



THE MARYLAND HORTICULTURE INDUSTRY

2018

Statistical Profile and
Economic Summary



Executive Summary

This study provides a comprehensive analysis into the growth and strength of the Maryland Horticulture Industry. The first iteration of the survey was conducted in 2000 and gave insightful information that was used to allow management and leadership decisions to be made. In 2003, the survey results highlighted the impact of a year of drought on the industry and its growth. The survey conducted in 2007 came just before one of the nation's most significant recessions in history while the 2012 survey results provided insight into the recovery of the industry. The reported sales from 2017 to 2018 indicate that there was a 3% increase in gross income. In 2019, survey respondents reported an additional 3% increase in sales. From 2017 to 2018, growers' sales decreased 3%, while retail sales recorded a 6% increase. In 2018, Maryland experienced record amounts of rainfall, totaling 64.62 inches.¹ This is important to remember when analyzing the 2018 results.

Important Highlights from the 2018 survey include:

Gross sales were an estimated \$1.376 billion in 2018, and projected to increase to \$1.465 billion in 2019:

- Landscaper sales accounted for 41% of the industry's sales
- Grower sales accounted for 35% of the industry's sales
- Retail sales accounted for 14% and other sales accounted for 10%

Maryland growers (wholesale and resale) generated an estimated \$1.376 billion in sales:

- Woody Plants 44% - \$609 million
- Annuals 21% - \$296 million
- Herbaceous Perennials 15% - \$200 million
- Other 16% - \$213 million
- Specialty Greenhouse 2% - \$30 million
- Aquatic Plants 1% - \$17 million
- Christmas Trees 1% - \$11 million

The industry employed nearly 25,000 individuals:

- 49% were employed full-time (over 150 days per year)
- Inexperienced employees received an average wage of \$12.38 per hour
- Experienced employees received an average wage of \$14.94 per hour
- Managers received an average wage of \$20.88 per hour
- Supervisors received an average wage of \$25.49 per hour

Factors limiting growth within the industry include:

- Labor – Managing a higher minimum wage and finding reliable skilled employees have caused difficulties.
- Government – Taxes and regulation have reduced profits.
- High Cost – Corporate debt and an increase in overhead cost have reduced profits.

Although the survey and report does not include all of the total economic activity, the 2018 Maryland Horticulture survey does provide a descriptive overview of statewide trends within the industry. The majority of the plants that are grown in Maryland are most often are sold within the state. That being said, Maryland's horticulture industry is dependent on other states as they assist in importing plants and horticulture products, as well as providing a market to sell Maryland grown finished plants.

¹ Source: Maryland Climate and Weather

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Maryland Horticulture – 2018

Objective

The 2018 Maryland Horticulture survey was administered in an effort to measure the economic impact of Maryland's Horticulture Industry. The survey presents a numerical picture of the plant types grown and sold within the state, location grown and sold, number of individuals employed in the industry, tenure of operation and total numerical value of the equipment, land and horticulture sales. The 2018 survey assists in identifying key components that impact growth of the horticulture industry.

Survey Design

Survey Sample²

Nursery operations in Maryland included in this survey are licensed operations. Surveys were distributed by both mail and email to a total of 876 operations. Note that this is a 15% decrease from 2012 in which surveys were mailed to 1,037 licensed operations.

To grow or sell perennial plant materials in Maryland, businesses need to be licensed by the Maryland Department of Agriculture, Office of Plant Industries and Pest Management. These businesses may include plant material growers, landscape contractors, sales operations, and plant brokers. It is important to note that businesses are not required to be licensed for operations that include cut-flower growers, orchards, flower shops, or turf growers; however, a number of these businesses choose to be licensed so that they would be able to ship their products out of state.

What is a Horticultural Product?

For the purpose of the 2018 Horticulture Survey, production included nursery plant production, brokerage services, landscape design, installation, maintenance, renovation, lawn care, fertilization, mowing, trimming, mulching, erosion control/hydro-seeding, plant delivery, plant rentals, watering, irrigation, interior plant operations, tree work, tree moving, tree spraying, IPM, seeding, and sales of Christmas trees, floral greenery, and plugs.

Data Collection

The survey was administered by postage as well as email. The initial distribution of the survey was sent via email in February of 2019. There were a total of ten reminders over seven months, which included six reminder emails and three postcards. For those operations who did not complete the survey, follow-up phone calls were made to encourage participation in the survey and answer any questions regarding how to complete it. A final hard copy survey was mailed to all operations in June of 2019.

Data Analysis

All survey results were entered into an online survey platform. Electronic responses were recorded directly by survey participants. Hard copy results received through mail were entered into the online survey platform verbatim by the research team. Analysis of the survey results was completed using Excel.

² Due to state licensing, there are some horticulture and green industry organizations and individuals that are not included in the 2018 survey. It is important to note that the report does not create a complete profile of the horticulture industry but rather of the licensed portion of the industry.

Estimation for Non-Response

The assumption was made that responses received illustrated the overall horticulture population as a whole, while non-respondents would have answered the same questions similarly. Those responses that were partially or completely blank were assumed to be performing the same as the other types of businesses in the industry. State totals were thus estimated by multiplying sample averages by the total number of surveys sent out. Reported results are thus representative of the total number of horticultural operations in the state of Maryland, unless otherwise specifically identified.

Survey results were also categorized by region. In this case, totals were estimated by multiplying sample averages for each region by the total number of survey recipients operating in each region. However, thirty-two responses were received which did not indicate a region or county(ies) of operation and were unable to be assigned to a specific region. These operations are included in the “multi-region” category which also includes estimates for companies that are known to operate in multiple regions across the state.

Responses:

For the 2018 Maryland Horticulture Survey, 876 surveys were sent to green industry professionals. A total of 188 companies responded to the survey, which accounted for 21.4% of the population of licensed operations. Of the 188 responses received, 120 of the responses were completed via paper survey and an additional 68 were completed online.

The non-response rate was 78.6%, or 692 operations. Green industry professionals who did not respond received ten reminders as well as direct phone calls to encourage them to participate.

Of the 153 companies that responded to the question, 128 stated that they ran a family owned operation and 25 stated that their operation was not family owned.

Category	Responses	Reconciled Database ³	Response Rate
Grower	64	130	49%
Retailer	25	199	13%
Landscaper	54	231	23%
Multiple ⁴	0	306	0%
Other	8	10	80%
Total ⁵	151	876	17%

Operations		
Family Owned Operations	128	84%
Non-Family Owned Operations	25	16%
Total	153	100%

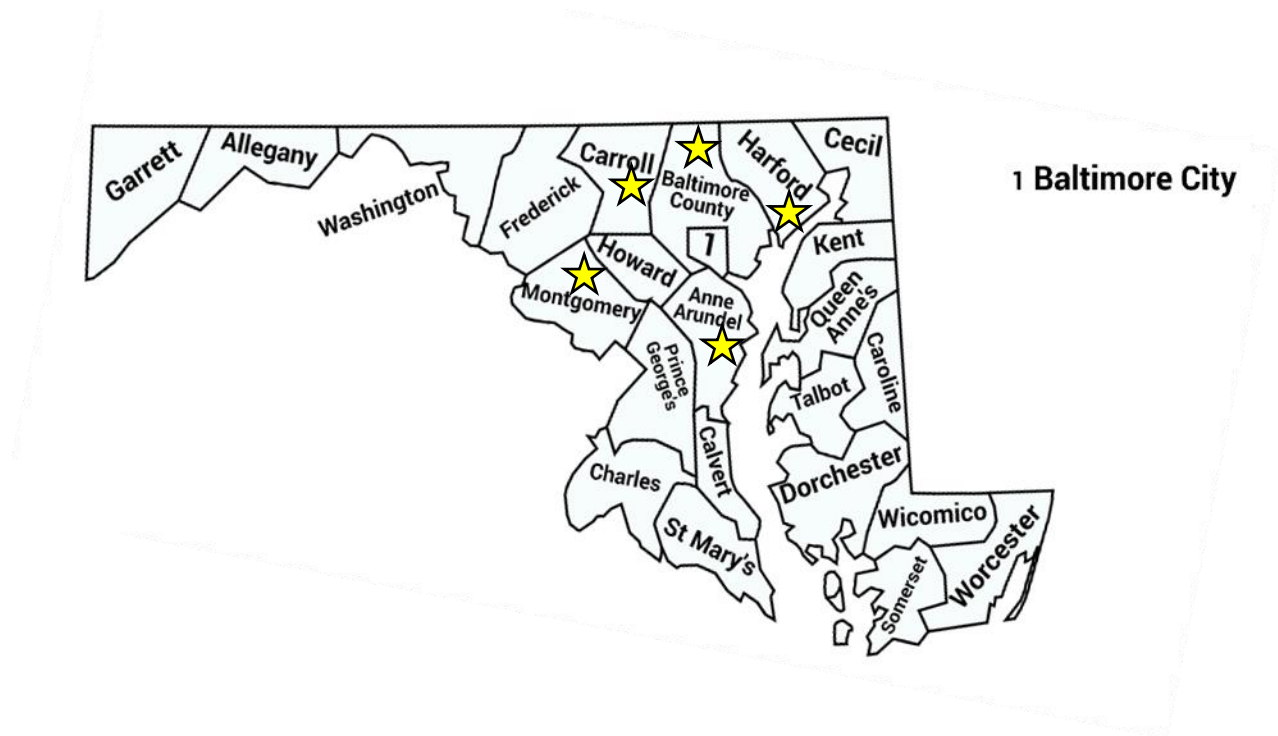
³ Growers include entities designated as nurseries and/or greenhouses. Retailer includes entities designated as plant dealers and/or brokers. Multiple includes entities operating under more than one business code.

⁴ Respondents were asked to select the one category that best described their entity, therefore no responses were designated as multiple categories.

⁵ An additional 37 responses stated that they had no related products or sales in 2018.

Responses by County

The highest response rates were Baltimore County (31), Montgomery County (14), Anne Arundel County (10), Queen Anne's (10), Harford County (9), and Carroll County (9).

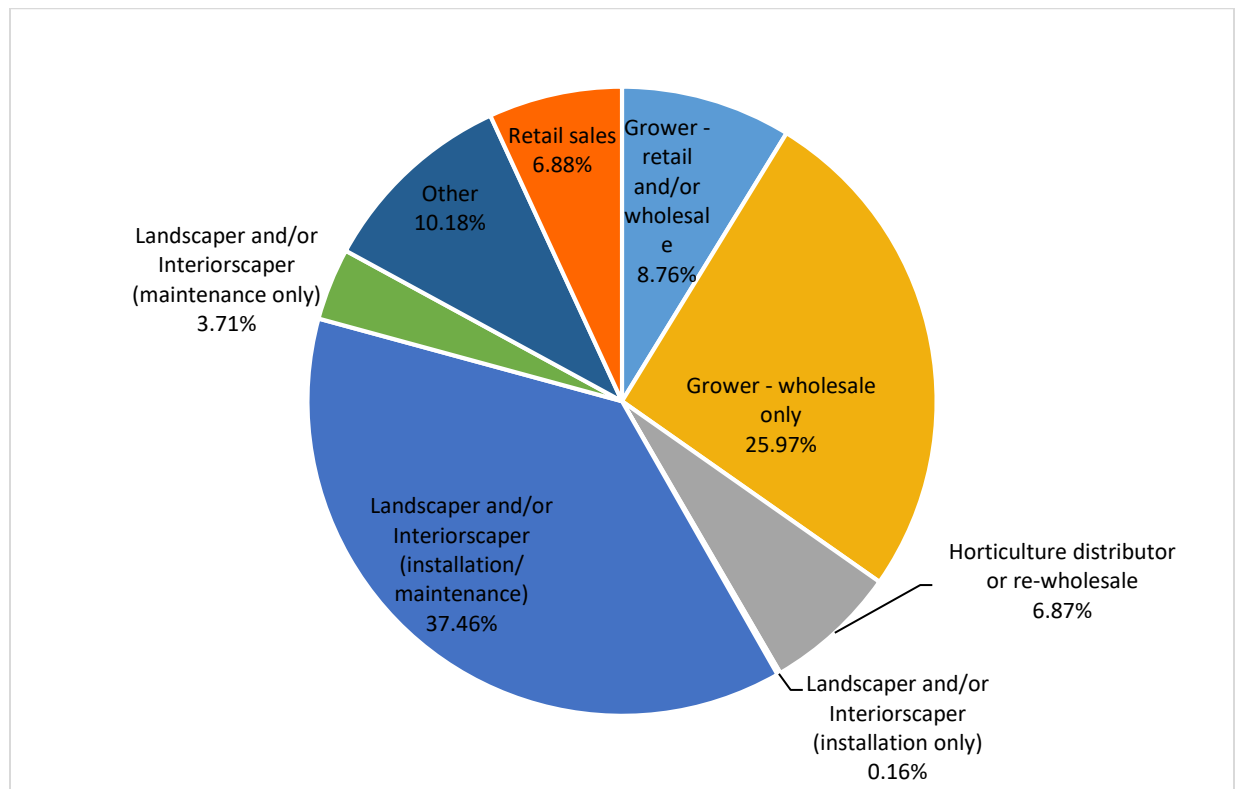


Comparability to Previous Surveys

Over the years, the survey questions have been modified to ensure that the results are presented in the most effective manner. Methodology used in previous surveys varies from year to year. This may be the reason that the total industry impact has varied in 2007, 2012 and 2018. The different methodologies utilized may result in incomparability of results across survey years. A complete version of the survey questionnaire is included in the end of this report.

Results and Summary of the Survey

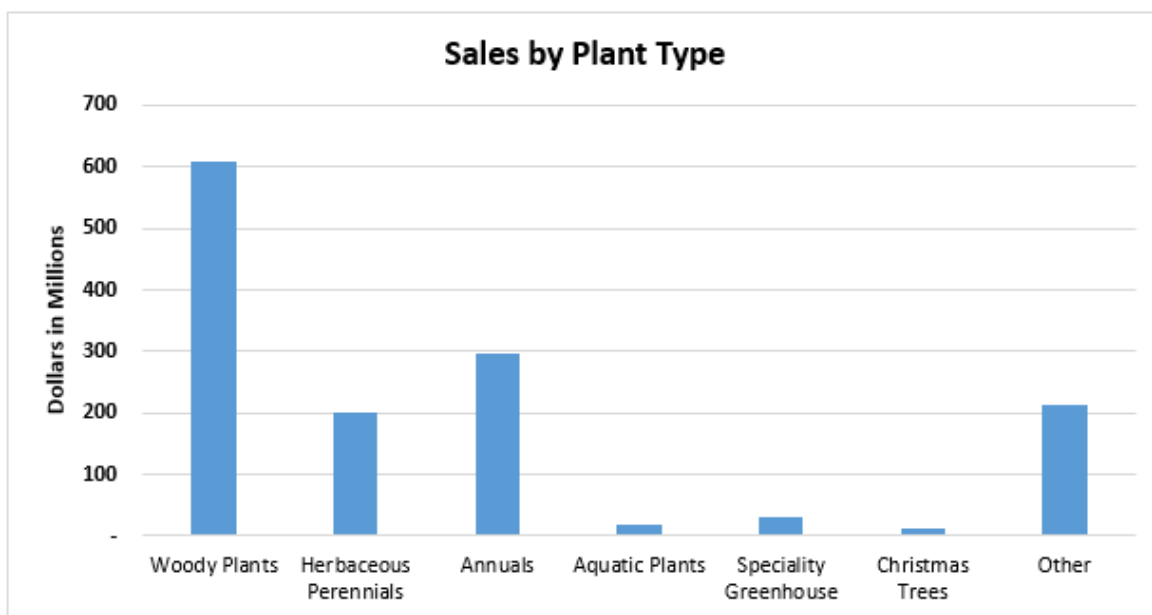
2018 Sales by Business Function



Category	2017 (\$)	Percent of Industry	Percent change (2017-18)	2018 (\$)	Percent of Industry	Percent change (2018-19)	2019 (Projected) (\$)	Percent of Industry
Grower	\$503,138,057	37%	-3%	\$478,029,219	35%	3%	\$509,866,075	35%
Landscaper	\$531,133,717	39%	9%	\$568,800,968	41%	4%	\$614,779,042	42%
Retail Sales	\$181,796,931	13%	6%	\$189,109,228	14%	-1%	\$194,125,523	13%
Other	\$142,355,400	10%	0%	\$140,147,986	10%	0%	\$145,844,171	10%
Total	\$1,358,424,104	100%	3%	\$1,376,087,401	100%	3%	\$ 1,464,614,811	100%

Types of Plants Sold

Woody plants and annuals, dominated the horticulture industry sales. These two plant types accounted for 65% of sales and in 2018 totaled about \$904.7 million in sales. Herbaceous perennials and other plant types (seeds, bulbs, etc.), reported similar sales at 15%, with sales in excess of \$200 million for herbaceous perennials and 15%, with sales in excess of \$213 million for other. Aquatic plants, specialty greenhouse items and Christmas trees, accounted for 4% of total sales and just short of \$58 million in sales.



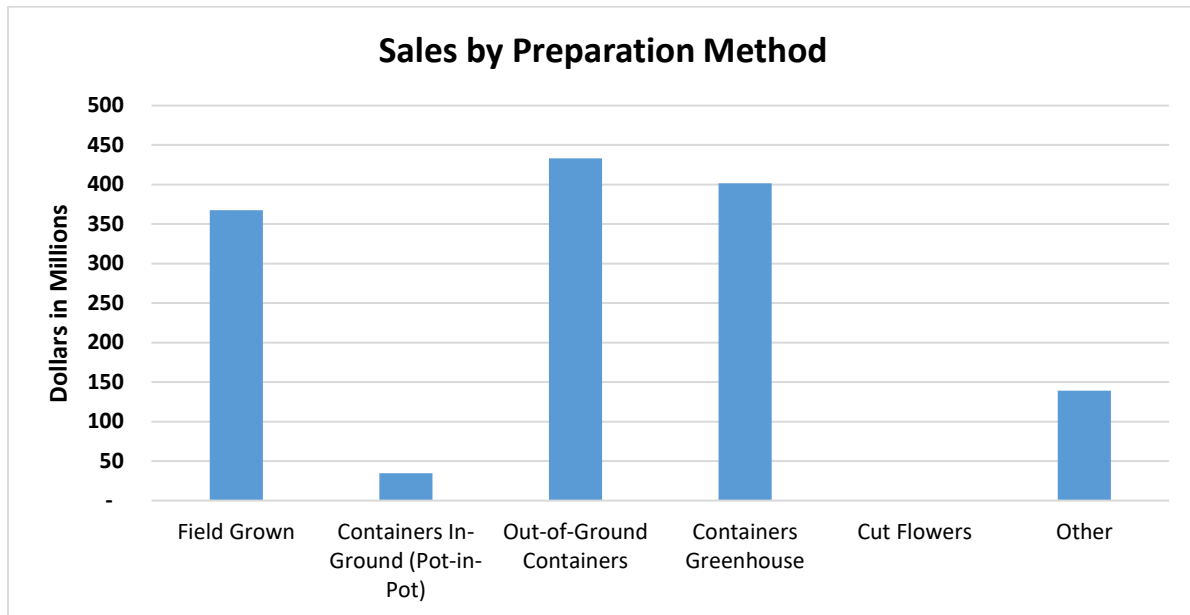
Plant Type	2018 (\$)	Percent
Woody Plants	\$608,900,245	44%
Herbaceous Perennials	\$200,097,704	15%
Annuals	\$295,820,210	21%
Aquatic Plants	\$17,499,873	1%
Specialty Greenhouse ⁶	\$29,830,994	2%
Christmas Trees	\$10,706,744	1%
Other ⁷	\$213,231,633	16%
Total	\$1,376,087,401	100%

⁶ Specialty Greenhouse items include houseplants and tropical.

⁷ Other products are sales related to other products and services not listed such as seeds, bulbs, etc.

Method for Plant Products Sold

The 2018 survey reported sales by preparation method, which included in containers (in-ground, out-of-ground, and greenhouse), field grown and more. The container-grown preparation method accounted for 63% of sales, which totaled nearly \$869 million. Field grown products made up 27% of sales and totaled \$368 million. Cut flowers and other products made up 10.01% of sales totaling \$139 million.

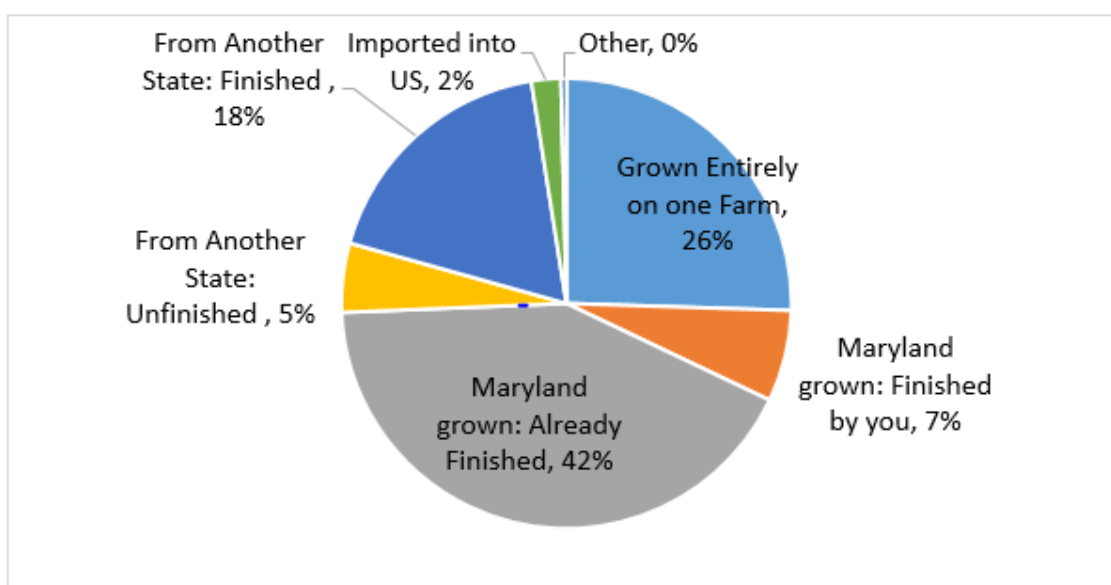


Preparation Method	2018 (\$)	Percent
Field Grown	\$367,512,296	27%
Containers In-Ground (Pot-in-Pot)	\$34,709,078	3%
Out-of-Ground Containers	\$433,259,358	31%
Containers Greenhouse	\$401,399,007	29%
Cut Flowers	\$129,773	0.01%
Other	\$139,077,889	10%
Total	1,376,087,401	100%

Source of Plant Material Sold⁸

The 2018 survey results show that approximately 5% of the plants sold by the Maryland Horticulture industry are sourced unfinished from another state, showing a decrease from the 2012 survey in which only 12% were from this type of source. The 2018 survey identified that about 42% of plant products were sourced finished from Maryland, 18% of products were sourced finished from another state and 5% of products started in another state and finished growing in Maryland.

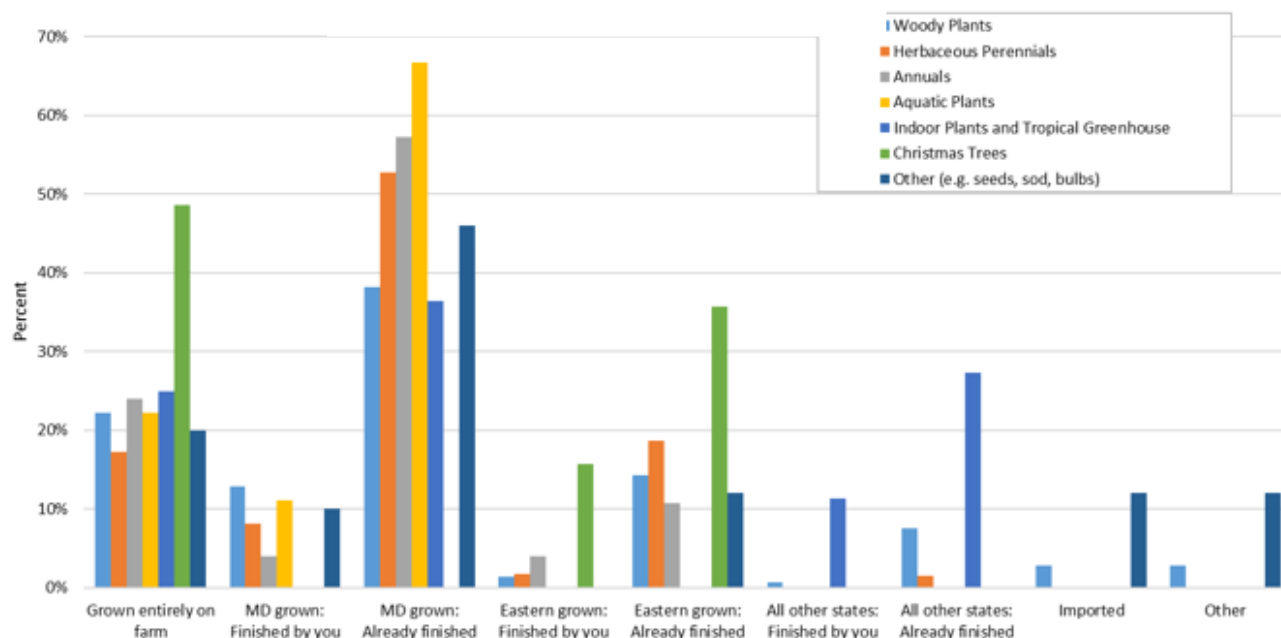
In 2018, about 26% of the Maryland nursery crop was grown from start to finish and sold directly on the farm, whereas in 2012 roughly 35% of products were grown and sold on the same farm. Only about 2% of plant materials were imported from outside the United States or of an unknown source, which was similar to the 1% reported in 2012.



Category	2018 Sales (\$)	Percent
Grown Entirely on one Farm	\$352,390,924	26%
Maryland grown: Finished by you	\$90,686,570	7%
Maryland grown: Already Finished	\$584,214,698	42%
From Another State: Unfinished	\$68,579,072	5%
From Another State: Finished	\$251,165,404	18%
Imported into US	\$29,050,734	2%
Other	\$5,460,664	0%
Total	\$1,376,087,401	100%

⁸ This analysis includes responses from the 57 participants who answered the question in the format designated in the instructions.

Source of Plant Material Sold



Eastern States include: CT, Wash. DC, DE, MA, ME, NH, NJ, NY, PA, RI, VT, and WV

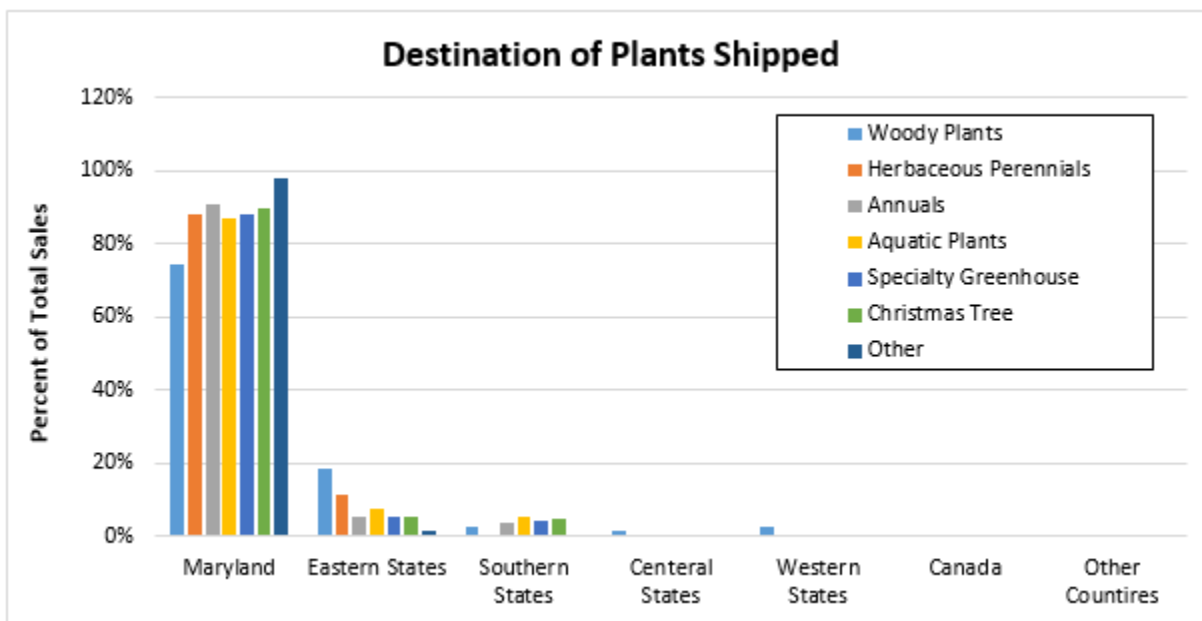
Southern States include: AL, AR, FL, GA, KY, LA, MS, NC, OK, Puerto Rico, SC, TN, TX, and VA

Central States include: IA, IL, IN, KS, MI, MO, MN, ND, NE, OH, SD, and WI

Western States include: AK, AZ, CA, CO, HI, ID, MT, NM, NV, OR, UT, WA, and WY

Destination of Plants Shipped

Of the annual plants produced by Maryland growers, 91% of them stayed in the state. Approximately 71% of woody plants that were produced in Maryland, stayed in the state of Maryland. The majority of plants that were produced in Maryland were sold within the state. Eastern and Southern states received the next largest amount of plants that were produced into Maryland. A very small amount of foreign exports were reported, these exports were distributed to Canada. No other countries were reported as receiving plants grown in Maryland.



Eastern States: CT, DC, DE, MA, ME, NH, NJ, NY, PA, RI, VT, WV

Southern States: AL, AR, FL, GA, KY, LA, MS, NC, OK, Puerto Rico, SC, TN, TX, VA

Central States: IA, IL, IN, KS, MI, MO, MN, ND, NE, OH, SD, WI

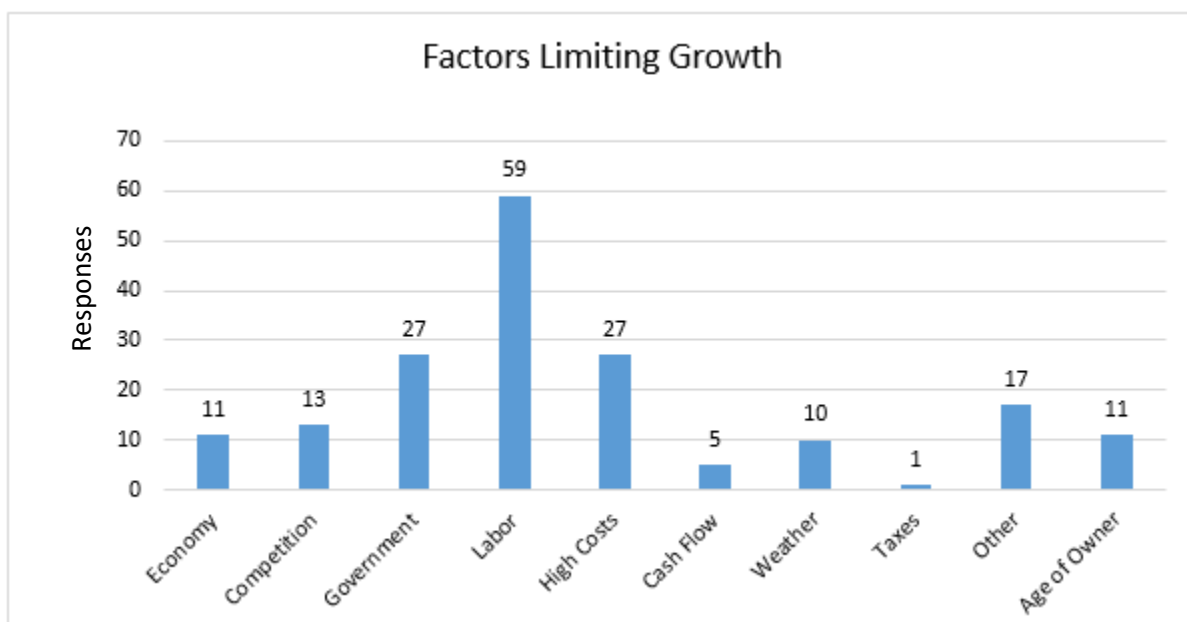
Western States: AK, AZ, CA, CO, HI, ID, MT, NM, NV, OR, UT, WA, WY

Industry Concerns

The 2018 Horticulture survey included a question which asked companies to record the factors that limit growth or caused problems to their business. The results indicated that labor, government and high costs were the main factors that were limiting growth.

As shown below, 59 individuals said that labor was the largest factor limiting growth. Labor issues included management of rising minimum wage rates, as well as continued promulgation of restrictive government regulations and cultural predilections, both impacting the availability of a consistent, reliable, and legal labor force. The high cost of doing business and holding corporate debt were also cited as factors that limited growth.

The 2012 survey indicated similar factors limiting growth in the horticulture industry. The most significant limiting factors identified in the 2012 survey were related to: the economy, competition, government, labor and high costs.



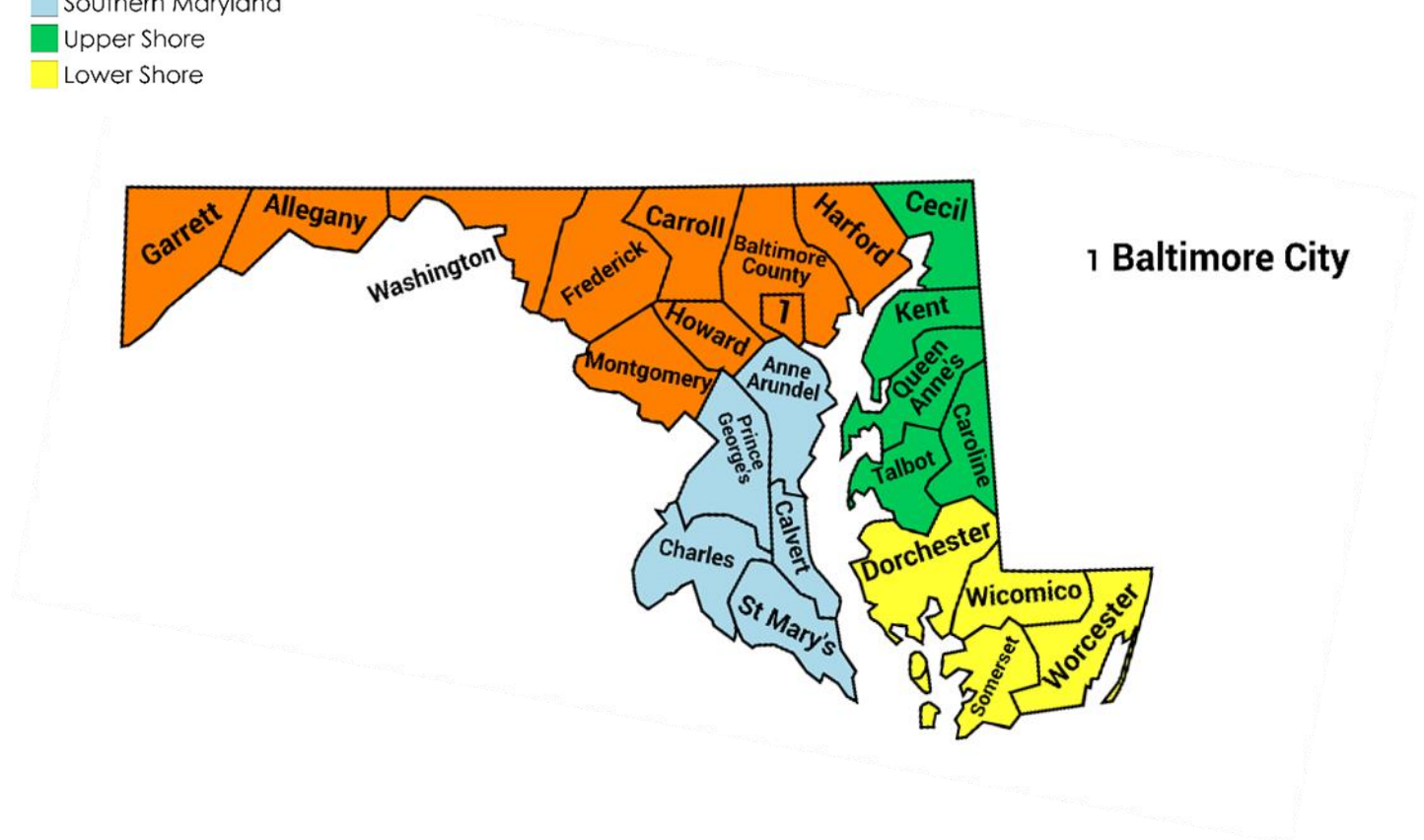
Regional Profiles of Horticulture in Maryland

The map below divides Maryland into four regions: Western and Central Maryland, Southern Maryland, Upper Shore and Lower Shore.⁹

The Western and Central region is composed of Garrett, Allegany, Washington, Frederick, and Montgomery, Carroll, Howard, Baltimore and Harford counties. The Southern region includes: Anne Arundel, Prince George's, Calvert, Charles and Saint Mary's counties. The Upper Shore region is composed of Cecil, Kent, Queen Anne's, Talbot and Caroline counties. Finally, the Lower Shore region includes: Dorchester, Wicomico, Somerset and Worcester counties.

Maryland Regions

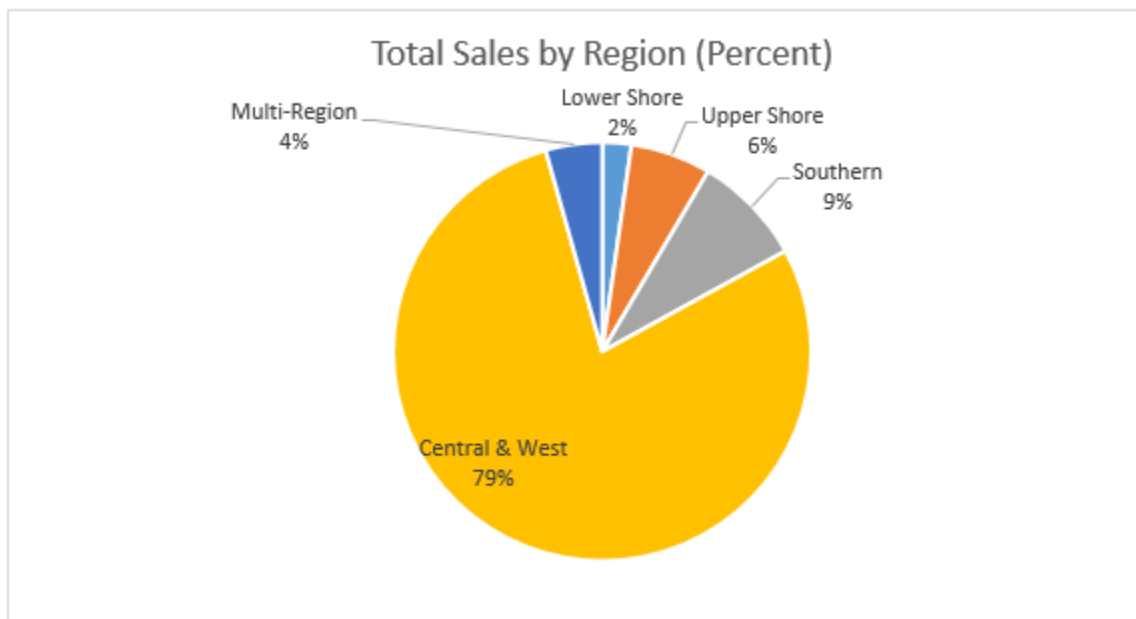
- Central and Western Maryland
- Southern Maryland
- Upper Shore
- Lower Shore



⁹ For data analysis purposes, Central and Western Maryland were combined to create one region.

Sales by Region

The Central and Western region led the state in total sales, accounting for half of the entire sales of Maryland. This region reported an estimated \$1.081 billion in sales, followed by Southern Maryland with an estimated \$118 million in sales. The Upper and Lower Shore accounted for less than 10% of all estimated sales in 2018. The two regions combined reported an estimated \$116.5 million in sales.



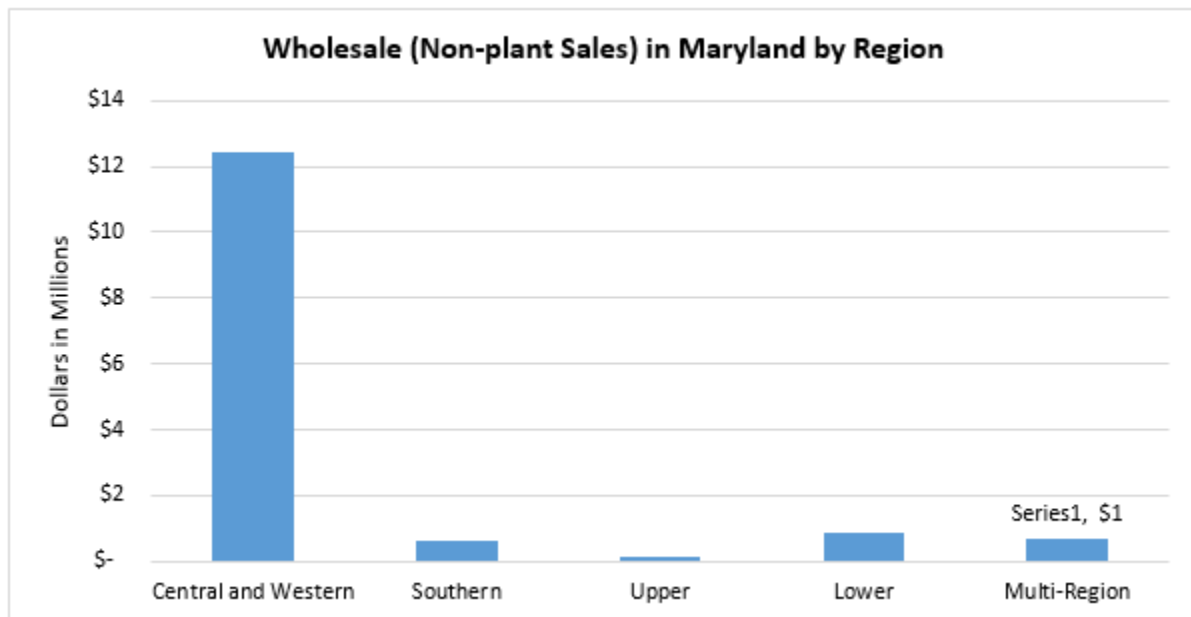
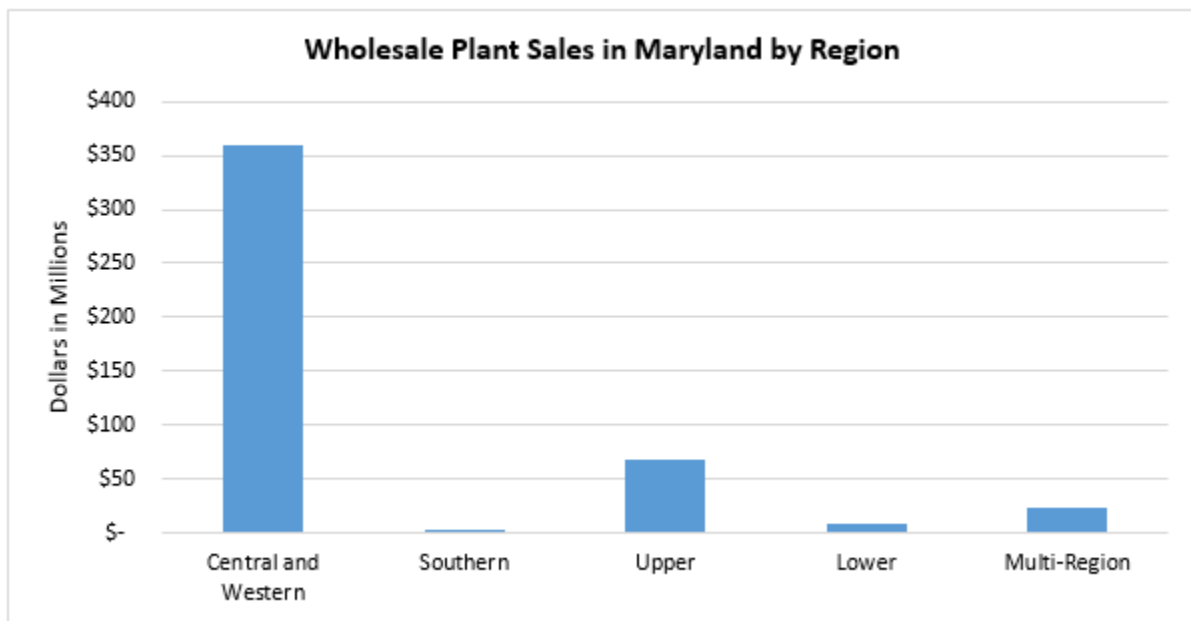
Region	2012 Sales (\$)	Scaled Sales (\$) ¹⁰	Percent Total
Lower Shore	\$5,264,000	\$30,832,000	2%
Upper Shore	\$19,776,844	\$85,699,657	6%
Southern	\$14,889,319	\$117,760,978	9%
Central & West	\$154,525,391	\$1,081,677,737	79%
Multi-Region	\$7,863,163	\$60,117,029	4%
Total	\$202,318,717	\$1,376,087,401	100%

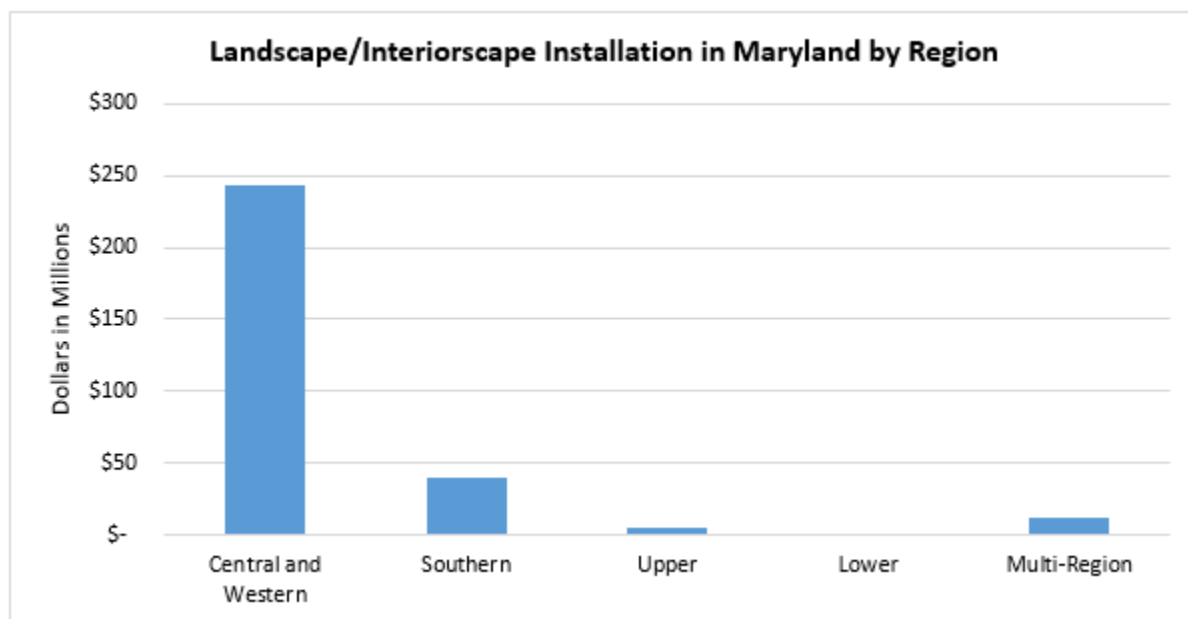
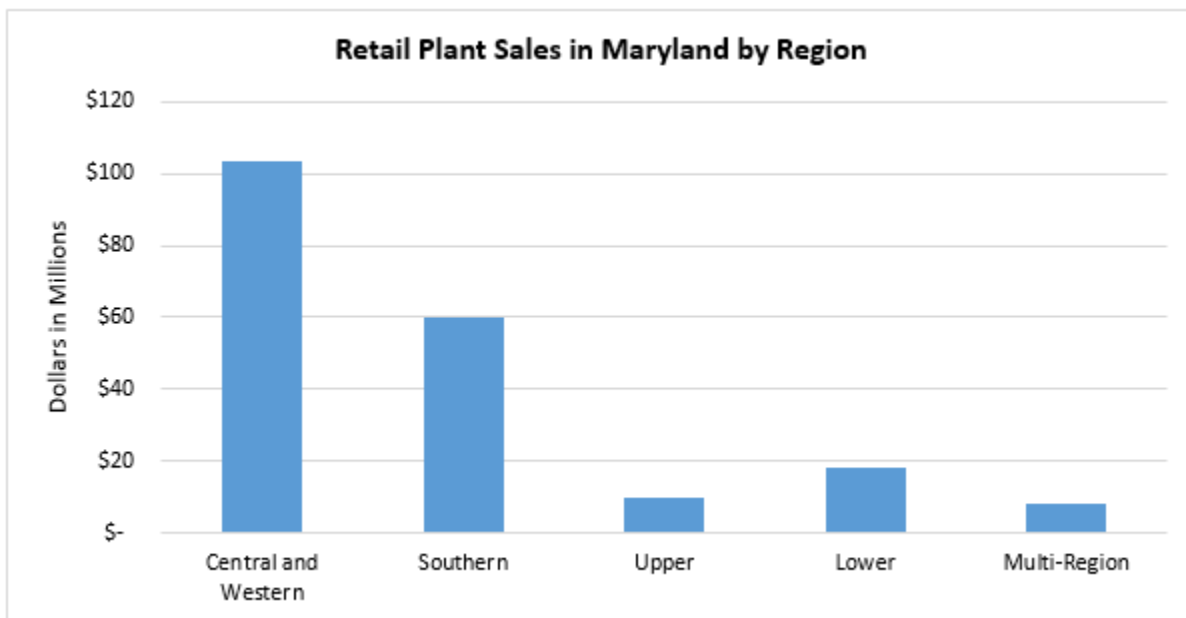
¹⁰ See page 5, Estimation for Non-Response

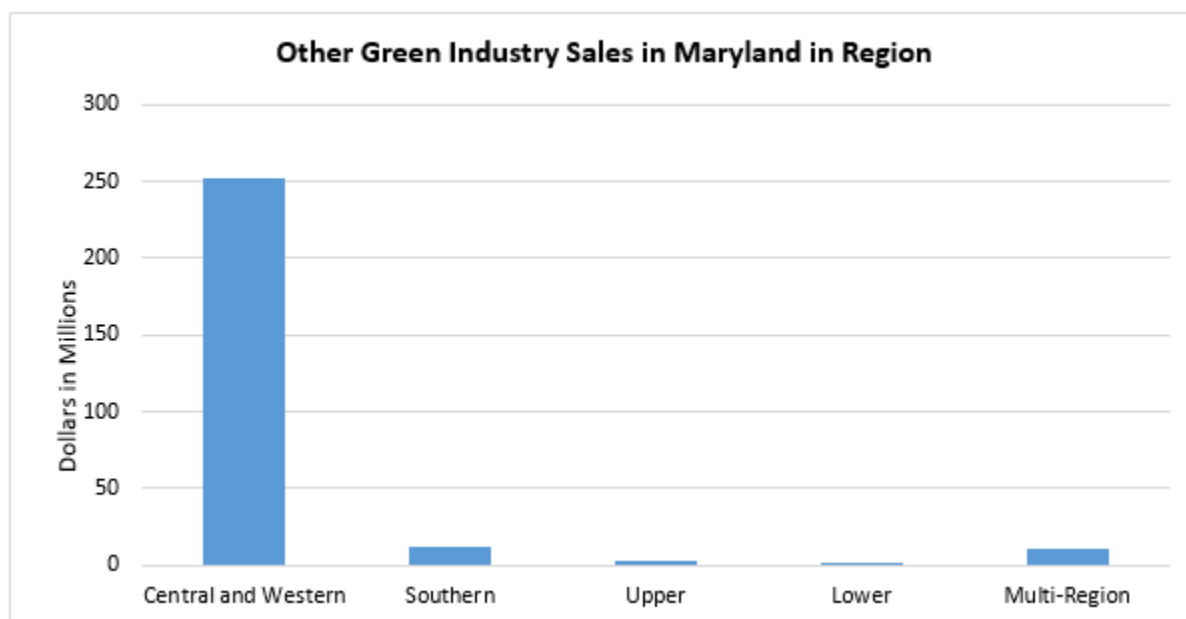
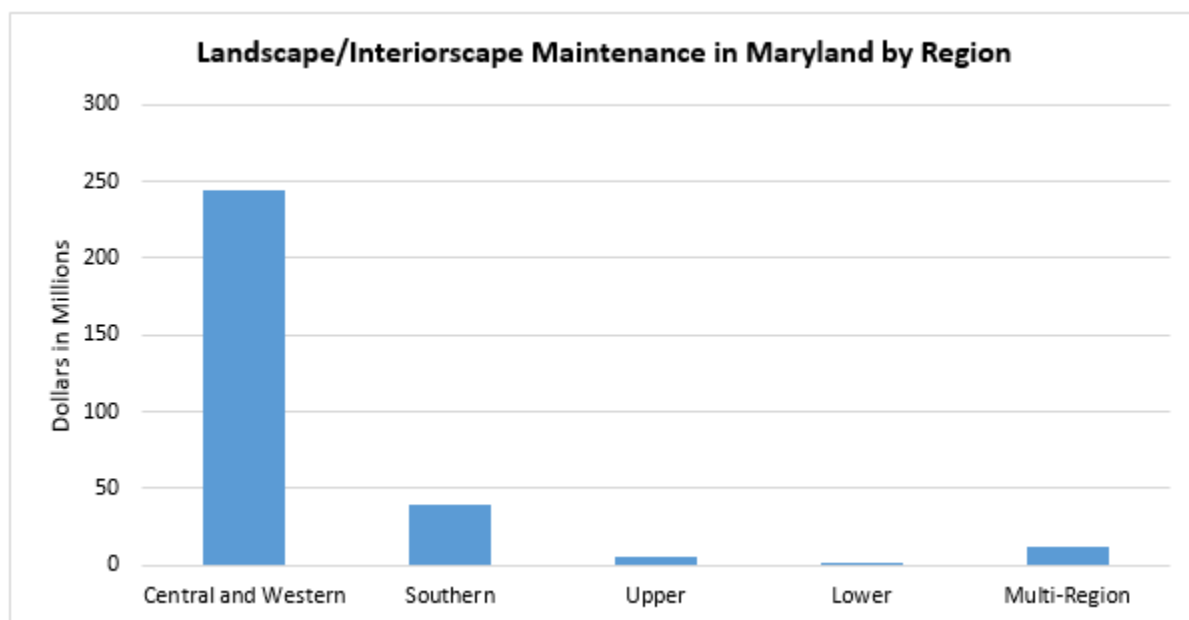
Sales of Horticulture Products by Business Function by Region

In 2018, the Central and Western region of Maryland reported the highest sales totaling \$1.08 billion. Wholesale (plant sales) and landscape related sales accounted for about 79% of all sales in the region. The Lower Shore region reported the lowest sales totaling \$30.8 million. Retail and wholesale (plant sales) accounted for about 86% of all sales in the region.

Region	Central & Western	Southern	Upper Shore	Lower Shore	Multi-Region
Wholesale (plant sales)	\$359,237,996	\$3,159,248	\$67,352,762	\$9,086,947	\$22,653,585
Wholesale (non-plant sales only)	\$12,404,845	\$622,841	\$140,573	\$892,629	\$661,585
Retail (plant sales)	\$46,861,131	\$44,771,416	\$9,162,010	\$17,355,300	\$5,195,292
Retail (non-plant sales)	\$56,762,980	\$14,933,313	\$588,510	\$1,048,839	\$3,064,109
Landscape/interiorscape installation	\$243,655,392	\$39,517,377	\$5,065,272	\$1,168,500	\$12,273,496
Landscape/interiorscape maintenance	\$251,449,230	\$11,593,145	\$2,931,197	\$1,279,786	\$11,393,818
Other	\$111,306,163	\$3,163,636	\$459,333	\$ -	\$4,875,144
Total	\$1,081,677,737	\$117,760,978	\$856,699,657	\$30,832,000	\$60,117,029

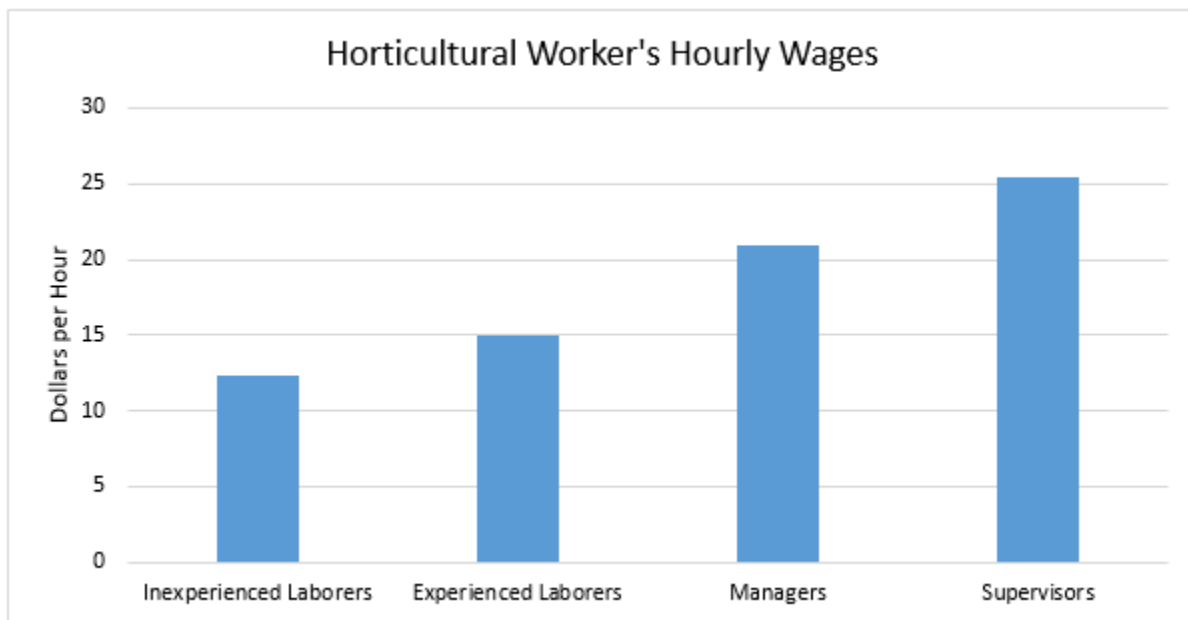






Number of Horticulture Workers and Wages

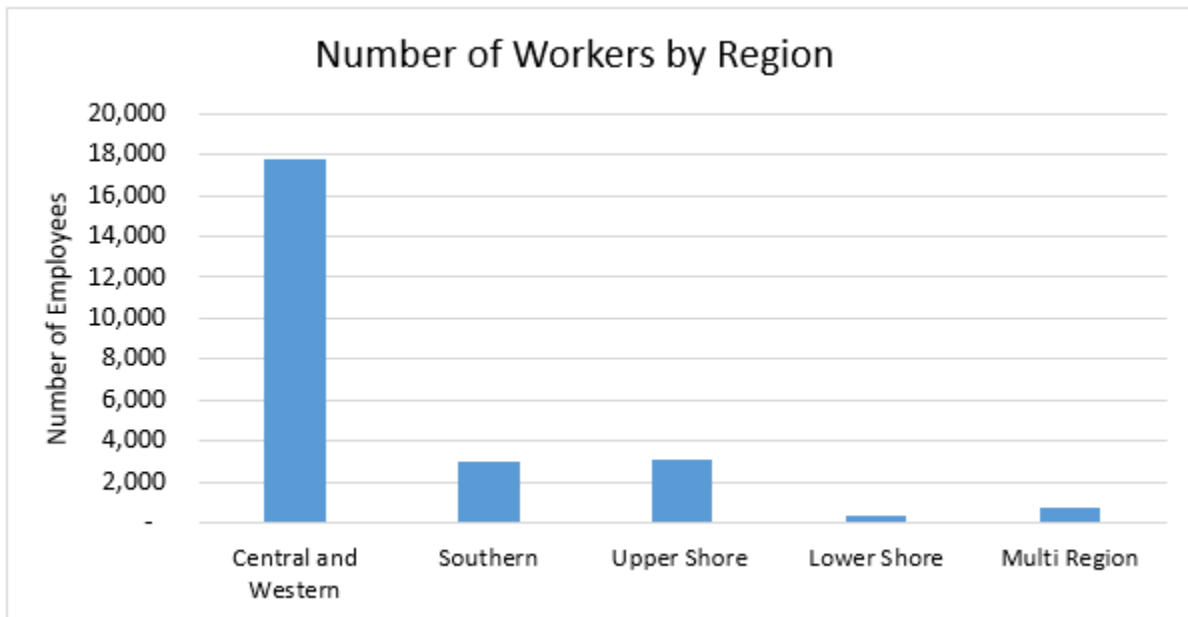
In 2018, there were a reported 24,880 Maryland employees who worked for state-licensed nursery and landscape businesses. In 2007, there were a reported 18,588 employees and in 2012 there were 25,605 employees. The 2018 results indicate a slight decrease from 2012. There is an approximate 50/50 split in employees who worked 149 days or less (51%) and those of which worked 150 days more (49%). A total of \$135.7 million dollars in labor overhead were reported in 2018. These items include benefits, payroll taxes, workers compensation and other costs that are included when hiring and processing foreign labor. In 2018, inexperienced Maryland horticulture employees received an average wage of \$12.38 per hour while experienced laborers averaged \$14.94 an hour in wages. Hourly wages for managers averaged \$20.88 and supervisors received average hourly wages of \$25.49. In 2018, there were 7,318 immigrant workers in which 3,357 came from the H2A program and 3,862 came from the H2B program.



Categories	2018 Labor	Scaled Total Workers
Total Workers	2,828	24,880
Worked 149 days or less	1,191	12,801
Worked 150 days or more	1,637	12,079
Immigrant Worker Programs		
Total Immigrant Workers	383	7,318
Workers from H2A Program	179	3,357
Workers from H2B Program	199	3,862
Workers from Unspecified Programs	5	100

Labor and Wages by Region

The Central and Western region accounted for the majority of horticulture employees by state-licensed operations. The region had 17,776 employees which accounted for 71% of all Maryland horticulture employees. The Southern and Upper Shore regions had a combined 6,007 employees (24%). In 2018, 51% of employees worked on a part-time/seasonal basis.

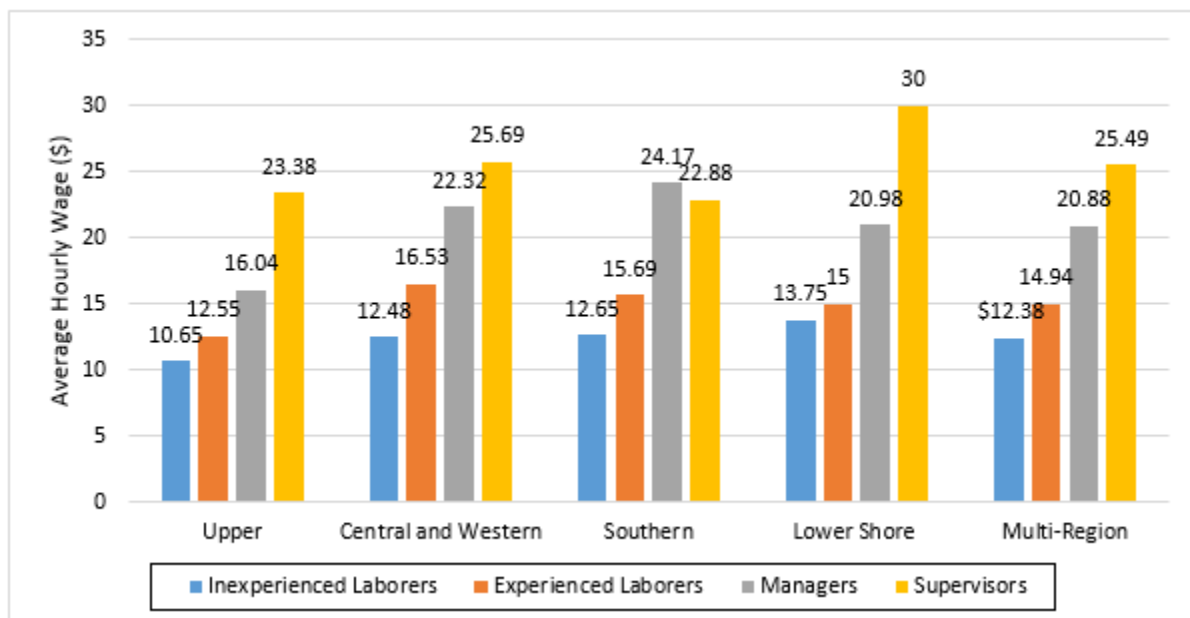


Region	Total Employed	# Employed < 150 Days	# Employed > 150 Days
Central and Western	17,776	9,395	8,381
Southern	2,942	1,297	1,645
Upper Shore	3,065	1,594	1,471
Lower Shore	381	123	258
Multi Region	717	392	324
Total	24,881	12,801	12,079

Total Wages by Region

In 2018, \$423.7 million were paid in wages by the horticulture industry.

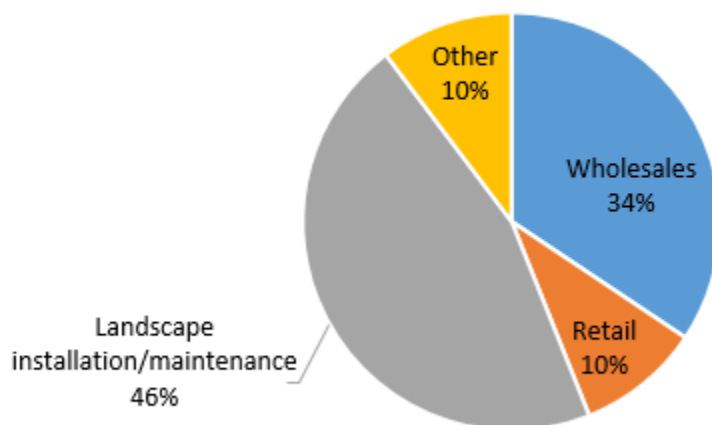
Regions	Gross Wages (\$)	Overhead and Benefits (\$)
Central & Western	323,585,325	58,312,800
Southern	36,868,164	5,138,220
Upper Shore	49,735,230	5,443,183
Lower Shore	2,562,500	1,025,000
Multi-Region	10,951,699	1,743,522
Total	423,702,918	72,662,726



Central and Western Maryland: (Allegany, Garrett, Frederick, Carroll, Montgomery, Baltimore, Harford, Howard and Washington Counties)

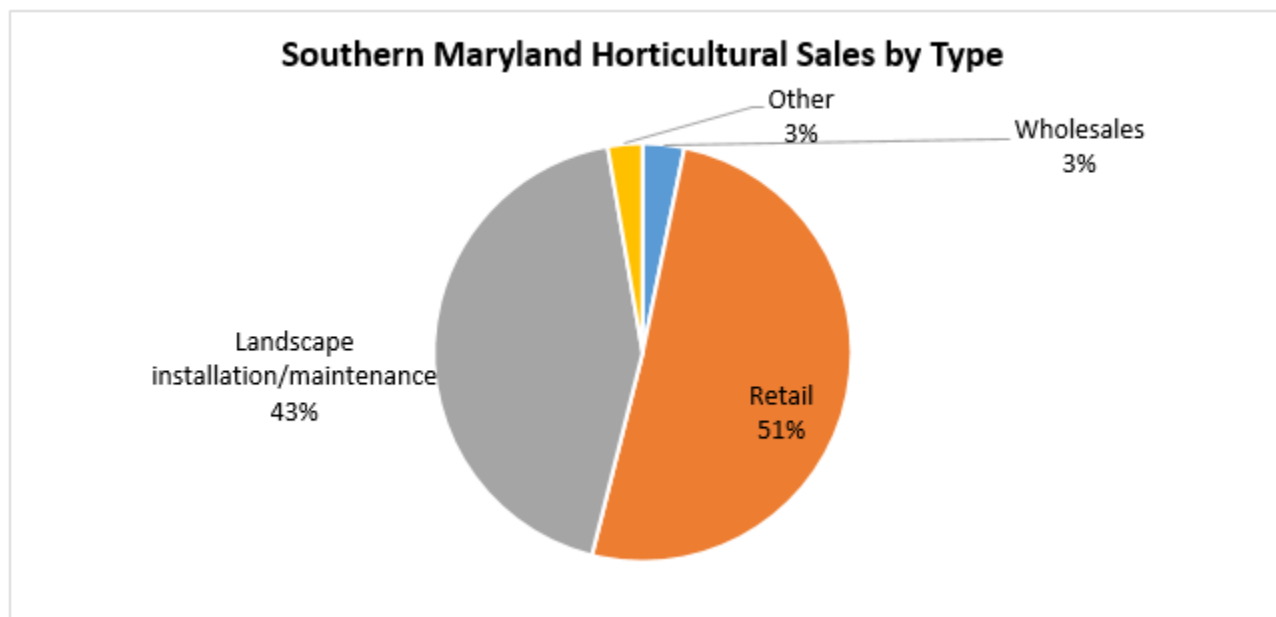
Sales	Percent	Value
Wholesales	34%	\$ 371,642,842
Retail	10%	\$ 103,624,111
Landscape installation/maintenance	46%	\$ 495,104,622
Other	10%	\$ 111,306,163
Total sales of horticulture products and services 2018	100%	\$ 1,081,677,737
Land area in production (total acres)		38,114
Total Wages Paid to Workers (2018)		
Wage Rate	Inexperienced Laborers	\$12.48
	Experienced Laborers	\$16.53
	Managers	\$22.32
	Supervisors	\$25.69
Number of Workers	Full Time	9395
	Seasonal	8381

Central and Western Maryland Horticultural Sales by Type



Southern Maryland: (Calvert, Charles, Anne Arundel, Prince George's and St. Mary's Counties)

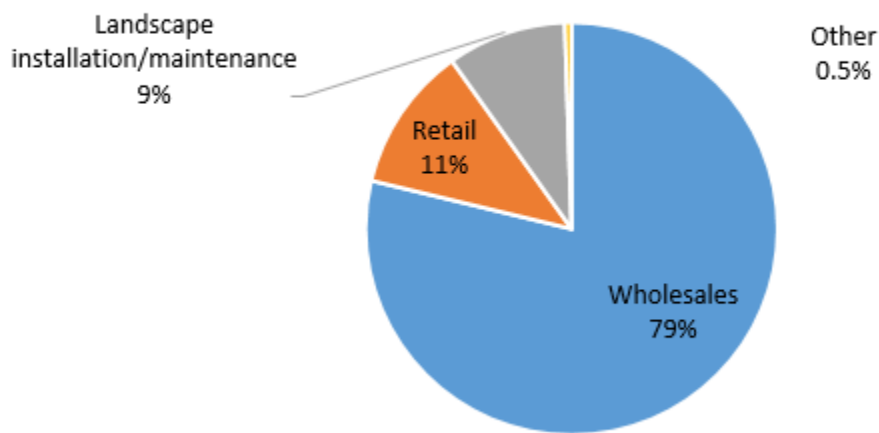
Sales	Percent	Value
Wholesales	3.2%	\$ 3,782,089
Retail	50.7%	\$ 59,704,729
Landscape installation/maintenance	43.4%	\$ 51,110,523
Other	2.7%	\$ 3,163,636
Total sales of horticulture products and services 2018	100.0%	\$ 117,760,978
Land area in production (total acres)		4,504
Total Wages Paid to Workers (2018)		
Wage Rate	Inexperienced Laborers	\$12.65
	Experienced Laborers	\$15.69
	Managers	\$24.17
	Supervisors	\$22.88
Number of Workers	Full Time	1297
	Seasonal	1645



Upper Shore Maryland: (Cecil, Kent, Caroline, Queen Anne's and Talbot Counties)

Sales	Percent	Value
Wholesales	79%	\$ 67,493,335.00
Retail	11%	\$ 9,750,520.00
Landscape installation/maintenance	9%	\$ 7,996,469.00
Other	0.5%	\$ 459,333.33
Total sales of horticulture products and services 2018	100%	\$ 85,699,657.33
Land area in production (total acres)		30,034
Total Wages Paid to Workers (2018)		
Wage Rate	Inexperienced Laborers	\$10.65
	Experienced Laborers	\$12.55
	Managers	\$16.04
	Supervisors	\$23.38
Number of Workers	Full Time	1594
	Seasonal	1471

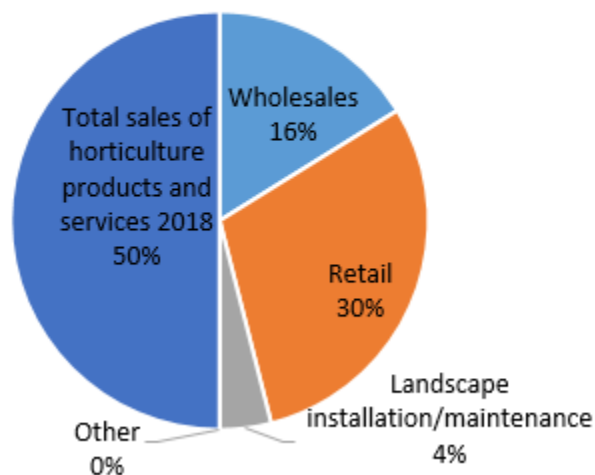
Upper Shore Maryland Horticultural Sales by Type



Lower Shore Maryland: (Dorchester, Wicomico, Worcester and Somerset Counties)

Sales	Percent	Value
Wholesale	32%	\$9,979,576
Retail	60%	\$18,404,139
Landscape installation/maintenance	8%	\$2,448,286
Other	0%	\$ -
Total sales of horticultural products and services 2018	100%	\$30,832,000
Land area in production (total acres)		698
Total Wages Paid to Workers (2018)		
Wage Rate	Inexperienced Laborers	\$13.75
	Experienced Laborers	\$15.00
	Managers	\$20.98
	Supervisors	\$30.00
Number of Workers	Full Time	123
	Seasonal	258

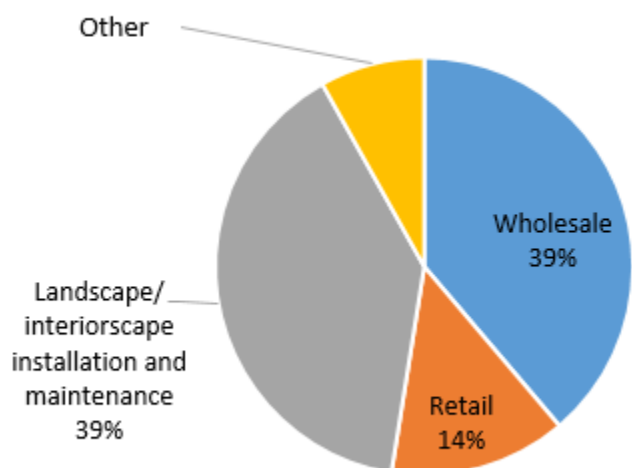
Lower Shore Horticultural Sales by Type



Multi-Region:

Sales	Percent of Sales	Value
Wholesale	38.78%	\$23,315,170.11
Retail	13.74%	\$8,259,401.29
Landscape/ interiorscape installation and maintenance	39.37%	\$23,667,313.68
Other (please specify)	8.11%	\$4,875,144
Total sales of horticultural products and services in 2018	100.00%	\$60,117,029.22
Land area in production (total acres)		7,691
Total Wages paid to workers (2018)		\$15,638,073.52
Wage Rate	Inexperienced Laborers	\$12.38
	Experienced Laborers	\$14.94
	Supervisors	\$20.88
	Managers	\$25.49
Number of Workers	Full time	324
	Seasonal	392

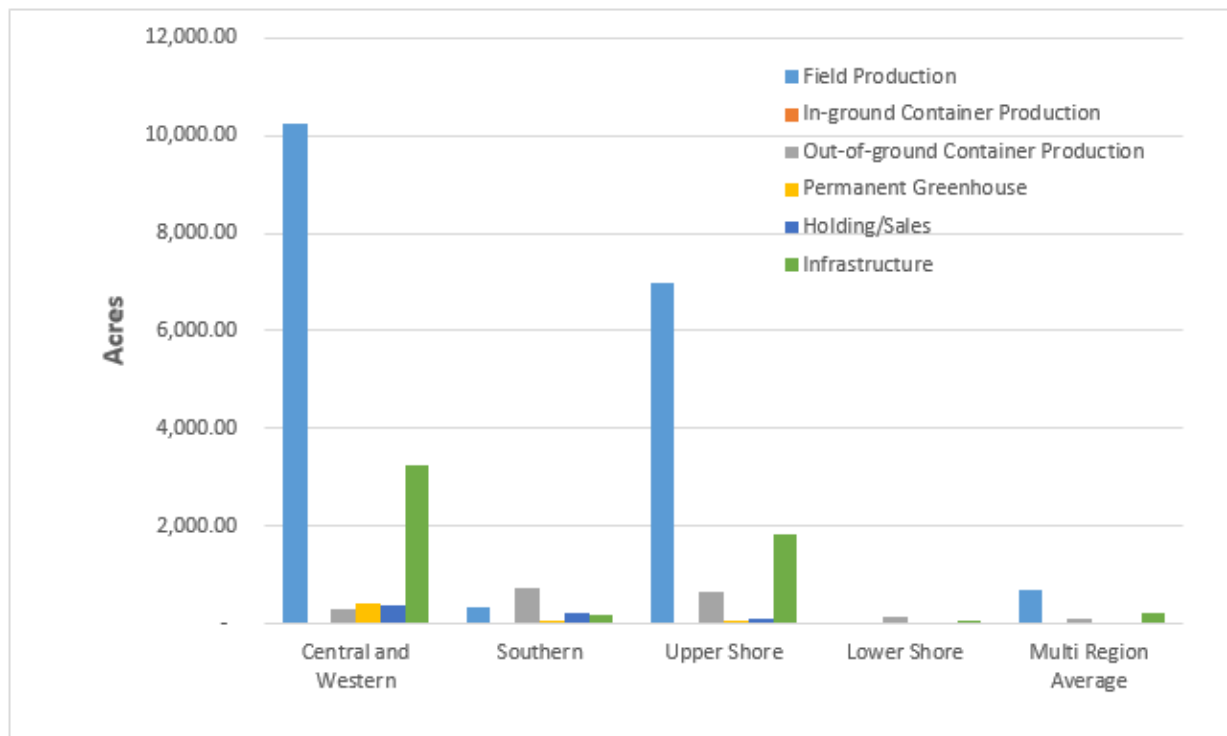
Multi-Region Horticultural Sales by Type



Total Acreage and Covered Growing Space

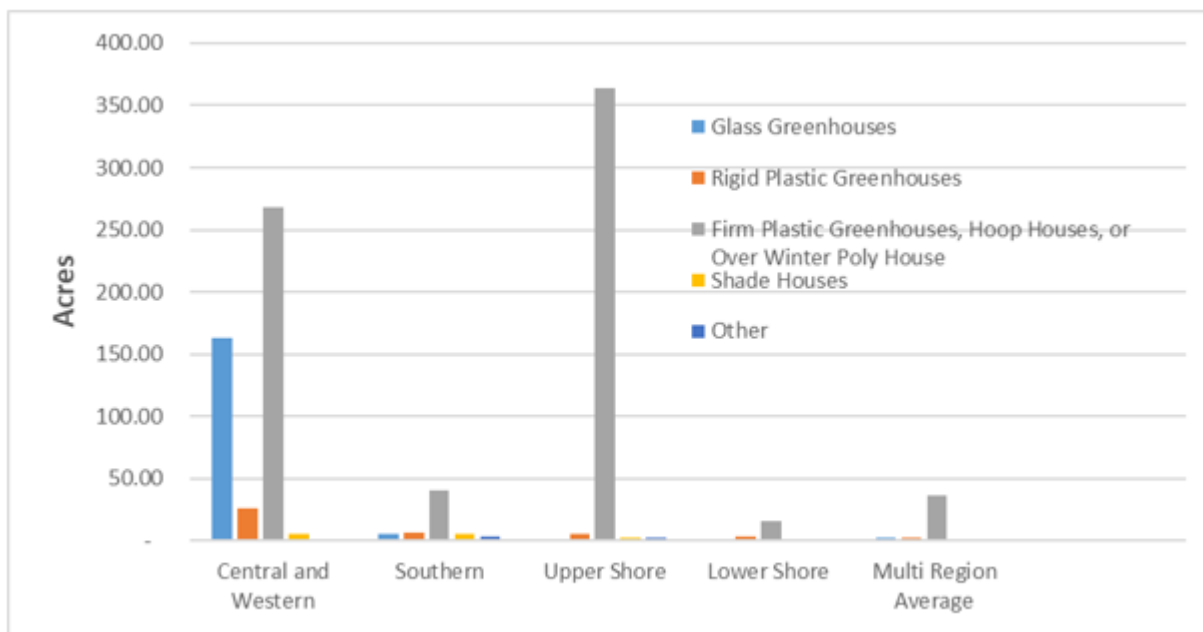
The total estimated acres of land in horticultural production in Maryland in 2018 is 27,054. The different acreage uses for the horticultural industry with the amount of acres used for each area include: field production (18,257 acres), in-ground container production (44.5), out-of-ground container production (1,911), permanent greenhouses (558), holding and sales (761), and infrastructure (5,523). Scaled acreage uses include: glass greenhouses (171 acres), rigid plastic greenhouses (44), firm plastic greenhouses, hoop houses, or winter poly houses (724), shade houses (14), and other purposes (6). These acreage totals offer an overview of where different businesses and individuals focus their operations.

Outdoor Production Acreage



Regions	Field Production	In-ground Container Production	Out-of-ground Container Production	Permanent Greenhouse	Holding/Sales	Infrastructure
Central and Western	10,237.50	5.25	288.75	404.25	393.75	3,239.25
Southern	327.12	13.92	715.14	73.08	214.02	194.88
Upper Shore	6,978.40	-	665.6	60.32	91.25	1,828.32
Lower Shore	5.13	25.5	128.13	5.13	32.39	51.25
Multi-Region	708.8	4.8	113.6	15.04	29.12	208.96
Total	18,256.95	44.47	1,911.22	557.82	760.8	5,522.66

Covered Growing Space



Reported Acreage

Regions	Glass Greenhouses	Rigid Plastic Greenhouses	Firm Plastic Greenhouses	Shade Houses	Other
Central and Western	0.31	0.05	0.51	0.01	-
Southern	0.03	0.04	0.23	0.03	0.02
Upper Shore	-	0.05	3.50	0.02	0.02
Lower Shore	-	0.09	0.38	0.01	-
Multi-Region	0.09	0.06	1.15	0.02	0.01
Total	0.43	0.29	5.77	0.09	0.05

Scaled Acreage

Regions	Glass Greenhouses	Rigid Plastic Greenhouses	Firm Plastic Greenhouses Hoop Houses, or Over Winter Poly House	Shade Houses	Other
Central and Western	162.75	26.25	267.75	5.25	-
Southern	5.22	6.96	40.02	5.22	3.48
Upper Shore	-	5.20	364	2.08	2.08
Lower Shore	-	3.69	15.375	0.41	-
Multi-Region	2.88	1.92	36.80	0.64	0.32
Total	170.85	44.02	723.95	13.60	5.88

2018 MARYLAND HORTICULTURE SURVEY

Dear Green Industry Professional:

This survey is being conducted by the Business, Economic and Community Outreach Network (BEACON) of the Franklin P. Perdue School of Business at Salisbury University, on behalf of the Maryland Nursery, Landscape and Greenhouse Association, Inc., to document the current growth, scope, and impact of Maryland's Ornamental Horticulture Industry.

The survey is being sent to all licensed nurseries and plant dealers in Maryland and includes retail chains located in Maryland yet headquartered out of state. **If you do business in more than one location, please combine the data for all locations on one questionnaire. Include sales from Maryland locations only.**

Your response is important to ensure reliable results. The information you provide is kept confidential and used only in combination with other reports to produce State or regional results.

COMPLETED PAPER COPIES CAN BE MAILED TO THE FOLLOWING ADDRESS:

BEACON at Salisbury University
Perdue Hall, Suite 100
1101 Camden Avenue
Salisbury, MD 21801

If you have any questions, please do not hesitate to contact our team at beacon@salisbury.edu or 410-546-6001. We appreciate your help in this important effort.

Sincerely,
BEACON

SECTION 1 - Type of Operation

1. Did you produce or sell nursery or greenhouse crops or provide landscape services during **2018**?

☐ Yes [*Continue*]

☐ No [*Skip to page 9, question 48*]

2. Which of the following categories **BEST** describes your business (*check one*):

☐ Grower - wholesale only

☐ Grower - retail and/or wholesale

☐ Landscaper and/or Interiorscaper (*installation only*)

☐ Horticulture distributor or re-wholesale

☐ Landscaper and/or Interiorscaper (*maintenance only*)

☐ Retail sales

☐ Landscaper and/or Interiorscaper (*installation/ maintenance*)

☐ Other (*Please specify*)

3. How many years has this business been in operation?

4. Is this operation a Family Owned Business?

☐ Yes

☐ No

SECTION 2 – Sources of Plant Material

5. Did you produce, purchase or install plants in **2018**? ☐ Yes *[Continue]*

☐ No *[Skip to Section 3, question 7]*

6. Please enter the **PERCENTAGE** of your **2018** plant material that you **produced or purchased** in each category and region identified in the table below. (For columns with entered data, percentages should add up to 100%)

Source of Plants:	Woody Plants	Herbaceous Perennials	Annuals	Aquatic Plants	Indoor Plants and Tropical Greenhouse	Christmas Trees	Other (e.g. seeds, sod, bulbs)
Grown entirely on your farm/ nursery							
Maryland grown: Finished by you							
Maryland grown: Already finished							
Eastern States grown: Finished by you							
Eastern States grown: Already finished							
Southern States grown: Finished by you							
Southern States grown: Already finished							
Central States grown: Finished by you							
Central States grown: Already finished							
Western States grown: Finished by you							
Western States grown: Already finished							
Canada grown: Finished by you							
Canada grown: Already finished							
Central America							
South America							
Europe							
Asia							
Africa							
Other							
Total							

Note: Eastern States include CT, Wash. DC, DE, MA, ME, NH, NJ, NY, PA, RI, VT, and WV **Southern States include** AL, AR, FL, GA, KY, LA, MS, NC, OK, Puerto Rico, SC, TN, TX, and VA **Central States include** IA, IL, IN, KS, MI, MO, MN, ND, NE, OH, SD, and WI **Western states include** AK, AZ, CA, CO, HI, ID, MT, NM, NV, OR, UT, WA, and WY

SECTION 3 – Destination of Sales – if you are a landscape contractor, go to question 9.

7. Did you wholesale and/or re-wholesale plant materials or engage in retail sales in 2018?

☐ Yes [Continue]

☐ No [Skip to Section 3, question 9]

8. Please enter the **PERCENTAGE** of your **2018** sales by plant material category sold to each region identified in the table below. (For columns with entered data, percentages should add up to 100%)

Destination	Woody Plants	Herbaceous Perennials	Annuals	Aquatic Plants	Specialty Greenhouse	Christmas Trees	Other (e.g. seeds, sod, bulbs)
Maryland							
Eastern States							
Southern States							
Central States							
Western States							
Canada							
Central America							
South America							
Europe							
Asia							
Total							

NOTE: Eastern States include CT, DC, DE, MA, ME, NH, NJ, NY, PA, RI, VT, WV
Southern States include AL, AR, FL, GA, KY, LA, MS, NC, OK, Puerto Rico, SC, TN, TX, VA
Central States include IA, IL, IN, KS, MI, MO, MN, ND, NE, OH, SD, WI
Western states include AK, AZ, CA, CO, HI, ID, MT, NM, NV, OR, UT, WA, WY

SECTION 3 – Destination of Sales (Continued)

9. Did you install and/or maintain plant materials for customers in **2018**?

☐ Yes [Continue]

☐ No [Skip to Section 4, question 11]

10. Please enter the **PERCENTAGE** of your **2018** sales by plant material category sold to each region identified in the table below. (For columns with entered data, percentages should add up to 100%)

States	Woody Plants	Herbaceous Perennials	Annuals	Aquatic Plants	Specialty Greenhouse	Christmas Trees	Other (e.g. seeds, sod, bulbs)
Maryland							
Eastern States							
Southern States							
Central States							
Western States							
Canada							
Central America							
South America							
Europe							
Asia							
Africa							
Other							
Total							

NOTE: Eastern States include CT, DC, DE, MA, ME, NH, NJ, NY, PA, RI, VT, WV
 Southern States include AL, AR, FL, GA, KY, LA, MS, NC, OK, Puerto Rico, SC, TN, TX, VA
 Central States include IA, IL, IN, KS, MI, MO, MN, ND, NE, OH, SD, WI
 Western states include AK, AZ, CA, CO, HI, ID, MT, NM, NV, OR, UT, WA, WY

Section 4 - Land, Buildings, and Equipment

11. What is your estimate of the current market value of land, structures and equipment used (owned, leased and/or rented) in your operation as of **December 31, 2018**?

12. What was the total acreage your operation owned, leased and/or rented for sales or production in **2018**? (Including all production, sales, and holding areas)

13. Please provide the number of acres your operation owned, leased, and/or rented for sales or production in 2018 for each of the categories below:

	Acres
a) Field Production (in ground).....	<input type="text"/>
b) In-ground container production (pot-in pot)	<input type="text"/>
c) Out-of-ground container production (container nursery)	<input type="text"/>
d) Permanent greenhouse (eg. propagation houses; not overwintering structures)	<input type="text"/>
e. Holding/sales.....	<input type="text"/>
f) Infrastructure (not otherwise indicated above)	<input type="text"/>

Section 4 - Land, Buildings, and Equipment *(Continued)*

14. Did your operation have any greenhouses, shade-house or overwintering structures in 2018?

☐ Yes *[Continue]*

☐ No *[Skip to question 16]*

15. Please indicate type and area of covered space in use in **2018**. *(Include covered space used for holding, selling, or finishing product.)*

	Square Feet	Acres
a) Glass greenhouses.....		
b) Rigid plastic greenhouses		
c) Film plastic greenhouses, hoop houses, or over winter poly house <i>(single or multi-layer)</i>		
d) Shade houses.....		
e) Other <i>(please specify)</i>		

16. List the Maryland counties where your operation is located. If your operation is in more than one county, list the total acreage in each county. *(Report acreage to the nearest whole number)*

COUNTY	ACREAGE

SECTION 5 - Gross Sales

	2017	2018	Projected 2019
17. What were your total gross sales from nursery or greenhouse crops and landscaping? <i>(Including hardscapes e.g. walkways, irrigation systems, decks, snow removal, etc.)</i> Note: Use fiscal year values if calendar year values are not available.			

18. What **PERCENT** of your total sales were from:

	2018	Projected 2019
a) wholesale <i>(plant sales)</i>		
b) wholesale <i>(non-plant sales only)</i>		
c) retail <i>(plant sales)</i>		
d) retail <i>(non-plant sales only)</i>		
e) landscape/interiorscape installation		
f) landscape/interiorscape maintenance.....		
g) other <i>(please specify)</i>		
<i>(Percentages should add to 100%)</i>		

SECTION 5 - Gross Sales (Continued)

19. What **PERCENT** of your plant sales were by the following categories?

2018

Projected 2019

- a) Woody plants
- b) Herbaceous perennials
- c) Annuals
- d) Aquatic Plants
- e) Specialty greenhouse (*house plants and tropicals*).....
- f) Christmas trees
- g) Other (*e.g. seeds, sod, bulbs, and cut flowers*).....

(Percentages should add to 100%)

20. What **PERCENT** of your sales were by the following methods?

(Include plants installed and maintained)

2018

Projected 2019

- a) Field Grown (*Include aquatic plants*)
- b) Containers
 - 1. In-ground containers (Pot-in-Pot)
 - 2. Above ground containers
 - 3. Greenhouse
- c) Cut Flowers
- d) Other (*Please specify*)

(Percentages should add to 100%)

SECTION 6 – Labor

- 21. How many workers were paid for working 149 days or less?
- 22. How many workers were paid for working 150 days or more?
- 23. How many workers were from the H2A program?
- 24. How many workers were from the H2B program?
- 25. How many workers were from other programs?

Domestic

Foreign

26. What were the total gross wages paid by your operation during **2018**? (*Include employer's cost for social security, worker's compensation, insurance premiums and any other benefits provided*).

27. Of the total gross wages paid (*item 26*), how much was for:

28. During **2018**, what was the average hourly wage for:

a) Labor overhead

(e.g. payroll taxes, workers' comp, benefits, other costs of hiring and processing foreign labor)

a) Inexperienced Laborers.....

b) Experienced Laborers

c) Managers

d) Supervisors.....

29. How many **UNPAID** workers were on this operation in **2018**? (*Include family members, operators, and partners not paid a salary*)

SECTION 7 – Stewardship – Only answer questions that apply to your operation

30. Do you have a current conservation plan with the local Soil Conservation District? ☐ Yes ☐ No
31. Please estimate how many acres you have in long term buffer strips, permanent grass isles and other buffer areas?
☐ None ☐ 0-10 ☐ 11-25 ☐ 26-50 ☐ Greater than 50
32. How many acres do you have in temporary buffer strips, grass isles and other buffer areas?
☐ None ☐ 0-10 ☐ 11-25 ☐ 26-50 ☐ Greater than 50
33. If you do have conservation zones, do you employ any of the following conservation practices? (Choose all that apply)
- ☐ Maintain perennial grass aisles between planting beds or rows
 - ☐ Maintain perennial grass buffers around fields
 - ☐ Use in-row cover crops
 - ☐ Use soil moisture sensors to management irrigation
 - ☐ Managed beneficial insect habitats (pollinators, etc.)
 - ☐ Release beneficial insects
 - ☐ Conserve beneficial insects by adjusting herbicide, fungicide, pesticide selection
 - ☐ Conserve beneficial insects by adjusting chemical application times and techniques
 - ☐ Conduct regular crop pest scouting
 - ☐ Grow plants under USDA Organic certification
 - ☐ Use compost as a nutrient source
 - ☐ Practice crop rotation
 - ☐ Utilize alternative energy sources (solar, wind, geothermal, etc.)
 - ☐ Other
34. If you do have conservation practices like buffer strips, did you employ them because...? (Choose all that apply)
- ☐ Cost share/ incentives
 - ☐ Required by regulations
 - ☐ A best management practice to protect the environment
 - ☐ To improve profitability
 - ☐ Because of consumer demand / for the marketing value of sustainability
 - ☐ Pressure from non-governmental organizations
35. Were you able to fully implement your nutrient management plan? ☐ Yes **[Skip to question 37]** ☐ No **[Continue]**
36. If no, what are some reasons why? (Choose all that apply)
- ☐ Lack of time
 - ☐ Lack of labor
 - ☐ Some BMPs were too restrictive
 - ☐ Costs to implement were too high
 - ☐ Other
37. Since implementing all or parts of your nutrient management plan, how much in dollars do you think you have saved?
☐ No savings ☐ \$1-\$500 ☐ \$501-\$1000 ☐ \$1001-\$5000 ☐ Greater than \$5000
38. Since implementing all or parts of your nutrient management plan, please estimate how much you have reduced nitrogen use in pounds per acre within your operation.
☐ No reduction ☐ 0-50 ☐ 51-100 ☐ 101-200 ☐ Over 200

39. Since implementing all or parts of your nutrient management plan, please estimate how much you have reduced the phosphorus use in pounds per acre in your operation.

- ☐ No reduction ☐ 0-50 ☐ 51-100 ☐ 101-200 ☐ Over 200

40. If your nutrient management plan increased your operational efficiencies, please indicate in what way:

- ☐ More efficient nutrient use
☐ More efficient water use
☐ More efficient labor use
☐ Better understanding of your overall operation
☐ Other

41. Do you capture and re-use irrigation water? ☐ Yes ☐ No

42. Do you use precision, micro or drip irrigation? ☐ Yes ☐ No

43. Do you use water management strategies or monitoring equipment? ☐ Yes ☐ No

44. Do you have buffer areas along streams of at least (Choose all that apply)

- ☐ 10' ☐ 20' ☐ 35' ☐ Greater than 35'

45. What watershed is (are) your operation(s) in? (Choose any that apply)

- ☐ Blackwater (Buttins Creek, Chicamcomico and Transquaking Rivers)
☐ Chester-Sassafrass (Little Northeast and Elk Creeks , Bohemian and Wye Rivers)
☐ Chincoteague (St. Martin River and Trapp Creek)
☐ Choptank (Tuckahoe River)
☐ Gunpowder-Patapsco (Patapsco and Gunpowder Falls, Gywnns Falls, Winters, Carson and Bynum Runs)
☐ Nanticoke (Marshy Hope, Broad and Quantico Creeks)
☐ Monocacy River and its tributaries
☐ Patuxent and its tributaries
☐ Potomac, Lower (Mattawoman, Najemoy and St. Clement Creeks, and Port Tabaco River)
☐ Potomac, Middle (Catocin Creek, and Seneca Creeks, Muddy Branch and Watts Branch, Rock Creek, Henson Creek, Tinkers Creek and Piscataway Creek, Anacostia River)
☐ Potomac, Upper (Savage River and Braddock, Jacobs, Collier Mill Runs; Town Creek, Fifteen Mile and Sideling Hill Creek; Licking, Tonoloway Conococheaue and Antietam Creeks)
☐ Pocomoke (Nassawongo and Dividing and Marumsc Creek)
☐ Severn River (South River)
☐ Susquehanna, Lower (Deer, Broad, Conowingo and Octoraro Creeks)
☐ Wicomico

SECTION 8 - Industry Factors

46. Please list the 3 most important factors that are limiting growth or are problematic for your business.

47. Is any of your land in a land preservation/conservation program? ☐ Yes ☐ No

If Yes: How many acres did you have total in preservation/conservation programs in 2018?

SECTION 9 - Conclusion

48. Would you like a copy of the survey results? ☐ Yes ☐ No

Please share with us any comments on issues affecting your industry:

Reported by: _____ Date: _____ Phone: _____

If additional help is needed please contact beacon@salisbury.edu or 410-546-6001.

Thank you for your time.

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MARYLAND
NURSERY, LANDSCAPE
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