## OKLAHOMA'S WHOLESALE

## NURSERY INDUSTRY

## PRODUCTION PRACTICES AND TRADE FLOWS



AGRICULTURAL EXPERIMENT STATION DIVISION OF AGRICULTURE OKLAHOMA STATE UNIVERSITY

## Table of Contents

Introduction ..... 1
Objectives ..... 1
Procedure ..... 2
General Characteristics ..... 2
Age of Firms ..... 3
Business Organization ..... 3
Branch Outlets ..... 3
Nursery Labor ..... 3
Computerization ..... 3
Marketing Practices ..... 4
Type of Plants Sold ..... 4
Sales Considerations ..... 4
Product Flȯw ..... 5
State of Origin of Propagated Plants ..... 5
Monthly Sales Pattern ..... 6
Shipping Destinations ..... 6
Price Determination ..... 7
Transportation ..... 8
Limitations to Expansion ..... 11
Advertising ..... 11
Sales Methods ..... 13
Summary ..... 13
References ..... 13
Appendix ..... 14
National Nursery Industry Survey (questionnaire) ..... 14

# OKLAHOMA'S WHOLESALE NURSERY INDUSTRY: PRODUCTION PRACTICES AND TRADE FLOWS 

Janet C. Henderson<br>Department of Horticulture and Landscape Architecture<br>Oklahoma State University<br>Stillwater, OK 74078<br>Raymond Joe Schatzer<br>Department of Agricultural Economics<br>Oklahoma State University<br>Stillwater, OK 74078.

## Introduction

The 1989 Nursery Business 100 Report (Brantwood, 1989) lists Oklahoma as 16th among the states in nursery production based on total sales dollars. Oklahoma`s sales totalled $\$ 75$ million in 1989. Three of the top ten nurseries have their headquarters and/or growing areas in Eastern Oklahoma. Most of the nursery acreage was located in Cherokee County, where 11 nurseries with a total of 1700 acres in the open and 2 million square feet under glass or other protection were located (U.S. Department of Commerce, 1987). Oklahoma County and Tulsa County also reported large numbers of nurseries, and the nursery industry was apparent across the state.

Despite these figures, little information is available to help characterize Oklahoma's wholesale nursery industry. This survey was initiated to generate data which would help nurserymen and other groups better understand this specialized industry. Data of this type could help those involved in nursery production to better use resources and to identify potential market trends. It would also indicate the impact that this industry has on Oklahoma's economy.

## Objectives

There were two primary objectives for this study: 1) To determine the size of the Oklahoma wholesale nursery industry and 2) To determine trade practices of Oklahoma wholesale nurseries.

## Procedure

This survey was conducted as part of a regional survey (Appendix A) by the S103 Regional Research Committee, "Technical and Economical Efficiencies of Producing and Marketing Landscape Plants". Surveys were mailed to 107 wholesale nurseries listed in the Oklahoma Certified Greenhouse and Nursery Directory (1988) during March of 1988. Nursery representatives were asked to respond in previously addressed, postage paid envelopes. A total of 38 nurseries (35.5\%) responded to the survey; however, not all nurseries responded to every question.

Information requested from nursery managers included general characteristics of their nursery relating to business organization, employee numbers and computerization of various operations. The types of products sold, sales methods, and limitations on sales were important in characterizing the industry as a whole. Trade characteristics were investigated through questions about destinations of nursery stock produced in Oklahoma. types of firms which receive that stock, pricing information, and modes of transportation.

## General Characteristics

All of the nurseries included in the survey had a production area greater than one acre. Nurseries involved in field or container production were included, and no distinction was made based on plant species produced. In the nursery industry, return variability depends more on species and plant size than on size of production area. Therefore, acreage size classifications would be misleading in attempting to compare nursery sales and marketing practices. For this reason, sales and marketing information were based on annual sales by category: Less than \$100,000, \$100,000 to $\$ 499,999, \$ 500,000$ to $\$ 999,999$, and $\$ 1,000,000$ or more.

The total sales for all nurseries surveyed totalled $\$ 35.6$ million. Of those who responded to the question concerning sales, 67 percent indicated total sales of less than $\$ 100,000$ (Table 1).

Table 1. Gross sales by Oklahoma nursery producers, 1988.

| Gross sales | Number of <br> respondents | Percent of <br> respondents |
| :--- | :--- | :--- |
| Less than $\$ 100,000$ | 24 | 67 |
| $\$ 100,000$ to $\$ 499,999$ | 7 | 19 |
| $\$ 500,000$ to $\$ 999,999$ | 2 | 6 |
| $\$ 1,000,000$ or greater | 3 | 9 |

## Age of Firms

Of the 38 nurseries which responded to the survey, half were established after 1980. Six nurseries were established between 1960 and 1979 and nine were established prior to 1960.

## Business Organization

Half of the nurseries responding were sole proprietorships, while nine were partnerships and ten were organized as corporations.

## Branch Outlets

Three respondents indicated that their firms had outlets in other states. Two firms listed outlets in Texas, while one firm listed Kansas and another firm listed Missouri and Arkansas as states in which affiliates were located.

## Nursery Labor

Of the nurseries surveyed, 63 percent had less than five permanent employees at their Oklahoma location and 82 percent had five or less temporary employees.

## Computerization

The availability and flexibility of microcomputers in recent years have allowed for more widespread use. Of the nurseries surveyed, more than 25 percent indicated that computers were used for word processing and accounting (Table 2). Accounting and inventory were most often cited as the areas in which computerization is planned within the next five years.

## Table 2. Percent of firms with various functions currently computerized or with computerization planned within 5 years.

|  | Percent <br> currently <br> computerized | Percent with <br> computerization <br> planned within <br> 5 |
| :--- | :---: | :---: |
| Function years |  |  |$|$| Word Processing | 26.0 | 8.0 |
| :--- | :---: | :---: |
| Accounting | 28.9 | 15.7 |
| Inventory | 13.1 | 18.4 |
| Financial investments | 5.2 | 2.6 |
| Marketing | 5.2 | 7.8 |
| Communications | 10.5 | 5.2 |
| Other | 7.8 | 2.6 |

## Marketing Practices

## Type of Plants Sold

Ornamental nurseries commonly carry a wide variety of plants. To allow comparisons, sales were separated into 11 plant classes and five sales percentage classes (Table 3). Nurseries with 75 to 100 percent of their stock in one class most often identified the deciduous shade and flowering trees as their specialization. While plants in all categories were sold in the state, more than 85 percent of the nurseries indicated that they did not sell small fruits or propagating material. This sales distribution indicates that there was a wide diversity in the types of plants provided by nursery producers within the state.

In addition to the variety of plants provided by Oklahoma producers, several processing methods are used to prepare plants for transport to the consumer. The growing system determines the processing method used to a great extent. By far, the majority of Oklahoma producers supply balled and burlapped and/or containerized plants (Table 4). All of those who listed bareroot, balled and potted or processed balled as processing methods indicated that less than 25 percent of their stock was prepared by any one of these methods. The field grow bags were used by only a few nurseries, and they seem to be the primary production method for those nurseries. One respondent listed evergreen trees as 100 percent of the nursery's plants and cut stock as its primary method of processing, suggesting that the operation dealt primarily with Christmas trees.

## Sales Considerations

Several methods were used in making sales transactions (Table 5). Thirty percent of the nurseries surveyed used negotiated in-person orders for over 75 percent of their sales transactions. Nonnegotiated in-person orders were used by 15 percent of the nurseries for at least 75 percent of their sales transactions. More than 80 percent of the firms indicated that they made fewer than 25 percent of their sales transactions at trade shows or by phone. All firms indicated that no sales transactions were made by mail order.

Although trade shows booked less than 25 percent of sales transactions as either negotiated or nonnegotiated orders, 38 percent of the firms surveyed were represented at one to seven trade shows during 1988. One firm attended 18 trade shows, while 59 percent did not attend any shows.

Overall, over 72 percent of sales were done with repeat customers, indicating that most firms have built a clientele which regularly books nursery orders.

Many factors limit expansion of firms. The surveyed nurseries were asked to rank several factors as limiting to expansion on a scale of 1 to 5 with 1 being the most limiting (Table 6). Capital was most often ranked as the number 1 limiting factor to expansion, but market demand was placed in the top 5 factors most often, and availability of labor was considered a limitation to expansion in most nurseries. Environmental regulations were the least limiting to expansion of sales.

## Table 3. Sales distribution by plant category of Oklahoma

 nursery stock producers, 1988.| Plant Category | 0\% ${ }^{\text {a }}$ | Percent of sales in plant category |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1-25\% | 25-50\% | 50-75\% | 75-100\% |
|  | percent of nurseries |  |  |  |  |
| Deciduous shade a |  |  |  |  |  |
| nd flowering trees | 15.8 | 16.6 | 27.0 | 16.2 | 24.3 |
| Deciduous shrubs | 44.7 | 55.3 | 0.0 | 0.0 | 0.0 |
| Broad-leaved evergreen shrubs | 47.4 | 33.7 | 16.2 | 2.7 | 0.0 |
| Narrow-leaved evergreen shrubs | 55.3 | 39.3 | 2.7 | 2.7 | 0.0 |
| Evergreen trees | 36.8 | 41.6 | 10.8 | 2.7 | 8.1 |
| Vines and ground covers | 65.8 | 31.5 | 0.0 | 2.7 | 0.0 |
| Roses | 73.7 | 26.3 | 0.0 | 0.0 | 0.0 |
| Herbaceous perennials | 76.3 | 18.3 | 2.7 | 0.0 | 2.7 |
| Tree fruits | 76.3 | 23.7 | 0.0 | 0.0 | 0.0 |
| Small fruits | 89.5 | 10.5 | 0.0 | 0.0 | 0.0 |
| Propagating material (liners, cuttings, etc.) | 86.8 | 13.2 | 0.0 | 0.0 | 0.0 |

${ }^{a} 0 \%$ indicates that the indicated plant category was not sold by the percent of nurseries listed.

## Product Flow

## State of Origin of Propagated Plants

While many nurseries propagated their own growing stock, others bought their stock from nurseries that had stock plants and labor available for propagation. Of the nurseries which responded to this survey, 33 indicated that they buy propagated materials in the form of seedlings, liners, whips or grafted plants and grow them to a salable size (Table 7). Oklahoma and Tennessee were indicated by approximately

Table 4. Percentage of Oklahoma firms which sell plants in various root/media categories, 1988.

|  |  | Percent of plants sold in category |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Category | $0 \%$ | $\mathbf{1 - 2 5 \%}$ | $\mathbf{2 5 - 5 0 \%}$ | $\mathbf{5 0 - 7 5 \%}$ | $\mathbf{7 5 - 1 0 0 \%}$ |
|  |  |  |  | Percent of nurseries- |  |
| Bareroot | 81.6 | 18.4 | 0.0 | 0.0 | 0.0 |
| Balled and burlapped | 36.8 | 4.9 | 16.7 | 11.1 | 30.6 |
| Container | 31.6 | 15.6 | 13.9 | 13.9 | 25.0 |
| Balled and potted | 86.8 | 13.1 | 0.0 | 0.0 | 0.0 |
| Processed balled | 94.7 | 5.3 | 0.0 | 0.0 | 0.0 |
| Field grow bag | 94.4 | 0.0 | 0.0 | 0.0 | 5.6 |

${ }^{a} 0 \%$ indicates that the indicated root/media category was not sold by the percent of nurseries listed.
half of the respondents as states of origin of these materials. Oregon and Texas were indicated by approximately 25 percent of the nurseries.

## Monthly Sales Pattern

Most sales ( 20 percent) were made during March and April, followed closely by May and December (Table 8). The slowest sales months were July, August and September. Since these nurseries supply the retail industry with plant material, the late summer months would be expected to be slow in sales since the retail industry should have received their stock for the year. Spring and fall are primary planting times, not midsummer. Also, since balled and burlapped plants are widely used in the state, sales would be expected to be lower while the plants were actively growing.

## Shipping Destinations

One firm indicated that 3 percent of total sales were shipped out of the United States. Most firms listed Oklahoma as the primary destination of their nursery stock, with 36 percent of total gross sales remaining in the state (Table 9). Texas was listed by nine firms and received 32 percent of the total gross sales reported by the respondents. While several other states received Oklahoma-produced nursery stock, the amount received was considerably lower than that of Texas.

Sales dollars received by firms were classified as retail (plants sold to the final consumer) or wholesale (plants sold to another firm for resale to the final consumer). Retail sales totalled approximately $\$ 2.9$ million, while wholesale dollars totalled

Table 5. Percentage of Oklahoma wholesale nursery sales transactions made by various methods, 1988.

| Transaction |  | Percent of sales transactions |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Medium | 0\%a | 1-25\% | 25-50\% ercent of | 50-75\% urseries | 75-100\% |
| Trade show orders (negotiated) | 78.9 | 21.1 | 0.0 | 0.0 | 0.0 |
| Trade show orders (nonnegotiated) | 94.7 | 5.3 | 0.0 | 0.0 | 0.0 |
| Telephone orders (negotiated) | 73.7 | 14.2 | 3.0 | 6.0 | 3.0 |
| Telephone orders (nonnegotiated) | 57.9 | 26.9 | 15.2 | 0.0 | 0.0 |
| In-person orders (negotiated) | 42.1 | 3.4 | 15.2 | 9.0 | 30.3 |
| In-person orders (nonnegotiated) | 52.6 | 5.0 | 12.1 | 15.2 | 15.2 |
| Mail order | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 |

[^0]$\$ 32.6$ million. Of the wholesale earnings, $\$ 2.8$ million came from rewholesalers, $\$ 24.9$ million came from retailers, and $\$ 4.9$ million was from landscape firms.

To better understand the distribution of plants to rewholesalers, retailers and landscapers, respondents were asked to list the top six destinations of their nursery stock by the type of firm receiving the shipments. Most of the rewholesale dollars came from within the state of Oklahoma (Table 10). Texas, Connecticut and Illinois also received significant amounts of nursery stock compared to other states listed. Retail sales dollars were primarily to Texas; however, more firms listed Oklahoma among their top six retail recipients of nursery stock. Among landscape firms, Oklahoma received the greatest percent of sales and more respondents listed Oklahoma as a recipient than any other state.

## Price Determination

Most firms listed cost of production and comparison to other growers as the most important factors in their determination of price (Table 11). Grade of plants

Table 6. Percentage of Oklahoma firms ranking various factors as limiting to expansion, 1988. Factors were ranked from 1 to 5 with 1 as the most limiting factor.

| Limiting <br> factor | $\mathbf{1}$ | $\mathbf{2}$ | Rank | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Water supply | 5.3 | 5.3 | 2.6 | 7.8 | 5.3 | Not a <br> Problem |
| Market demand | 13.1 | 26.3 | 13.1 | 5.3 | 15.8 | 26.3 |
| Competition | 2.6 | 2.6 | 7.9 | 13.1 | 15.8 | 57.9 |
| Weather uncertainty | 0.0 | 7.9 | 5.3 | 2.6 | 5.3 | 79.0 |
| Environmental <br> regulations | 0.0 | 0.0 | 0.0 | 0.0 | 2.6 | 97.4 |
| Owner's <br> management | 10.5 | 7.9 | 5.3 | 5.3 | 5.3 | 65.6 |
| Land | 10.5 | 5.3 | 10.5 | 2.6 | 5.3 | 65.6 |
| Labor | 5.3 | 5.3 | 23.7 | 15.8 | 13.1 | 36.8 |
| Capital | 34.2 | 18.4 | 10.5 | 2.6 | 2.6 | 31.6 |
| Ability to hire/ |  |  |  |  |  |  |
| develop competent |  |  |  |  |  |  |
| management | 2.6 | 7.9 | 7.9 | 18.4 | 0.0 | 63.2 |
| Other | 5.3 | 0.0 | 0.0 | 2.6 | 0.0 | 92.1 |

and market demand were also considered among the top five price determining factors by more than 60 percent of the nurseries surveyed. Factors considered least important were inflation and time of year.

An average of 82 percent of sales were completed at the nurseries' printed price. Three firms indicated that they give discounts for quantity purchases. One firm gives a 10 percent discount for all purchases over $\$ 1000$, while two firms have several discounts depending on dollar value of the total purchase.

## Transportation

Trucks were listed as the most common form of shipping transportation with 97 percent of all stock shipped in this manner. The other 3 percent of nursery stock was shipped by parcel post and United Parcel Service. None of the firms indicated shipments by rail or air freight.

Table 7. State of origin for seedlings, liners, whips or grafted material purchased by Oklahoma nurseries, 1988.

|  | Nurseries buying |  |
| :--- | :---: | :---: |
| Origin | Number | Percent |
| Oklahoma | 19 | 57.6 |
| Tennessee | 16 | 48.5 |
| Oregon | 9 | 27.3 |
| Texas | 9 | 27.3 |
| California | 6 | 18.2 |
| Alabama | 4 | 12.1 |
| Arkansas | 4 | 12.1 |
| Pennsylvania | 4 | 12.1 |
| Louisiana | 2 | 6.1 |
| lowa | 2 | 6.1 |
| Missouri | 2 | 6.1 |
| Georgia | 1 | 3.0 |
| Ohio | 1 | 3.0 |
| Michigan | 1 | 3.0 |
| North Carolina | 1 | 3.0 |
| Nevada | 1 | 3.0 |
| Kansas | 1 | 3.0 |
| Illinois | 1 | 3.0 |
|  |  |  |
| All States | 33 | 86.8 |

Table 8. Average percent of nursery stock sales occurring monthly, Oklahoma, 1988.

| Month | Number of <br> Respondents | Average <br> percent of <br> sales |
| :--- | :---: | ---: |
| January | 22 | 8.9 |
| February | 23 | 11.2 |
| March | 29 | 20.5 |
| April | 27 | 20.6 |
| May | 25 | 18.1 |
| June | 21 | 10.4 |
| July | 18 | 5.6 |
| August | 18 | 4.5 |
| September | 24 | 7.2 |
| October | 25 | 10.3 |
| November | 26 | 11.9 |
| December | 23 | 17.4 |

Table 9. Destinations of nursery stock shipped from Oklahoma nurseries, 1988.

| Destination <br> state | Number of <br> respondents | Percent of <br> gross sales |
| :--- | :---: | :---: |
| Oklahoma | 27 | 36.3 |
| Texas | 9 | 32.4 |
| Missouri | 6 | 12.0 |
| Illinois | 2 | 6.4 |
| Massachusetts | 1 | 4.5 |
| Pennsylvania | 1 | 3.3 |
| Kansas | 9 | 1.9 |
| Arkansas | 8 | 1.7 |
| Colorado | 4 | 0.5 |
| Mississippi | 1 | 0.5 |
| New Mexico | 1 | 0.2 |
| Michigan | 1 | 0.1 |
| Virginia | 1 | $\star$ |

[^1]Table 10. Distribution of wholesale sales to receiving states by market outlet, Oklahoma, 1988.

| Destination | Rewholesalers |  | Retailers |  | Landscapers |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Nurseries Sales |  | Nurseries Sales |  | urse | Sales |
| Arkansas | 2 | 0.7 | 5 | 0.3 | 6 | 0.3 |
| Colorado | 1 | 0.7 | 2 | * | 1 | * |
| Connecticut | 1 | 15.2 | - | - | - | - |
| Illinois | 2 | 15.0 | 1 | 8.5 | 2 | 1.8 |
| Indiana | 1 | 4.6 | - | - | - | - |
| Kansas | 6 | 6.5 | 4 | 1.1 | 6 | 1.3 |
| Massachusetts | - | - | 1 | 6.8 | 1 | 1.2 |
| Michigan | 1 | 0.8 | - | - | - | - |
| Minnesota | 1 | 0.3 | - | - | 1 | 2.9 |
| Missouri | 2 | 0.9 | 4 | 16.0 | 2 | 15.1 |
| New Mexico | 1 | 0.7 | 2 | 0.2 | 1 | * |
| Oklahoma | 13 | 31.4 | 21 | 17.2 | 22 | 64.6 |
| Pennsylvania | - | - | 1 | 5.1 | 1 | 0.5 |
| Tennessee | - | - | 1 | * | - | - |
| Texas | 5 | 23.4 | 5 | 44.7 | 6 | 9.0 |
| Utah | - | - | - | - | 1 | * |
| Virginia | - | - | - | - | 1 | 0.2 |

*Less than $0.1 \%$ of gross sales.

## Table 11. Percentage of Oklahoma firms ranking various factors as most important in price determination, 1988. Factors were ranked from 1 to 5 with 1 as the most important factor.

| Pricing <br> factor | Rank |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ | Not a <br> factor |
| Cost of production | 36.8 | 18.4 | 13.1 | 5.3 | 7.9 | 18.4 |
| Inflation | 0.0 | 2.6 | 2.6 | 5.3 | 5.3 | 84.2 |
| Comparison to <br> other growers | 29.0 | 29.0 | 13.1 | 10.5 | 16.7 | 10.5 |
| By grade of plants | 10.5 | 10.5 | 21.1 | 10.5 | 16.7 | 36.8 |
| Market demand | 7.8 | 15.8 | 15.8 | 18.4 | 10.5 | 31.6 |
| Time of year | 0.0 | 0.0 | 5.3 | 5.3 | 10.5 | 78.9 |
| Based on inventory | 0.0 | 5.3 | 2.6 | 23.7 | 15.8 | 52.6 |
| Based on last <br> year's price | 5.2 | 7.9 | 10.5 | 5.2 | 13.2 | 57.9 |

Firms were asked about the source of their trucks for shipments. Approximately 21 percent of shipments were made by commercial common carriers, while 44 percent were sent in nursery owned, rented, leased or consigned trucks, and 35 percent were made in buyer owned, rented, leased or consigned trucks. Of those deliveries made in nursery-owned trucks, 92 percent of the return trips were empty backhauls. Over half (54\%) of the firms indicated that they had a maximum radius of delivery. This radius ranged from 35 to 300 miles from the nursery.

## Limitations to Expansion

The factors identified most often by nursery firms as most limiting to expansion were market demand or development (Table 12). Two other factors, transportation availability or costs and lack of owner interest in expansion, were cited almost as often.

## Advertising

The average allocation to advertising was just over 3 percent of sales, but amounts ranged from 0 to 20 percent of sales. Yellow pages, newspapers and newsletters or flyers were listed by most nurseries as common advertising media (Table 13). Newspaper advertising received the largest budget allocations while billboards and radio received the smallest allocations.

## Table 12. Factors identified by Oklahoma firms as most limiting to expansion of geographic trade areas, 1988.

| Factor | Percent <br> of <br> firms |
| :--- | :---: |
| Market demand or development | 24.1 |
| Transportation availability or costs | 20.7 |
| Owner does not wish to expand | 20.7 |
| Capital | 10.3 |
| Labor supply or quality | 10.3 |
| Time | 6.9 |
| Limited inventory | 3.4 |
| Limited facilities | 3.4 |

Table 13. Percent of advertising budget allocated to various advertising media by Oklahoma nurseries, 1988.

| Advertising <br> medium | Number of <br> nurseries | Average percent <br> of advertising <br> budget |
| :--- | :---: | :---: |
| Yellow pages | 13 | 19 |
| Billboards | 2 | 3 |
| Radio | 5 | 3 |
| Trade shows | 7 | 11 |
| Newspaper | 12 | 27 |
| Trade journals | 6 | 8 |
| Catalogs | 7 | 14 |
| Newsletters/flyers | 13 | 16 |

## Sales Methods

Seven of the firms surveyed indicated that they had salespeople on their payrolls who travel and represent their firms. Five of those firms had less than four salespersons while one had 19 and another did not indicate their number of salespeople. One nursery manager indicated that the services of a sales broker were used. and that sales broker was headquartered in Oklahoma. In this case, the broker worked on a 10 percent commission.

## Summary

Oklahoma has a diverse nursery industry consisting primarily of nurseries which are sole proprietorships with fewer than five permanent employees, five temporary employees, and gross sales of less than $\$ 100,000$. A few large nurseries sell most of the plants. Only a few of the firms have branch outlets in other states.

Most Oklahoma nurseries produce plants in containers or in the field for balling and burlapping. Most nurseries listed Oklahoma as the primary destination for their plants. Based on gross sales, almost the same dollar value of plants go to Texas. Most nurseries set prices based on costs of production and by comparison to other growers. They use in-person orders for a large portion of their sales, and negotiated more sales than they sold at a nonnegotiated price.

More nurseries ranked capital as the factor which most limited expansion potential of their sales. They also rated market demand as an important limiting factor for expansion. They saw environmental regulations as having little impact on ability to expand.

Oklahoma has a diverse and healthy nursery industry. If included in the ranking of Oklahoma`s principal crops and livestock, nursery production would rank in the top ten commodities.

## References

Brantwood Horticultural Research Division. 1989. 1989 Nursery Business 100
Report, 10th Annual Ranking of America's Largest Growers. Brantwood Publications, Clearwater, Florida.

Oklahoma Department of Agriculture, 1988, Oklahoma Certified Greenhouse and Nursery Directory, Plant Industries Division, Oklahoma City, Oklahoma.
U.S. Department of Commerce, Bureau of Census. 1987. Census of Agriculture. Part 36, Oklahoma State and County Data. Vol. 1, Geographic Area Series.

## NATIONAL



This Research Project Is Sponsored By The S-103 Regional Marketing Research Committee.

The following states have active membership:

| Alabama | New Mexico |
| :---: | :---: |
| Arkansas | New York |
| Connecticut | North Carolina |
| Florida | Ohio |
| Georgia | Oregon |
| Illinois | Pennsylvania |
| Kentucky | South Carolina |
| Louisiana | Tennessee |
| Mississippi | Virginia |

This project is partially funded by the Horticultural
Research Institute, Inc.

Dear Nursery Manager:

Your nursery operation is part of a $\$ 7$ billion industry that has experienced considerable market growth and economic change during the past decade. A cooperating research committee of agricultural economists and horticulturalists is attempting to document the changes and opportunities confronting nursery growers and other participants in this diverse, dynamic industry. Basic marketing data, including information about your firm, are needed to permit analysis of recent trends and structural changes that are impacting the relative competitive position of producers in various parts of the country. This market analysis should help you as a nursery manager anticipate and initiate adjustments in your long-range planning programs, and enhance your firm's marketing strategy or survivability. Your input is also needed for an accurate representation of the industry.

Please complete and return this research survey. Postage has been prepaid, and your completed questionnaire is vital to the success of this study. Marketing economists working for universities in each participating state will be summarizing the survey data. All of the individual responses to this survey will be kept strictly confidential. The record number printed on each questionnaire will be used only to count the frequency of returned questionnaires from each state. Information from each state is critical.

A copy of the analysis of this survey including averages and summary statistics will be distributed to all of the participants. Please call the individual on the return address label if you have questions about this survey.

Your help and cooperation is greatly appreciated!

Thank You,

Marketing Research Committee (S-103)
Cooperating Agricultural Experiment Stations

## NURSERY INDUSTRY SURVEY

## General Information

1. In what year was your firm established? $\qquad$
2. What form of business organization describes your nursery?
$\qquad$ Proprietorship
$\qquad$ Partnership
$\qquad$ Corporation (type of corporation) $\qquad$
$\qquad$ Other (please specify) $\qquad$
3. Does your business operate a nursery in another state? $\square$ yes $\square$ no If yes, what percentage of total sales is from each location?

4. What functions of your firm are computerized?

| Function | Computerized <br> (check, if yes) | Planned within <br> next five years |  |
| :--- | :---: | :---: | :---: |
| Word processing |  |  | - |
| Accounting | - |  |  |
| Inventory | - | - |  |
| Financial investments | - | - |  |
| Marketing | - | - |  |
| Communications | - | - |  |

5. How many people does your firm employ at this location?

Permanent employees $\qquad$
Temporary employees ___ (average number)

## Products

6. What percentage of your sales are in these plant categories?

| $\% \%$ | Deciduous shade and flowering trees |
| ---: | :--- |
| $\%$ | Deciduous shrubs |
| $\%$ | Broad-leaved evergreen shrubs |
| $\%$ | Narrow-leaved evergreen shrubs |
| $\%$ | Evergreen trees |
| $\%$ | Vines and ground covers |
| $\%$ | Herbaceous perennials |
| $\%$ | Tree fruits |
| $\%$ | Small fruits |
| $100 \%$ | Propagating material (liners, cuttings, etc.) |

7. Considering all plants sold by your firm, what percentage of your sales are in these root/media holding categories?

| Sales | Method | Sales | Method |
| :---: | :---: | :---: | :---: |
| \% | Bare root | \% | Balled and potted |
| \% | Balling and burlapping | _\% | Processed balled |
| \% | Container | \% | Field grow bag |
|  |  |  |  |

8. Approximately what percentage of your sales transactions are made using the following methods?

|  | Method |
| ---: | :--- |
| $\%$ | Trade show orders (negotiated) |
| $\%$ | Trade show orders (nonnegotiated) |
| $\%$ | Telephone orders (negotiated) |
| $\%$ | Telephone orders (nonnegotiated) |
| $\%$ | In-person orders (negotiated) |
| $\%$ | In-person orders (nonnegotiated) |
| $100 \%$ | Mail orders |

9. At how many trade shows was your firm represented in 1988 ? $\qquad$
10. What percentage of your sales are done with repeat customers? $\qquad$ $\%$
11. Identify the five factors that most limit the expansion potential of your firm. Rank in order of 1 through 5, with 1 being the most important.
$\qquad$ Water supply
Land
Market demand
Labor
Competition
Capital
Weather uncertainty
Environmental regulations
Own management
Ability to hire/develop competent management other (specify) $\qquad$
12. For purchases of seedlings, liners, whips, or grafted material, what are the top six origins by state or country?

| State or country | Percentage of purchases | State or country | Percentage of purchases |
| :---: | :---: | :---: | :---: |
|  | \% |  | \% |
|  | \% |  | \% |
|  | \% |  | \% |

13. What percentage of total annual sales occur during each month?

| Jan $\qquad$ \% | Feb $\qquad$ \% | Mar $\qquad$ <br> \% | Apr $\qquad$ <br> \% | May $\qquad$ \% | Jun $\qquad$ \% |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| July $\qquad$ <br> \% | Aug $\qquad$ \% | Sep $\qquad$ \% | Oct <br>  | Nov $\qquad$ \% | Dec $\qquad$ \% | $\begin{aligned} & \text { Total= } \\ & 100 \% \end{aligned}$ |

14. Do you ship nursery products out of the country? $\square$ yes $\square$ no

If yes, what is their percentage of total sales? $\qquad$ \%
15. As defined by total dollar sales, what are the top six destinations by state or country?

N

| State or country | Share of all annual sales | State or country | Share of all annual sales |
| :---: | :---: | :---: | :---: |
|  | \% |  | \% |
|  | \% |  | _\% |
|  | _\% |  | _\% |

16. What percentage of your total dollar sales are: wholesale $\qquad$ \%
$\qquad$
total 100\%
17. What percentage of your wholesale sales are to:
$\qquad$ \% Re-wholesale firms (including other growers and brokers)
$\qquad$ \% Retail firms (including mass marketers and garden centers)
_ \% Landscape firms $100 \%$
18. For dollar sales to re-wholesalers (and other growers), what are the top six destinations by state and percentage of sales?
State
$\qquad$
$\qquad$
Sales $\qquad$ Sales
$\qquad$ \%
$\qquad$ \% $\qquad$
$\qquad$ \%
$\qquad$ \%
$\qquad$
$\qquad$ \%
19. For dollar sales to retail outlets (including mass marketers and garden centers), what are the top six destinations by state (or country) and percentage of sales?

| State | Sales | State | Sales |
| :---: | :---: | :---: | :---: |
| \% |  |  |  |

$\qquad$
$\qquad$
$\qquad$
$\qquad$ \%
$\qquad$
$\qquad$ \% $\qquad$
$\qquad$ $\%$
20. For dollar sales to landscape firms, what are the top six destinations by state and percentages of sales?

| State | Sales | State |  |
| :--- | :--- | :--- | :--- |
|  |  |  |  |

$\qquad$

## Price Determination

21. Identify by rank the five most important factors you use to determine prices. Rank in order of 1 through 5 , with 1 being the most important.
$\qquad$ Cost of production
Inflation
Comparison to other growers
By grade of plants
Market demand
Time of year
Based on inventory
Based on last year's price
Other (please specify)

## Price Determination (cont.)

22. What percentage of your sales are at the printed price value? $\qquad$ \%

If you give quantity discounts, please identify quantity and discount amounts.


## Transportation

23. What percentage of your products do you ship by the following modes of transportation?
$\qquad$ \% Truck
$\qquad$ \% Rail
$\qquad$ \% Parcel Post and United Parcel Service
\% Air freight
24. What percentage of your truck shipments are by the following sources?
$\qquad$ \% Commercial common carriers
$\qquad$ \% Nursery owned/rented/leased or consigned
$\qquad$ \% Buyer owned/rented/leased or consigned 100\%
25. When making deliveries in your own trucks, what percentage of the return trips are empty backhauls?
$\qquad$ \%
26. Do you have a maximum radius of delivery?yes
If so, what is it? $\qquad$ miles
27. What do you see as the greatest limitation in terms of expanding the geographic scope of your trading?

## Advertising

28. What dollar amount, or percentage of sales, do you annually allocate to advertising? $\qquad$
29. What percentage of your advertising budget is for:
$\qquad$ \% Yellow pages
$\qquad$ \% Billboards
$\qquad$ \% Radio
$\qquad$ \% Trade shows
$\qquad$ \% Newspaper
$\qquad$ \% Trade journals
$\qquad$ \% Catalogs
$\qquad$ \% Newsletter/flyers
$\qquad$ \% Other, please specify $\qquad$

## Sales

30. Do you have salesmen on your payroll that travel and represent your firm? $\square$ yes $\square$ no

If ves, how many? $\qquad$
31. Do you use the services of a sales broker? yes ... no

If yes, where is the broker's headquarters? $\qquad$
Does the broker sell by commission or fee? $\qquad$
Commission margin is $\qquad$ per $\qquad$ -.

Fee is $\qquad$ per $\qquad$ .
32. In round numbers, what was the value of gross sales from your nursery in 1988, or your most recently completed fiscal year? \$ $\qquad$ . If you do not wish to give the amount, please check the appropriate category.

- ] Less than \$100,000

C \$2,000,000-\$2,999,999
] \$100,000-\$499,999
\$3,000,000-\$3,999,999
$\square$ \$500,000-\$999,999
\$4,000,000 - \$4,999,999\$1,000,000-\$1,999,999
$\square$ Greater than $\$ 5,000,000$-please specify the appropriate amount $\qquad$ .

- THANK YOU FOR YOUR COOPERATION -
$\qquad$


[^0]:    ${ }^{\text {a }} 0 \%$ indicates that the indicated transaction medium was not used by the percent of nurseries listed.

[^1]:    * Less than $0.1 \%$ of gross sales.

