James B. Beard

AMERICAN SOD PRODUCERS ASSOCIATION

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TABLE OF CONTENTS

Page	
1	"BUSINESS MANAGEMENT SEMINAR REVIEW" Dr. W. R. Luckham, Virginia Tech
3	"INDENTIFYING FUTURE TURF NEEDS AS RELATES TO WATER" Dr. James Beard, Texas A & M
5	"IMPLICATIONS OF THE WATER SYMPOSIUM TO SOD GROWERS" Dr. Robert C. Shearman, University of Nebraska
7	"KEEPING MOWING COSTS UNDER CONTROL" Dr. J. R. Watson, The Toro Company
9	"KEEPING IRRIGATION COSTS UNDER CONTROL" Dr. John W. Addink, AG Sod Farms, Inc.
13	"A PROCEDURE FOR EVALUATING WHAT IT COSTS TO DELIVER SOD" Dr. W. R. Luckham, Virginia Tech
17	"CONSTRUCTION OUTLOOK FOR 1983" Howard O. Falls, F. W. Dodge Division
19	"WHAT'S NEW & OLD ON THE LABOR HORIZON" Don Shasteen, U.S. Deputy Under Secretary of Labor
23	"EFFECTIVE MARKETING" Ralph J.C. Evans, Marketing Services
25	"PREACH WHAT YOU PRACTICE" David Burkett, Counselor-Managing by Communicating

BUSINESS MANAGEMENT SEMINAR REVIEW

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The turbulent economy of the last few years has made it essential to know just what it is costing you to produce a product or do a job. If you know, in some detail, how much it costs you to produce cultivated turfgrass, than you are in position to evaluate alternative methods of running your operation. Should you own or rent the land? What can you do to shorten the production cycle? Would netting be an option? Can you afford to live with your marketable sod for one more year? How should you price your sod? What is the least you could accept to avoid keeping it over for another growing period?

Forty two workshop participants who ranged from brand new to seasoned producers, from those with a few to those with thousands of acres in production, and from cool season to warm season grasses, spent two days wrestling with these types of questions. We worked hard for two long days developing a model to calculate costs of production for a common workshop case example, then made adjustments to the basic data or to the production process to evaluate the impact on costs of production. First, we worked with cool season grasses and then with warm season grasses.

We found that, for the cool season case example, that it cost $1.125 to produce and $.175 to harvest each square yard of sod. If we wanted a 10% profit margin, then the target price needed to be $1.45 per square yard (two year production cycle, owned land). If this sod could not be sold when planned, but was carried over for one more season, costs increased to $1.715 per square yard, with a target price of $1.91.

What could be done? If the production schedule was adjusted from 24 to 14 months, the cost of production fell to 62½ cents and the target price to 89 cents. The next adjustment was to use netting, which lowered the cost of production to 56 cents and the target price to 80 cents per square yard.

The situation was similar for producers of warm season grasses. The initial estimate for the example firm was a cost of production of 99 cents per square yard of St. Augustinegrass, and a target price of $1.18. After adjusting the enterprise to a more optimum size for the equipment involved, the cost of production declined to 61 cents with a target price of 73 cents per square yard harvested.

The important part of the whole workshop experience was the demonstration of a step-by-step procedure for determining just what it costs you to produce sod under your situation, using whatever data you had available (we worked from a tax return). Next was the ease with which you could evaluate the impact of proposed adjustments before you committed to action.

The workshop on determining costs of production is just one tool in a whole arsenal of business and financial management tools and strategies available to the turfgrass producer/manager. Knowledge of labor costs, machinery costs, when to replace or repair equipment, job costs and pricing techniques, and how to use these tools is important to business success. Budgeting techniques, whether total or partial, are powerful business management tools for evaluating changes in business operation.

Financial management is another area which has become of critical importance in recent years as interest rates fluctuate and costs escalate. Knowledge of the basic financial statements and how they can be used in helping you to achieve your goals is critical to success. While most sod producers manage the technological side of their business quite well, few understand just how to actively manage the financial side of their business to achieve firm or personal goals. Successful financial management requires an understanding of the interactions among the operating, assets and liabilities segments of the basic financial statements so that appropriate financial management strategies may be incorporated into the overall management process.

Finally, since all things are accomplished through the efforts of people, the theories, tools and techniques of personnel management must become a part of, and be used by, the successful manager. Only by understanding one's basic management style, and the factors that influence individual productivity, is the manager able to forge and maintain the ability to work with people which is necessary if firm goals are to be achieved. Thus the manager's job is to identify and understand the business, financial, and personnel management aspects of the business and actively apply them to the management of the firm. Success in the turfgrass business will come to those who are prepared to make it happen. Are you ready?

IDENTIFYING FUTURE TURF NEEDS AS RELATES TO WATER

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An important water concern for sod producers in the near future will be water availability for the end user. Based on studies of long-term projections by a presidential commission (1980), we know that many parts of the country have had water shortages. By the year 2000, nationwide water consumption will increase 33 percent. And yet, we have the same amount of water that we've always had. We've got to start thinking about conservation now.

There are three basic considerations when we discuss water-use. First, the amount of water required to support the growth of the plant; second, the amount of water involved in transpiration evaporation from the leaf (called evapotranspiration and abbreviated ET); and third, the amount of water that evaporates from the soil.

We must not confuse these water-use issues with drought. Selecting grasses with low water-use rate under irrigated turf conditions requires a different strategy than selecting grasses for drought tolerance. They involve different strategies in cultural practices and, in some cases, even in grass selection.

Water-use by turfgrasses involves a complex system. First, there is the source of water. Depending upon texture, compaction, solidity, we have water availability in the soil. Second, there is the root system through which water is taken out of the soil. Their depth, number and extension is significant. Third, you have the atmosphere (the light, temperature, water vapor content of the air and wind) which affects what we call the evaporation demand-the pulling of water from the soil through the plant into the atmosphere. And, fourth, we have the process of evapotranspiration (ET) itself and the resistances or barriers the plant places on ET to slow it down. The latter is a form of water conservation.

By the use of simulation chambers that produce controlled temperatures, wind velocity and atmospheric water vapor levels, we can superimpose these factors over a canopy of turf. Having established known evaporative demands, we then place different grasses or different varieties of grasses in the chamber and then evaluate the affect on the water-use rate. Eventually, we check our data in the actual field situation.

There are various "barriers" we can develop in relation to leaf structure to restrict water loss. For example, 90 percent of the water going through the vascular system passes out of the plant through the stomatal cavity. We must learn how to slow this loss through such possibilities as limiting stomata density.

Another barrier involves the number of leaves in the turf canopy. Based upon leaf orientation, water vapor diffusing upward bounces off the canopy and slows water loss.

Study of these two barriers has proven interesting. It has been assumed for a long time that stomata resistance was most important. It now appears that canopy resistance, including the leaf area and orientation, is a far more important barrier. There is 60 to 70 percent resistance of a tight canopy versus 20 to 30 percent resistance through the stomatal cavity. What does that mean to you? It means that inbreeding and turf culture manipulation of the canopy is far more important than trying to manipulate the stomata. An important dimension of canopy resistance is the rate of leaf growth. When we examine mowing statistics, we see about a 25 percent increase of evapotranspiration of turf in just four days because of vertical leaf elongation. What does that tell us? A turf grass with a slow vertical leaf orientation is going to have a lower water-use rate. Also, cultural practices that do not stimulate vertical leaf elongation will have a lower water-use rate. For example, nitrogen is going to force shoot growth. It's going to increase water-use rate as you go to higher levels. This is a very basic principle to keep in mind. It's really simple. What we want is not the plant with rapid leaf elongation, more vertical leaves and the shallow root system. We want a plant that has a higher density of leaves with some horizontal leaf orientation, a slower leaf extension rate and a larger root system for water absorption. This will give us a more water conserving plant. We have started to look at these water-use rates among species with plot studies at Texas A & M.

The initial data involving rankings is unpublished at the present. These rankings will be published in the future and ASPA TURF NEWS will report the findings.

IMPLICATIONS OF THE WATER SYMPOSIUM TO SOD GROWERS

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Water is critical to the sod industry in two ways. All sod producers are concerned about water in terms of production of their crop. Without water from natural or man-applied means, there would be no crop to produce. Availability of water is of considerable importance, but a primary issue to the sod industry may be the relating aspect of water use and water availability as it influences the use of the sod. Discussion in the water symposium pointed out that water use and water availability on a national basis and probably on a world wide basis will be of critical importance in the future and industries depending on water for production of crops should develop contingency plans. Water shortages will affect marketing and sales of sod production. Water saving turfgrasses and turfgrass management practices will be essential in the future. Both sod producers and consumers will be involved in critically assessing their water use and striving for water use efficiency practices. With these aspects in mind, I want to review some benefits of the water symposium as they relate to sod producers and others interested in sod production.

One of the first benefits derived from the ASPA sponsored water symposium will be publication of a symposium proceedings. This proceedings will serve as an authoritative and comprehensive book covering the state of the science and art as it relates to turfgrass water use and water conservation. The symposium was an unusual happening for the turfgrass industry. Never before have 12 experts from turfgrass research and industry come together to brainstorm one particular topic, particularly one as critical as the water issue. They had the opportunity to delve into turfgrass water use and water conservation, and to discuss current literature as it relates to these topics. Publication of these discussions is sorely needed by the sod industry. Not too long ago, ASPA tried to acquire a base of information concerning turfgrass water use and conservation because of water problems that confronted the sod industry in some western states. ASPA found no single collection of this material available to use as a resource. ASPA discovered that desired information was scattered throughout various publications and in fact some of it was unavailable to the public, since it had not been published. Therefore, the publication resulting from the symposium will be an important source of information for developing criteria which will be used to guide people in making wise decisions in relationship to water use and water conservation. This will include political groups who are forced to consider water priorities. Too often in such situations decisions are made without a sound basis and information of this type would allow political groups such as municipalities to develop contingency plans in case water shortages did occur.

Sod producers will find the book helpful from a management standpoint. Water conserving grasses and management practices are discussed in detail. It will also serve as a source of information that the sod producer can use

when faced with discussing issues relating to water shortages.

A second benefit derived from the ASPA sponsored water symposium relates to a better understanding of the current knowledge about factors influencing turfgrass water requirements. With this improved understanding and increased awareness of the present knowledge base, researchers will be able to develop projects relating to improved turfgrass water conservation practices. The symposium clearly demonstrated that more research is needed and that our current knowledge is limited. However, the symposium discussion also demonstrated that a keen interest in this area of research is developing. This interest will surely lead to considerable improvement in available data relating to this topic in the future.

A third area of benefit from the ASPA sponsored water symposium evolved a growing understanding of irrigation technology and design. Studies are being made on more efficient means of water application. Technically, we can now use electronic sensing devices to monitor amount of soil moisture available to plant and develop irrigation scheduling practices that reduce water consumption and conserve available water supplies through this means. Computer monitoring of watering practices and irrigation scheduling on turfgrass sites will likely be a common practice in the future.

Finally, the water symposium discussed topics which will be helpful to turfgrass managers through better turfgrass management, improved technology, and improved public awareness. The published findings of the symposium will be an aid to turf managers as they deal with drought and water shortages. It will help these managers deal with such decision makers as legislators who might determine the amount of available water that the turfgrass industry and homeowners are allocated during water shortages. The ASPA sponsored water symposium will play a very important role in this regard. ASPA members and their officers should be commended for their willingness to support such a symposium. It demonstrates the farsightedness of this organization and its critical awareness of factors that are critical to the industry. The water symposium is an outstanding accomplishment and it will serve as a beginning to improve our knowledge of water needs in the turfgrass industry.

KEEPING MOWING COSTS UNDER CONTROL

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As the cost of labor and equipment have escalated over recent years, turf facility managers have sought ways to improve productivity and control budgets. Because grass cutting is the most time-consuming part of a maintenance program, and the most important factor contributing to overall appearance of the turfgrass area, proper selection of mowing equipment is essential to a successful operation. But because reliable information often is not available, purchase decisions are sometimes reached without specific knowledge of the long term consequences the particular equipment may have on the total budget. In order to help keep mowing costs under control, and to help improve efficiency for a turf facility, the concept of total cost per acre should be employed in equipment selection and use.

Basically, there are two means of cutting grass, shearing action (reels) and by contact (rotaries). Reels are used to mow formal and semi-formal areas and all areas cut below 1 - 1¼ inches. They require approximately 0.1 HP per inch of cut. Reel type mowers are ideally suited for mowing sod fields, especially when used in 7 - 9 or 11 gang configurations. Reels require relatively smooth ground upon which to operate and do not cut tall rank growing weeds.

Rotaries are more versatile than reels. They will cut tall, rank growing weeds, trim closely, mulch leaves, or collect them. They are used at heights of cut of 1½ inches and higher. Rotaries require approximately 0.2 HP per inch of cut. They are used infrequently on sod fields, although would be useful for overgrown areas.

When considering purchase of a particular type of mower or model, one should evaluate its performance based on productivity, maintenance costs, and construction. Too, availability of parts and service are critical to efficient operations. When selecting a rotary, particular attention should be paid to the safety features, the type of blade and method of blade mounting, ease of adjustment and the horsepower of the unit.

The type of engine also plays an important role. As a category, air cooled engines may consume 15 - 30% more fuel per horsepower/hour than water-cooled, and water-cooled diesel engines can be as much as 20% more fuel efficient than their gasoline counterparts.

Depreciation costs, downtime costs and safety training of operators are all points that need to be carefully reviewed if mowing costs are to be kept under control.

ASPA
Febuary 1983

KEEPING IRRIGATION COSTS UNDER CONTROL

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Applying additional water beyond what is needed is a waste of water, energy and nitrogen. However, applying less than what the crop needs can quickly reduce yields. This paper discusses how we are attempting to maximize yields and minimize irrigation costs.

There is an old chinese proverb which says, "To amass an immense fortune a man must know how to make a profit". One could rephrase this and say that today to survive you need to know how to cut your costs to make a profit and maybe even survive. One of the bigger costs is irrigation. Forty percent of our total equipment costs are for irrigation equipment. For our day to day operating costs, 41% of our repair and maintenance costs are for irrigation. Twenty percent of our total costs (without trucking) is irrigation. This includes depreciation, 10% of total labor, utilities and repair and maintenance. Eleven percent of the cost is for fertilizer. Thirty percent or more of this fertilizer can be lost on sandy soil with excessive irrigation.

We have one farm where we might have 50% of our present yields if we did not irrigate, but most of our farm's yields are totally dependent upon irrigation. Therefore, we need to apply sufficient water.

There is another Chinese proverb which says, "There is a time to fish and a time to dry nets". To paraphrase this today, I would say today is the time to analyze irrigation costs and water use very carefully. There was a time when energy was low cost and water was plentiful. Today energy is high cost and water table levels are declining in many areas.

We are attempting to use our irrigation systems more effectively. I use the term effective rather than efficient in that many systems are very efficient but use high pressure and are not very effective.

We attempt to look at the complete cycle of water use. This starts with looking at what a crop needs for evaporation and transpiration. When rainfall occurs, it is free. We try to adjust our irrigation to the rainfall. When rainfall is insufficient we use irrigation. We look at how we obtain this water from the aquifer, how it infiltrates into the ground and how deep perculation and runoff occurs under sprinkler systems.

Another thing we are attempting to learn more about is turf water use. Here is some data taken for several different irrigation programs on a golf course and the result.

1. Same irrigation as on a nearby course- 43" of water applied.
2. Irrigation program based on evaporation from a large open pan - 39" of water applied.
3. Irrigation program was based on tensiometer readings reaching 15 centibars before irrigation began - 38" of water applied.
4. Tensiometers reached 40 centibars when irrigation was started - 31" of water applied.

5. Tensiometers reading reached 55 centibars when irrigation was started 27" of water applied.

Perhaps the most significant thing is the statement of no difference in the turf quality. The water used was reduced from 43" to 27" with no noticeable change in turf quality. This was probably on a golf course with 20" of rainfall.

I have noticed the randomness of irrigation scheduling when working with many farmers. Slides presented at the talk show some of the ways irrigation was and still is being conducted. "I suppose I should be irrigating because my neighbor is". Perhaps the neighbor is not doing a very good job of irrigating as was shown in the golf course example. The plant says, "I am drowning. Doesn't he know we have had two cool days and 1" of rain." We always get some cooler days and sometimes rainfall in the summer when the irrigation system can be shut off. On the third slide, the irrigator says, "The soil is wet; I don't need to irrigate". The plant says, "If he would dig a little deeper, he would know I am dry and thirsty". We should do some deeper checking of soil moisture to check subsurface moisture. A critical situation exists if our system should break down for several days and the subsurface soil is dry or too much water is being applied and the subsurface soil is very wet showing deep perculation.

Irrigation scheduling is applying the right amount of water at the right time. One of the old ways of irrigation scheduling is to check the soil moisture. This is still a good way. In the discussion on golf course irrigation, instruments such as a tensiometer was used to decide when to irrigate. One of the problems with tensiometers is that several need to be installed because of the nonuniformity of the soils and water application, and the need to hand clip around the tensiometers because the usual mowing cannot be done at the tensiometer installations. The tensiometers can be put in a box but the applied water runs off the box and the box is not evaporating nor transporating water. Recharging is also occassionally required.

A study of water use by Bermuda grass in Arizona during May-September shows very high use during June, July and August, lower use before June and after July and nearly zero use during the winter. Reducing transpiration from the plant may reduce the yield or how quickly the crop can be harvested.

Evaporation is from the soil and plants. Some factors affecting evapor-transpiration include the kind of crop, temperature, humidity, solar radiation and wind. Some weather factors can be measured and equations applied to estimate water use.

Soil moisture also affects water use. The higher the soil moisture the higher the evaporation from the soil surface. Higher soil moisture contents may also increase transpiration and provide what may be called "luxurious water use".

Evaporation pans can be helpful but have limitations as the tensiometers.

Once we have an estimate of crop water use we need to know how much our system applies. A 135 acre center pivot with 760 gpm will apply 0.3 inches per day which is equivalent to 5.6 gpm per acre. A capacity of 6 gpm per acre is desireable for grass.

These rules of thumb for corn under center pivot on sandy soils also have application on grass.

1. Apply 2" per week when maximum temperatures are in the 90's.
2. Apply 1½" per week when maximum temperatures are in the 80's to 90's.
3. Apply 1" per week when maximum temperatures are in the 70's to 80's.
4. Deduct weekly rainfall from these amounts.
5. Monitor soil moisture once per week and adjust rules 1,2,3 & 3 up or down based on whether monitoring shows soil is dry or wet.

This is a very simplified way since we have only taken into account one variable.

Another thing we are attempting to improve is the monitoring and controlling of our irrigation systems. Monitors are being put on irrigation systems and possibly pumps to be read back at a central point and the information recorded on a printer. The manager can look at weekly records, and knowing water use, can determine whether the systems are applying the correct amount.

We are also checking our systems and making changes on them as required. We are trying to put the water into the soil at the lowest cost. Low angle, low pressure sprinklers can reduce our operating costs, evaporation and drift. Based on runoff tests run under center pivots, I am not in favor of spray nozzles and partically not spray nozzles on drops. Spray nozzles apply water in a very small area which can give us much more runoff than impact head sprinklers. Less overlap also reduces application uniformity and drops increase these problems.

We are doing testing of our wells. A monometer type instrument to check the flow has provided good results. Water meters are good; however, they need to be checked and repaired perhaps once a year. Water levels are measured with an electrode or airline where possible. Checking power consumption of electric motors is done by measuring amps and volts.

Knowing the flow, operating pressure, pumping level and the power used we can determine the efficiency of the pump. Decisions can than be made on pump changes.

Some of our wells pump sand and air. Both are damaging to the bowls and air can cause havoc to an irrigation system, particularly if the well is surging. Therefore, before the pumps are damaged, we pull the pumps and have the impellors trimmed or change the bowls to match the pump to the well conditions.

As Romans 5:3 says, "We can rejoice when we run into problems and trials for we know they produce endurance, and endurance produces character, and character produces hope and hope does not disappoint us". We still have our problems with center pivots. One of them is freezing up and collapsing of the center pivots. Another is getting stuck and a tire going flat which is

even more serious. One of our challenges right now is what to do with pivot tracks. Problems occur on sandy soils as well as on clay and silt soils.

Our goal is to do a little better job this year than we did last year and a better job next year than we did this year.

A PROCEDURE FOR EVALUATING WHAT IT COSTS TO DELIVER SOD

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There is no general answer to the question "What is it really costing you to deliver a product?" except that it is probably more than you think. With rapidly rising equipment, fuel and labor costs, the answers you come up with may soon be out of date unless you have a procedure that allows you to quickly update your figures. For business reasons, you will need to do this periodically and then adjust your delivery charges as warranted.

The following is a building block approach that gives a simplified, workable solution to a very complex problem. Often, computer programs and statistical techniques are used to determine delivery costs. The procedure discussed here will get you reasonably in the ball park.

The basic equipment includes a 10-wheel dual-tandem truck with a 17 foot bed and a Gross Vehicle Weight of 36,000 lbs. capacity, and a fork-lift with a 4,500 lb. capacity. As an alternative, you might consider a truck mounted hydraulic loader. In addition to the equipment costs, is the cost of labor. In this case all labor is provided by the driver. Cost estimates are developed for each major piece of equipment and for the truck driver, and summarized as follows:

Truck—10-wheel, dual-tandem, with 17 foot bed, GVW 36,000 lbs.; New cost: $25,000; Useful life: 5 years; Annual use: 600 hours; **Cost per hour to own and operate: $24.63**

Fork Lift—Capacity 4,500 lbs., weight 2,700 lbs.; New cost: $18,000; Useful life: 8 years; Annual use: 600 hours; **Cost per hour to own and operate: $10.39**

Hydraulic loader—Bed mounted; Capacity 4,400 lbs.; New cost: $19,100; Useful life: 15 years; Annual use: 600 hours; **Cost per hour to own and operate: $8.63**

Truck driver—Basic wage rate $7.50 per hour; annual cost, including fringe benefits; **Cost per productive hour: $11.65**

Pallets—4′ × 4′, 75 sq. yds.; weight 4,000 lbs.; 8 pallets/truck load.

What's Involved?

The cost estimates developed for the labor and equipment are used to determine the costs of performing the following functions required to deliver a product. Each of these functions involves the use of labor and one or more pieces of equipment.

Basic Function	Equipment and Labor Used	Cost per Hour	Time Used	Total Cost	
Assembly & Loading	Truck	$24.63	× .5 hr.	= $12.31	
3 min./pallet	Fork-lift	10.39	× .4 hr.	= 4.16	
	Driver	11.65	× .5 hr. × 1.2	= 6.99	$23.46
Delivery	Truck	$24.63	× 1 hr.	= $24.63	
Zone 1	Fork-lift	10.39	× 1 hr.	= 10.39	
(1 hour)	Driver	11.65	× 1 hr. × 1.1	= 12.82	$47.84
Unloading	Truck	$24.63	× .5 hr.	= $12.31	
3 min./pallet	Fork-lift	10.39	× .4 hr.	= 4.16	
	Driver	11.65	× .5 hr. × 1.2	= 6.99	$23.46
Return	Truck	$24.63	× 1 hr.	= $24.63	
(1 hour)	Fork-lift	10.39	× 1 hr.	= 4.16	
	Driver	11.65	× 1 hr. × 1.2	= 13.98	$49.00
Total cost for delivering 600 sq. yds. of sod to zone 1					**$143.76**
Total cost per sq. yd. =$143.76÷600					**24¢**

Note that the total estimated costs for loading and unloading are identical ($23.46). These costs will be the same regardless of trip length or delivery zone. The delivery and return costs are also nearly identical for deliveries once these basic figures have been developed, calculating the cost of delivery can be further simplified as follows:

(1) loading and unloading÷sq. yds.=cost/sq. yd.; $46.92 (23.46+23.46)÷600=7.82¢ or 8¢/sq. yd.
(2) delivery and return x zone÷sq. yds.=cost/sq. yd.; $96.84 [(47.84+49.00)×1]÷600=16.14¢ or 16¢/sq. yd./zone

Delivery costs can now be quickly calculated. Example:

(1) Deliver 600 sq. yds. of sod to zone 1; 600×.08 +600 ×.16×1=$144÷600=24¢/sq. yd.
(2) Deliver 600 sq. yds. of sod to zone 2; 600×.08 +600 ×.16×2=$240÷600=40¢/sq. yd.
(3) Deliver 600 sq. yds. of sod to zone 3; 600×.08 +600 ×.16×3=$336÷600=56¢/sq. yd.

Thus, under these conditions, delivering a full load of 600 sq. yds. costs 24¢ per sq. yd. to zone 1, 40¢ per sq. yd. to zone 2, and 56¢ per sq. yd. to zone 3.

Calculating a Mileage Charge

Since each zone represents about 1 hour of travel time, or 25 miles in the example, this procedure could be easily transferred to a mileage charge basis by substituting cost per mile for cost per hour for the truck charges. Costs for the fork lift and labor could be based on a per hour basis. Thus you would have a hybrid system of hourly and mileage charges.

Summary

A method for quickly calculating delivery costs has been developed and illustrated. Two variations for cost determination: (1) using zone pricing; and (2) using a fixed cost plus mileage charge, have been illustrated. Both of these approaches are based upon developing cost estimates for (1) the delivery vehicle; (2) the loading/unloading equipment; and (3) the driver or other labor cost. With these basic pieces of information it is possible to quickly and easily determine an appropriate cost for delivery.

Under the assumed conditions, it costs about 24¢ per square yard to deliver sod to zone 1 or 25 miles from the farm, 40¢ to go 50 miles in zone 2 and 56¢ to go to zone 3 or 75 miles from the farm. These figures can be obtained by using either method presented. Further, this procedure can be quickly updated as costs for equipment, fuel or labor charge. While delivering sod has been used in the illustrations, the same procedures hold for delivering any product.

"CONSTRUCTION OUTLOOK FOR 1983"

HOWARD O. FALLS

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Construction represents 10% of our gross national product, a $175 Billion dollar industry. It employs 15% of our labor force, over 4.5 million men and women. It is a dynamic, constantly changing business that ebbs and flows in response to economic forces usually beyond its control. It is not at all unusual for construction to go through a peak, valley, peak configuration every 5 years or so that amounts to a 25% range change while the G.N.P. is moving (in the same period) in the 9% to 10% range.

As we move into 1983, we seem, finally, to be climbing out of the trough that construction has been in since the beginning of this decade. We may be witnessing the beginning of a climb that will take us to new heights of building activity.

As usual, housing, encouraged by the decline in mortgage interest rates (now hovering around 13.5% and heading down) will lead the recovery, perhaps stretching to reach 1.5 million dwelling units in 1983, a 37% improvement over last year.

The recently passed 5¢ per gallon gasoline tax will provide a much needed shot in the arm to highway and mass transit construction, increasing the dollars spent on that kind of construction activity almost a billion over last year's 35 billion, a 4% improvement.

Non residential building, impacted by a dramatic decline in office construction will be off last year's 58 billion dollar total by over 5 billion dollars, a 9% decline.

But, in the aggregate, we expect, by year end, to see the construction industry, led by a rejuvenated housing market, at the start of a new period of recovery and expansion.

WHAT'S NEW & OLD ON THE LABOR HORIZON

Don Shasteen, Deputy Under Secretary of Labor
Washington, D.C.

Let me tell you what's "new" at Labor - and forgive me if I get a little bit excited about these things.

First, we achieved a consensus, after a year and a half of negotiations, on major reform of the provisions of what you all knew as the Farm Labor Contractors' Registration Act. As a result of that consensus, we persuaded Congress to repeal FLCRA and replace it with the Migrant and Seasonal Agricultural Workers' Protection Act.

Another long series of negotiations produced a consensus reform of the Black Lung workers' compensation law. We won Congressional approval of major changes in the Unemployment Insurance Program, tightening up the Federal Extended Benefits portions of the program and folding Trade Adjustment Assistance into the delivery system in a way that eliminated abuses, made the combined system more fair to the vast majority of insured workers, and saved the taxpayers an estimated $2.5 billion annually.

Close on the heels of that action by Congress the Administration began working with private industry, state and local government officials, and the people on Capitol Hill to rewrite and reform - indeed, to replace - the old Comprehensive Employment and Training Act. CETA, as it was known, had cost the taxpayers approximately $53 billion and had placed only 15 percent of the trainees in jobs in private industry. Only 18 cents out of each dollar spent had gone for actual training - the rest went for wages, stipends, and welfare-type allowances and services.

The new Job Training Partnership Act is truly a job training law. At President Reagan's insistence, 70 cents out of every dollar will go for training. Instead of 15 percent, we have established a performance goal of placing 85 percent of the trainees in permanent jobs in the private sector. The federal government's role will be changed from management to oversight. The Governor of each state will manage the job training program in accordance with the particular needs of his state.

One of the most costly areas of government expenditures has resulted from the tremendous increases in entitlement benefits, based on built-in cost-of-living increases. The Bureau of Labor Statistics has recently revised the housing component of the Consumer Price Index to make the index a closer measure of the true cost of living.

Secretary Donovan has stated that one of his major achievements has been to change the Occupational Safety and Health Administration from an agency of crime and punishment to one of cooperation with both labor and management. OSHA has placed new emphasis on support of 24 State OSHA programs and eliminated dual enforcement in states with approved plans. OSHA is promoting workplace cooperation to reduce hazards through training, education, consultation and reduced regulation, and resources are being aimed at the high-hazard industries.

Another case of putting the emphasis where it belongs is law enforcement against labor racketeers. In the first year of the Reagan Administration, indictments were doubled and convictions increased by more than one-third. In the second year of the Reagan Administration the rate of indictments was up a third and the rate of convictions was up 140 percent.

The enormity of the Department's enforcement activities can be seen in its responsibilities for administration of the Employee Retirement Income Security Act of 1974, commonly referred to as ERISA. The Labor Management Services Administration within the Department has regulatory and enforcement responsibility for protecting a half million private pension plans and almost a million and a half health and welfare plans for workers in private industry in the United States. Total assets of these plans are approximately 1 1/2 trillion dollars.

From the time ERISA was enacted in 1974 until the Reagan Administration came into office, there had been no comprehensive review and analysis of regulation and enforcement requirements and resources. Secretary Donovan set up a task force to accomplish this purpose.

American citizens cannot be permitted to suffer the debilitating loss of pension or health and welfare benefits they have earned and come to expect. We are involved in correcting the administrative and enforcement deficiencies in ERISA.

We need to pass the Nunn-Rudman Anti-Racketeering Act to assure that convicted felons cannot continue in sensitive labor-management positions, handling vast sums of employees' dues, health, welfare and pension funds while working their way through extended and seemingly interminable appeals process.

We need the Immigration Reform and Control Act, a measure that passed the Senate twice last year and failed to reach a vote in the House of Representatives only because procedural maneuvers were used to thwart the will of the House.

I think you will see a theme running through all of the administrative and legislative reforms that have been accomplished as well as those we still seek. That theme is productivity. The productivity of the free enterprise system is what built the economy of this Nation. America pioneered in productivity. If that is "old," then we must face the reality that "old" ways that are tried and true are worth returning to. That is what's really "new" on the Labor Horizon.

EFFECTIVE MARKETING

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During this presentation, I am going to ask you to evaluate yourself; to compare your past and present performance in relation to who and what you really want to be with your respective business, product, or service in your market area.

I will illustrate my points by using a collection of slides.

The following assumptions are: That very few of you sit down and prepare a formal quantifiable plan to monitor your market position or set targets, timetables, and budgets that you religiously follow.

My definition of marketing is anything that is done to a product or service which enhances its ability to stimulate a customer to make a buying decision and further satisfies his needs following the purchase with reliable performance.

Another assumption is that your business purpose is to make money.

Let's begin our evaluation:

Business Self-analysis - What are the trends with my product, service, market, and customer base? What is my position?

Planning - Having considered where I am, what are my goals and objectives? List both long and short term.

Advertising -What is my philosophy? What have been the results? How do I measure my effectiveness?

Pricing -What is my philosophy? Does the same policy work now that worked 10 years ago? What are my price/volume relationships?

Sales promotion -What activities are planned for the year? What will they cost? How much more will be sold because of these activities?

Management -How am I structured? What improvements can be made? Am I grooming a successor?

Public relations -This is a free ride. Am I taking the time to get any benefit?

Marketing warfare -The military talks about running itself like a business. We can talk about the strategy and tactics of military like marketing schemes.What is your approach? Defensive, offensive, flanking, guerilla?

Business plan -Statement of objectives, market analysis, organization, personnel, and capital required.

Image -What does my business look like to the consumer? Signing, trucks, letterhead, stationery, advertising.

Competition -evaluate and be aware of the trends. It is better to the competition than try to respond to it!

Management -The objectives of a good effective manager should be to plan, lead, delegate, and supervise.

The careful development and monitoring of your plan will aid in achieving improved results with your marketing efforts. Measurement of your performance allows for mid-course correction and proper evaluation of results. Effective marketing will provide return on your investment many fold as well as providing you and your organization with programs of which you can be proud.

PREACH WHAT YOU PRACTICE

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Most of life's problems, and much of our individual tragedy, are the result of our failure to communicate. Evidence suggests that heart attacks, strokes, high blood pressure, drug addiction, the high divorce rate, the high suicide rate, battered spouses, battered children, and difficult working relationships are the result of poor communication or no communication at all.

For most of our lives, we are not real people communicating but rather facade personalities informing. Information and communication are not the same. Information demands; communication declares. Information goes one way; communication goes two ways. Information deprecates the person on the other side of the message. Communication encourages enthusiasm and growth in that person.

Because most of us are better at information-sending than we are at communication-sharing, we are dishonest in our relationships, playing games and manipulating other people (and thus counterfeiting them).

Our manipulations of other people employ helplessness, suffering, and anger to get them to do what we want them to do or to prevent them from doing what we don't want them to do. We use these manipulations when we grow tired of deferring and wish to control the situation by subverting authority. Just as children erode parental authority by helplessness, suffering, and anger, workers use the same techniques to limit a manager's authority.

The most popular form of management today--in the home, in school, and on the job--is authoritarian management. One person tells another person what to do, why and how. Authoritarian management also is the least effective system because it produces considerable stress. Workers can erode authority through subtle manipulation and therefore are in charge of product quality and quantity. This is especially true of Television People, those born after the mid-Fifties, the rank and file of American workers. They have emerged from their formative years even more capable of manipulation than those who are Print People because the content of television reinforces the manipulative learning of their childhood years.

Nearly everyone can learn to replace information and manipulation with communication and declaring behavior. Because communication is not taught at home during the formative years nor is it taught in school, it must be learned during adulthood, often on the job. Once learned, those who truly communicate

deal more with issues than with feelings, more with negotiation than with compromise. As a result, they become more self-responsible, more accountable, less manipulative. In the absence of debilitating stress, their physical and mental health improve. They become more creative, and they set a communicating example as they "preach what they practice."