Grades for

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[19] Merritt Baker, op. cit., p. 160.

[20] Ibid., p. 161.

live hogs and pork carcasses of the barrow and gilt class became effective on September 12, 1952.[21] Although grades for meats were not established until much later than many other products, these grades probably have become more familiar to the ultimate consumer than those for most other products because of successful consumer education programs and the development of self-service meat operations.

The Federal grading and stamping of beef was started by the United States Department of Agriculture on May 1, 1927. The initial request for the development of a Federal grading inspection service came from a producer organization called the Better Beef Association. The organization consisted of producers and their representatives from the leading cattle raising sections of our country. They believed that a uniform, official grading program for measuring quality was needed to encourage the production of high quality beef and to assure the consumer of the quality of his purchase.[22] Thus, once more the motivating force for inspection and grading came from the producing segment of the population rather than from the relatively unorganized consumer group.

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[21]Pork-Facts for Consumer Education, Agriculture Information Bulletin No. 109, U.S.D.A. (Washington: Government Printing Office, January 1954),p. 4.

[22]U. S. Grades for Beef, U.S.D.A. Leaflet No. 310 (Washington: Government Printing Office, 1955).

The beef grading program was first set up on an experimental basis in ten major meat market-centers in 1927. This service for packers requesting grading was put on a self-supporting basis in 1928 by charging fees in the manner previously initiated by the Federal fruit and vegetable inspection and grading service. As the coverage grew to include other meats besides beef, the demand for grading increased and by 1955, a staff of over four hundred graders was required to perform the grading required by the trade. Inspectors are now located in practically every section of the United States, and all segments of the meat industry take advantage of this service.[23] An indication of the growth of the use of the voluntary Federal meat grading service may be gained by comparing the amount graded in 1930 which was 79,587,421 pounds of meat with the amount graded in 1947 which was 3,600,000,000 pounds. This was an increase of approximately forty-five times in a seventeen year period. Approximately ninety per cent of all meat graded during this period was beef.[24]

Poultry Standards

The grading of poultry dates from 1928 when turkeys were first graded for the Thanksgiving and Christmas markets.

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[23] Ibid., p. 1.

[24] Catherine M. Viehmann, A Consumer's Guide to U.S. Standards for Farm Products, U.S.D.A. Misc. Publication No. 553 (Washington: Government Printing Office, 1947), p. 3.

However, most poultry is now inspected by the poultry inspection service of the Production and Marketing Administration of the United States Department of Agriculture which checks for condition and wholesomeness. Firms that request this service may use the following legend on their packages: "Inspected for Wholesomeness by U. S. Department of Agriculture." About 285,000,000 pounds of poultry were inspected by the Production and Marketing Administration in 1946.[25] In some of the plants which handle eviscerated poultry, the product is also graded for quality after the inspection for wholesomeness and condition. However, at the present, volume appears rather limited.[26]

Standards for Dairy Products

The grading of dairy products dates to 1919 and now includes products such as creamery butter, cheddar cheese, swiss cheese, non-fat dry milk solids, and dry whole milk.[27] Except for butter, limited use has been made of grades in this area. Eggs, frequently categorized with dairy products, are another product like butter in which wide use of Federal grades have been made, both at the wholesale and retail levels. The actual grading is done through the facilities

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[25] Ibid., p. 6.

[26] Ibid., p. 6.

[27] Merrit Baker, op. cit., p. 162.

of the Production and Marketing Administration of the United States Department of Agriculture or under license by this agency by cooperating State agencies.[28]

Grades at Retail Level

Although U. S. Government grades have been established for practically all perishable products in the unprocessed state, little use has been made of these grades at retail level. Reasons for this are difficult to definitely ascertain, but many educators and agricultural extension specialists are of the opinion that the use of trade terms rather than numerical or alphabetical listings as grade designations may be a partial cause. For example, the use of the terms prime, choice, and good to designate the various grades of beef requires more consumer education and knowledge than would the use of the terms A, B, or C or 1, 2, 3. In addition, an excessive number of grades have been established for certain products with fine lines separating grades. Thus, grading requires expert knowledge to accurately determine these differences. The very nature of such products compounds the difficulty for there are no definite divisions between quality for the various perishable products which have a continuous range from high quality to low quality. Also, since such products are perishable, grades assigned

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[28] Viehmann, op. cit., p. 7.

at the shipping point or even at the terminal market are subject to change and require constant observation, culling or regrading.

In an attempt to overcome the problems of an excessive number of grades for a single product and the use of confusing trade designations with which the consumer is not familiar, the United States Department of Agriculture has assigned consumer grades to certain fresh fruits and vegetables. As of July 1955, consumer grades had been developed for brussel sprouts, carrots, celery, corn, kale, parsnips, potatoes, spinach, field tomatoes, and turnips.[29] This less complicated series of grades consists of only two consumer grades for each product which are, "U.S. Grade A," and "U.S. Grade B." The products may also be marked, "Unclassified," which indicates that lots bearing this designation do not conform to the standards for any grade. The term, "Culls," has long been used by the processing trade to describe poorer quality. The comparable term established for consumer grades is, "Off grade."

These grades were established after World War II in answer to a number of requests, particularly from consumer groups and those working with consumers, for a less complicated series of grades which would mean more to consumers. For example, the complexity of some trade grades may be shown in the case of apples. The U.S. commercial grades

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[29]Motts, op. cit.

for apples are U.S. Extra Fancy; Combination U.S. Extra Fancy--U.S. Fancy; U.S. Fancy; Combination U.S. Fancy--U.S. No. 1; U.S. No. 1; U.S. No. 1 Cooker; U.S. No. 1 Early; Combination U.S. No. 1--U.S. Utility; U.S. Utility; and finally, U.S. Hail. While these grades effectively serve growers, shippers, and others in the trade, consumers usually desire a quality of U.S. No. 1 or better, and thus a more limited range is possible. Present research by the United States Department of Agriculture is directed toward investigating the feasibility and need for extending consumer grades to include products such as apples. Thus far, only limited use has been made of grades developed entirely for consumer use. However, in some food items, such as eggs, it has been possible to adopt the terms "U.S. Grade A, B, or C" and have such terms carry through all wholesale trading channels direct to the retail level. The use of alphabetical designations rather than specific trade terms has tended to reduce consumer confusion regarding the quality of products marked in this manner. Butter is graded in a similar manner, but grades begin with AA rather than A. Apparently consumers prefer to purchase these products when marked by grade, for the use of grade designation on containers is rather extensive at the retail level for these items.

As prepackaging and preserving methods for perishables are improved, demand for more extensive use of grades

at the retail level may result in the development of consumer grades for a wider variety of products. Whether or not this will occur is conjectural for nationally advertised brands may develop and preclude the need for such grades in the minds of consumers, as has occured in the case of processed perishable commodities.

CHAPTER IV

THE DETROIT AREA CONSUMER SURVEY

Introduction

The previous chapters have dealt primarily with the historical development of United States grades for perishable agricultural commodities. From this study, it is apparent that the major demand for the institution of a Federal grading system has come from the producing and wholesaling segments of the economy. As a result, grades have been developed chiefly to aid those in the trade. Potential benefit to consumers through application at retail level has been a secondary consideration. Therefore, grades have had limited use at retail and consumers tend to select perishables by means other than United States grades. This chapter will show that consumer recognition of the factors considered in grading is limited and their quality preferences differ from those of grading authorities.

In an attempt to determine how accurately the present United States commercial grades for certain agricultural products reflect consumer preferences, Doctor Henry Larzelere of the Michigan State University Department of Agriculture Economics has been conducting a consumer panel study in the Detroit area since December, 1955. This study is under the

jurisdiction of Michigan State University Agriculture Experiment Station and is one of the first to investigate mixed product classifications sponsored by this organization. The panels are held in the Home Economics Laboratory at Wayne University in Detroit. The first panel was held December 12, 1955 as a test run, and the study has continued on the last Monday of each month since that time. From one hundred and twenty to one hundred sixty consumers attend each session and are given an opportunity to rate the products on display. A portion of the results thusfar obtained will be used in this chapter in an attempt to determine consumer preferences and their recognition of various grades.

Method of Selecting Panel Members

Selection of consumers to participate as panel members was made from a mailing list of six thousand five hundred names prepared from the Detroit telephone book. A questionnaire was printed and sent to the selected names in groups of five hundred as needed through the past six months. The form requested information concerning the age, education, income, number of members in the family, frequency of purchase of the items to be displayed, and whether or not the recipient desired to attend a panel. This form was sent, together with a letter explaining the project and a return envelope, to each name selected. Two weeks after the first mailing, a second questionnaire printed on different color paper, together with a different explanatory letter, was sent

to those who had not replied to the first letter. This method was used with each group of five hundred names throughout the survey. Acceptances averaged slightly over six per cent on the first mailing, and slightly under five per cent on the second mailing for a total of seven hundred and sixteen acceptances or slightly over eleven per cent of the six thousand five hundred names used. Four hundred and thirty-one negative replys were received and two hundred and ninety-one letters were returned unopened by the Postal Department.

The forms used for this study contained questions requesting information concerning the age, education, and total income after taxes. Separate sections were devoted to the female and male heads of each family. The sections in which the above information was requested were arranged as follows:

TABLE I

QUESTIONNAIRE

Age	Education	Income
a -- under 30 b -- 31 - 45 c -- 46 - 60 d -- over 60	a -- 0-8 years b -- 9-11 c --12-13 d --14 or more	a -- under 2,000 b -- 2,000--4,000 c -- 4,000--5,400 d -- 5,401--7,000 e -- 7,000-10,000 f --10,000 and over

From returns that had been completed, it was apparent that the majority fell within certain classifications of age, income, and education. Therefore, Dr. Larzelere decided to

restrict the panel to those in age category b [31-45] in order to obtain a more intensive study of the preferences of consumers within that area. The years of formal education completed by this age group fell mostly in the c group [12-13]. About half as many were in group d [14 or more], and a slightly smaller number were in group b [9-11] years. Total income of all members within the household, from all sources after federal taxes were deducted, ranged chiefly from four thousand to ten thousand dollars per year. The d income category [5,401--7,000] showed a slight lead over both the e category [7,001--10,000] and the c category [4,001--5,400], in the completed returns. Thus the majority of persons who were selected for the panel were in the middle income group and had received a high school education. On the returns, men indicated that they performed the family shopping in almost twenty-five per cent of the cases, and about this proportion of males participated in the survey. There were no racial or color categories on the questionnaires and it is assumed that the sample gave a fairly representative distribution of the various components of Detroit's population.

The first panel was held December 12, 1955 and those in the first group of five hundred who had expressed willingness to attend were contacted by telephone to arrange for the most suitable hours of attendance. The panels were conducted from two in the afternoon until ten in the evening

in order to permit both homemakers and employed persons to attend at the most convenient times. During the study, some members were requested to return several succeeding months in order to determine if they performed in a consistent manner.

Manner of Display

The products displayed were apples, potatoes, eggs, poultry, and pork chops with tomatoes added later in the study. The various agricultural departments at Michigan State University helped prepare the products to be displayed under the direction of Dr. Dewey, Dr. Bratzler, and Dr. Dawson. Mr. Walter Muzzey of the United States Department of Agriculture Poultry and Egg Inspection Service at Lansing also provided invaluable assistance. The products to be displayed were graded according to U.S. grades in areas where these grades were in use, and by trade practices in the case of pork. The apples, potatoes, and shell eggs were displayed on paper plates. Poultry and pork were displayed in iced trays after being wrapped in pliofilm as commonly practiced in retail food stores. Some eggs were shown broken out in dishes while others were displayed in electric frying pans in order to show the final appearance before consumption. The displays were arranged on long tables according to commodity, and in each commodity group there were from one to seven sections of the same product. Each section was devoted to presenting different conditions of the products in order

to help determine consumer recognition of various grading factors and the effect of these factors on consumer rating. For example, one section of the apple display was devoted to size. In that section there would be from three to five different size categories. The apples in this section were of the same type, color, shape, and grade so that only the size would differ. The apples were displayed on paper plates with one to five apples on each plate depending upon the availability. All the apples on each of the plates were as similar as possible. The panelists rated each group from first to fifth according to their personal preferences. No mention of the factors being considered was made in order to assure that the members judged according to personal evaluation.

Throughout the study, symbols were used to indicate the various categories so that numerical or alphabetical sequence would not influence selection. The symbols were alternated so that a particular figure would not continually indicate a certain quality. The positions of the products on display were also varied so that the highest quality would not be placed in a standard position. The symbols were #, %, &, *, and () and were used throughout the study.

During the investigation, Dr. Larzelere greeted each group of consumers and explained to them the procedure to be followed in rating the products on display. Assistants were available to aid when any confusion arose, but attempts were made to obtain individual performance. The consumers were

given a series of cards to be filled out with their ratings. Most were extremely thorough, and spent approximately one hour completing their ratings. In order to more fully explain the methods used and the results thusfar indicated, the results for the February, March, and April panels, together with the codes for each product used when arranging the displays have been compiled [See Appendix]. Preliminary indications of consumer preferences may be gained by considering this data. As an aid to clarity, the expert ratings for the February displays in each product group have been listed along with the total consumer first choice votes for each item. Detailed results for each group may be found in the Appendix.

Pork Results

For the February panel, three sections of pork were prepared. The chops in each section were selected and arranged by Dr. Bratzler and his staff according to expert opinion. The following table gives the order of arrangement and factors considered in each section. The item rated top quality according to trade practice was placed in the A category and the remainder followed alphabetically in decreasing quality whenever the factors being considered were sufficient to permit this differentiation. Thus, in Section I, the A category would indicate the top choice of those preparing the display while the E item would be the least desirable. In order to compare this with consumer ratings,

the number of first choice votes given each item by the panel members follow.

TABLE II

EXPERT RATING AND PANEL MEMBERS SELECTIONS FOR PORK -- FEBRUARY

Expert Rating	Consumer Selection as First Choice
Section I--Marbling, Color, Firmness, and Size of Eye	
A-- Top - in all four categories	19
B-- Top - except marbling	24
C-- Top - except size of eye	19
D-- Top - except color	59
E-- Top - except firmness	7
Section II - Trim	
A-- Top - no fat	22
B-- Top - 1/8 inch fat cover	72
C-- Top - 1/4 inch fat cover	14
D-- Top - 3/8 inch fat cover	21
E-- Top - 1/2 inch fat cover	3
Section III - Cut	
A-- Center cut loin	58
B-- Center cut rib	24
C-- Sirloin	41
D-- Blade	2

The first section consisted of top quality chops with differences in marbling, color, firmness, and the size of the eye. The chop rated down according to trade practices due to poor color received the majority of first place ratings by the consumers. They also rated a chop with marbling deficiencies slightly ahead of the chop without

any defects. However, they did agree that lack of firmness was the most undesirable feature. Chops in Section II differed by amount of trim. The chop with one-eighth inch fat cover received the most first place votes, far ahead of the one with no fat and those with heavier fat cover. The third section consisted of varied cuts. The center cut loin chop led with the sirloin second, center cut rib third, and blade a distant fourth. The ratings in the latter section were close to expert expectations. However, the preference for a one-eighth trim over a very close trim, and a solid color chop with little marbling over chops with lighter color and marbling were both surprising.

The March panel repeated the earlier results. Chops were rated for color and varied trim and a chop with poor color and one-eighth inch trim secured the most first choice selections, while one with good color and one-eighth trim was second. A chop with poor color and three-eighths trim was third and one with the same trim and good color was last. Thus, it was apparent that the trim influenced the panel members more than color, and that they prefered solid color meat rather than marbled, contrary to the experts.

Chops in the second section had one-eighth inch trim. Two were from the center cut loin and the one with poor color was rated first by the majority. The other three chops were blade cuts, two with good color and one with poor. The latter was rated ahead of the former.

Section III consisted of various cuts to determine the effect of bone size upon selection. Center cut rib chops were most popular and a hip bone sirloin chop received the lowest rating. The fourth section had uniform chops of varied thickness. The three-quarter inch chop received over twice as many firsts as did a chop one inch thick. There was little difference between the rating for chops one-half and one-quarter inch thick. It has generally been supposed that a thicker chop would be most popular, but possibly cooking time influences choice, and three-quarters of an inch width was preferred in this case. Another possibility is that consumers are used to seeing the thinner size in the stores in which they shop.

The April panel verified the trim preferences, for chops with one-eighth trim for both good and poor color were more popular than those with three-eighths trim. However, the chop with good color received the vast majority of first choice votes. Among five chops with a one-eighth trim, a center cut loin with poor color received more first place ratings than a similar cut with good color. Three of the chops were blade chops and the one with poor color was ranked lowest. Apparently color was secondary to other considerations influencing consumer selections. In the next section, price was introduced as a factor. A chop with poor color and one-eighth trim priced at sixty-five cents per pound received over one hundred more firsts than did one with the same trim but good color, priced at sixty-nine cents per pound.

Section IV had chops with varied thickness, but this time the predominant favorite was one inch thick.

The results enumerated indicate some of the difficulties to be found when establishing consumer grades due to varied preferences of consumers. There was no unanimous agreement on preferences although evidently the large majority prefer one-eighth inch trim and are not adversely affected by solid dark color. Possibly such results will prove to be more beneficial for packers and retailers who prepare pork for display than for those interested in establishing uniform grades based on consumer preferences. However, the failure to agree on color and marbling importance with the experts may be significant in future grade revisions.

Apple Results

The next item considered was apples. Table III lists the primary consideration in each section during the February panel. The first factor covered in February was that of general grade characteristics. U. S. Extra Fancy received the majority of first place votes and the Fancy, No. 1, and Utility were selected in the same sequence as they are officially rated. Section II consisted of U. S. Extra Fancy apples of the same size with attention to color variations. The apples with maximum color and minimum color were accurately judged but little preference could be noted between one with fifty per cent of the color required for the class and one with twenty-five per cent of maximum color. The

TABLE III

EXPERT RATING AND PANEL MEMBER SELECTIONS
FOR APPLES--FEBRUARY

Expert Rating	Consumer Selection as First Choice
Section I -- General Grade Characteristics	
A-- U. S. Extra Fancy	87
B-- U. S. Fancy	37
C-- U. S. No.1	1
D-- U. S. Utility	2
Section II -- Color Variations [all apples this section U. S. Extra Fancy 2-1/2" to 2-3/4"]	
A-- Maximum color, 95-100% red	73
B-- 50% maximum, 85 - 90% red	18
C-- 25% maximum, 75% red	34
D-- minimum for grade, 66% red	6
Section III -- Bruising--All Apples U. S. No. 1	
A-- No bruising	37
B-- minimum bruising	37
C-- 50% of maximum	11
D-- Maximum	53
Section IV -- Defects -- All Apples U.S. Fancy	
A-- No defects	68
B-- Stems missing	51
C-- Mis-shapen, lop sided	4
D-- Spots, russeting	4
Section V -- Size -- All Apples same Grade	
A-- 2-3/4 -- 3 inches	86
B-- 2-1/2 -- 2-3/4 inches	31
C-- 2-1/4 -- 2-1/2 inches	9

third section was devoted to bruising. In this category, the group with maximum amount of bruising received the most first place selections while those with minimum bruising and no bruising followed. Apparently color was more important than defects in this case, although all apples were of the same grade. The fourth section considered defects and consumer rating again followed established standards. Apples with spots and russeting, or apples which were misshapen or lop-sided were far behind. The final section considered size and here the two and three-quarter to three inch size was most popular.

During the March panel, the consumers again rated according to general grade characteristics in line with established standards. With color, the apples were displayed with different grades and greater variations were thus apparent. Here, the selection reflected official practices and less trouble was noticed through the middle range of color than when the apples were all of one grade. Again in bruising, the ratings accurately reflected the Federal grades. Regarding defects, performance was similar, with spots and russeting the most undesirable defects. With size, the largest size U. S. Extra Fancy was most popular followed by a smaller size in the same grade. Third choice was U. S. Fancy, a large size and fourth the same grade in a smaller size. Apparently size was less important than overall grade characteristics in consumer rating which is in agreement with official opinion.

During the April panel, general grade characteristics were again considered for the lower grades and the rating agreed with established practice. Defects for Jonathon apples were considered and again apples with stems missing scored second and russeting was the most serious drawback. While rating for size, the large size in the top grade was first but was followed by the large size in the second grade rather than a smaller size in the best grade. Section V was devoted to bruising and top rating was given to apples with the maximum number of bruises. The variety was McIntosh which is highly susceptible to bruising and perhaps consumers are used to purchasing them in this condition. Second position was given to the group with minimum bruising while those with one or two large bruises were listed low on the list. Numerous small bruises did not influence the rating as much as did a few large ones.

The results of apple rating seem to indicate that color was very important to consumers, while small bruises did not bother them as much as large ones or as russeting. Missing stems reduce the popularity somewhat, but not as much as other defects. The most desired size generally seems to be the two and three quarter to three inch size. The consumers were also able to rate according to the order determined by Federal grade in a large number of cases.

Egg Results

The next product category considered was eggs. The eggs displayed were arranged according to the following table:

TABLE IV

EXPERT RATING AND PANEL MEMBERS SELECTIONS
FOR EGGS -- FEBRUARY

Expert Rating	Consumer Selection as First Choice
Section I--Shell Texture	
A-- A	34
B-- A	54
C-- A - B shell texture	5
D-- A - B shell texture	44
E-- A - C shell texture	1
Section II--Stains	
A-- A - minor stain	38
B-- A - adhering dirt	15
C-- A - B stain localized	49
D-- A - B stain scattered	28
E-- A - C stain	17
Section III--Eggs Broken Out on Plates	
A-- A	63
B-- A yolk - B albumen	25
C-- A yolk - C albumen	10
D-- B	17
E-- C	15
Section IV--Break Out by Panel Members	
A-- AA	56
B-- A	34
C-- B	22
D-- C	14
Section V--Eggs Broken Out on Plates	
A-- AA	67
B-- A	22
C-- A with meat spot smaller than 1/8 inch-- brown	6
D-- A with meatspot smaller than 1/8 inch -- white	13
E-- A with bloodspot smaller than 1/8 inch	21
Section VI--Fried--Easy Up	
A--A	55
B--A yolk - B albumen	21
C-- C yolk- C albumen	10
D-- B	11
E-- C	29

During February, in Section I there were two grade A shell eggs and one was selected as the first choice. However, an A egg with B shell texture received the second largest number of tallies for first choice ahead of the other grade A egg. Section II consisted of eggs with stain or dirt on the shell. C grade stains and adhering dirt were the least desirable marks on the shells. Section III consisted of eggs broken out according to grade. Most consumers selected the grade A egg as first choice. Second choice was an egg with a grade A yolk and grade B albumen while third choice was a grade B egg. A grade C egg and a grade A egg with C albumen followed in that order indicating that perhaps a watery albumen is the least desired property. Section IV consists of a break out test performed by the consumers of eggs which had been previously candled and separated into grades AA, A, B, and C. Results reflected recognition of the various qualities required by the grades. Section V consisted of another display of eggs broken out from the shell. Grade AA rated highest, while little difference was noted between a grade A egg and a grade A egg with a small bloodspot. The final section consisted of eggs displayed in electric frying pans sunny side up. A grade A egg received top rating while a grade C egg rated second. The tendency of a grade C egg to spread and present a large albumen when cooked may be the reason the grade C egg rated high in the cooking test.

During the March panel, a grade A egg with normal shell received a preponderance of the first choice votes, while the others ranged down according to the roughness of the shell while dirt and stains caused lower ratings. With displays of half dozens of eggs, white shells were the first choice of most and uniform brown eggs were second. Tinted eggs and a half dozen consisting of three white and three brown eggs were next in order with shaded brown eggs last in preference. In a break out display, a grade A egg with B albumen and an A with a brown meatspot rated behind grade A eggs which showed varying aircells when candled. The last section was a repeat of the fried egg display and the ratings agreed with established grades.

The April panel was arranged in a manner similar to the previous months with prices introduced in several sections. The first section consisted of dozens of eggs in containers marked fifty, fifty-four, and fifty-eight cents per dozen. They were C, B, and A grade eggs respectively. In front of each group was placed an egg of the respective grade broken out on a plate. More panelists selected the fifty-four cent egg than the fifty-eight for their first choice with the fifty cent selection a distant third. In order to check on conformity, in section seven on the opposite side of the table, the consumers were permitted to purchase one-half dozen of eggs if they desired. The break out arrangement and price were similar to Section I with the prices per half dozen twenty-five, twenty-seven, and

twenty-nine cents. Thirty-one panelists purchased from the twenty-five cent group, forty-three from the twenty-seven cent group, and seventy-eight from the twenty-nine cent selection. Therefore, the panel members did not show the same preferences when actually purchasing the eggs as they did when merely rating them. Possibly this reflects consumer purchasing habits of buying by price in order to get the best quality when the goods are not visible as in the case of boxed eggs. Section II covered shell texture and a normal shell received the majority of first choice selections, while a rough shell received the lowest rating. Again with stains, a normal shell and one with a small localized stain were judged ahead of those with larger or scattered stains. With shell color, all white again rated far ahead of the all brown, followed by a combination of three white and three brown. In the fried egg display, a B egg rated higher than a A with a B grade albumen while an A with a one-eighth inch bloodspot rated well below a C egg.

The results indicate consumers place a premium on white shell eggs, but may rate grade C high when these eggs are broken out. Perhaps retailers would be able to sell grade C eggs in volume if they maintained displays of freshly broken out eggs of this grade in order to show the consumer the relative quality. The low ratings for dirt, stains, or roughness on the shell probably indicates that most consumers do not see such eggs at retail outlets. Possibly the introduction of eggs broken into plastic containter will lead to

a wider use of the lower grade eggs. In comparison with expert ratings, the panel members ranked grade C eggs higher than expected. Their ratings were not affected as much as expected by a watery albumen, by localized shell stains, or by meatspots and bloodspots. However, they agreed with the expert ratings in a good portion of the sections considered.

Potato Results

The fourth commodity used for this investigation was potatoes. They were arranged according to the following table:

TABLE V

EXPERT RATING AND PANEL MEMBERS SELECTION FOR POTATOES -- FEBRUARY

Expert Rating	Consumer Selection as First Choice
Section I--Size Variations	
A-- Under 1-7/8 inches	1
B-- 1-7/8 to 2-1/4 inches	1
C-- 2-1/4 to 2-3/4 inches	38
D-- 2-3/4 to 3-1/4 inches	40
E-- 3-1/4 inches and over	41
Section II--Skin Characteristics	
A-- U.S. No. 1 - smooth white	33
B-- U.S. No. 1 - smooth red	65
C-- U.S. No. 1 - russet	36
D-- U.S. No. 2 - white	3
E-- U.S. No. 2 - russet	1
Section III--Cleanliness--All U.S. No. 1	
A-- Washed, very clean	40
B-- Washed, slightly clean	26
C-- Unwashed, slightly dirty	57
D-- Unwashed, dirty	6

TABLE V -- Continued

Expert Rating	Consumer Selection as First Choice
Section IV--Bruises and Cuts	
A-- No cuts and bruises	56
B-- 2% cuts and bruises	25
C-- 5% cuts and bruises	28
D-- 10% cuts and bruises	16

The first test was for size preferences and little difference was noted between potatoes ranging from two and one-quarter inches to over three and one-quarter inches in diameter. Smaller potatoes, especially under one and seven-eighth inches in diameter were rated low. With skin characteristics, U. S. No. 1 grades rated well ahead of No. 2 grades. Among the No. 1's, smooth red ranked well ahead of smooth white and russet. The reds were just reaching the market during February and apparently were more acceptable to the consumers due to retail displays at that time. With regard to cleanliness, potatoes which had been washed and scrubbed and those which had been washed but not scrubbed ranked behind a sample which had been brushed but not washed. However, potatoes which were neither washed or brushed were rated last. Perhaps the more thorough methods of cleaning potatoes reveal more blemishes. Brushing or light spraying is probably sufficient to remove the necessary dirt without employing extensive cleaning. The consumers preferred potatoes with no bruises or cuts although they were unable to

show significant difference in preference between potatoes with two per cent and those with five per cent cuts and bruises.

During the March panel, a decided preference was shown for potatoes between two and three-quarters and three and one-quarter inches in diameter. For skin characteristics, a No. 1 white Katahdin variety ranked first, slightly ahead of a No. 1 red, with a No. 1 white Sebago variety a distant third. With cleanliness, potatoes which had been brushed clean ranked ahead of those scrubbed clean or those left dirty. Once more potatoes without cuts and bruises were most popular while slight differences in per cent of bruises were not noted.

During the April panel, preference again seemed to be for size between two and two and three-quarters inches in diameter with smaller sizes rated lower. Regarding shriveling, more than a slight amount brought an appreciable drop in rating. Although sprouting was not desirable, the downgrading was not as severe as for shriveling. The preference for no cuts and bruises was again apparent as well as for no sunburn or greening. Finally, potatoes with minimum bruises ranked slightly ahead of those with no defects and significantly over those with cuts and bruises and sunburn.

Medium size potatoes seem to be the most popular and shriveling was apparently the most significant defect in the eyes of the consumer. Brushing or light spraying appears sufficient to insure desired cleanliness while sprouting,

sunburn, or cuts, bruises, and defects adversely affect panel ratings. The panel members disagreed with the experts on the importance of cleanliness and also sprouting. They did agree more closely on other factors, although they were unable to detect slight variations in percentage of defects.

Poultry Results

The fifth commodity dealt with was pountry, specifically chickens. The February display was arranged according to Table VI.

TABLE VI

EXPERT RATING AND PANEL MEMBERS SELECTIONS FOR CHICKENS -- FEBRUARY

Expert Rating	Consumer Selection as First Choice
Section I--Flesh	
A-- A	94
B-- A	19
C-- A - B fleshing	3
D-- A - B fleshing	9
E-- A - C fleshing	2
Section II--Finish	
A-- A	58
B-- A	55
C-- A finish - B flesh	5
D-- A - B finish	11
E-- A - B finish	3
Section III--Defects--Form	
A-- A	39
B-- A - maximum tear on back	45
C-- A - B breast tear	21
D-- A - Hunchback	15
E-- A - B pin feathers [dark]	15

TABLE VI -- Continued

Expert Rating	Consumer Selection as First Choice
Section IV--Form	
A-- A	32
B-- A - minimum	12
C-- A - dislocated wing	50
D-- A - broken wing and low A flesh	8
E-- A - broken leg and dislocated wing	27
Section V--Tears in Skin and Flesh	
A-- A	22
B-- A	25
C-- A - B tear [back]	8
D-- A - B tear [breast]	25
E-- A - maximum tear [breast]	52
Section VI--Finish	
A-- A	13
B-- A	25
C-- A	18
D-- A - A with minimum	33
E-- A - C tear [breast]	44
Section VII--Bruises	
A-- A	23
B-- A	13
C-- A	58
D-- A - B bruises on leg	12
E-- A - B bruise on breast	33

The first test was for the amount of flesh and the panel accurately determined the correct order of the chickens on display. Again with finish, the top grades were selected. However, with back and breast tears and deformities such as hunchback, there was less unanimous opinion. Pin feathers produced lower grading than any of the previous defects. Dislocated wings and broken legs were somewhat

disregarded, and fleshiness was of primary consideration. Bruises also were overlooked by most panel members when rating, although birds with bruises received lower rating than those with tears.

During the March panel, fleshing again showed precedence over such factors as blood in the bag containing the chicken, red breast area, or white pin feathers. Poor finish resulted in a lower rating than a broken wing with protruding bone. Poor shape was not a significant factor in affecting decisions while dark pin feathers caused lower rating than light ones.

During April, a skin blister resulted in lower rating than poor flesh, although the latter influenced panelists more than conformation and bruising. Pin feathers continued to cause low rating while an A bird with yellow flesh ranked significantly higher than one with white flesh.

Throughout the three months it was apparent that fleshiness was the most important consideration. Skin and meat tears were generally overlooked while finish, bruises, dislocated wings, and broken legs had limited influence on selections. Dark pin feathers probably had a more negative effect than any factor other than lack of fleshiness in influencing choice. Possibly consumers are used to broken bones and lack of conformation or find difficulty detecting these factors when the poultry is packaged. When poultry is frozen, bruises and other defects may be difficult to

detect. It is apparent that the consumers are interested in well fleshed, meaty chickens and most other considerations important in grading are subordinated to this factor. While agreeing with the experts in general, the panel members rated lower for lack of fleshiness, and did not consider defects such as tears, deformities, or broken bones as significant as bruises, dark pin feathers, or poor finish.

The above discussion of the preliminary findings obtained by analyzing results from the survey during three different months accentuate the difficulties concerned with establishing consumer grades.

CHAPTER V

SUMMARY

This study of the historical development of grades for agricultural products has shown that the demand for grades has come primarily from producers and dealers and their organizations. Until shortly after World War II, little interest in the use of grades at retail level was apparent. As a result, most Federal action dealing with grading was devoted to aiding the grower and the wholesaler. For example, the annual Agricultural Appropriations Bills have contained provisions directed toward facilitating trading in perishable products through the use of grades since early in the century. In addition, specific legislation has been instituted to promote uniform practices and to protect the producer from exploitation. While several acts were designed to aid the consumer as well as the producer and dealer, the benefits for the consumer were generally secondary. Thus, the grades which were developed were designed principally to aid those in the trade and were based on established practices or scientific studies and measurement and did not consider consumer preferences directly.

The development of United States grades for agricultural food products has benefited producers, dealers, and

all those who depend upon a uniform language to facilitate trading. However, consumers have benefited only indirectly from the improvements in the distribution of perishables resulting from the establishment of a uniform grading system, for they have had little opportunity to select by grade at their retail outlets. This restricted use of grades at the final distribution point has been attributed to various factors. One factor is the customer habit of selecting perishable food products through the use of the various personal senses including sight, touch, smell, and occasionally taste. For products such as melons, even hearing may be employed when shaking or thumping the product. Another factor is the wide variety of terms used for grade designations. These terms have generally been based on traditional trade practices. In addition, there are apparently an excessive number of grades, with indefinite divisions between categories, for many perishable commodities. Thus, expert knowledge and experience are necessary to successfully ascertain the various grades and quality indicated.

In an attempt to overcome some of these problems, the United States Department of Agriculture has established consumer grades for several products. These grades are based upon a reduced number of alphabetical terms. Thus far, these grades have not been used extensively. However, with predictions of improvements in prepackaging and preservation heralding a potential volume increase for perishables, consumer grades may gain in importance. Whether this will

occur or not is at present conjectural. In order to be prepared if demand for consumer grades at retail level does become significant, the Department of Agriculture is sponsoring investigations regarding consumer buying preferences for perishable foodstuffs. The area being investigated is the feasibility of correlating consumer grades to trade grades. This study reveals a lack of uniformity in consumer selection for many products. However, the results may provide a new basis on which to establish consumer grades depending upon the quality preferences of the majority rather than upon practices common in the trade. If this is not feasible, the results may prove helpful to retailers by informing them of the factors considered most important in the selection of perishables by their customers.

The survey presented in the previous chapter shows that consumers are unable to consistently identify perishables according to Federal grades. They also fail to show unanimous agreement on the factors which are most important in determining personal evaluation of quality. Although they do not individually agree consistently with each other, collectively they indicate certain definite preferences. These preferences differ from the expectations of those in the trade in many instances for the consumers base their selections on personal tastes, and their choices show limited correlation with the ratings of experts. Therefore, if increased demand for grade use at the retail level should

occur, some grading practices may have to be revised. While it may not be practical to establish alphabetical grades with a limited number of terms for each product due to extensive use and acceptance of the present system throughout the perishable trade, it may be possible to establish a separate group of consumer grades for all perishables for use extensively at retail level. In this manner, retail grades might be based on the quality preferences of the majority of consumers, while the trade grades could retain their numerous and detailed trade terms for the special use of the producers and middlemen. Thus, the traditional importance of a uniform grading system for facilitating trading may be maintained while a more effective retail system could be developed to aid the shopper.

Due to the need for constant rotation as a result of the highly perishable nature of most produce and fresh meat, grading at store level is very difficult for most products at the present time. The major problem is the almost constant need for regrading, especially with fresh fruits and vegetables. Combined with the consumer habit of personal inspection before purchase, these factors have been sufficient to limit the use of grades at the retail level. However, with the increasing use of packages in which the contents are partially or wholly concealed, consumers may be forced to depend upon grades to help them determine the particular quality that they desire. Future use of Federal grades at retail level will depend in large extent upon

prepackaging and preserving developments and improvements. When methods of preservation advance sufficiently to assure the maintenance of quality and prevention of deterioration between the time the product is packaged and the time it is used, the use of grades on containers at retail level will be feasible for the more highly perishable commodities as well as for the more durable products. The types of containers used to package perishables will also have considerable effect upon future use of grades at retail. If packages similar to those used presently for tomatoes and carrots become popular, the contents will be wholly or partially visible. However, the customer will be limited almost exclusively to visual means of selection. Therefore, consumers may request the use of grades to assist them in selecting the quality they desire. If packages similar to those used for canned or frozen foods find favor, the contents will not be visible and some other means of selecting these items will be necessary. In this case, consumer grades could be an important factor and would facilitate consumer recognition of quality.

While the future demand for consumer grades is indefinite at this time, indications are that the prepackaging of perishable commodities at the producer level is likely. As a result, there is a possibility that consumers will desire to rely upon the assistance of Federal grades to help them select their perishables rather than upon controlled labels or nationally advertised brands as in the case of

canned and frozen food products. Whether or not brands do develop, consumer grades based upon the preferences of the consumer, rather than upon the traditional trade practices, may effectively be used to serve the consumer. By affixing an easily identified grade upon packages containing perishables, packers would help the retail customer to quickly determine the quality of the contents. When the use of grades is combined with some indication of the date when the merchandise was packaged, or when the grade designation would no longer be effective, the result should be increased sales volume for these commodities as a result of heightened satisfaction with perishable foods.

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APPENDIX

PORK CHOP CODE, FEBRUARY 27, 1956

I. Marbling, Color, Firmness, and Size of Eye

A -- Top-in all four categories

B -- Top-except marbling

C -- Top-except size of eye

D -- Top-except color

E -- Top-except firmness

II. Trim

A -- Top-no fat

B -- Top-1/8 in fat cover

C -- Top-1/4 in fat cover

D -- Top-3/8 in fat cover

E -- Top-1/2 in fat cover

III. Cut

A -- Center cut-loin

B -- Center cut-rib

C -- Sirloin

D -- Blade

PORK CHOP TALLY, FEBRUARY 27, 1956

I.	A	B	C	D	E
1	19	59	19	24	7
2	39	26	28	32	9
3	34	20	31	28	18
4	26	10	36	21	23
5	5	9	9	18	67

II.	A	B	C	D	E
1	22	72	14	21	3
2	32	25	28	38	5
3	34	18	34	31	17
4	22	6	41	28	23
5	13	3	7	6	75

III.	A	B	C	D
1	58	24	41	2
2	45	35	34	8
3	14	48	42	20
4	6	16	5	90
5	1	1	2	4

PORK CHOP CODE, MARCH 26, 1956

I. Color -- Trim

A -- Good color - 1/8" trim

B -- Poor color - 1/8" trim

C -- Good color - 3/8" trim

D -- Poor color - 3/8" trim

II. All 1/8" Trim

A -- Center cut loin - good color

B -- Center cut loin - poor color

C -- Blade - good color

D -- Blade - good color

E -- Blade - poor color

III. Bone

A -- Center cut ribs

B -- Center cut ribs

C -- Round bone sirloin chop

D -- Double bone sirloin chop

E -- Hip bone sirloin chop

IV. Uniform Chop but Vary Thickness

A -- 1" thick

B -- 3/4" thick

C -- 1/2" thick

D -- 1/4" thick

PORK CHOP TALLY, MARCH 26, 1956

I.	A	B	C	D	
1	49	76	10	23	
2	46	29	39	42	
3	45	28	33	37	
4	8	15	64	45	
5	0	0	1	1	

II.	A	B	C	D	E
1	25	116	0	0	0
2	84	27	10	2	26
3	19	1	39	18	72
4	12	3	81	28	22
5	4	0	17	95	14

III.	A	B	C	D	E
1	55	56	34	15	0
2	50	47	21	28	1
3	21	26	55	35	9
4	70	15	33	58	21
5	0	3	3	11	116

IV.	A	B	C	D	
1	36	81	23	19	
2	46	45	32	22	
3	26	10	63	49	
4	36	9	27	55	
5	0	0	0	0	

PORK CHOP TALLY, APRIL 23, 1956

I.	A	B	C	D	
1	122	20	12	3	
2	22	53	70	8	
3	8	66	52	21	
4	3	14	19	119	
5	0	1	0	1	
II.	**A**	**B**	**C**	**D**	**E**
1	51	93	4	1	8
2	84	52	9	0	12
3	5	7	62	13	77
4	10	0	56	22	46
5	4	2	10	116	10
III.	**A**	**B**	**C**	**D**	
1	22	124	2	4	
2	86	20	29	23	
3	32	10	78	31	
4	12	0	44	93	
5	1	0	0	1	
IV.	**A**	**B**	**C**	**D**	
1	116	12	16	13	
2	25	63	51	26	
3	7	44	70	30	
4	5	30	16	82	
5	1	1	1	2	

PORK CHOPS, APRIL 23, 1956

I. Color -- Trim

A -- Good color - 1/8" trim

B -- Poor color - 1/8" trim

C -- Good color - 3/8" trim

D -- Poor color - 3/8" trim

II. All 1/8" Trim

A -- Center cut loin - good color

B -- Center cut loin - poor color

C -- Blade - good color

D -- Blade - poor color

E -- Blade - good color

III. Color Trim - Price

A -- Good color - 1/8" trim - 69¢

B -- Poor color - 1/8" trim - 65¢

C -- Good color - 3/8" trim - 68¢

D -- Poor color - 3/8" trim - 66¢

IV. Uniform Chop but Vary Thickness

A -- 1" thick

B -- 3/4" thick

C -- 1/2" thick

D -- 1/4" thick

APPLE CODE, FEBRUARY 27, 1956

I. General Grade Characteristics

A -- U. S. Extra Fancy
B -- U. S. Fancy
C -- U. S. No. 1
D -- U. S. Utility

II. Color Variations [All U.S.Extra Fancy 2-1/2" to 2-3/4"]

A -- U.S. Extra Fancy - maximum color, 95-100% red
B -- U.S. Extra Fancy - 50% maximum, 85-90% red
C -- U.S. Extra Fancy - 25% maximum, 75% red
D -- U.S. Extra Fancy - minimum for grade, 66% red

III. Bruising

A -- U. S. No. 1 - no bruising
B -- U. S. No. 1 - minimum bruising
C -- U. S. No. 1 - 50% of maximum
D -- U. S. No. 1 - maximum bruising

IV. Defects

A -- U. S. Fancy
B -- U. S. Fancy - stems missing
C -- U. S. Fancy - mishapen, lop sided
D -- U. S. Fancy - spots, russeting

V. Size [All Same Grade]

A -- 2-3/4" - 3"
B -- 2-1/2" - 2-3/4"
C -- 2-1/4" - 2-1/4"

APPLE TALLY, FEBRUARY 27, 1956

I.	A	B	C	D
1	87	37	1	2
2	32	78	8	4
3	3	5	80	42
4	2	4	34	75
5	0	0	1	1

II.	A	B	C	D
1	73	18	34	6
2	27	46	42	20
3	17	43	42	22
4	7	17	6	76
5	0	0	0	0

III.	A	B	C	D
1	37	37	11	53
2	31	32	41	33
3	31	32	39	17
4	25	23	33	21
5	0	0	0	0

IV.	A	B	C	D
1	68	51	7	4
2	45	60	9	12
3	7	7	48	7
4	3	5	41	60
5	1	1	0	0

V.	A	B	C
1	86	31	9
2	27	77	19
3	10	15	94
4	1	0	2
5	0	0	1

APPLE CODE [JONATHAN VARIETY], MARCH 26, 1956

I. General Grade Characteristics

A -- U. S. Fancy
B -- U. S. Fancy
C -- U. S. No. 1
D -- U. S. No. 1
E -- U. S. Utility

II. Color

A -- U. S. Extra Fancy - 90% red color
B -- U. S. Extra Fancy - 66% red color
C -- U. S. Fancy - 33% red color
D -- U. S. No. 1 - 25% red color

III. Bruising [All U. S. Fancy 2-1/2" - 2-3/4"]

A -- Minimum bruising due to handling
B -- Practically none [bare minimum]
C -- 50% of maximum bruising allowed
D -- Maximum amount of brusing and enough to disqualify from the grade
E -- Very severe bruising --otherwise within grade and equal in color to other

IV. Defects [All U. S. Fancy]

A -- No defects
B -- Stems missing
C -- Mis-shapen, lop sided
D -- Spots and russetting

V. Size [All Fruit Re-selected to Give Uniformity of Color within Grade]

A -- U. S. Extra Fancy - 2-3/4" - 3"
B -- U. S. Extra Fancy - 2-1/4" - 2-3/4"
C -- U. S. Fancy - 2-3/4" - 3"
D -- U. S. Fancy - 2-1/2" - 2-3/4"

APPLE TALLY, MARCH 26, 1956

I.	A	B	C	D	E
1	63	72	18	2	5
2	67	51	21	10	5
3	10	19	76	27	18
4	3	4	23	75	46
5	3	1	10	33	73

II.	A	B	C	D
1	113	42	5	1
2	23	90	24	16
3	6	10	86	48
4	6	6	33	83
5	0	0	0	0

III.	A	B	C	D	E
1	78	54	18	15	5
2	39	60	30	20	10
3	19	19	53	32	23
4	9	8	29	57	38
5	2	7	15	23	67

IV.	A	B	C	D
1	69	75	16	6
2	52	51	41	9
3	20	17	81	24
4	7	5	9	109
5	0	0	0	0

V.	A	B	C	D
1	115	26	11	8
2	25	59	35	32
3	7	43	54	45
4	1	20	46	63

APPLE CODE, APRIL 30, 1956

I. General Grade Characteristics [Jonathon Apples]

A -- U. S. Fancy
B -- U. S. No. 1
C -- U. S. No. 1
D -- U. S. Utility
E -- U. S. Utility

Graded for defects, slight over maturity

II. Color [McIntosh Apples]

A -- U. S. Fancy 50%
B -- U. S. Fancy 33%
C -- U. S. No. 1 29%
D -- U. S. No. 1 25%
E -- U. S. Utility 20%

Color difference between 29% and 33% not marked.

III. Defects [Jonathon Apples]

A -- U. S. Fancy
B -- U. S. Fancy, utility in bruising
C -- U. S. Fancy, utility in russetting
D -- U. S. Fancy, utility in shape
E -- U. S. Fancy, stems missing

IV. Size [McIntosh Apples]

A -- U. S. Fancy, 2-3/4" - 3"
B -- U. S. Fancy, 2-1/2" - 2-3/4"
C -- U. S. Fancy, 2-1/4" - 2-1/2"
D -- U. S. No. 1, 2-3/4" - 3"
E -- U. S. No. 1, 2-1/2" - 2-3/4"

V. Bruising [McIntosh Apples]

A -- U. S. No. 1, Minimum bruising highly suscepitable
B -- U. S. No. 1, six bruises 1/2" diameter to bruising
C -- U. S. No. 1, one large bruise, 1" diameter
D -- U. S. No. 1, two large bruises, 1/2" diameter
E -- U. S. No. 1, twelve bruises, 1/2" diameter

APPLE TALLY, APRIL 23, 1956

I.	A	B	C	D	E
1	114	32	8	2	1
2	29	85	27	17	2
3	8	31	88	27	5
4	0	7	29	83	37
5	4	0	2	25	108

II.	A	B	C	D	E
1	65	18	41	27	19
2	37	26	63	25	13
3	24	37	23	44	31
4	19	41	20	39	27
5	10	32	8	19	64

III.	A	B	C	D	E
1	87	4	1	1	40
2	47	2	1	5	50
3	19	7	7	22	58
4	1	0	24	108	6
5	0	0	120	17	1

IV.	A	B	C	D	E
1	95	24	16	45	4
2	39	43	13	49	15
3	14	58	23	44	17
4	5	23	54	11	49
5	1	6	47	6	68

V.	A	B	C	D	E
1	48	21	23	2	66
2	45	49	28	6	32
3	36	50	35	3	35
4	21	30	65	14	19
5	5	4	3	128	3

EGG CODE, FEBRUARY 27, 1956

I. Shell Texture

A -- A
B -- A
C -- A - B shell tex
D -- A - B shell tex
E -- A - C shell tex

II. Shell Stains

A -- A - minor stain
B -- A - adhering dirt
C -- A - B stain localized
D -- A - B stain scattered
C -- A - C stain

III. Tech Breakout

A - A
B - A - yolk - B albumen
C - A - yolk - C albumen
D - B
E - C

IV. Panel Breakout

A - AA
B - A
C - B
D - C

V. Tech. Breakout

A - AA
B - A
C - A with meatspot smaller than 1/8" - white
D - A with meatspot smaller than 1/8" - brown
E - A with bloodspot smaller than 1/8"

VI. Fried - Easy up (Tech.)

A - A
B - A yolk - B albumen
C - A yolk - C albumen
D - B
E - C

EGG TALLY, FEBRUARY 27, 1956

I.	A	B	C	D	E
1	34	54	5	44	1
2	45	35	11	29	3
3	31	18	34	34	9
4	12	10	69	16	16
5	2	7	5	1	95

II.	A	B	C	D	E
1	38	15	49	28	17
2	44	9	24	31	29
3	21	14	28	36	26
4	11	30	18	17	38
5	10	56	5	12	14

III.	A	B	C	D	E
1	63	25	10	17	15
2	27	55	12	15	18
3	10	24	23	50	25
4	10	17	39	29	28
5	13	2	39	12	37

IV.	A	B	C	D
1	56	34	22	14
2	34	47	29	17
3	20	27	48	28
4	13	15	22	61
5	0	0	2	2

V.	A	B	C	D	E
1	67	22	21	13	6
2	25	36	35	23	15
3	17	22	36	28	19
4	7	27	22	24	42
5	7	16	9	35	41

VI.	A	B	C	D	E
1	55	21	10	11	29
2	24	33	21	17	32
3	25	21	38	24	22
4	11	19	27	36	29
5	8	25	27	34	11

EGG CODE, MARCH 26, 1956

I. Shell

A - A - normal
B - A - B body check
C - A - B rough shell
D - A - C body check
E - A - C rough shell

II. Dirt and Stain

A - A - minor stain
B - A - adhering dirt
C - A - B stain localized
D - A - B stain scattered
E - A - C stain

III. Shell Color --[1/2 Dozen Each Sample]

A - white
B - uniform brown
C - 3 white, 3 brown
D - shaded brown
E - tint

IV. Tech. Breakout

A - A
B - A - B air cell
C - A yolk - B albumen
D - A - C air cell
E - A meatspot (br) less than 1/8"

V. Tech. Breakout

A - AA
B - A
C - A - with meatspot (white) less than 1/8"
D - A yolk - C albumen
E - B

VI. Fried - Easy up (tech.)

A - A yolk, B - albumen
B - A yolk, C - albumen
C - A with bloodspot less than 1/8"
D - B
E - C

EGG TALLY, MARCH 26, 1956

I.	A	B	C	D	E
1	111	34	0	13	2
2	25	93	10	15	8
3	6	13	73	53	15
4	3	6	56	50	26
5	3	2	9	17	97

II.	A	B	C	D	E
1	92	7	38	15	10
2	30	4	64	39	17
3	18	19	30	47	40
4	2	43	12	29	59
5	6	75	4	17	22

III.	A	B	C	D	E
1	76	52	7	11	18
2	36	50	32	14	29
3	22	19	63	19	24
4	10	18	27	54	29
5	4	8	17	50	47

IV.	A	B	C	D	E
1	29	51	23	48	13
2	41	49	25	29	8
3	28	30	42	32	13
4	44	11	28	33	25
5	4	5	29	5	87

V.	A	B	C	D	E
1	46	42	17	32	24
2	47	53	20	12	24
3	25	32	34	19	35
4	18	18	45	26	37
5	12	3	32	59	28

VI.	A	B	C	D	E
1	61	43	20	5	28
2	43	35	29	8	39
3	32	25	42	14	38
4	10	34	43	32	24
5	1	11	13	89	19

EGG CODE, APRIL 23, 1956

I. Break Out

A -- A 58¢ a dozen
B -- B 54¢ a dozen
C -- C 50¢ a dozen

II. Shell Texture - One-half Dozen

A -- A normal
B -- A but B body check
C -- A but B rough shell
D -- A but C body check
E -- A but C rough shell

III. Stain - One-half Dozen

A --A normal
B --A but B stain localized 1/32
C --A but B stain scattered 1/16
D --A but stain localized 1/16
E --A but stain scattered 1/8

IV. Shell Color

A -- white
B -- uniform brown
C -- 3 white, 3 brown
D -- shaded brown
E -- tint

V. Broken Out

A -- A with B aircell
B -- A yolk with B albumen
C -- A with C aircell
D -- A yolk with C albumen
E -- C but not spots

VI. Fried

A -- A yolk - B albumen
B -- A yolk - C albumen
C -- A with 1/8 bloodspot
D -- B
E -- C

VII. Price Selections [1/2 Dozen]

25¢
27¢
29¢

EGG TALLY, APRIL 23, 1956

I.	A	B	C		
1	72	64	20		
2	54	61	39		
3	36	20	94		
4	0	0	1		
5	0	0	0		
II.	**A**	**B**	**C**	**D**	**E**
1	129	16	0	14	0
2	19	115	6	17	0
3	4	15	39	88	-
4	1	5	102	28	15
5	0	2	6	6	133
III.	**A**	**B**	**C**	**D**	**E**
1	95	44	15	19	15
2	30	61	21	21	23
3	11	28	41	38	40
4	11	14	54	26	36
5	7	5	21	47	40
IV.	**A**	**B**	**C**	**D**	**E**
1	108	34	8	10	17
2	16	41	42	16	42
3	15	42	40	15	39
4	9	26	44	34	32
5	4	10	19	77	22
V.	**A**	**B**	**C**	**D**	**E**
1	68	43	17	26	14
2	25	29	26	26	38
3	21	45	32	38	20
4	25	23	31	48	26
5	13	14	47	14	55
VI.	**A**	**B**	**C**	**D**	**E**
1	49	13	3	22	70
2	54	22	14	32	34
3	25	49	13	47	23
4	21	44	32	35	16
5	5	24	90	16	11
VII.	25¢	27¢	29¢		
	31	43	78		

POTATO CODE, FEBRUARY 27, 1956

I. Size Variation

A -- under 1-7/8"
B -- 1-7/8" to 2-1/4"
C -- 2-1/4" to 2-3/4"
D -- 2-3/4" to 3-1/4"
E -- 3-1/4" and over

II. Skin Characteristics

A -- U.S. No. 1 - smooth white
B -- U.S. No. 1 - smooth red
C -- U.S. No. 1 - russet
D -- U.S. No. 2 - white
E -- U.S. No. 2 - russet

III. Cleanliness

A -- U.S. No. 1 - washed, very clean [scrubbed]
B -- U.S. No. 1 - washed, slightly clean
C -- U.S. No. 1 - unwashed, slightly dirty [brushed]
D -- U.S. No. 1 - unwashed, dirty

IV. Bruises and Cuts

A -- No cuts and bruises
B -- 2% cuts and bruises
C -- 5% cuts and bruises
D -- 10% cuts and bruises

POTATO TALLY, FEBRUARY 27, 1956

I.	A	B	C	D	E
1	1	1	38	40	41
2	1	6	43	47	33
3	3	23	38	29	31
4	17	85	4	6	11
5	101	28	0	0	7

II.	A	B	C	D	E
1	33	65	36	3	1
2	53	33	29	5	6
3	28	19	40	12	28
4	7	4	9	45	58
5	2	2	9	58	30

III.	A	B	C	D
1	40	26	57	6
2	35	41	42	21
3	29	34	19	36
4	16	40	5	59
5	2	1	0	1

IV.	A	B	C	D
1	56	25	28	16
2	27	36	35	12
3	27	42	43	17
4	10	14	13	21
4	2	4	3	5

POTATO CODE, MARCH 26, 1956

I. Size Variation

A -- 2-1/4" to 2-3/4"
B -- 2-3/4" to 3-1/4"
C -- 3-1/4" and over
D -- half (2-1/4"--2-3/4"), half (2-3/4"-3-1/4")
E -- half (2-3/4"--3-1/4"), half (3-1/4" and over)

II. Skin Characteristics

A -- No. 1 white (Katahdin)
B -- No. 1 russet
C -- No. 1 red
D -- No. 1 white (Sebago)
E -- No. 2 white (Katahdin)

III. Cleanliness

A -- Washed clean, Sample A
B -- Washed clean, Sample B
C -- Brushed clean, Sample A
D -- Brushed clean - Sample B
E -- Washed partly clear

IV. Bruises and Cuts

A -- No cuts and bruises
B -- 2% cuts and bruises
C -- 5% cuts and bruises
D -- 10% cuts and bruises

POTATO TALLY, MARCH 26, 1956

I.	A	B	C	D	E
1	7	86	31	22	2
2	19	34	23	62	16
3	37	21	29	39	27
4	46	2	39	20	45
5	39	4	25	5	58

II.	A	B	C	D	E
1	69	9	51	21	5
2	39	19	34	41	22
3	22	30	34	40	27
4	15	45	18	32	29
5	2	43	11	15	64

III.	A	B	C	D	E
1	40	18	58	4	33
2	33	24	56	10	40
3	25	35	26	32	31
4	26	49	15	24	32
5	23	21	3	79	10

IV.	A	B	C	D
1	76	22	23	6
2	25	35	47	10
3	19	52	37	15
4	16	24	26	101
5	11	11	14	15

POTATO CODE, APRIL 23, 1956

I. Size Classification

A -- U.S. No. 1, 1-7/8" - Size A
B -- U.S. No. 1, 1-1/2" to 2" - Size B
C -- U.S. No. 1, 1-1/2" up
D -- U.S. No. 1, 2" 60% - 2-1/4"
E -- U.S. No. 1, 1-7/8" but not less that 30% 2-3/4" and lot less than 60" 2-1/4"

II. Shriveling

A -- U.S. No. 1, but no shriveling
B -- U.S. No. 1, but slight shriveling
C -- U.S. No. 1, but medium shriveling
D -- U.S. No. 1, but maximum shriveling
E -- U.S. No. 1, but No. 2 shriveling

III. Sprouting

A -- U.S. No. 1, no sprouting
B -- U.S. No. 1, slight sprout
C -- U.S. No. 1, medium sprout
D -- U.S. No. 1, maximum sprout
E -- U.S. No. 1, No. 2 for sprouting

IV. Bruise and Cut

A -- no cuts and bruises
B -- 2% cuts and bruises
C -- 5% cuts and bruises
D -- 10% cuts and bruises

V. Sunburn or Greening

A -- none
B -- 5% sunburn
C -- 5% light burn
D -- 10% sunburn
E -- 10% light burn

VI. Defects

A -- U.S. No. 1, no defects
B -- U.S. No. 1, with cuts and bruises
C -- U.S. No. 2, cuts and bruises
D -- U.S. No. 1, maximum bruises
E -- U.S. No. 2, acct. sunburn

POTATO TALLY, APRIL 23, 1956

I.	A	B	C	D	E
1	23	9	1	92	28
2	42	6	14	34	51
3	59	14	23	19	42
4	26	25	77	7	19
5	3	98	37	1	4
II.	**A**	**B**	**C**	**D**	**E**
1	77	57	2	8	4
2	31	79	5	22	14
3	15	9	63	52	21
4	18	6	42	46	21
5	11	1	38	22	90
III.	**A**	**B**	**C**	**D**	**E**
1	60	12	11	15	43
2	23	38	21	46	15
3	35	28	46	19	18
4	15	27	49	35	22
5	18	45	32	34	51
IV.	**A**	**B**	**C**	**D**	
1	90	32	30	11	
2	29	39	52	8	
3	20	43	36	22	
4	10	23	24	40	
5	4	19	10	72	
V.	**A**	**B**	**C**	**D**	**E**
1	70	11	33	21	8
2	18	12	38	41	39
3	18	21	26	44	39
4	28	32	34	26	32
5	16	73	20	19	32
VI.	**A**	**B**	**C**	**D**	**E**
1	20	53	10	64	5
2	23	52	12	43	23
3	54	25	21	22	33
4	35	20	37	23	39
5	21	3	73	2	52

POULTRY CODE, FEBRUARY 27, 1956
[Chicken Fryers--2-1/2 to 3 lbs. Eviscerated]

I. Fleshing

A -- A
B -- A
C -- A - B fleshing
D -- A - B fleshing
E -- A - C fleshing

II. Finish

A -- A
B -- A
C -- A finish, B flesh
D -- A - B finish
E -- A - B finish

III. Defect

A -- A
B -- A - maximum tear on back
C -- A - B breast tear
D -- A - B pins dark
E -- Hunchback

IV. Defect

A -- A
B -- A - minimum
C -- A - dislocated wing
D -- A - broken wing and low A flesh
E -- A - broken leg and dislocated wing

V. Tears

A -- A
B -- A
C -- A - maximum tear, breast
D -- A - B tear, back
E -- A - B tear, breast

VI. Tears

A -- A
B -- A
C -- A
D -- A - A with minimum
E -- A - C tear, breast

VII. Bruises

A -- A
B -- A
C -- A
D -- A - B bruise on leg
E -- A - B bruise on breast

VIII. Bruises and Tears

A -- A
B -- A
C -- A - B breast tear
D -- A - C bruise on breast
E -- A - C bruise on leg

POULTRY TALLY, FEBRUARY 27, 1956

I.	A	B	C	D	E
1	94	19	3	9	2
2	20	76	5	17	7
3	3	14	31	73	14
4	4	11	46	20	37
5	2	3	38	4	63

II.	A	B	C	D	E
1	58	55	5	11	3
2	45	44	8	22	5
3	12	18	25	60	13
4	4	5	35	26	53
5	1	1	50	4	49

III.	A	B	C	D	E
1	39	45	21	15	15
2	23	34	20	17	32
3	22	29	21	22	34
4	24	9	31	24	29
5	15	5	30	45	13

IV.	A	B	C	D	E
1	32	12	50	8	27
2	16	33	42	6	37
3	28	36	22	23	23
4	33	36	7	21	19
5	14	6	2	65	17

V.	A	B	C	D	E
1	22	25	8	25	52
2	29	16	11	48	22
3	33	45	13	21	17
4	25	29	23	7	24
5	14	8	68	22	8

POULTRY TALLY, FEBRUARY 27, 1956 [Continued]

VI.	A	B	C	D	E
1	13	25	18	33	44
2	19	33	20	39	17
3	34	22	28	31	20
4	34	17	28	10	24
5	23	26	29	10	18

VII.	A	B	C	D	E
1	23	13	58	12	33
2	34	19	29	22	30
3	27	25	14	28	28
4	24	27	15	34	17
5	15	39	7	27	15

VIII.	A	B	C	D	E
1	33	40	32	22	11
2	33	37	30	14	11
3	32	26	27	14	25
4	19	13	17	36	32
5	6	7	17	37	24

POULTRY CODE, MARCH 26, 1956

I. Defects

A -- A
B -- A - with blood in bag
C -- A - red hocks
D -- A - white pins, reddish breast area
E -- A - B fleshing, reddish

II. Defects

A -- A
B -- A - maximum B tear or break [large meaty breast skin]
C -- A - B fleshing, red in bag
D -- A - B finish and flesh
E -- A - B flesh, browning, protruding bone

III. Defects

A -- A
B -- A dislocated wing
C -- B skin tear on breast [rear]
D -- B - breast tear, odd shape
E -- B - bruise on leg

IV. Defects

A -- A
B -- red in bag, small bruise on leg
C -- red in bag, B skin tear breast [rear]
D -- hunchback
E -- C - fleshing, finish red

V. Defects

A -- A
B -- A dislocated wing, red back joints
C -- A dislocated wing, red hock joints
D -- B breast tear, front
E -- B bruise on breast

VI. Defects

A -- A
B -- A
C -- A, dark back
D -- B small curved breast
E -- C tear breast, large bird, good otherwise

VII. Packed in Ice

A -- A small bird
B -- A back tear, rear
C -- A - C breast tear
D -- B breast tears
E -- B breast tear, rear

VIII. Fresh-pins, Unpacked, Placed on Ice

A -- minimum A pins
B -- minimum A pins, large bird
C -- B pins
D -- C pins
E -- C pins and feathers

POULTRY TALLY, MARCH 26, 1956

I.	A	B	C	D	E
1	69	60	15	18	2
2	48	53	34	18	2
3	21	24	65	30	9
4	7	8	30	64	29
5	2	3	2	17	105

II.	A	B	C	D	E
1	60	86	5	3	2
2	64	43	10	9	20
3	7	13	58	29	52
4	9	1	50	33	51
5	8	5	22	73	20

III.	A	B	C	D	E
1	24	45	53	18	24
2	31	45	35	29	20
3	32	36	30	26	26
4	44	15	16	39	21
5	16	7	14	36	56

IV.	A	B	C	D	E
1	58	21	12	59	6
2	23	43	28	50	3
3	24	52	45	27	6
4	31	32	56	6	15
5	11	0	4	5	117

V.	A	B	C	D	E
1	50	34	6	24	40
2	48	36	18	25	26
3	36	32	18	33	27
4	10	33	47	30	25
5	3	10	58	34	29

POULTRY TALLY, MARCH 26, 1956--[Continued]

VI.	A	B	C	D	E
1	31	54	19	3	48
2	47	49	33	14	16
3	45	24	39	13	28
4	21	11	41	34	29
5	3	8	14	82	26

VII.	A	B	C	D	E
1	15	28	7	23	77
2	31	31	12	42	32
3	39	49	14	29	17
4	40	28	19	38	13
5	22	11	96	16	8

VIII.	A	B	C	D	E
1	13	87	34	10	10
2	43	20	33	25	26
3	35	19	36	16	42
4	30	14	29	17	42
5	26	7	14	79	27

POULTRY CODE, APRIL 23, 1956

I. Defects

A -- A
B -- A - B conformation
C -- A - B flesh
D -- A - C bruise
E -- A - C blister

II. Defects

A -- A
B -- A but Bbruise on leg toward hock joint
C -- A but B pins
D -- A but C conformation
E -- A but C broken bone

III. Defects

A -- A
B -- A but B finish
C -- A but C pins
D -- A but B tears
E -- A but C fleshing

IV. Defects

A -- A
B -- A but B broken bone
C -- A but C finish
D -- A but B blister
E -- A but C tear

V. Pins and Feathers

A -- minimum A pins
B -- minimum A pins, larger of 2
C -- A but B pins
D -- A but C pins
E -- A but C pins and feathers

VI. Flesh Color

A -- A - white flesh
B -- A - yellow flesh
C -- A - yellow flesh
D -- B - white flesh
E -- B - yellow flesh

POULTRY TALLY, APRIL 23, 1956

I.	A	B	C	D	E
1	105	8	18	21	2
2	21	54	54	19	12
3	16	53	42	41	5
4	7	30	24	56	37
5	5	9	14	17	96

II.	A	B	C	D	E
1	38	39	23	54	3
2	39	58	9	38	12
3	40	33	23	33	28
4	19	17	34	20	55
5	16	6	63	9	54

III.	A	B	C	D	E
1	114	13	0	29	4
2	22	35	8	85	4
3	10	72	15	29	29
4	7	29	39	9	69
5	1	3	90	2	48

IV.	A	B	C	D	E
1	59	4	77	4	16
2	62	12	48	6	27
3	16	31	17	16	70
4	12	78	12	19	27
5	6	20	1	109	15

V.	A	B	C	D	E
1	9	36	69	24	31
2	20	29	31	37	49
3	26	46	26	28	28
4	45	32	9	38	21
5	53	10	19	26	25

VI.	A	B	C	D	E
1	23	15	106	9	8
2	44	59	22	12	26
3	38	45	6	26	32
4	41	21	11	36	40
5	6	12	6	68	44

Date Due

JUN 8	1961		
~~FEB 1 3~~	1964	May 1/30/64	