Market Expansion Strategies for Turfgrass Producers in the Eastern United States

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Abstract

In 1998 the International Turfgrass Producers' Foundation (ITPF) partially funded a unique research project to identify practical marketing strategies for increasing the demand for sod in the Eastern U.S. This research, implemented by the University of Florida, consisted of two sequential steps. In the first step, case studies were conducted in six states through personal interviews of 20 sod-related businesses. Their purpose was to identify the most critical factors influencing the demand for sod. This information was necessary to design, develop and implement telephone surveys, the second portion of the research. Over 500 firms, representing eight (8) distinct Standard Industrial Classifications (SIC) in 26 states, were sampled. Data were analyzed by: 1) geographic region — northeast, east central, and southeast; 2) type of business — general contractors and developers, landscape architects and contractors, retail nurseries and garden centers, and sports turf users; and 3) size of business as determined by annual sales (small = less than $500,000; medium = $500,000–$2.5 million; large = $2.5–$10 million, and very large = more than $10 million).

The results of this research indicate that demand for sod is currently very strong within the eastern U.S. The problem confronting producers is not one of demand but, essentially, ineffective approaches to marketing and a lack of sufficient resources, both money and effort, directed at reaching customers. This conclusion was drawn from information gathered in response to several question areas — from whom was sod purchased, what were customers looking for when they purchased sod, did purchasing criteria vary by type of customer, how important is seasonality in the demand for sod, and what are buyer expectations concerning the future demand for sod? Some key findings follow.

Firstly, sod purchases are typically at the wholesale level directly from the farm unlike most agricultural sectors that utilize traditional marketing channels in which one to many "middle men" are involved. This direct approach to marketing suggests that many potential market niches may be overlooked by producers as was evidenced when respondents complained of difficulty obtaining enough sod. Secondly, sod shipments were too large for many businesses in the retail sector, particularly garden centers with limited space. By exceeding the handling capacity of these retailers, an entire segment of potential buyers is eliminated. Thirdly, sports turf users in the northeast appear to represent an under-utilized market. Compared to other types of businesses in the region, this group had the highest use of sod (36%) compared to seed. Sports turf businesses cannot afford extended down time of their fields and because their turf-wear is much more intensive, it necessitates frequent replacement. It would clearly be in the interest of sod producers to target this group more aggressively. Finally, seasonally slow periods such as the beginning and end of winter may represent small "market windows" for some producers. Given the intense competitive climate in the spring, summer and early fall, it makes sense to focus additional attention on these markets during the slower months of the year. Such a strategy could also help firms alleviate cash-flow constraints that typically occur at this time of year.

Most respondents considered quality first when contemplating buying sod. In fact, quality was valued substantially higher than price, the second-ranked characteristic. However, when analyzed by type of buyer, general contractors and developers preferred price over quality. Third- and fourth-ranked sod features were availability of supply and reliable delivery. Producers need to be aware of

the different preferences that exist among buyers since this will directly or indirectly affect market demand. For instance, it makes little sense to emphasize quality to a particular contractor who happens to be more concerned about price.

When respondents were asked to identify features liked most about sod when compared to seed, rapid establishment was the clear winner. The fact that sod provides a "finished, professional look" was a recognized and substantial benefit in contrast to seed. Attractive appearance was the second most desirable feature, followed by erosion and weed control. Erosion control surfaced as a key concern for developers since soil run-off is often associated with hefty fines levied by local governments. Features liked least about sod were obvious — high initial cost, heavy and dirty to handle, and the labor intensiveness of installing sod.

Based on results of this study, it is clear that abundant opportunities are available in the eastern U.S. to expand sod markets. Six major market strategies are recommended:

1. *Diversify distribution* — sod producers are too concentrated at the farm/wholesale level and are foregoing numerous opportunities with the retail sector and other smaller market niches.
2. *Target architects and developers* — since this group specifies whether sod or seed is to be used, producers need to target them with descriptive, accurate and timely information that focuses on the many advantages of sod.
3. *Advertise more effectively* — research indicates that sod producers do not advertise enough, do not put their ads in the right places, and do not consider the most appropriate market niches.
4. *Improve quality and professionalism* — quality was ranked as the most important feature desired by buyers, yet it was also a major complaint. Producer organizations need to promote quality by providing more educational programs for their members.
5. *Educate producers and consumers* — although related to advertising, education should not be confused with it. The sod production industry should become aggressive at designing, developing and delivering educational material to both producers and consumers. Quality should also be promoted by informing buyers of the many positive features of sod.
6. *Target off-season periods* — producers are competing aggressively with each other during peak seasons; but windows of opportunity are available in the off-season for producers who are willing and able to find them.

Keywords: turfgrass, eastern United States, marketing, purchasing criteria, survey research.

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by
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Introduction

Historically turfgrass research has focused on the numerous biological, physiological and cultural aspects of sod production and maintenance. Such efforts have included making sod varieties more resistant to pests and diseases, increasing off-take rates through improved cultural practices, and enhancing harvesting efficiencies through technological innovations. While this type of research clearly fulfills an important need for the turfgrass industry, at the same time it does not address another problem confronting many farmers. The crux of this problem can be stated quite simply. How prudent is it to invest thousands of dollars in capital and hundreds of man-hours in labor cultivating a crop if, when harvest time arrives, the producer has trouble selling it, at least in quantities and at prices that are acceptable to him?

Although waiting until the last minute to secure a market may seem negligent, it occurs frequently throughout agriculture, and the turfgrass industry is no exception. Research in Florida has shown that while production of sod has kept pace with market demand, producers have done little to expand markets or add value to their product. Indeed, when adjusting for inflation, nearly all major Florida grasses have declined considerably in price over the past 25 years (Haydu, 1992, 1998).

This trend is not unique to Florida but common throughout the United States. Falling real sod prices have occurred in spite of rising input costs, particularly for raw materials and labor, resulting in an uncomfortable "cost-price" squeeze for many growers (Johnson, 1995). These trends can and should be reversed. . The problem is *not* a production issue, most producers already know how to grow quality sod, the real challenge is to sell turfgrass *profitably and in sufficient volumes* once it is produced.

Although the present economic expansion has been both vigorous and unprecedented in its duration and the ensuing growth in commercial and residential developments has been a boon to the sod industry, most producers can easily recall when times were not so good. Producers should take positive steps to prepare for an uncertain future. Market research is an effective tool that helps take the "guess work" out of farming, which is precisely what this research addresses.

Sod typically is used for various applications — new residential and commercial developments, re-landscaping existing developments, sports turf facilities, and other commercial applications — including businesses, schools and roadsides. New developments are 70% of the sod market, but there has been resistance by many developers, landscape architects and contractors to utilize sod. Many of these professionals prefer the simplicity of installation and

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the lower, up-front cost of seeded lawns. Sod producers need practical and economically feasible options to counter this situation, including alternatives that extend outside some of the more traditional markets. Demand *can* be increased so that everyone benefits — the task is simply to determine the most feasible and effective methods of doing so.

This study sought to identify practical strategies for expanding sod markets while simultaneously securing prices that would provide a reasonable return on investment. This dual goal is not a simple task, for producers must increase their own market share *without* reducing or restricting the market share of others. This goal can be achieved only if the *total* market for turfgrass is enlarged. Therefore, the objective of this research was to ascertain how to enlarge the entire turfgrass pie so that all producers have the opportunity to obtain a larger slice, as opposed to merely redistributing the same sized pie among many competing producers.

This report consists of four main parts. In the first part, the study's overall objective and several sub-objectives that support and define the direction of the research are identified. In part two, research methods employed are presented and discussed. Part three introduces the findings of the research. Due to the breadth and depth of the study, this section is comprised of several topic areas, including a summary that highlights major results. The last part may be the most important from the producers' standpoint, for it offers specific marketing recommendations based on conclusions of the study.

Part I: Objectives

The objective of this study was to identify major factors that currently influence the demand for turfgrass in selected metropolitan centers in the eastern United States. Market demand opportunities were identified and practical strategies for increasing sales by individual producers are proposed. Specific objectives of the project were to:

1. Identify and select key metropolitan areas in the northern and southern regions of the United States from which to conduct case studies. Identify primary and secondary turfgrass markets within these areas.
2. Determine the relative demand for primary turfgrass varieties. Identify major purchasers of sod and interview buyers to determine the most feasible markets, particularly potential market niches that may have been overlooked by producers.
3. Develop practical marketing strategies that can increase a producer's sales volume and business profitability. Describe innovative methods that turfgrass associations can adopt to increase demand for sod at the state or regional levels.

Part II: Research Methods

Study Areas. Research focused on the eastern portion of the United States. Due to the area's geographic diversity and in order to make project results more applicable to producers in different parts of the study area, it was further delineated into three sub-regions:

1. *Northeast*: Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island, Vermont.
2. *East Central*: Delaware, Indiana, Kentucky, Maryland, Michigan, New Jersey, Ohio, Pennsylvania, Virginia, West Virginia.
3. *Southeast*: Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee.

Case Studies. Case studies were conducted through personal interviews to identify important factors affecting sod demand in each major geographic area. Case studies were used to initiate this research because it allows for considerable breadth and depth in the investigation process. The researchers needed to identify strategic market opportunities, some of which may have appeared obvious, others less apparent and understood. To achieve this in-depth understanding, lengthy discussions with key players were essential. In all, twenty (20) different companies were interviewed in seven states. (Florida was not one of the states because of the researchers' extensive knowledge of the industry in the state). A brief profile describing the types of businesses and their geographic location is presented in Table 1. Specific businesses included sod producers (5), developers (2), golf and country clubs (2), landscape design and/or construction (3), a rake and seed contractor (1), landscape services (2), retail nurseries (4), sod installer (1), a sod broker (1), and a public school maintenance supervisor (1). Preliminary questionnaires were developed for the interviews, which were conducted at the business site and took between 1 and 1½ hours to complete. The information was compiled and organized for the second phase of the research process, the telephone surveys.

Telephone Surveys. Whereas case studies provided the basic information from which to determine strategic opportunities, telephone surveys were used to establish their legitimacy through a large sample of representative firms. Phone surveys allow a wide spectrum of people to be covered within a short time period. Although mail surveys can provide more detail, acquiring an adequate sample of responses often takes many months. This contrasts to telephone surveys that can be completed in a matter of weeks. However, a limitation of phone interviews is that only a brief time is available to obtain the necessary data. Therefore, questions must be concise and target a specific issue or need. Establishing which questions should or should not be included in the interviews was an essential purpose of the case studies. Potential sod "buyers" fell into four main categories based on Standard Industrial Classification (SIC) codes developed by the U.S. Department of Commerce. These four sectors — specified in this report for purposes of brevity as: 1) General Contractors, 2) Landscape Services, 3) Retailers and 4) Sports Turf Users — include the following SIC categories:

- *General Contractors* — General contractors and developers of single family housing construction (SIC 1521), commercial residential construction (SIC 1522) and non-residential construction (SIC 1542).

Table 1. Summary of personal interviews conducted with turfgrass-related firms, in the eastern region of the United States, 1999.

Type of Business	State	Annual Business Volume	Product/Services and Markets
1. Sod Production	New York	$2 million	Sod, roll out, delivery, bag soil. Major customers: 90% wholesale, 10% retail. Large garden centers, independents and chains.
2. Sod Production; Nursery Crops	Pennsylvania	$500,000	Sod, installation, nursery crops
3. Sod Production	Maryland	$1 million	Sod, pickup and delivery
4. Sod Production	North Carolina	$3 million	Sod growing, installation. Markets are 40% residential, 40% commercial, 20% golf courses
5. Sod Production	Georgia	$500,000	Sod, delivery up to 150 miles. Markets to retailers and landscape contractors for residential renovation.
6. Sod Production; Broker	North Carolina	not available	Grows nine varieties of turf, sod buying and delivery. Markets are landscapers, homeowners, golf courses.
7. Developer	Pennsylvania	$6.5 million	Build residential homes.
8. Landscape Services	Maryland	$2 million	Maintenance, grading, stonework
9. Landscape Design and Construction	Pennsylvania	$400,000	Design and refurbish existing homes, including sod installation.
10. Landscape Contracting	North Carolina	$800,000	Landscape design, installation, maintenance, hardscaping.
11. Landscape Contracting	Georgia	$400,000	Landscape design and residential construction. Sod sprigging.
12. Landscape Contracting; Retail Nursery	Georgia	$600,000	Landscape design and construction, retail nursery.
13. Hydroseeding Contractor	Pennsylvania	$700,000	Initial and finished grading, hydro-seeding.
14. Sod Installer	New York	$2 million	Grade and prepare soil. Install irrigation. Lay sod.

Type of Business	State	Annual Business Volume	Product/Services and Markets
15. School Grounds Maintenance	Georgia	$2.5 million budget	Grounds maintenance, hardscaping, landscape construction.
16. Retail Garden Center	Alabama and Georgia	$2 million	Plant and garden supply, retailing, and landscaping. Customers are 75% homeowners and 25% large volume buyers.
17. Retail Garden Center	New York	not available	Sell nursery crops, sod.
18. Retail Garden Center; Landscape Services	Maryland	$5 million	Nursery crops, sod, refurbish existing homes, provide sod to small landscape contractors
19. Golf and Country Club	Maryland	$4 million	Golf, dining, tennis, swimming
20. Golf & Country Club	North Carolina	$5 million	Large golf course, tennis, dining.

- *Landscape Services* — Landscape architects comprising landscape counseling and planning (SIC 0781), lawn and garden services (SIC 0782), hydro-seeding contractors (SIC 078213), sodding services (SIC 078203), landscape contractors (SIC 078204) and lawn maintenance firms (SIC 078206).
- *Retailers* — Nurseries and garden centers (SIC 5261)
- *Sports Turf* — Sports turf and golf courses comprising public golf courses (SIC 7992) and membership sports and recreation clubs, including private golf clubs (SIC 799700). Athletic field maintenance (SIC 078216) and Stadiums, Arenas, and Athletic Fields (SIC 794104).

Within these four sectors, a random sample of firms was selected. Lists of firms were purchased from a company called *Marketing Systems Group*, an authorized vendor for data products from *American Business Information*, the original source for the lists. A total of 503 firms were interviewed (490 in telephone surveys and 13 from the personal interviews) and included representatives from all 26 states that comprised the three regions. Data were then analyzed based on these four sectors. As noted, each group actually represents a substantially broader range of business types, accounting for a total of eight (8) SIC codes. These businesses were selected because they represent both major and minor turfgrass markets and they were considered to be the most likely to possess knowledge concerning market opportunities.

Data were also examined based on three additional criteria that could influence sod purchases — geographic location, size of business based on annual sales volume, and business experience. Firms interviewed numbered 143 in the northeast (Table 2), 142 in the east central

region, and 218 in the southeast. When analyzed by type of business — 54 general contractors and developers, 150 landscape architects, 140 retail garden establishments and 159 sports turf facilities were interviewed.

A total of 135 small, 139 medium, 52 large and 19 very large businesses, based on annual business volume — small (less than $500 thousand); medium ($500 thousand to $2.5 million); large ($2.5 million – $10 million); and very large (over $10 million), were interviewed (Table 3).

A fourth variable considered was the duration the company was in business. Owners/managers with extensive turfgrass experience were desired since this group would have considerable knowledge concerning challenges and opportunities for the sod production industry. Figure 1 shows the average years in business for the four types of companies. Landscape services averaged the least with 16.5 years, followed by general contractors with nearly 24 years, sports turf users had almost 28 years and retailers had the most experience with just under 29 years. In summary, this research project constituted four sequential stages requiring nearly one year to complete.

Table 2. Number of respondents interviewed, by turfgrass buyer category, in three eastern regions of the United States in 1999.

Type of Business	Region[1]				
	NE [2]	EC [3]	SE [4]	Total	Percent
General Contractors [5]	8	5	41	54	11%
Landscape Services [6]	39	46	65	150	30%
Retailers [7]	51	45	44	140	28%
Sports Turf [8]	45	46	68	159	32%
Total All Buyers	143	142	218	503	100%
Percent	28%	43%	28%	100%	

[1] Includes 490 interviews from telephone surveys in addition to 13 interviews from the case studies.
[2] Northeast includes the states of Connecticut, Maine, Massachusetts, New Hampshire, Vermont, Rhode Island, New York.
[3] East Central includes Delaware, Maryland, New Jersey, Pennsylvania, Virginia, Ohio, Michigan, Indiana, Kentucky, West Virginia.
[4] Southeast includes Alabama, Mississippi, Georgia, Florida, South Carolina, Louisiana, Arkansas, Tennessee, North Carolina.
[5] General contractors and developers of single family housing construction (SIC 1521), commercial residential construction (SIC 1522) and non-residential construction (SIC 1542).
[6] Landscape architects and contractors comprising landscape counseling and planning (SIC 0781) and lawn and garden services (SIC 0782).
[7] Nurseries and garden centers (SIC 5261).
[8] Sports turf and golf courses comprising public golf courses (SIC 7992) and membership sports and recreation clubs, including private golf clubs (SIC 799700).

Table 3. Number of respondents interviewed by type of business and annual sales volume.

Annual Sales Volume	General Contractor	Landscape Services	Retailers	Sports Turf	Total
Less than $500,000	4	67	31	33	135
$500,000 – $2.5 million	20	34	46	39	139
$2.5 million – $10 million	15	12	11	14	52
Over $10 million	8	2	4	5	19

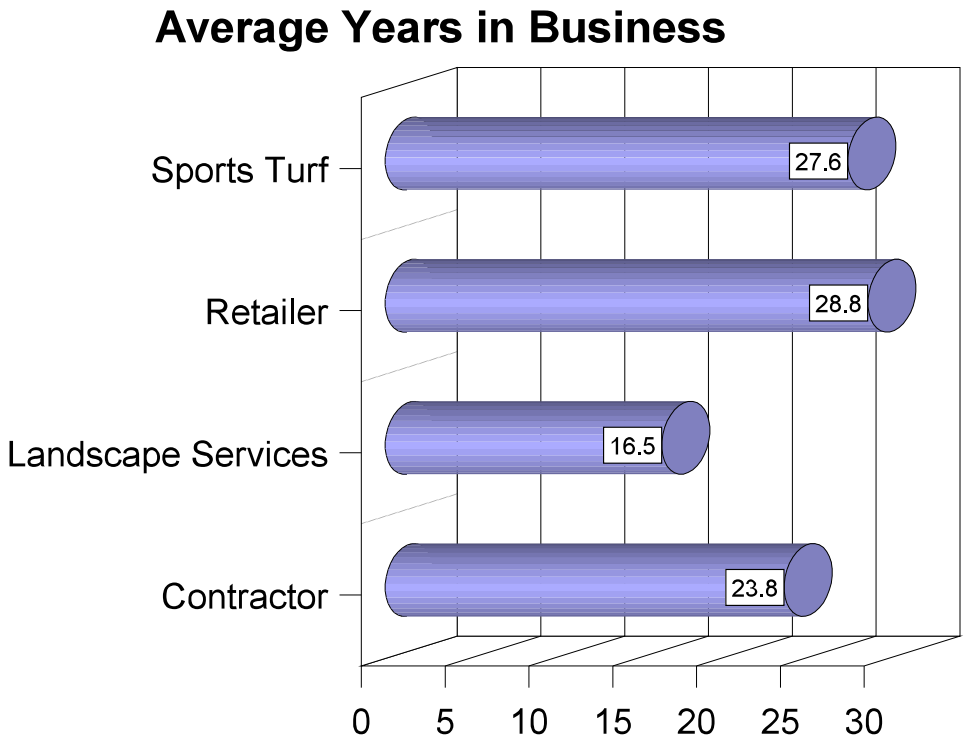

Figure 1. Average years in business as specified by the type of respondent interviewed, 1999.

Part III: Research Results

Planning is indispensable when considering any new business venture. When the sod production industry wants to explore possibilities for expanding markets, the first step is to gather as much information as possible about these potential markets — Who are the major players? How many of them are there? Where are they located? What are their purchasing habits? How do selling transactions differ by type of business or geographic region? To expand markets or find new market niches, it is vital to learn as much as possible to portray from several perspectives primary and secondary sod markets. When sufficient information is obtained, viable prospects can be examined and opportunities put forth to expand market demand.

Sod Purchasing Characteristics

Unlike many other agricultural commodities that utilize several marketing channels, such as shipping point marketing firms or large integrated wholesalers, sod is handled quite simply and uniformly by passing directly from the farm to the consumer. This tendency is illustrated in Figure 2 for both quantities and dollar value. Between 85 and 95 percent of all sod was purchased at the farm gate. Brokers represented the next substantial group, handling 13 percent of physical volume but only 2 percent of actual dollar value. Retailers played an even smaller role, with only 2 percent of respondents purchasing from these firms. The direct mode of distribution is probably due to sod's perishable nature, as well as its considerable bulkiness and weight.

Table 4 presents data on the quantities and values of sod purchased by four different types of buyers in three regions of the eastern U.S. These numbers provide information on total purchases within each group, derived from the sample of roughly 500 firms interviewed. In the northeast, sports turf users purchased the most square feet of sod. In the east central portion, landscape architects and design firms purchased the majority, and in the southeast the retail group was on top.

The dominant group was not developers of residential sites or sports turf groups, but rather the retail sector. Substantially more turf moved through the retail sector than the other outlets, indicating their surprising market influence. Normally developers and landscape contractors are perceived as the major market outlets for sod, not retail firms. Such results suggest that this rather non-traditional segment may be gaining in prominence. This assertion was supported while interviewing firms in the case studies. One large sod producer, for example, had been selling 90 percent of total production to a retail chain. Primary buyers at retail firms are typically homeowners, lawn maintenance firms, and very small landscape contractors. In conclusion, the economic boom that has been the impetus behind robust growth in new housing starts has also influenced owners of existing homes to renovate their residences.

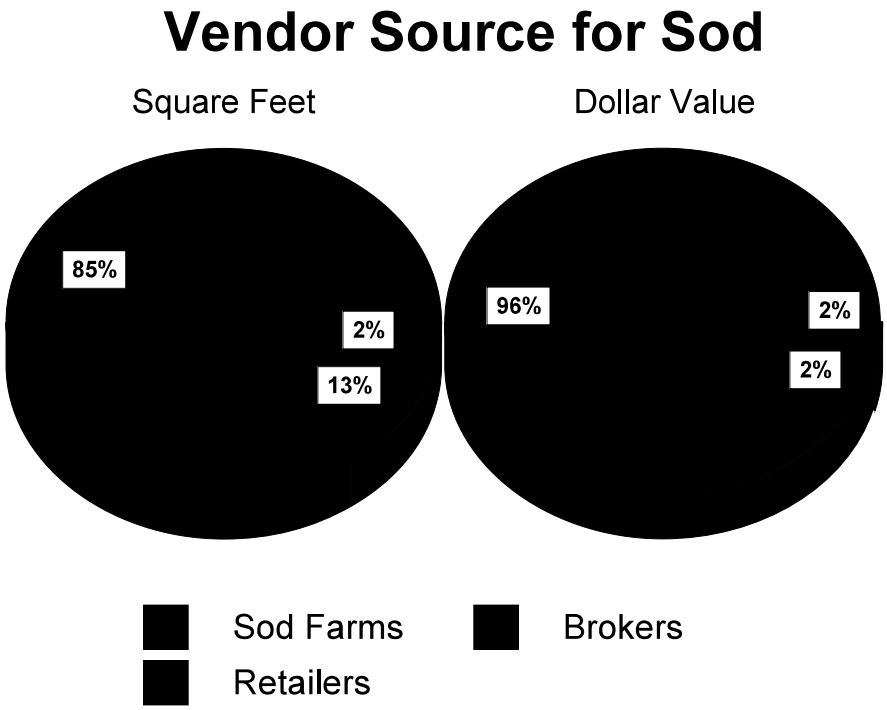

Figure 2. Purchasing sources for sod by all buyer groups in the northeast, east central and southeastern United States.

What were the dominant turfgrass varieties purchased by major buyer groups in the survey area? In the northeast, the single most important grass was bluegrass with 46 percent of the total (Table 5). This was followed by a bluegrass/ fescue blend (16 percent) and fescue (13 percent). For the east central portion of the study area, bluegrass/fescue dominated the market, comprising nearly two-thirds (62%) of all sod purchased. Bluegrass accounted for roughly a quarter (27%) of the total, followed distantly by bermudagrass at 6%. Unlike the other two regions, which were dominated by one or two varieties, the southeast had four grasses sharing the market rather evenly. Bermudagrass was the most notable with just under one-third share (31 percent) of the market. St. Augustinegrass (17%), centipedegrass (16%) and fescue (15%), each with about half as much, constituted the balance. Finally, by combining the three regions, the grass type capturing the largest market share for the entire eastern U.S. can be determined — the bluegrass/fescue blend was ranked first with 32 percent. Bluegrass comprised nearly one-fifth (19 percent) of the market, followed by bermudagrass (16 percent) and fescue (10 percent). The two grasses with the smallest share were St. Augustinegrass and centipedegrass, each with 7 percent.

Table 4. Average square feet purchased by turfgrass buyer group in the three eastern regions of the United States in 1999.

Type of Buyer and Number Respondents	Northeast [1]	East Central [2]	Southeast [3]	Total	
	Square Ft	Square Ft	Square Ft	Square Ft	Percent
	----------Thousands ----------				
Contractor [4] (54)	903	6,815	350	8,068	8%
L. Services [5] (150)	1,018	22,870	3,455	27,343	28%
Retailer [6] (140)	3,504	2,775	36,315	42,595	44%
Sports Turf [7] (159)	14,167	2,975	1,405	18,548	19%
All Groups (503)	19,591	35,437	41,526	96,555	100%
Percent Share	20%	37%	43%	100%	100%

[1] Includes Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island, Vermont.
[2] Includes Delaware, Indiana, Kentucky, Maryland, Michigan, New Jersey, Ohio, Pennsylvania, Virginia, West Virginia.
[3] Includes Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee.
[4] General contractors and developers of single family housing construction (SIC 1521), commercial residential construction (SIC 1522) and non-residential construction (SIC 1542).
[5] Landscape architects and contractors comprising landscape counseling and planning (SIC 0781) and lawn and garden services (SIC 0782).
[6] Nurseries and garden centers (SIC 5261).
[7] Sports turf and golf courses comprising public golf courses (SIC 7992) and membership sports and recreation clubs, including private golf clubs (SIC 799700).

Table 5. Top six turfgrass types purchased by survey respondents in three regions of the eastern United States, 1999 data.

Grass Type	Northeast[1]	East Central[2]	Southeast[3]	Total
Bluegrass	46%	27%	1%	19%
Bluegrass/Fescue	16%	62%	2%	32%
Fescue	13%	5%	15%	10%
Bermudagrass	2%	6%	31%	16%
Centipedegrass	1%	(–)	16%	7%
St. Augustinegrass	2%	(–)	17%	7%

[1] Includes Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island, Vermont.
[2] Includes Delaware, Indiana, Kentucky, Maryland, Michigan, New Jersey, Ohio, Pennsylvania, Virginia, West Virginia.
[3] Includes Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee.

Another important factor in this study is the proportion of land on which sod is used compared to that where seed is used. From a marketing perspective, regions that utilize a greater proportion of seed could potentially offer a correspondingly larger market for sod. In the northeast, the average respondent used roughly one-quarter sod and three-quarters seed (Table 6). In the east central portion of the country, which includes some states in the more southern latitudes like Kentucky and Virginia, the portion of sod purchased increased to one-third. Finally, the southeastern states were the near opposite of the northeast, with roughly three-quarters sod purchased compared to only one-quarter seed. Interestingly, this use pattern was fairly consistent across the different business categories. For instance, contractors in the northeast tended to use seed about the same as did retailers and contractors. In general then, we can conclude that market opportunities for increasing sod sales by enticing current grass seed users to buy sod are more abundant in the north, where more seed is currently being used, and perhaps less abundant the further south one goes. There are, however, some discrepancies. Sports turf companies in the northeast used 36 percent sod, about 10 percent more than the other groups, suggesting their preference for sod over seed. This makes sense given the nature of their business, such as golf courses and athletic fields. Not only can these businesses not afford long periods of down time from their fields, but turf-wear is much more intensive, necessitating more frequent replacement. The combination of these two characteristics makes the demand for sod by sports turf facilities extremely viable. Indeed, during the case studies, several respondents believed that sports turf facilities under-utilized sod.

Table 6. Percent of product volume purchased in sod (as opposed to seed) in three regions of the eastern United States, 1999 data.

Type of Buyer	Northeast[1]	East Central[2]	Southeast[3]	All Regions
General Contractors[4]	25%	19%	69%	37%
Landscape Architects[5]	28%	36%	72%	45%
Retailers[6]	24%	37%	60%	40%
Sports Turf[7]	36%	31%	77%	48%
Average All Buyers	28%	31%	69%	43%

[1] Northeast includes the states of Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island, Vermont.

[2] East Central includes Delaware, Indiana, Kentucky, Maryland, Michigan, New Jersey, Ohio, Pennsylvania, Virginia, West Virginia.

[3] Southeast includes Alabama, Arkansas, Georgia, Florida, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee.

[4] General contractors and developers of single family housing construction (SIC 1521), commercial residential construction (SIC 1522) and non-residential construction (SIC 1542).

[5] Landscape architects and contractors comprising landscape counseling and planning (SIC 0781) and lawn and garden services (SIC 0782).

[6] Nurseries and garden centers (SIC 5261).

[7] Sports turf and golf courses comprising public golf courses (SIC 7992) and membership sports and recreation clubs, including private golf clubs (SIC 799700).

A related variable influencing the utilization of sod is seasonality of the business. Marketing strategies might target slow or fast periods, depending on the firm's objectives and where opportunities develop. For the firms interviewed, the peak periods were in the spring and fall and the slack periods were winter and summer (Figure 3). For some growers, the interval with the most activity might indicate the greatest opportunities, since demand at this time would be highest. On the other hand, since most producers are busiest at this time, it might also be the most competitive period. Therefore, a possible strategy is for some producers to target periods of low intensity that could create opportunities in certain markets. Slow winter months, for example, might be a good chance for contacting state and local governments who need lower quality grass for roadsides and drainage areas. Turf quality in northern areas is already compromised during this time of year, so offering a lower price to move excess production may be profitable. The point is, from a cash flow standpoint, it makes sense to even out the peaks and troughs of business activity throughout the year. Just because business is slow for most producers in winter months does not mean that it has to be for everyone.

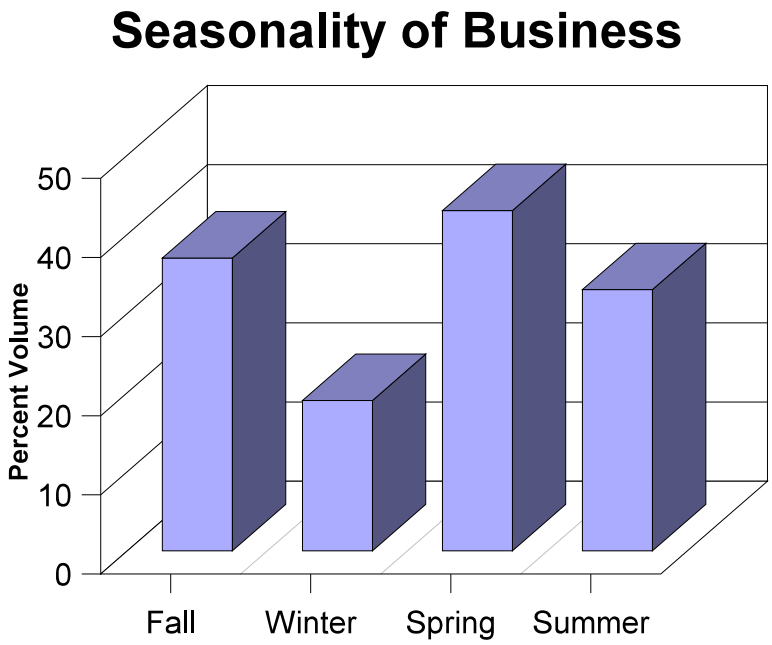

Figure 3. Seasonality of business volume for turfgrass related businesses, all regions.

Business Expectations and Market Demand

In an effort to determine current and future impacts to the sod market, people were asked how their business volume had changed from the previous year (1998) and, if it had changed, how much it had changed. Nearly all firms (87 percent), regardless of type, stated that business activity had grown from the previous year (Table 7). Sports turf users, architects and retailers all

Table 7. Changes in business volume that occurred during 1998 for turfgrass related businesses.

Type of Business	Change in Business Volume from Previous Year							
	Increase			Decrease			No Change	
	Number of Firms	Percent of Firms	Avg %	Number of Firms	Percent of Firms	Avg %	Number of Firms	Percent of Firms
Contractors[1]	42	9%	46%	6	1%	51%	1	
Architects[2]	118	27%	28%	11	3%	36%	3	1%
Retailers[3]	119	27%	24%	9	2%	11%	1	
Sports Turf[4]	109	24%	26%	18	4%	36%	8	2%
Total	388	87%	31%	44	10%	33%	13	3%

[1] General contractors and developers of single family housing construction (SIC 1521), commercial residential construction (SIC 1522) and non-residential construction (SIC 1542).

[2] Landscape architects and contractors comprising landscape counseling and planning (SIC 0781) and lawn October 26, 1999and garden services (SIC 0782).

[3] Nurseries and garden centers (SIC 5261).

[4] Sports turf and golf courses comprising public golf courses (SIC 7992) and membership sports and recreation clubs, including private golf clubs (SIC 799700).

claimed that business had increased roughly 25 percent from the previous year. General contractors and developers indicated that business volume had grown by 46 percent. Such robust expansion by this group bodes well for the sod industry, which depends heavily on new residential and commercial construction. The average growth for all firms in this group was an impressive 31 percent. Ten percent of firms claimed that business had declined and three percent stated there was no change from the previous year. Although the group claiming that business activity had declined was small, the percentage decline for the average business was quite substantial. Why these firms encountered such financial turmoil amidst a generally prosperous climate is unclear and open to speculation.

In an effort to obtain a brief glimpse into the future, respondents were asked about their expectations regarding sod purchases for the coming year (Table 8). In this case, fewer firms expressed such confidence (37 percent), although those that did were highly optimistic. Even the retail firms that were highly conservative indicated a 25 percent increase, a very strong number by any standards. From this level, expectations grew markedly. Landscape architects, design companies, general contractors and developers all expected sod purchases to increase by more than 50 percent. However, the most significant change came from the sports turf group, which anticipated a near doubling (97 percent) of purchases in 1999. Another 37 percent of respondents indicated they expected no change. Given that business volume was strong in 1998, this result can be interpreted as an expression of business confidence. In spite of such optimism from nearly three-quarters of all firms, some businesses were apprehensive. Roughly one-fourth of respondents expected sod purchases to decline by nearly 50 percent. Interestingly, the group

expecting the largest reduction was sports turf users. Although not the same identical firms, they were in the same category as those that had expressed confidence. This response could reflect the cyclical nature of this industry, including the fact that it tends to be "project driven". During a period of project activity, managers may embrace a more optimistic outlook since expansion and growth are often associated with economic health. Conversely, during a project hiatus, apprehensions may surface, including uncertainty about the economy and the financial risks a downturn portends. Sports turf facilities provide leisure activities that rely almost exclusively on discretionary income. During economic slowdowns, such expenditures are often the first to be cut by consumers.

Table 8. Expectations, by turfgrass industry group, for sod purchases next year (year 2000).

Type of Business	Expected Increase			Expected Decrease			No Change	
	Firms	Percent	Average	Firms	Percent	Average	Firms	Percent
Contractors [1]	19	4%	58%	7	1%	43%	25	5%
Architects [2]	56	12%	51%	31	7%	44%	55	12%
Retailers [3]	57	12%	25%	30	7%	35%	40	9%
Sports Turf [4]	40	9%	94%	59	12%	63%	51	11%
Total	172	37%		127	27%		171	37%

[1] General contractors and developers of single family housing construction (SIC 1521), commercial residential construction (SIC 1522) and non-residential construction (SIC 1542).

[2] Landscape architects and contractors comprising landscape counseling and planning (SIC 0781) and lawn October 26, 1999and garden services (SIC 0782).

[3] Nurseries and garden centers (SIC 5261).

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Desired Product Characteristics

Perhaps the most vital marketing function is to determine the types of products that consumers want. Stated more technically, producers need to match product characteristics with buyer expectations. The closer the match, the happier the consumer, and the more value they attach to that product. From a producer's standpoint, value should translate into higher prices and greater quantities sold, which in turn suggests higher profits. To determine buyer expectations regarding sod, three inter-related questions were asked: (1) What are the most important criteria you consider when purchasing sod? (2) What features do you like *most* about sod? (3) What features do you like *least* about sod? Respondents were also requested to rank criteria from most-to-least (4 = most; 1 = least) important. Results, presented in Tables 9 and 10, are weighted averages for all firms, firms by geographic region and by type of business.

Highlights of these results follow.

1. Purchasing Criteria

Results of All Firms. Sod quality was the number one attribute cited by the sample of firms, as indicated by a weighted value of 3.48 (Table 9). The reader should note that, because these tabulations are weighted, even small differences between values can be significant. For example, the variation between quality and price is considerable since price is ranked at 2.42, or more than one full point below quality. This large differential indicates that sod quality is a far greater concern to the average buyer than is price. The third most important feature was availability of supply, with a weighted rank of 2.38. A final purchasing criterion was delivery. With a rank of 1.51, delivery was either not important or was viewed as a lesser issue compared to the other product features.

Regional Differences. Only very minor differences appeared when the data was examined by geographic location. Apparently, where people lived did not influence their views regarding criteria for purchasing sod.

Type of Business. Whereas regional influences were negligible, larger variations surfaced when examined by type of business (Table 10; Figure 4). Quality, for example was given a high rank of 3.62 by sports turf users, but a relatively low rank (2.65) by general contractors and developers. Both retailers and architects also rated quality nearly as high as did sports turf users. On the other hand, contractors placed considerable importance on price (3.10) compared to architects (2.38), retailers (2.23) and sports turf (2.37). Availability of sod was ranked close to the average of 2.38 for all businesses, and it was also very close to price in overall importance. Rankings for delivery varied slightly more, the most significance being given by retailers (1.75) and the least by architects (1.34). In summary, of the four purchasing criteria listed, quality and price stood out as the most valued features. Furthermore, when selling sod, producers should emphasize quality over price for all groups except contractors.

An interesting question is why the contractor group differed so much from others by placing a premium on price rather than quality. Perhaps the most compelling reason is that sod purchases represent a minor part of a contractor's business volume. Many general contractors and developers may only deal with sod indirectly, through their landscape contractors. Moreover, from a marketing perspective, this group is also furthest removed from the final consumer — whether it be a homeowner, a garden center shopper, or the member of a golf & country club. Because they are more distant, they tend to be less aware of consumer concerns, and so focus instead on something near and dear to them — their own financial bottom line. Conversely, retailers and sports turf users are located much closer to the consumer and are more cognizant of the value these consumers place on turf quality.

Table 9. Importance of major product features affecting the purchase of sod, differentiated by geographic region.

Major Sod Features	Northeast [1]	East Central [2]	Southeast [3]	All Firms
1. Purchasing Criteria				
Quality	3.54	3.53	3.40	3.48
Price	2.30	2.37	2.51	2.42
Availability	2.28	2.34	2.47	2.38
Delivery	1.65	1.45	1.46	1.51
2. Features Liked Most about Sod				
Rapid Establishment	3.43	3.52	3.26	3.38
Attractive Appearance	3.00	2.80	2.81	2.86
Erosion Control	2.07	2.33	2.42	2.30
Weed Control	1.48	1.30	1.33	1.36
3. Features Liked Least about Sod				
High Initial Cost	3.27	3.19	3.19	3.21
Labor to Install	3.00	3.09	3.26	3.14
Heavy and Dirty	2.23	2.41	2.39	2.35

[1] Northeast includes the states of Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island, Vermont.

[2] East Central includes Delaware, Indiana, Kentucky, Maryland, Michigan, New Jersey, Ohio, Pennsylvania, Virginia, West Virginia.

[3] Southeast includes Alabama, Arkansas, Georgia, Florida, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee.

2. Features Liked Most about Sod

Results of All Firms. Rapid establishment was the most desired product feature with a 3.38 average weighted rank (Table 9). In both the case studies and telephone interviews, respondents noted that sod provides a "finished, professional look" to their entire job, in contrast to seed that generally conveys an image of work left undone. Attractive appearance was the second dominant feature (2.86), which may be related to rapid establishment. Interestingly, even though "appearance" is an aesthetic feature, as opposed to functional, it underscores the importance of perception by the end-user. People expect a finished product to look good and sod provides that quicker than seed. The last two features, erosion (2.30) and weed control (1.36), are more

Table 10. Importance of major product features affecting the purchase of sod, differentiated by type of business.

Major Sod Features	Contractor [1]	Landscape Services [2]	Retailer [3]	Sports Turf [4]	All Firms
1. Purchasing Criteria					
Quality	2.65	3.54	3.56	3.62	3.48
Price	3.10	2.38	2.23	2.38	2.42
Availability	2.56	2.35	2.36	2.37	2.38
Delivery	1.60	1.34	1.75	1.42	1.51
2. Features Liked Most about Sod					
Rapid Establishment	3.29	3.16	3.50	3.52	3.38
Attractive Appearance	2.62	3.02	3.09	2.58	2.86
Erosion Control	2.76	2.26	2.09	2.35	2.30
Weed Control	1.33	1.40	1.33	1.36	1.36
3. Features Liked Least about Sod					
High Initial Cost	3.37	3.25	3.20	3.14	3.21
Labor to Install	3.00	3.10	3.09	3.25	3.14
Heavy and Dirty	2.39	2.39	2.36	2.31	2.35

[1] General contractors and developers of single family housing construction (SIC 1521), commercial residential construction (SIC 1522) and non-residential construction (SIC 1542).

[2] Landscape architects and contractors comprising landscape counseling and planning (SIC 0781) and lawn October 26, 1999and garden services (SIC 0782).

[3] Nurseries and garden centers (SIC 5261).

[4] Sports turf and golf courses comprising public golf courses (SIC 7992) and membership sports and recreation clubs, including private golf clubs (SIC 799700).

functional attributes and were less important to respondents. However, notice that erosion control was ranked much higher than weed control. This result may stem from the fact that, in some areas, erosion can carry with it hefty fines by local government authorities. Soil run-off is viewed as harmful to streams and rivers and is increasingly becoming a sensitive issue with environmental agencies.

Regional Differences. Of the four features presented, only erosion control showed any type of variation with regards to geographic location of the respondent. People in the northeast appeared to be least concerned (2.07) whereas those in the east central (2.33) and southeast (2.42)

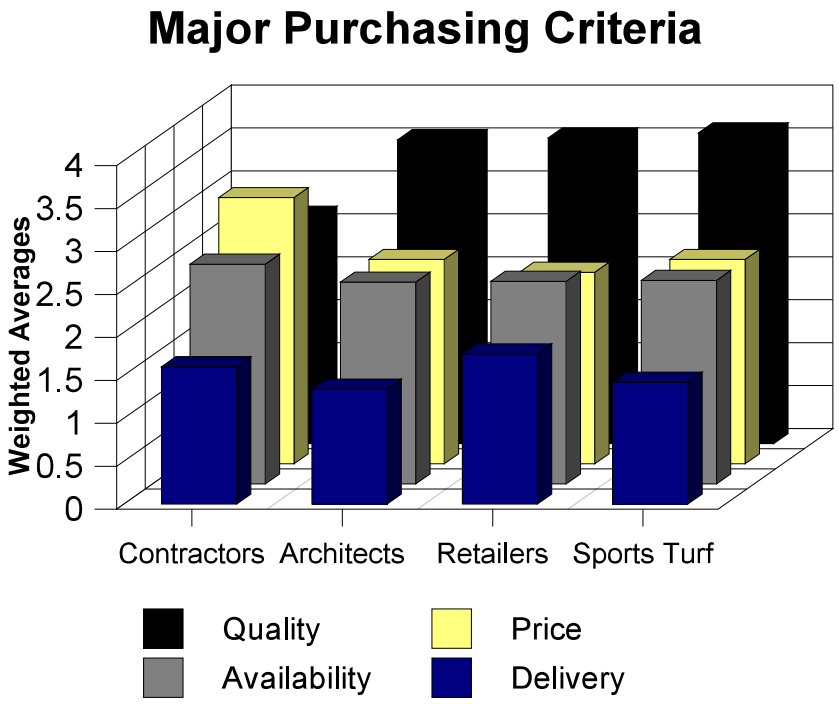

Figure 4. Comparison of the importance contractors, architects, retailers and sports turf users, place on various characteristics of sod.

ranked it slightly higher.

Type of Business. Although rapid establishment was ranked number one by all business types, there were modest differences across business categories (Table 10). Sports turf users ranked it highest (3.52) while landscape architect and design firms ranked it the lowest (3.16). Attractive appearance was the second most important attribute desired by the average firm. Retailers felt this was more critical (3.09), followed closely by architects (3.02). General contractors and developers (2.62) and sports turf facilities (2.58) ranked attractive appearance slightly lower. Note that sports turf firms emphasized "quality" as a purchasing criteria, but quality for them may indicate tolerance to heavy traffic and perhaps the absence of weeds, as opposed to color and texture. Erosion control was considered most important by general contractors and developers (2.76), who also are the ones facing potential fines for soil run-off. Sports turf users placed it as a moderate feature (2.35) while architects (2.26) and retailers (2.09) valued it least. Again, sports turf facilities are probably confronted with erosion problems more frequently in their work and so place a higher value on erosion control than retail firms who are less likely to confront such situations.

3. Features Liked Least About Sod

Results of All Firms. Three undesirable sod characteristics listed were: a) high initial cost; b) heavy and dirty; and c) the substantial labor requirements for installation. High initial cost was ranked first (3.21) followed by labor (3.14) as the most prominent disliked characteristics (Table 9). Clearly these characteristics are related — the more labor that is required to complete a job drives up overall costs. In both the case studies and telephone interviews, cost became the overriding issue . Although "heavy and dirty" was also cited repeatedly, it was not considered as important (weight of 2.35), probably because most people recognize there is little that can be done about it.

Regional Differences. Differences were negligible across regions. It is interesting to note that, whereas in the northeast high initial cost ranked highest at 3.27, in the southeast labor to install ranked highest at 3.26. This may point to the labor market situation in the southeast as a factor to be considered.

Type of Business. Differences were minor across type of business (Table 10).

Responses on How to Increase Sod Demand

The following section summarizes some of the more salient comments extracted from the case studies and the open-ended portion of the telephone surveys. Although it does not include all the information from the interviews, it does represent what the researchers believe are the more crucial observations — those that will have the most impact on the market demand for sod. These remarks were used to develop the "Market Expansion Strategies" section that follows.

1. Availability. Several noteworthy comments were made regarding a lack of sod availability. First, buyers complained that sod is difficult to get no matter where one is. Producers need to make more sod available in general. Second, remote locations such as rural areas present an even greater obstacle to acquiring sod. Producers concentrate too much on urban centers at the expense of smaller, less visible markets. To remedy this situation, producers should provide more *vendor locations* to improve product access and customer convenience. Establishing "*sod depots*" was a practical suggestion for increasing availability at the local level. Third, more sod needs to be made available in *smaller quantities*. Frequently nurseries take larger shipments than they need or can feasiblely sell. Because sod has a short shelf-life, spoilage is common. Producers should offer smaller orders, perhaps 500 square feet, and eliminate the large, minimum-sized orders of 2000 sq. ft. or more that exceed most nurseries' carrying capacity. Fourth, have more *year-around availability*. Sod is always difficult to obtain in the summer months; supplies should be better regulated. Producers should consider *contract growing* to their larger volume customers to guarantee supply. Fifth, implement more *effective advertising* to let customers know where to purchase sod. Sixth, *more grass varieties* are needed — too few choices are available, including a lack of blended grasses.

2. Cost. Respondents complained repeatedly about the high cost of sod. One individual suggested that if producers made sod less expensive, more people would buy it, thereby increasing demand. Others felt that high installation costs because of labor reduced sod demand.

In terms of positive advice, several people indicated that mechanized laying of big rolls revolutionized their businesses, reducing labor requirements and costs, and sped up their operation. Promote the use of *sod-laying machinery* in conjunction with more *sod rolls* in order to increase demand. Second, *cost comparisons* with seed were also encouraged. The industry needs to inform buyers that, when one takes into account the time factor involved in establishing seed (1–2 years, depending on time of year it was planted), sod is probably cheaper. Third, some complaints were made that sod uses too much water. Again, *water consumption comparisons* of sod versus seed might be useful to educate consumers.

3. Delivery. As in the case above, producers were asked to reduce order sizes. *Prohibitively large orders* have three negative consequences for producers: 1) the client is forced to buy more than wanted, in which case the producer has an unhappy customer; 2) the potential customer chooses to look elsewhere; or 3) the customer chooses seed over sod as a solution. The bottom line — under all three scenarios the producer loses a customer. A second major complaint was *unreliable delivery*. Respondents felt that producers should deliver sod when the customer wants it, not when it is convenient for the producer. Sod should also be *delivered fresh* — don't cut it today and deliver tomorrow or the day after. Third, *cover sod* during shipping so that it is protected in hot weather. Buyers complained that the ends often get dried out and burned. After sod is installed, it has an unsightly checkerboard appearance. To make matters worse, weeds generally grow in the dead areas, which compounds the problem and angers the customer. Fourth, some people believed *freight charges* were too high. Producers need to assess whether shipping costs are reasonable, including the prices charged by their distributors.

4. Quality. Recall that sod quality was the most important characteristic sought by buyers, yet it was also a major complaint. First, a *lack of consistency* was cited from two perspectives: a) Producers need to better monitor their own product quality. Buyers felt quality varied too much from one shipment to the next; and b) Quality varied too much within the industry — some producers provide consistent and reliable quality, others do not. Sod growers who sell products of inferior quality undermine the reputation of everyone. Providing consistent and reliable quality through a *grades and standards* program is critical in the long run for the industry. A second quality issue pertained to harvesting. Sod is often *harvested immature*, then falls apart by the time the customer gets it. This makes landscapers, or whoever else is responsible for the lawn, look bad; it also raises costs when the sod has to be replaced. Third, *sod purity* is compromised too often. Numerous citations were made of unacceptable *contamination* from other grasses and weeds. Some people suggested developing a *sod certification* program (similar to grades and standards). Related to the purity issue, an unacceptable incidence of contamination from *pests and diseases* was cited. A comment was made that producers need to clean up their sod before selling it. Fourth, respondents complained that producers weren't careful enough about sod perishability — often it is nearly dead by the time it arrives. Buyers recommend supplying it *fresher* and cutting it with *longer roots* for quicker, more successful establishment. Fifth, *storage* is a major issue that has been ignored. Buyers desperately need longer shelf life for sod. Suggestions included allowing more space between the rolls or stacks and to consider smaller pallets for nurseries. Garden centers felt they could sell more sod if smaller pallets were offered in conjunction with more frequent deliveries. Nurseries lack space to lay out and water sod. Sixth, *incompatible soil* types — soils that come with sod are often different from the

customer's soil, which complicates the establishment process. Producers should try to provide a closer match between their own soils and the soils of their customers.

5. Education & Marketing. The industry should promote the benefits of sod. First, develop comparisons between sod and seed from several perspectives: a) *time* standpoint — customer is provided with an "instant" lawn; b) *convenience* — sod eliminates tracking in mud and dirt into newly built homes; c) *environmental* benefits — sod filters out contaminants from cars and trucks and prevents or reduces soil erosion; d) *aesthetic* features — sod provides a beautiful cover in city parks and is a clean place for children to play; and e) *economic* — seed requires 1–2 years to attain the same quality as sod. Second, consider *educating allied industries*. Many businesses use sod directly, or rely on it indirectly. Architects and developers, for example, use sod but are less aware of its advantages, or the true costs of seeded areas. If businesses were convinced of sod's benefits, they would use it more. Third, provide more *advertising* at the regional and national level. The public needs more exposure. Consumers need to be targeted, not just the garden centers or landscape businesses. If consumers want sod, they will inform the garden centers, who in turn will supply more of it. Producers often advertise in the wrong places, like trade magazines, rather than targeting media their customers listen to or read. Market more to sports turf businesses, an overlooked market, by promoting the benefits of sod over artificial turf.

6. Professionalism. First, producers should be more credible by standing behind their product through guarantees. The industry has a bad reputation of stepping away from responsibility once a sale is made. Growers should recognize their obligations, particularly with regard to delivery. Obtaining on-time delivery is a problem, so work closer with shipping firms. Second, brokers often behave unprofessionally by being too cut-throat. The sod industry should work closer with brokers.

Part IV: Market Expansion Strategies

Results of this research indicate that sod producers in the eastern portion of the United States have ample opportunities to increase demand for their product. Producers need to take individual and collective action to reap the full potential of the market. The recommendations that follow highlight some of the more significant market opportunities for producers; however, they should not be viewed as the only ones. Indeed, if one message is clear from this research, opportunities are nearly limitless and sod producers merely need to become committed in their attitude and practical in their approach. With an economy still on firm ground, housing starts showing no sign of diminishing, and the work force at full employment, the demand for sod should remain strong in the foreseeable future.

1. Diversify distribution. Research results indicate that there is far too much concentration at the farm/wholesale level. The distribution flow of sod is too restricted. Potential buyers need more access. If more sod is moved to the retail sector — whether through retail chains, independent garden centers, or perhaps even "sod depots" established by producers — sod demand will increase. To do this, it means that producers must become more flexible in their business practices. In other words, producers must overcome their tendency towards selling sod

only in large shipments. Targeting more sod at the retail level requires selling smaller quantities to meet the constraints of the nurseries and garden centers. Nurseries stated repeatedly that they could sell a lot more sod if they were allowed to purchase smaller inventories. Even large retail chains are faced with space limitations when it comes to maintaining sod.

Similarly, producers should be willing to work with the retail sector to devise technologies for increasing the length of time sod can be stored. To keep sod from deteriorating once it has been cut, sod needs oxygen and water. To shelve sod, nurseries lay the sod in parking lots, or any other place they can find, and water it. But this requires considerable space, something most nurseries and garden centers lack. Perhaps a new type of pallet can be devised that allows spaces between each sod layer on the pallet. This extra space would allow oxygen to permeate the thatch and a misting system could supply water between the layers. Such a pallet system would save considerable space, allow more sod to be stored, improve on sod quality that is considered a premium feature, and result in substantially greater volumes of sod bought and sold.

Finally, producers should avoid shipping sod long distances and unprotected during periods of extreme heat. Research indicated that frequently the buyer received sod with the ends dried out and burned. This resulted in a "quilting" effect when the sod was laid. In addition, respondents noted that these dead areas were highly prone to weeds within a short period. No consumer would be happy with a quilted, weed infested lawn, particularly after spending so much money purchasing it. The message is — a little care can go a long way in keeping a satisfied customer.

2. Target architects and developers. Architects and developers are the ones that specify what is to be included, or not included, in a building site. Concentrate on developing educational material and programs that target architects and developers of commercial and residential complexes. These businesses are highly cost-conscious and need only to be convinced of the benefits of sod. Rectify misconceptions about the cost of sod by comparing the total costs associated with seed for the duration it takes to get it fully established. Sod has a bad reputation because of the high initial cost, but seed has a prolonged cost that is generally overlooked. If sod were included in the building budget, sod would actually be a very minor expense. For example, assume that the price of sod is $0.30 square foot laid (land preparation not included since seeded lawns also require it) and there is a lawn size of 3,000 square feet. Assume the cost of a new home is $150,000. Then {$3,000 x 0.3 = nearly $1,000} ÷ {$150,000} = 0.67%, or one-third of one percent! This is clearly not a financial obstacle by any stretch of the imagination. The problem is that sod is not factored into the original budget so that the homeowner is faced with this additional cost at the very end of the project, something that most people do not anticipate and are not prepared for financially. If it were factored in initially, most homeowners would not even notice the additional expense. Moreover, if the homeowners were educated as to the benefits of sod, they would probably insist on it. During the personal interviews, developers noted that seeding involved considerable aggravation and cost from: a) repeated repairs after rains; b) fines levied by regulatory agencies for soil run-off; c) irate homeowners that were faced with dirty homes from months of mud and dirt tracked in by kids, pets, and adults; and d) a bad image for developers from an environmental and a professional standpoint. As one developer in the northeast — who was in the process of moving entirely out of seed and into sod, who anticipated being 100% sod in the year 2000 and who was incorporating the cost as a line-item in

the budget — put it:

> "*People who build a home and then seed their lawns end up unhappy. After all that money, children or dogs track in mud and it ruins the entire job. We could have done everything right and built a perfect home. But the mud and dirt leave a bad taste in their mouths, and they blame us for it even though it's not our fault. The problem is that one angry customer tells ten others and the bad word keeps spreading. This is a very large over-looked cost."*

Producers should also identify local areas that actively enforce fines and other penalties for soil erosion. Architects and developers in these areas will be particularly receptive to being introduced to a viable alternative to seed. Show them the numbers in terms of cost and emphasize the other benefits as well (i.e., avoiding the aggravations associated with maintaining seeded lawns). Consider also contacting city/county agencies and convince them of the many benefits of sod.

3. **Advertise more effectively**. Advertising is something most businesses take for granted. One would imagine that advertising is commonplace. Results of this research indicate that this may be an erroneous assumption. Indeed, due primarily to the sustained economic expansion in the U.S., it appears that in most areas of the survey region, demand exceeded supply. Therefore, if producers are having trouble moving product, it is not from a lack of market demand. In fact, one of the biggest complaints from customers was their frustrations in trying to find sod. Some noted that if they did find it, it was too distant to purchase. What this suggests is that a major obstacle to greater sales for many producers is a lack of basic communication. Producers need to become much more aggressive in their advertising. This means not just more advertising, but advertising more *effectively*. Identify who your customers are, where they are, and then identify specific advertising media that will reach them. Submitting promotional materials in your industry trade magazine is not the answer because most of your lay customers will never see it.

The turfgrass industry should consider implementing a top-notch national advertising campaign. Average consumers take turfgrass for granted — they think little about how much grass contributes to the quality of their lives by providing a safe playing environment for their children, preventing soil erosion, reducing temperatures around the house during hot summer days, and filtering out harmful chemicals that might otherwise reach vital water supplies. Turfgrass needs more public exposure that promotes its many benefits. A positive image goes a long way to alleviate unnecessary government regulations based on misconceptions or ignorance about this important product.

4. **Improve quality and professionalism**. Quality was ranked as the most important purchasing criterion among buyers. Unfortunately, lack of quality was also a major complaint. Improving quality needs to be exercised not only from an individual producer standpoint but also collectively by the industry. Research results indicates that too much poor quality sod is presently being distributed. Poor quality from even one producer hurts everyone. Poor quality comes in many forms — sod infested with weeds, harmful insects, or disease; sod cut too soon and left sitting in fields waiting for shipment; sod cut improperly (not enough soil, with dull cutting blades, or unevenly) so that it falls apart by the time the customer receives it; sod

contaminated with unwanted grasses; etc. The sod production industry should consider strategies for improving quality at the local, regional and national levels. Educational programs directed at producers that emphasize the long-term benefits of quality — benefits for everyone — should be developed. Grades and standards have been brought up before, but such a program has many merits. Given the importance that buyers attribute to quality, it is clear that producers can use this easily and effectively to increase demand.

Quality goes way beyond just trying to improve one's product. Rather, quality involves an attitude, a way of thinking, a philosophy of life that is embraced completely. Quality is a thoroughly pragmatic, dollars and cents approach to management that, done honestly and diligently, will enhance productivity, lower costs and increase net returns to the business. Achieving quality isn't easy – it is a never ending effort to improve. Quality programs try to improve the way things are done to avoid or eliminate troubles before they arise, instead of solving problems as they come up. The point is, nothing is free, cause and effect are real. If a sod producer takes short cuts by reducing fertilizer, weed or pest control programs to save money, in the long run it will *cost* money through a poor quality product. Buyers will remember poor quality and soon look elsewhere. Moreover, the more it happens, the faster word spreads, and a negative image begins to encompass the business. In economic good times, a firm might get away with it, but eventually it will be an "Achilles' heel" and could easily lead to the termination of the business.

Numerous respondents complained about late deliveries and/or producers that did not stand behind their product. Professionalism, quality and business success are all inter-related. A commitment to professional standards and the quality of the product are inseparable. A true professional will not allow poor quality to leave the farm. Similarly, a professional embraces ethical business practices, is reliable and efficient, and treats both employees and customers right. Professionals are successful because they do things right, and everyone wants to do business with someone who can be trusted, time and time again. Unprofessional behavior hurts everyone — other sod producers, the customers, and even the producer with the unacceptable behavior.

5. **Educate producers and consumers**. The sod industry really needs to become aggressive at promoting their product through educational programs. Although most people like sod once they have it, serious misconceptions surround it. At least four critical areas should be addressed by sod producers regarding education: 1) Cost – the cost factor has already been discussed, but people need to hear about it. Sod is <u>not</u> expensive, people only <u>think</u> it is. Therefore cost is an erroneous perception among consumers. But erroneous perceptions, if they are not corrected, have real life consequences. 2) Convenience – consumers should be educated about the time factor — that sod provides a beautiful, green lawn with a clean playing environment almost instantly. This should be an easy sell because Americans are notorious for demanding "instant gratification". 3) Environment – consumers should be taught about the environmental benefits of sod, particularly in urban areas where pollutants from street run-off is excessive and dangerous. Research has been done to show that turf acts as a natural filtering device — the homeowner needs to know about it. 4) Maintenance and Care – sod frequently comes under attack during periods of drought because it requires so much water. Actually, sod does <u>*not*</u> require disproportionate amounts of water. The problem is not the sod, it is the homeowner or the business who abuses it. People water lawns far too much. Moreover, the computerized watering

systems are a bane to the image of turfgrass because, once installed, the consumers think their tasks are done — after all, its automatic! The industry should educate consumers to monitor their irrigation systems regularly to ensure they function properly (all the heads are on properly, there are no major leaks, etc), that watering regimes are appropriate for the time of year, that the system is turned off until the lawn needs additional watering after periods of heavy rainfall, etc. The sod industry should take leadership by working with the irrigation industry in promoting technologies that conserve water. In addition, develop inexpensive educational materials, such as brochures and pamphlets that instruct homeowners how to care for their lawns in an environmentally responsible manner. By doing this, community leaders will recognize that the industry is acting responsibly and be more willing to be a partner during periods of drought, rather than an antagonist and an enforcer.

6. **Target off-season periods**. Too much emphasis is placed on the spring and summer months. Producers need to identify opportunities during the beginning and end of winter months when outdoor activity is down. City/county governments, public and private schools, perhaps even homeowners and developers may be receptive to buying sod if conditions are suitable. Since it is likely that sod quality will be inferior during this period, consider selling it cheaper as a "Grade B" material. By selling it at a lower price, more volume may be sold that could help producers who are faced with unwanted inventories. Naturally, selling in off-periods will be influenced by weather conditions, but small "windows" at the beginning and end of winter may be feasible, particularly for certain areas like roadsides and highway rights-of-way. Moreover, sod has an advantage over seed in that it is more easily established during these marginal periods. Finally, producers located further south should recognize that these "windows of opportunity" will remain open longer for them.

Many respondents complained about not being able to obtain sod when it was needed. This indicates that some markets are not being served adequately. For instance, some people complained that rural areas were being overlooked because producers were concentrating on larger volume metropolitan centers. Clearly such markets represent tangible opportunities, perhaps during off-season months. At the very least, this time should be used making contacts for the spring, lining up customers, and selling as early as conditions allow.

Finally, sod producers should consider contract growing. Several respondents indicated they would be interested in contracts if they could guarantee supply. Although contracting may not be suitable for everyone, it can be particularly useful for larger volume buyers. Generally, both parties specify the types of grass, quantities, price(s), and date(s) of delivery. Although it involves certain risks to each party (e.g. if the market price of sod is lower than the contract price at delivery time, the buyer loses. The converse of this would also be true.), contracts can be written with contingencies to protect each party. Because of their many inherent benefits, the use of contracts in agriculture continues to grow. It may prudent for the sod production industry to explore this form of selling further.

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