

# Virginia Green Industry Survey

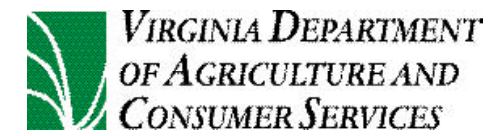
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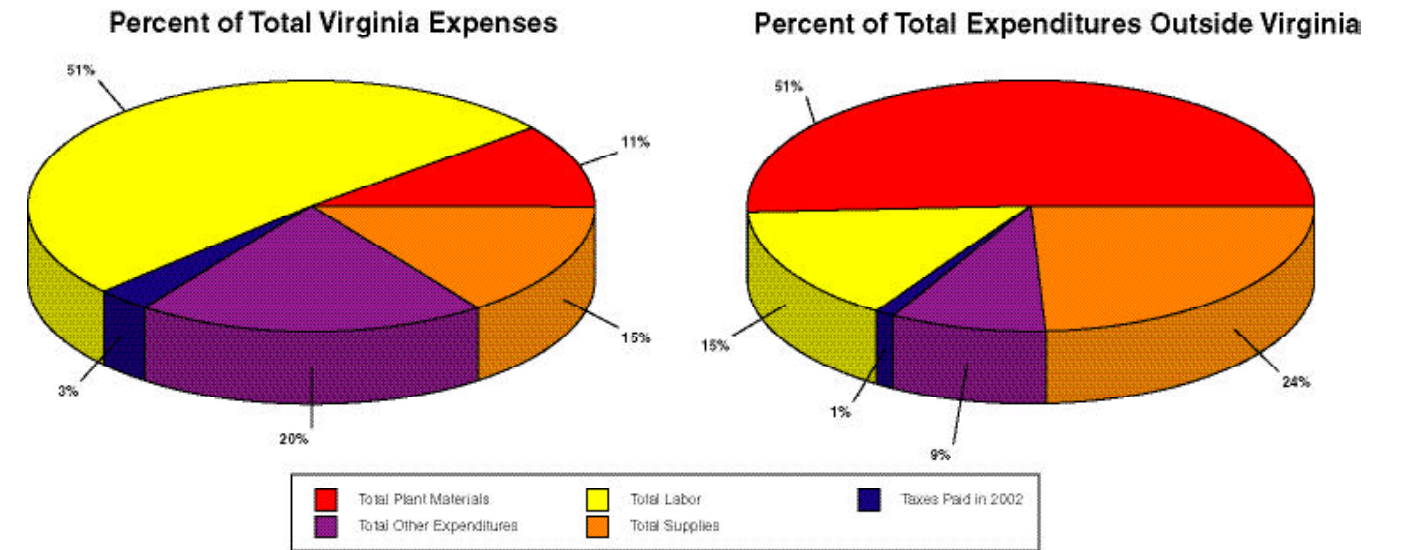
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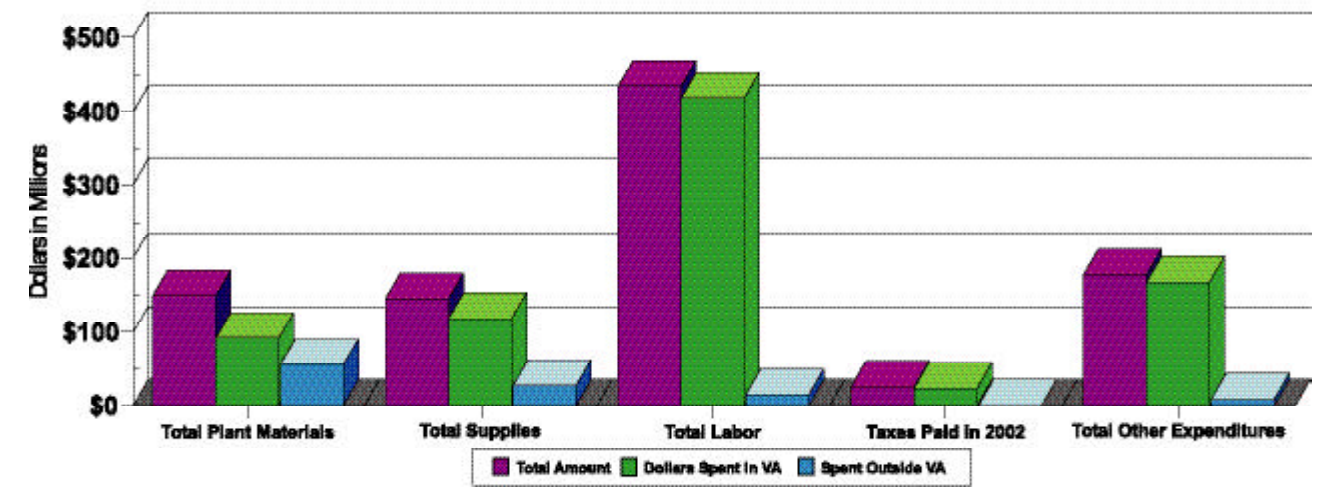
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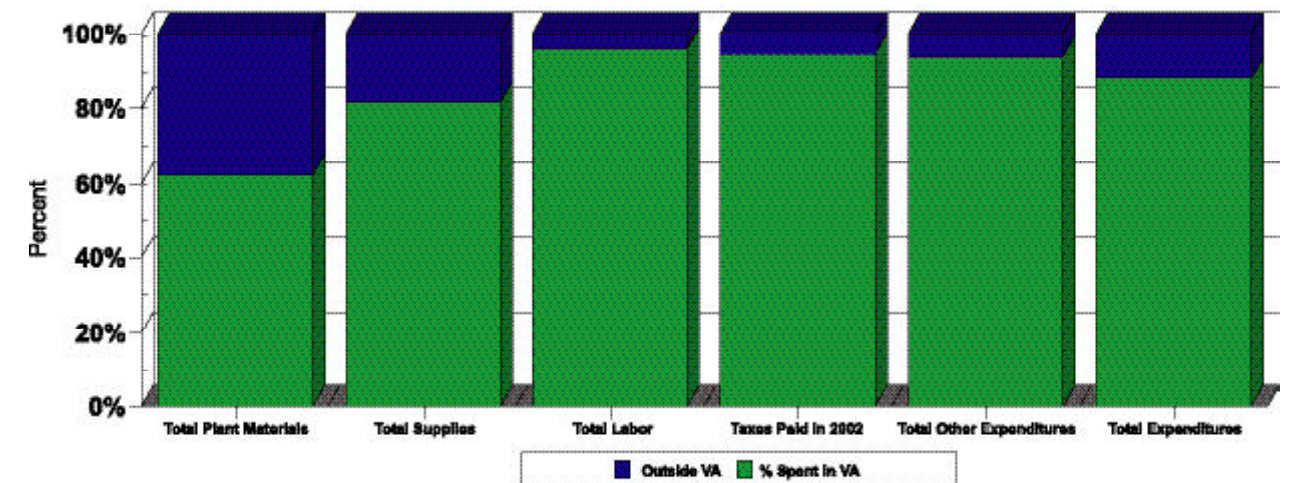
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Expenditures In and Out of Virginia



Expenditures for Nursery Production and Landscape Services



**Expenditures for Nursery Production and Landscape Services**

Total expenditures for Virginia in 2002, totaled \$933.5 million. Eighty-eight percent of these expenditures were spent in the Commonwealth, while the remaining 12% was spent outside of the state. The largest expense was labor at \$434.9 million, with 96% of that total spent in Virginia. Other expenditures accounted for \$177.9 million, followed by plant materials at \$150.2 million, and supplies at \$145.3 million. Plant materials accounted for the largest expenditure outside the state at \$56.9 million, representing 38% of plant material expenditures.

Type of Expenditure	Percent Spent in Virginia	Percent Spent Outside Virginia
Plant Materials	62	38
Total Supplies	82	18
Total Labor	96	4
Taxes Paid in 2002	95	5
Other Expenditures	94	6
Total Expenditures	88	12

Type of Expenditure	Total Amount	Percent of Total Expenses	Dollars Spent in Virginia	Percent of Total Virginia Expenses	Dollars Spent Outside Virginia	Percent of Total Expenses Outside Virginia
Labor	434,975,000	47	418,873,000	51	16,102,000	15
Plant Materials	150,209,000	16	93,342,000	11	56,867,000	51
Supplies	145,338,000	15	118,500,000	15	26,838,000	24
Taxes Paid in 2002	25,036,000	3	23,784,000	3	1,252,000	1
Other*	177,892,000	19	167,762,000	20	10,130,000	9
<b>Total</b>	<b>933,450,000</b>	<b>100</b>	<b>822,261,000</b>	<b>100</b>	<b>111,189,000</b>	<b>100</b>

\* Other includes equipment purchases, equipment renting and leasing, capital improvements, interest paid on business loans, insurance expenses, professional services, advertising, general office expenses, and other expenditures.

**Executive Summary**

The face of agriculture in Virginia is rapidly changing to accommodate the economic realities of the times. Nursery crops, while having a long history in Virginia’s agricultural profile, have emerged as a profitable and fast growing farm commodity. This statistical profile and economic survey provides insight into the significance of nursery and landscape activities in Virginia.

Here are a few highlights from the statistical profile:

**Gross receipts exceeded \$1.14 billion in 2002**

- o Plant sales accounted for 31%
- o Landscape (maintenance only) accounted for 24%
- o Landscape Installation accounted for 32%
- o Design or Architectural Services accounted for 8%
- o Other categories accounted for 5%

**Woody plants topped product sales**

- o Woody plants 55%
- o Annuals 21%
- o Herbaceous Perennials 13%
- o Other products (includes aquatic plants and christmas trees) 6%
- o Specialty Greenhouse Crops 5%

**Virginia wholesale growers generate over \$204.6 million from 25,000 production acres, including 17 million square feet of covered space.**

**Over 23,300 people are employed by the industry**

- o 54% are employed for over 150 days
- o **Average labor wage is \$8.76/hr.**

**Current Market value of total value of land, structures, and equipment was \$898.5 million.**

It is understood that the conclusion stated in this survey demonstrates a conservative profile of the “Green Industry” in Virginia.

Please take time to review all of the data included in this publication. This important information is available to industry, legislators, lending institutions, and educators for formulating relevant policies and programs benefiting Virginia’s citizens and the “Green Industry”. We thank all those who participated and contributed to this very informative statistical and economic profile.

## 2002 VIRGINIA GREEN SURVEY

The Green Industry has been one of the fastest growing agricultural segments over the last decade. This growth has spurred dramatic interest in the industry's size and economic importance. The 2002 Green Industry Survey is the first comprehensive study of the entire Green Industry ever conducted in Virginia. These statistics are crucial in obtaining state and local government support on various issues.

### OBJECTIVE

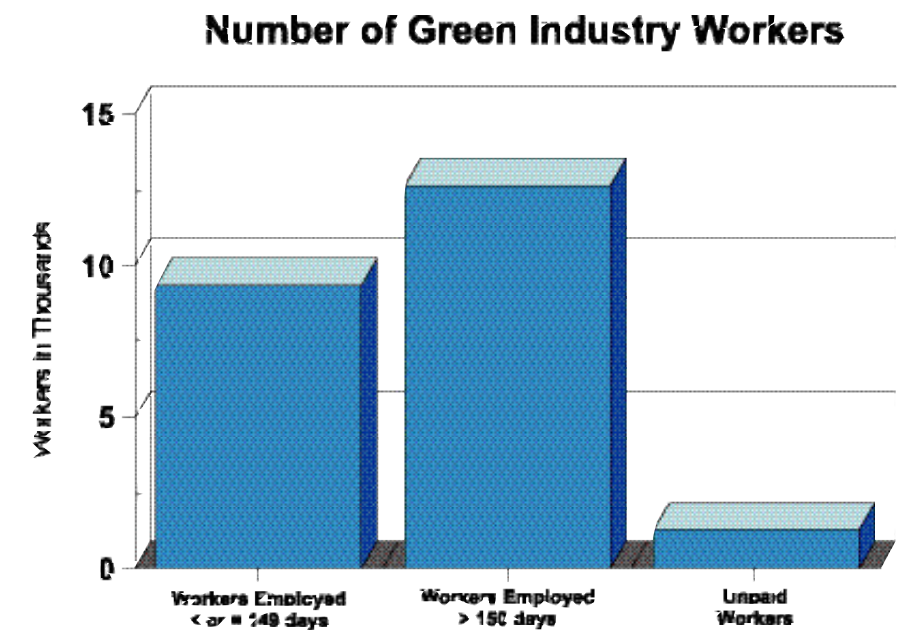
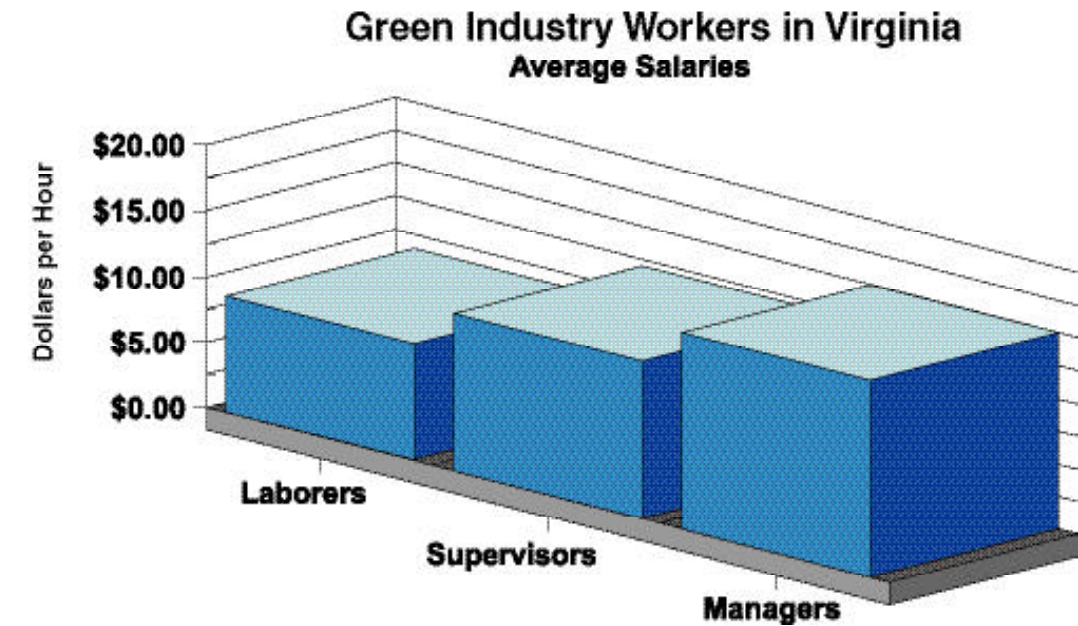
The purpose of the 2002 Green Industry Survey is to measure the economic importance of Virginia's nursery, greenhouse and landscape services industry. The survey produces current information on the production of various types of plants grown and sold in and outside of Virginia and landscape services provided by the industry. In addition, the study provides information on the number of workers employed by the industry and average wage rates.

### POPULATION

The Green Industry as defined for this survey includes businesses or individuals who are wholesale producers or providers of landscape services. Wholesale producers include growers involved in wholesale only, re-wholesale distribution, or wholesale/retail. The landscape service providers includes businesses or individuals involved in landscape installation, maintenance, design, and architecture. The survey did not attempt to cover the retail sector except where a wholesale producer also operated as a retail operation. For this reason large retail chains are excluded from the sample population.

### SURVEY DESIGN AND DATA COLLECTION

The sample included all wholesale nurseries licensed by the Virginia Department of Agriculture and Consumer Services. In addition, other name sources were purchased to compile a list of individuals and businesses involved in the Nursery and Landscape Industry.



### Number of Green Industry Workers and Wages

In 2002, there were 23,350 workers in Virginia's green industry. A little over half of these workers (54%) were full-time employees, while the remaining were seasonal employees (40%) and unpaid workers (6%). Total wages paid by the green industry in 2002 was \$407.0 million. On average, laborers were paid \$8.95 per hour, supervisors were paid \$12.04 per hour, and managers were paid \$15.08 per hour.

Type	Number of Workers
Workers employed < or = 149 days	9,400
Workers employed > 150 days	12,650
Unpaid Workers	1,300
<b>Total</b>	<b>23,350</b>

Green Industry Workers in Virginia	Average Salaries (per/hr.)
Laborers	\$8.95
Supervisors	\$12.04
Managers	\$15.08

A sample of 4,246 questionnaires was mailed to potential respondents in December 2002. In early January 2003 a second mail out was made to all who did not respond to the initial mailing. Follow up telephone contacts were made to the remaining non-respondents who failed to return the questionnaire by mail. The telephone follow up effort focused more on the larger operations to improve overall coverage of the items of interest.

### **NON-RESPONSE ADJUSTMENT**

There was no attempt made to conduct a special study of the non-response population. The assumption was made that the characteristics of non-respondents were no different than those who responded to the survey. Therefore, missing items for partially completed reports were estimated based on reported data from operations of similar size and scope.

### **RESPONSE**

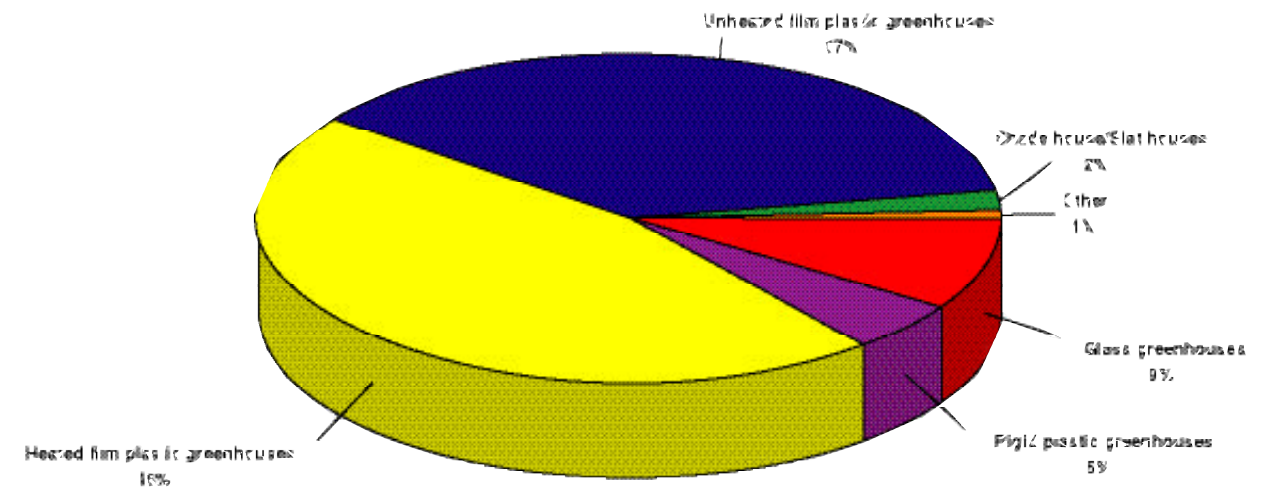
A total of 1,146, or 27 percent of recipients responded to the survey. Of this total, 42 indicated they were not in business at this time but will have future sales. Another 525 reported they are no longer actively involved in the nursery or landscape business.

**Sales of Horticultural Products and Services**

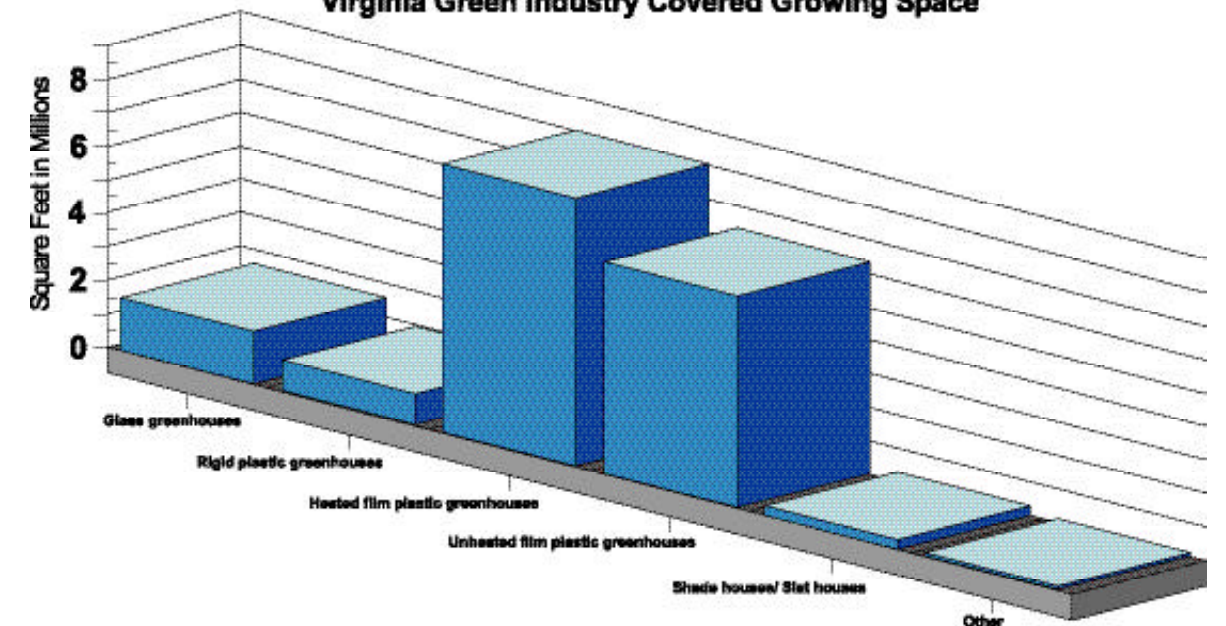
Total gross receipts from Virginia’s Green Industry in 2002 was \$1.1 billion. Plant Sales had the largest receipts, representing 31% of the total with a value of \$353.6 million. Plant Sales included wholesale plant sales and any retail sales by the licensed nurseries, but did not attempt to represent the impact of large chain retailers. The second largest business function was landscape maintenance, representing 24% of gross receipts with a value of \$274.5 million. Closely following was landscape installation with a value of \$259.5 million or 23% of gross receipts. Landscape installation dealing with hardscape sales only accounted for 9% of total receipts followed by design or architectural services at 8%, and other (e.g., fertilizer, chemicals, etc.) at 5%.

Sales by Business Function:	Dollars	Percent
Plant Sales	353,560,000	31
Landscaping (maintenance only)	274,510,000	24
Landscape Installation (exclude hardscape)	259,530,000	23
Landscape installation (hardscape only)	105,400,000	9
Design or Architectural Services	95,720,000	8
Other	54,710,000	5
<b>Total Gross Receipts :</b>	<b>1,143,430,000</b>	<b>100</b>

**Virginia Nursery Covered Growing Space**



**Virginia Green Industry Covered Growing Space**



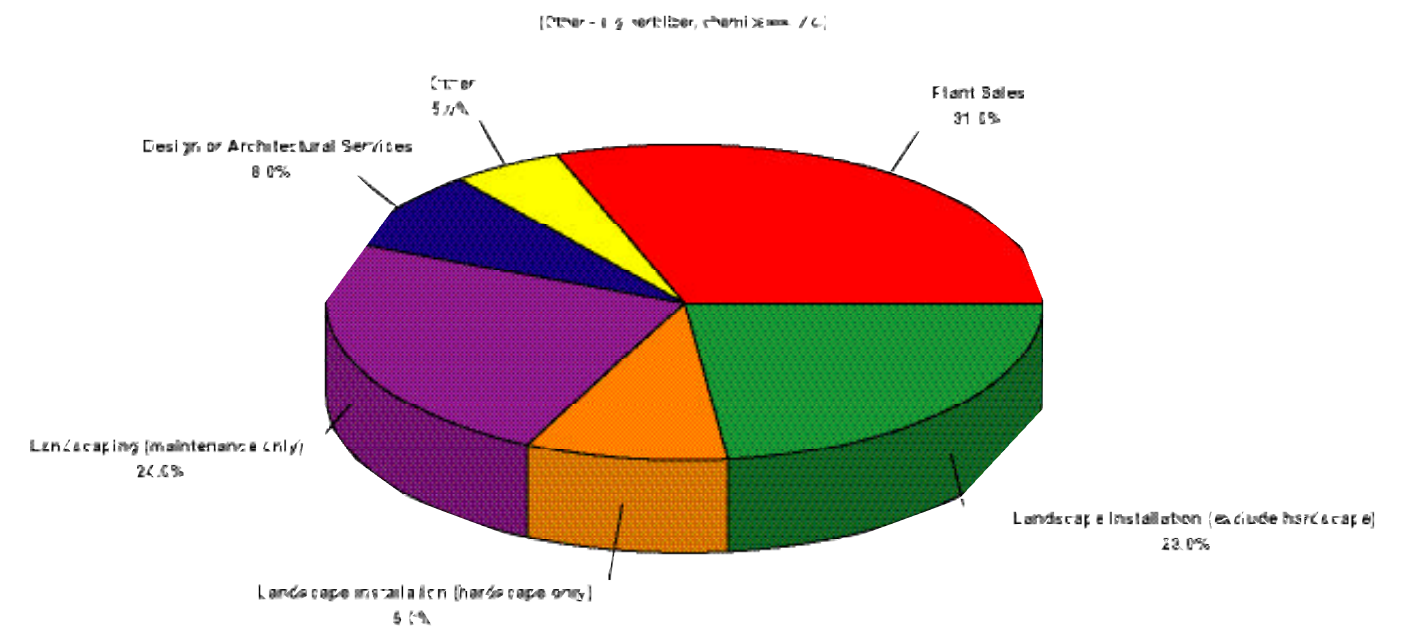
### Virginia Green Industry Growing Space

Total area for covered nursery space in 2002 was more than 17 million square feet. Heated film plastic greenhouses, hoop houses, or over-winter poly-houses (single or multi-layer) accounted for nearly 8 million square feet of covered growing space. Unheated film plastic greenhouses, hoop houses, or over-winter poly-houses (single or multi-layer) represented 6.3 million square feet making film plastic the largest method for covered growing space at 83%. Nine percent of the covered space was in glass greenhouses, with the remaining space in rigid plastic greenhouses, shade/slat houses, and other types of covered growing space. Total acres in production for 2002 was 25,070 acres. Woody plants represented the largest amount of production acres with 13,100 with other and christmas trees accounting for the majority of the remaining acreage.

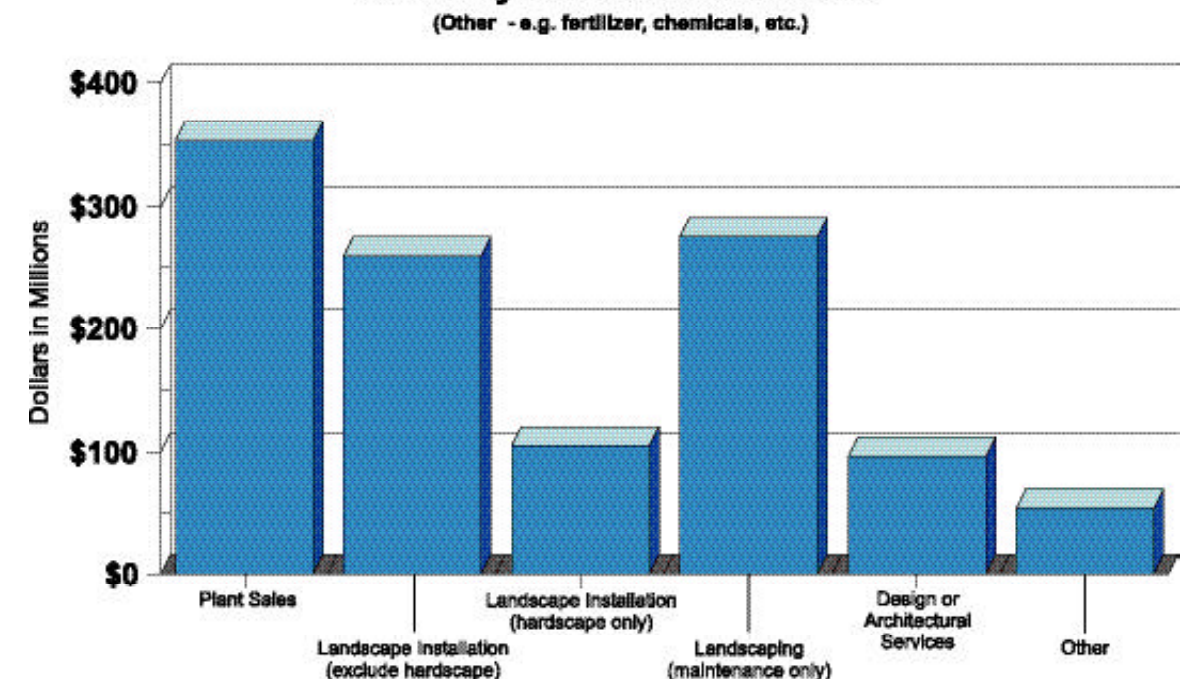
Covered Growing Space	Square Feet	Percent
Heated film plastic greenhouses (hoop houses, or over-winter poly-house)	7,995,000	46
Unheated film plastic greenhouses (hoop houses, or over-winter poly-house)	6,335,000	37
Glass greenhouses	1,595,000	9
Rigid plastic greenhouses	912,000	5
Shade houses/ Slat houses	300,000	2
Other	122,000	1
<b>Total</b>	<b>17,259,000</b>	<b>100</b>

Total Acreage Under Production	Acres
Woody plants, trees, and shrubs	13,100
Herbaceous perennials	400
Fall annuals	250
Spring annuals	750
Specialty greenhouse crops	250
Aquatic plants	20
Christmas trees	4,600
Other	5,700
<b>Total</b>	<b>25,070</b>

Sales by Business Function:



Sales by Business Function:



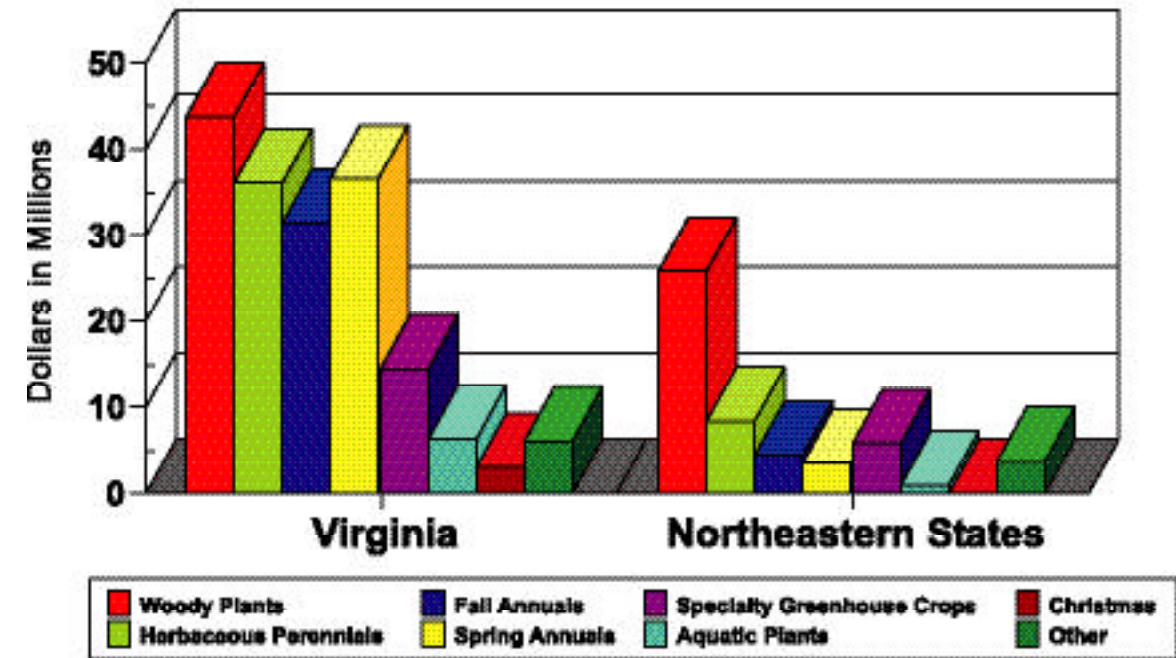
### Types of Plant Products Sold in Virginia

Virginia plant sales and landscape installation sales were broken down into six different categories by product type. The largest percentage of plant sales in 2002 was woody plants at \$392.0 million in gross receipts. Woody plants represented over one-half of product sales, while the second largest amount of sales were in spring annuals at \$105.4 million, followed by herbaceous perennials at \$91.7 million. Fall annuals accounted for nearly \$43.7 million in sales. Other types, aquatic plants, and Christmas trees accounted for \$38.7 million. Specialty crop sales totaled \$37.4 million.

Sales by Product Type:	Dollars	Percent
Woody Plants	392,000,000	55
Spring Annuals	105,375,000	15
Herbaceous Perennials	91,715,000	13
Fall Annuals	43,690,000	6
Other (includes aquatic plants and christmas trees)	38,658,000	6
Specialty Greenhouse Crops	37,370,000	5
<b>Total:</b>	<b>708,808,000</b>	<b>100</b>

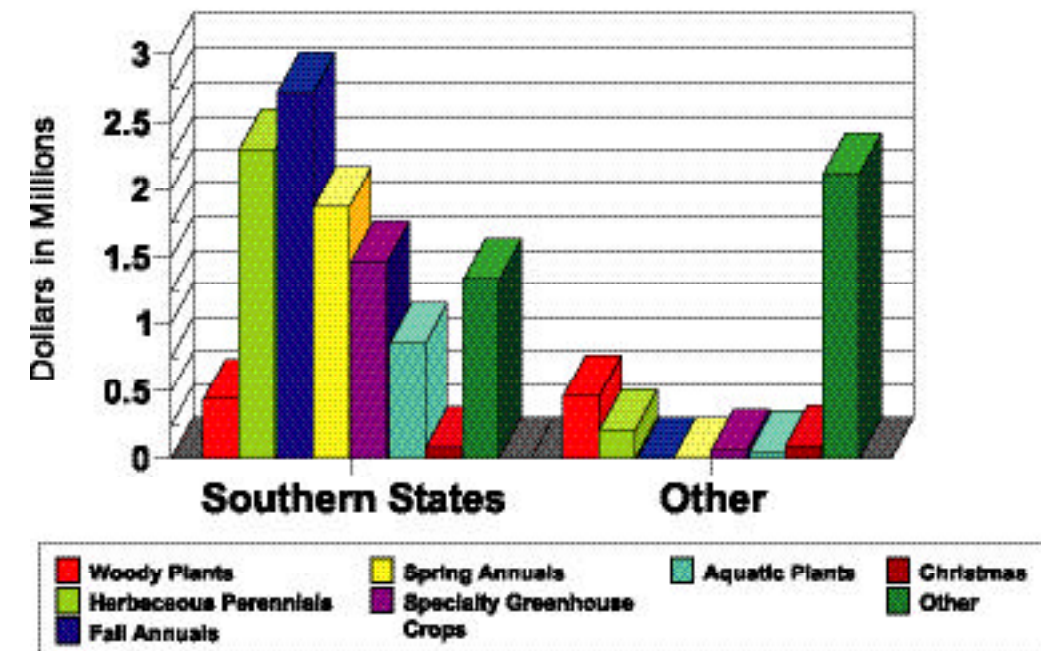
\* Sales by product type include installation charges.

### Destination of Plants Shipped: Virginia & Northeastern States



### Destination of Plants Shipped

(Other includes Central and Western States, Canada, and Other Countries)





**Destination of Plants Shipped by Product**

Sixty-two percent of woody plants were shipped within the state while 37% went to northeastern states, and 1% went to southern states and other. Eighty-seven percent of spring annuals shipped within the state while 9% shipped to northeastern states, 4% to southern states, and <1% to other. Herbaceous perennials shipped 77% within the state, 18% to northeastern states, and 5% to southern states. Fall annuals shipped 81% within the state. Specialty greenhouse crops and other (includes aquatic plants, christmas trees, and other) shipped 66% and 61% within the state, while the remainder of the two was divided between northeastern states, southern states, and other. The majority of plant material was shipped within the state, but the remaining material was mostly shipped to the northeastern and southern states. Very little nursery material was shipped to the central states, western states, Canada, and other countries.

Plant Type	Percent of Plant Type Shipped to Each Destination			
	Virginia	Northeastern States <sup>4/</sup>	Southern States <sup>5/</sup>	Other <sup>6/</sup>
Woody Plants	62	37	1	1
Spring Annuals	87	9	4	<1
Herbaceous Perennials	77	18	5	<1
Fall Annuals	81	12	7	<1
Other *	61	21	9	9
Specialty Greenhouse Crops	66	27	7	<1

**Regions:**

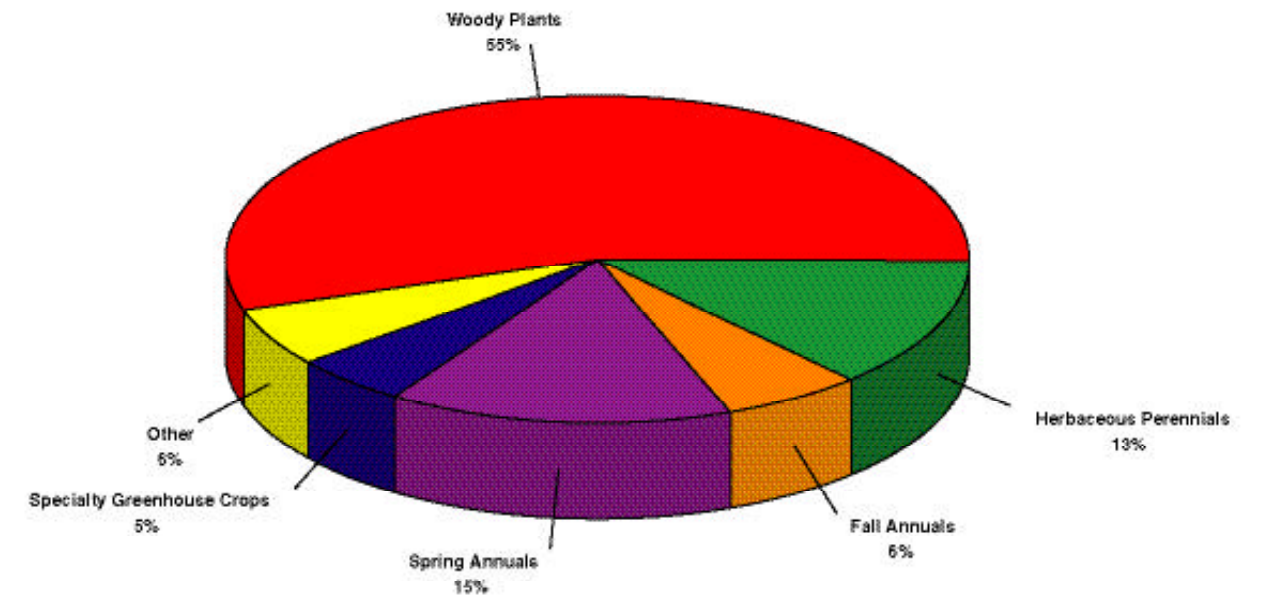
4/ Northeastern States include ME, VT, NH, MA, CT, RI, NY, PA, DE, NJ, WV

5/ Southern States include SC, GA, AL, FL, AR, LA, MS, NC, TN, TX, and Puerto Rico

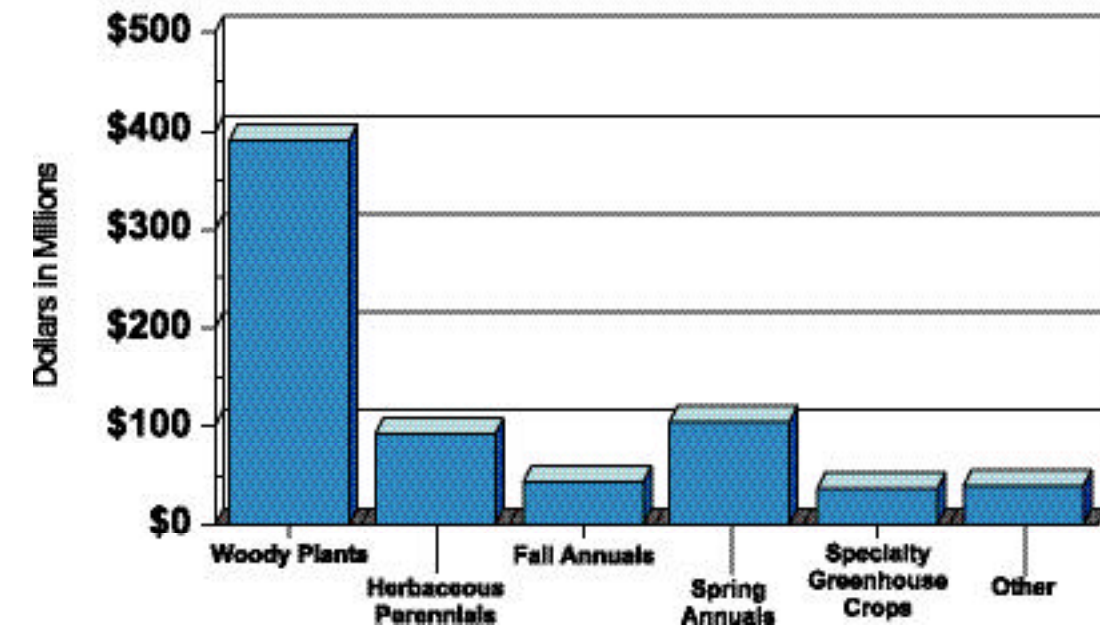
6/ Other includes OH, MI, WI, IN, IL, IA, NE, KS, MO, ND, SD, MN, KY, AK, WA, OR, ID, MT, WY, NV, UT, CO, NM, CA, AZ, HI, Canada, and other countries.

\* Plant type "other" includes christmas trees, aquatic plants, and other

**Sales by Product Type:**



**Sales by Product Type:**  
(other includes christmas trees and aquatic plants)



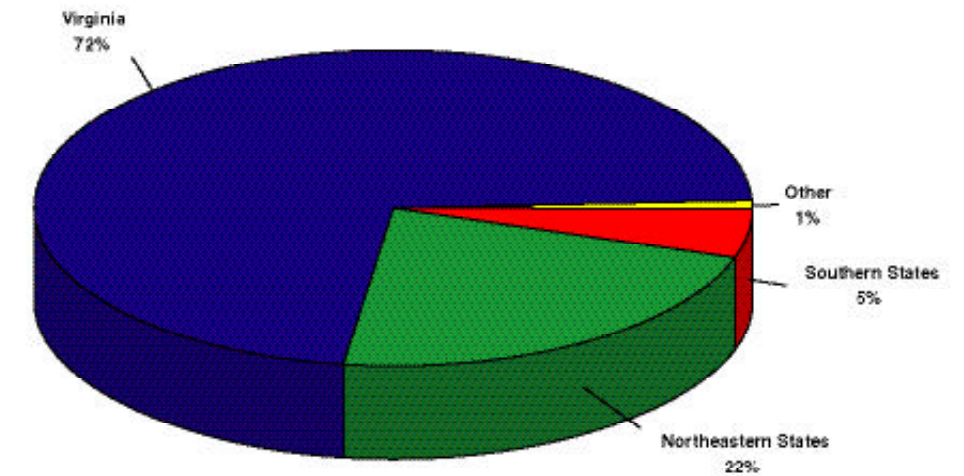
**Method for Plant Products Sold in Virginia**

Container-grown stock accounted for over one-half of all nursery stock grown and sold in Virginia in 2002. Sales for containers were \$416.5 million, more than doubling the \$157.7 million in sales for the second largest method, balled & burlap which represented 22% of receipts. Flats accounted for 11%, with sales at \$75.5 million. Products sold as bareroot, cut flower, and other, accounted for the remainder of plant sales.

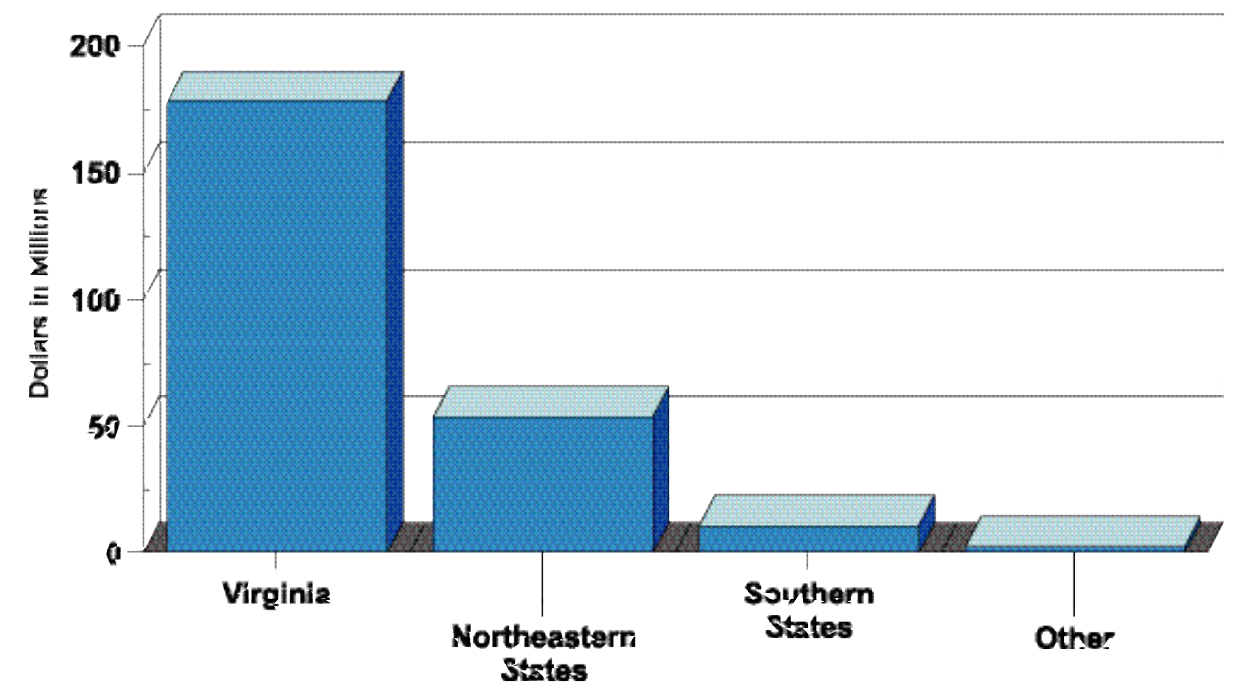
Method of Preparation	Dollars	Percent
Containers (all types)	416,465,000	59
Balled & Burlap	157,710,000	22
Flats	75,470,000	11
Other	36,895,000	5
Bareroot	16,210,000	2
Cut Flower	6,058,000	1
<b>Total</b>	<b>708,808,000</b>	<b>100</b>

**Percentage Shipped to Area**

(Other includes Central States, Western States, Canada, and Other Countries)



**Dollars Shipped to Area**



**Destination of Plants Shipped**

A total of \$246.0 million plants were shipped to various destinations. Seventy-two percent shipped to locations in Virginia, while 22% was shipped to northeastern states. The southern states received 5% of plants shipped and other received 1%. Other consists of central states, western states, Canada, and other countries.

Destination of Plants Shipped	Dollars	Percent
Virginia	178,101,500	72
Northeastern States <sup>1/</sup>	53,701,000	22
Southern States <sup>2/</sup>	11,121,000	5
Other <sup>3/</sup>	3,034,000	1
<b>Total</b>	<b>245,957,500</b>	<b>100</b>

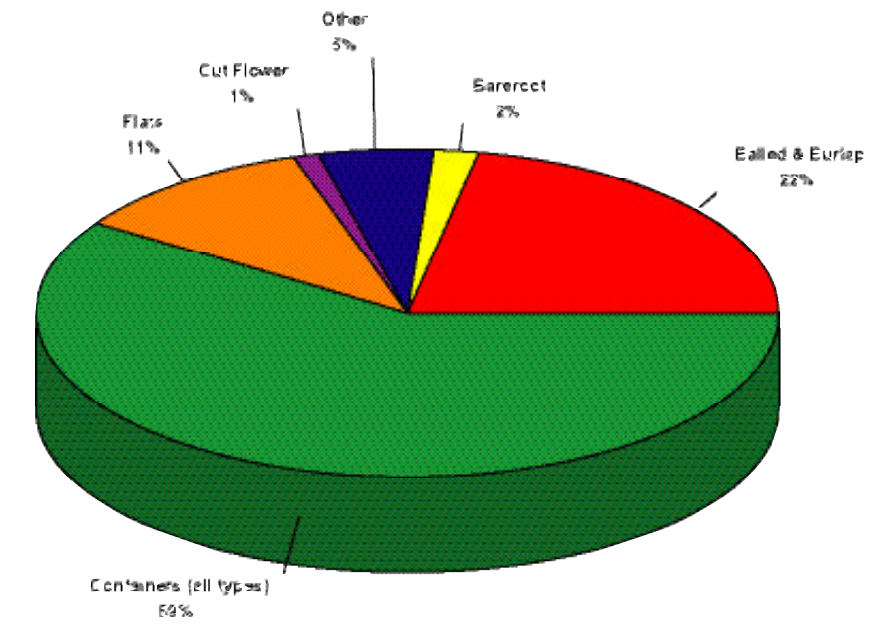
**Regions:**

<sup>1/</sup> Northeastern States include ME, VT, NH, MA, CT, RI, NY, PA, DE, NJ, WV

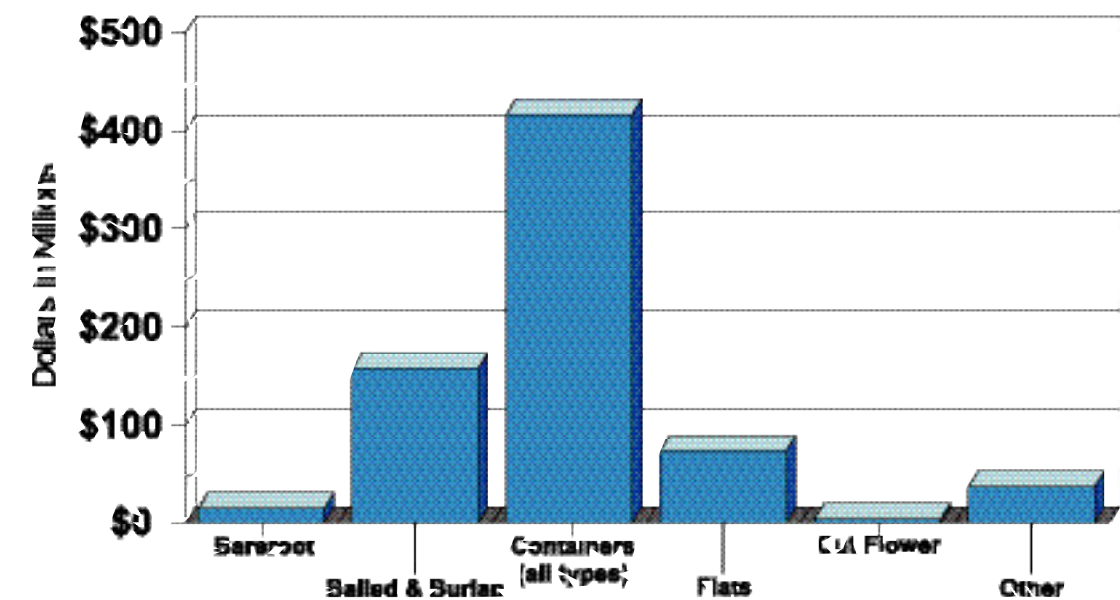
<sup>2/</sup> Southern States include SC, GA, AL, FL, AR, LA, MS, NC, TN, TX, and Puerto Rico

<sup>3/</sup> Other includes OH, MI, WI, IN, IL, IA, NE, KS, MO, ND, SD, MN, KY, AK, WA, OR, ID, MT, WY, NV, UT, CO, NM, CA, AZ, HI, Canada, and other countries.

**Method of Preparation**

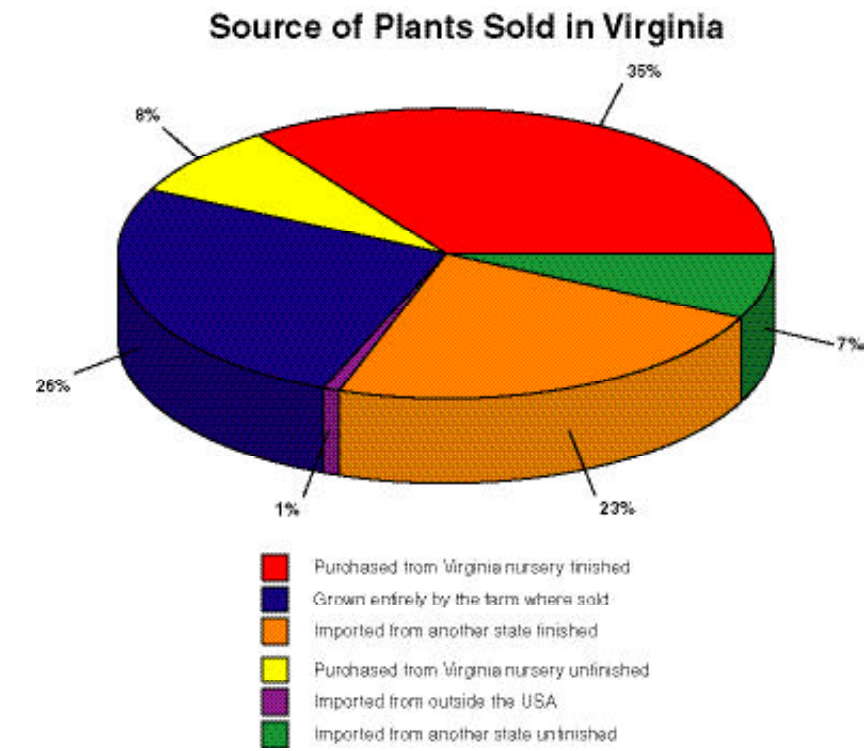


**Method of Preparation**



**Source of Plant Material Sold**

In 2002, 35% of plants sold in Virginia were purchased from another Virginia nursery, completely finished. Around 187.3 million in plant material was grown entirely on the farm where sold, accounting for 26% of plant material sales. Around \$160.2 million in plant material was imported from another state completely finished. Plant materials purchased from a Virginia nursery unfinished represented 8%, and purchases outside of Virginia finished by producers, accounted for 7% of the market. A very small amount of plant material (1%) was imported from outside the United States.



Source of Plants Sold in Virginia	Dollars	Percent
Purchased from Virginia nursery finished	246,350,000	35
Grown entirely on the farm where sold	187,270,000	26
Imported from another state completely finished	160,155,000	23
Purchased from Virginia nursery unfinished	60,413,000	8
Imported from another state unfinished	49,050,000	7
Imported from outside the USA	5,570,000	1
<b>Total</b>	<b>708,808,000</b>	<b>100</b>

