North Carolina Green Industry

IMPACT REPORT | 2023-2024

PREPARED BY

Melinda Knuth, Daniel Tregeagle and **Rajan Parajuli**

North Carolina State University

IN PARTNERSHIP WITH

North Carolina Green Industry Council

North Carolina
Department of Agriculture
and Consumer Services

June 1, 2025

The North Carolina green industry represents a significant and diversified component of our state's economy. The data presented in this study provides a comprehensive analysis of the economic impact of the entire green industry.

The dynamic nature of the NC green industry is reflected in its significant economic contribution. In 2023, the North Carolina green industry directly contributed $9.5 billion to the state economy. The industry also supported 65,745 full- and part-time jobs with a direct labor income of $3.3 billion. Accounting for all impacts, the total annual contribution of the green industry to the North Carolina economy is about $15.8 billion in industry economic impact. The information documented by the graphs, charts, and conclusions in this study clearly illustrates the substantial and growing economic value of this diverse and vibrant industry in NC—the green industry.

We extend our sincere gratitude to the following for their invaluable support:

- The NC State University College of Agriculture and Life Sciences research team for their expertise and dedication to this project.
- The North Carolina Department of Agriculture and Consumer Services for their ongoing commitment to the success of our industry.
- The North Carolina Farm Bureau Federation for their advocacy and collaboration.
- The Joint Legislative Oversight Committee for their attention to this important issue.
- The dedicated board members and advisors of the North Carolina Green Industry Council for their guidance and support.

We trust that this report will serve as a valuable resource for policymakers, industry stakeholders, and all those interested in the continued growth and success of North Carolina's green industry.

Sincerely,

Steven W. Troxler

Steve Troxler
Commissioner of Agriculture

EXECUTIVE Summary

The green industry is a vital and impactful sector for the state of North Carolina. The environmental horticulture industry, or green industry, is comprised of wholesale nursery and greenhouse, Christmas tree production, turf grass management, sod producers, and irrigation, landscape design, composting, urban forestry, parks and airports, botanical gardens and public parks, construction and maintenance firms, and wholesale and retail distribution firms such as garden centers, home stores, mass merchandisers with lawn/garden departments, brokers and re-wholesale distribution centers, and allied trades suppliers of inputs to the industry. The green industry is a key part of agriculture, a critical industry of North Carolina commerce. Historically, the green industry has been a fast growing segment of the North Carolina and U.S. economy. Findings from this report are supportive that the North Carolina green industry has grown in economic output and contributions since 2005, nearly 20 years ago.

The green industry not only strengthens the North Carolina economy, but creates the natural and curated landscapes that attract residents and businesses to the state. Without the beautification, ecosystem services, and health and social benefits that plants provide to human beings, the state would experience significantly reduced economic prosperity. Whether maintaining home landscapes or turf on golf courses, growing annual plants at multi-generational greenhouse operations, optimizing upkeep with equipment, selling Christmas trees, or sustaining permanent plant collections for the public to view, the green industry is involved by providing flowers, trees, shrubs, and other ornamental products. Overall, the green industry in North Carolina is flourishing.

HIGHLIGHTS WITHIN THE REPORT

- North Carolina's green industry directly contributed $9.5 billion *(2023 dollars)* in industry output from various businesses and economic activities to the state economy.
- The North Carolina green industry directly supported 65,745 full- and part-time jobs with a direct labor income of $3.3 billion.
- Accounting for all the effects on the North Carolina economy, the green industry in 2023 had a total annual contribution of about $15.8 billion in industry economic impact.
- Total value added production in North Carolina was more than $9.1 billion.

TABLE OF Contents

continued . . .

TABLE OF Contents

TRENDS
Over Time

Evaluating the green industry by changes over time, clear trends emerge. While long-term impacts of Hurricane Helene in Western North Carolina are still unknown, there are positive long-term trends of the industry statewide that should be noted.

In 2023, the North Carolina green industry was directly responsible for $9.5 billion of economic output, and the total economic output attributable to the industry was $15.8 billion. This larger value includes the direct effects, indirect effects *(business-to-business purchases due to green industry activity)*, and induced effects *(household spending by green industry employees and employees of firms in supporting businesses)*. Economic output measures the value of production, which is the sum of total sales and net inventory change.

continued . . .

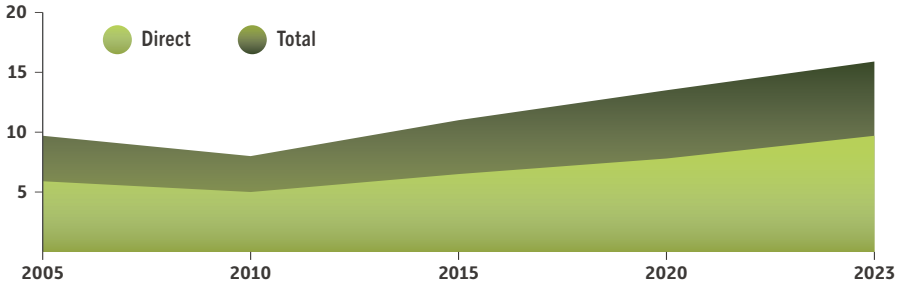
TRENDS

Over Time

F1 TRENDS IN **ECONOMIC OUTPUT** OF THE GREEN INDUSTRY IN NORTH CAROLINA FROM 2005 UNTIL 2023 ADJUSTED FOR INFLATION USING 2023 USD VALUES

– 2023 DIRECT ECONOMIC OUTPUT –
$9.5 billion

– 2023 TOTAL ECONOMIC OUTPUT –
$15.8 billion

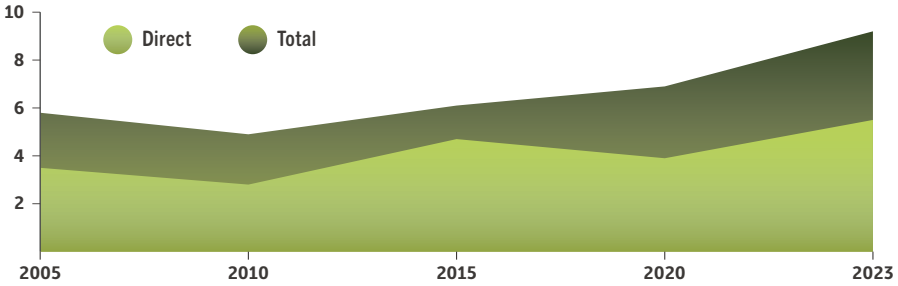


In addition to the industry's substantial economic output, the industry significantly adds to the value of its inputs. In 2023, the direct value added by the North Carolina green industry was $5.5 billion. The total value added by the industry was $9.1 billion. Value added, also known as Gross State Product, measures the value of economic output less the value of intermediate inputs required to produce the final products and services generated by the industry.

F2 TRENDS IN **VALUE ADDED** OF THE GREEN INDUSTRY IN NORTH CAROLINA FROM 2005 UNTIL 2023 ADJUSTED FOR INFLATION USING 2023 USD VALUES

– 2023 DIRECT VALUE ADDED –
$5.5 billion

– 2023 TOTAL VALUE ADDED –
$9.1 billion



The economic impact of the North Carolina Green Industry was last measured in 2005. Since then, the direct and total impact of the industry has increased steadily across all four measures of impact **(F1, F2).** The following numbers are in 2023 dollars – the effects of inflation have been removed. In 2005, the direct economic output was approximately $5.9 billion, increasing to $9.5 billion in 2023. Total economic output increased from $9.8 billion in 2005 to $15.8 billion. Between 2005 and 2023, direct value added increased from $3.4 billion to $5.5 billion and total value added increased from $5.7 billion to $9.1 billion.

continued . . .

TRENDS

Over Time

F3 TRENDS IN **EMPLOYMENT** OF THE GREEN INDUSTRY IN NORTH CAROLINA FROM 2005 UNTIL 2023

All four metrics suggest that the economic impact of the green industry in North Carolina has been trending upward since 2005. Regardless of the measure, the real impact of the industry has increased by over 50 percent since 2005. While there was a dip in 2010 due to the 2008 economic downturn, the industry fully recovered by 2015 and has only increased its impact since then. Like many other industries, there was a drop in employment in 2020 due to the COVID-19 pandemic, however the green industry surged substantially in the last couple of years.

Overall employment from 2005 to 2023 has remained relatively stable ***(F3)*** with direct employment ranging from 60,000 employees in 2005 to approximately 66,000 employees in 2023. Total employment, which includes direct, indirect and induced employment, increased from approximately 83,000 employees in 2005 to just under 100,000 employees in 2023. The stability of employment over this period implies that the growth in the industry has come from increased productivity per employee.

continued . . .

TRENDS

Over Time

F4 ECONOMIC CONTRIBUTION OF THE GREEN INDUSTRY IN NORTH CAROLINA IN 2023, REPORTED IN 2023 DOLLARS

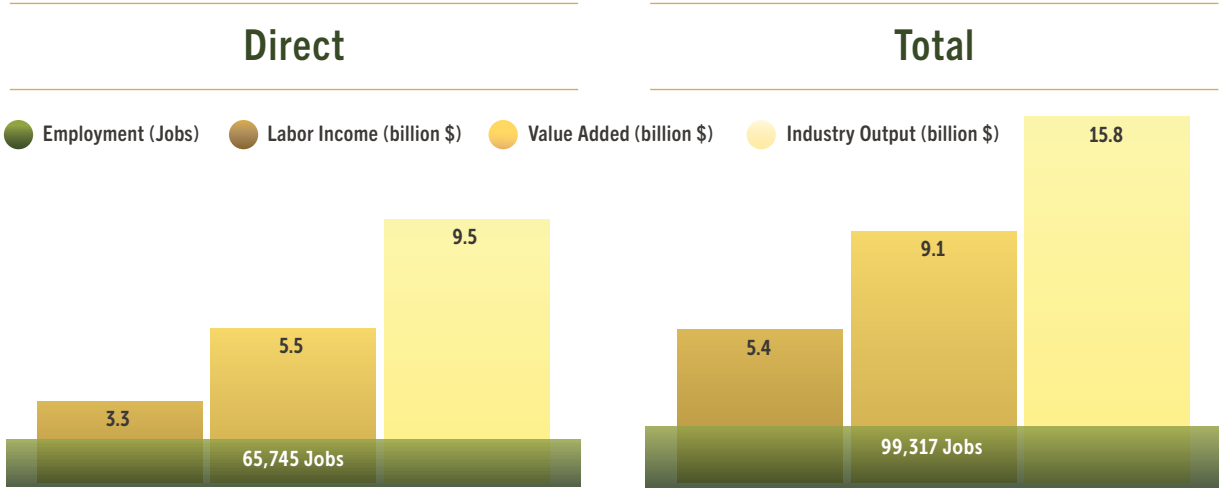


FIGURE 4 reports the total economic contributions, aggregates of direct, indirect, and induced effects of the North Carolina green industry in 2023. Including direct and multiplier economic effects, the NC green industry had a total economic impact of about $15.8 billion in industry output and $9.1 billion in value added to the state economy. The total annual employment contribution of the green industry was 99,317 jobs with a payroll of about $5.4 billion in 2023.

Ninety-four percent of businesses that answered the survey were based in North Carolina, leaving 6% either as a part of a franchise based outside of North Carolina or a business located in another state that is registered in North Carolina or does significant amount of business in the state.

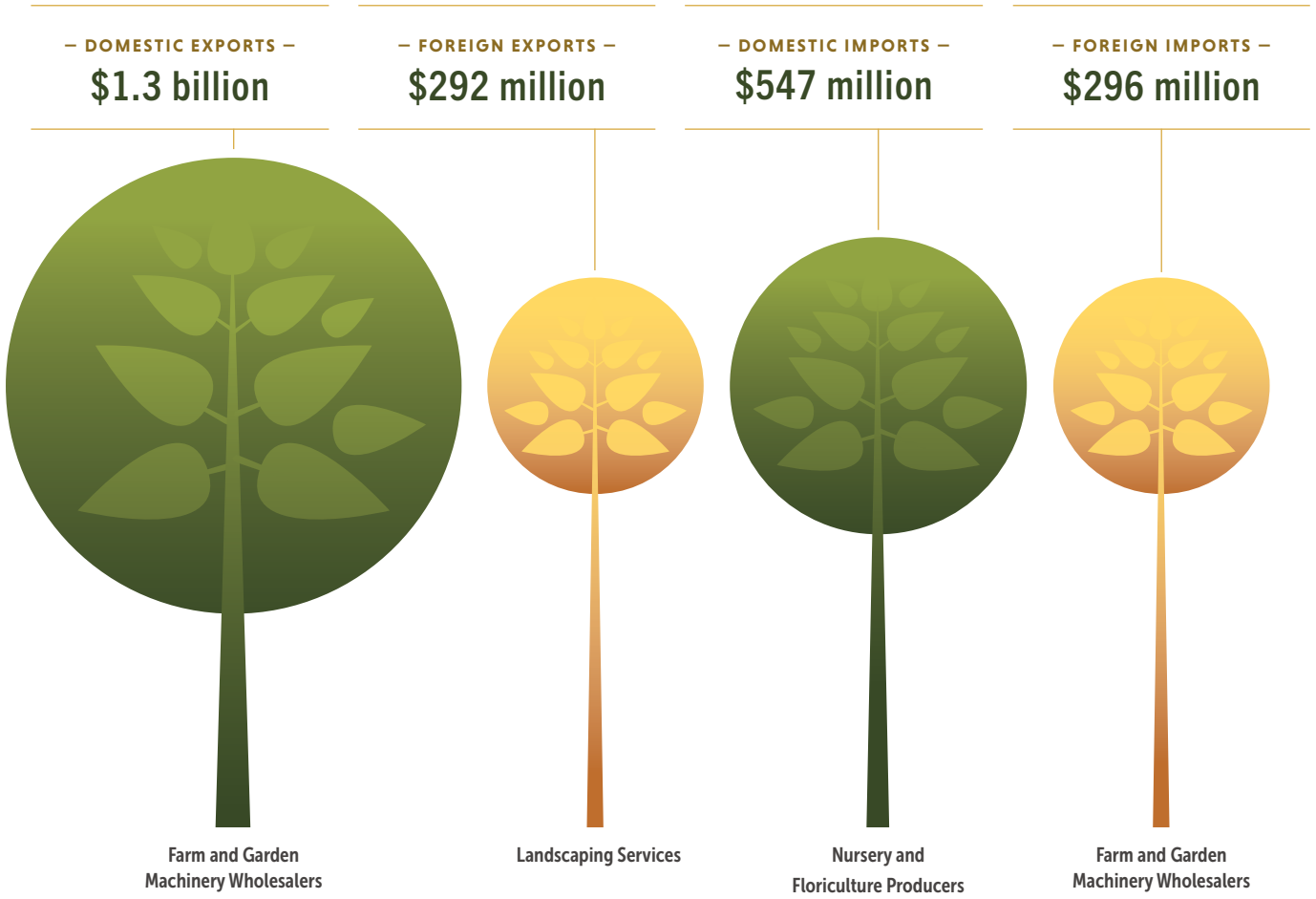
On average, there are 62 permanent employees, 9 temporary workers and of these 6 were employed as part of the H-2A or H-2B program, per business that answered the survey. Converting these into percentages, on average, 80% of employment is permanent, 12% is temporary, and 8% is H-2A or H-2B. It's important to note that the questionnaire did not ask respondents to distinguish between H-2A or H-2B workers. These government run programs issue visas allowing employers to hire foreign workers for temporary agricultural *(H-2A)* and non-agricultural *(H-2B)* work if domestic labor is not available.

Labor has been a major topic of discussion for industry members, therefore a follow-up question was asked: *"Which of the following things are you doing to address labor shortages?"* In their answers, industry members responded that 13.8% were adding employee benefits to keep workers or attract new workers, 8% were reducing their business activity to be in line with their current labor ability, 18% were adopting labor-saving technologies, 22.2% were training employees to improve skills, and 37.8% were paying higher wages, while 5.8% of firms reported not having a labor shortage.

IMPORTS AND Exports

Besides the in-state economic contributions, the green industry in North Carolina also contributed substantially to domestic and international markets **(F5).** In 2023, we estimate that the various sub-industries in the North Carolina green industry exported $1.3 billion worth of their goods and services to other states domestically and about $292 million to foreign countries. The largest domestic exporting sub-industry was landscaping services *(about 46%),* but farm and garden machinery wholesalers contributed the largest value of goods and services (62%) to foreign exports. In terms of imports, the North Carolina green industry accounted for about $547 million and $296 million worth of goods and services in domestic and foreign imports, respectively. Nursery and floriculture producers imported the most from both domestic and foreign markets.

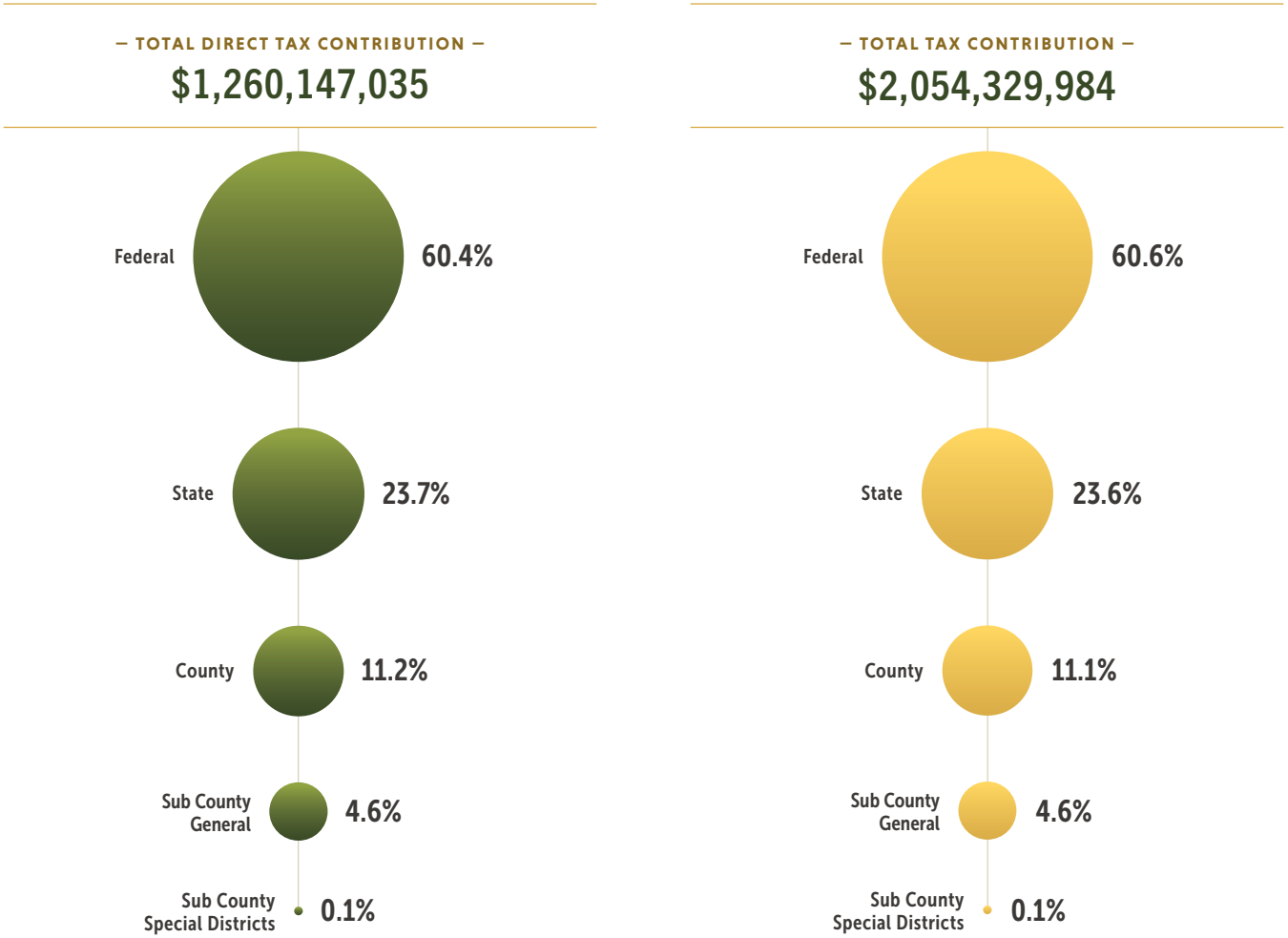
F5 IMPORTS AND EXPORTS OF THE GREEN INDUSTRY IN NORTH CAROLINA IN 2023, REPORTED IN 2023 DOLLARS



TAX Contributions

The green industry in North Carolina contributes significantly to local, state, and federal taxes **(F6).** In 2023, green industry businesses and employees generated approximately $1.3 billion directly in terms of local, state, and federal taxes. With indirect and induced economic effects included, the total tax contribution of the aggregated North Carolina green industry was about $2.1 billion. About 60% of the total tax collections were federal, followed by state taxes *(24%)*.

F6 TAX CONTRIBUTIONS OF THE GREEN INDUSTRY IN NORTH CAROLINA IN 2023 REPORTED IN 2023 DOLLARS

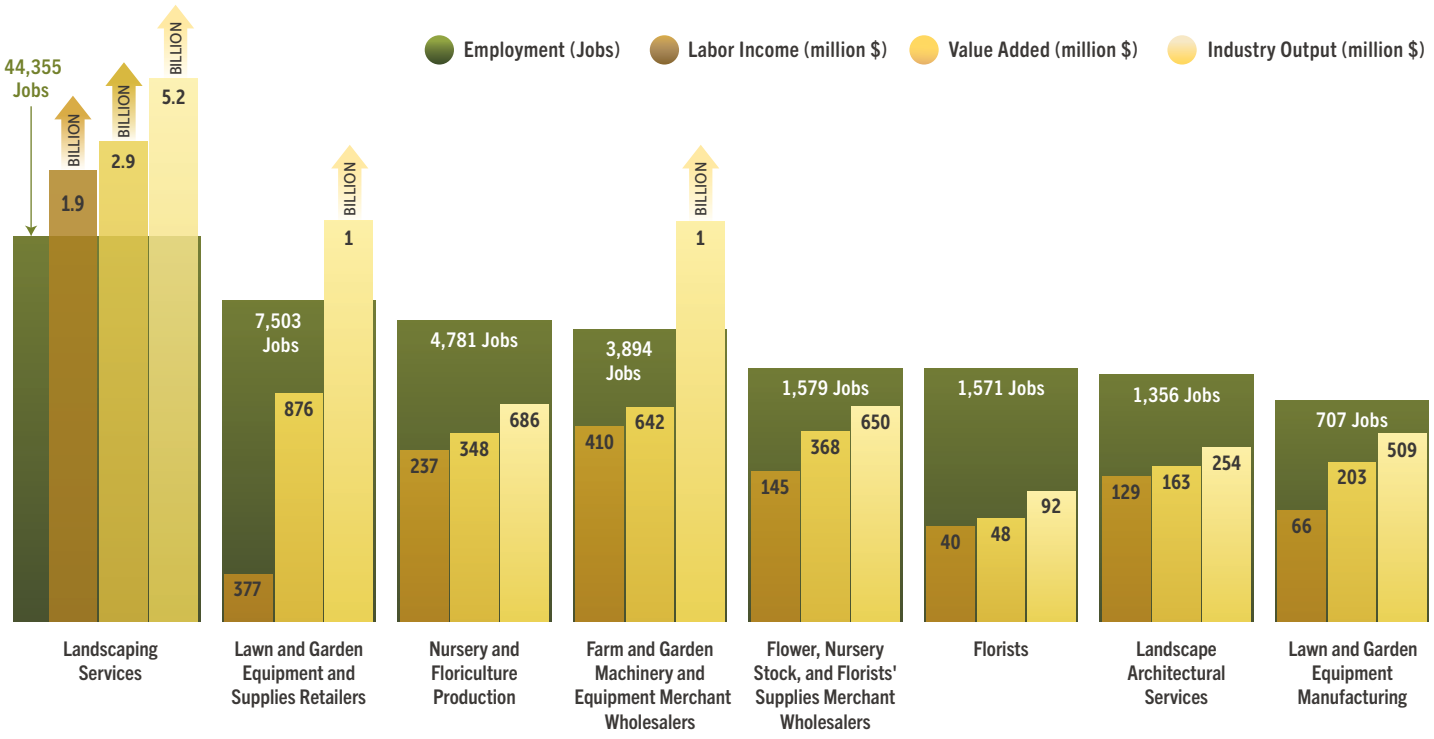


ECONOMIC CONTRIBUTION
by Sub-Industry

Landscaping services were the largest contributor in terms of direct and total economic contribution, followed by lawn and garden equipment retailers and wholesalers **(F7A & F7B).** Total economic contribution *(total effects)* refers to the aggregates of direct, indirect, and induced effects. Landscaping services provided an estimated total output of $8.7 billion. Among the other types of businesses involved in the green industry, retail lawn and garden stores had more direct employment, while farm and garden machinery wholesalers contributed more in terms of labor income and economic output.

F7A DIRECT EFFECT ECONOMIC CONTRIBUTION OF THE GREEN INDUSTRY IN NORTH CAROLINA IN 2023 BY SUB-INDUSTRY, REPORTED IN 2023 DOLLARS

– DIRECT EMPLOYMENT –	– DIRECT LABOR INCOME –	– DIRECT VALUE ADDED –	– DIRECT INDUSTRY OUTPUT –
65,745	$3.3 billion	$5.5 billion	$9.5 billion



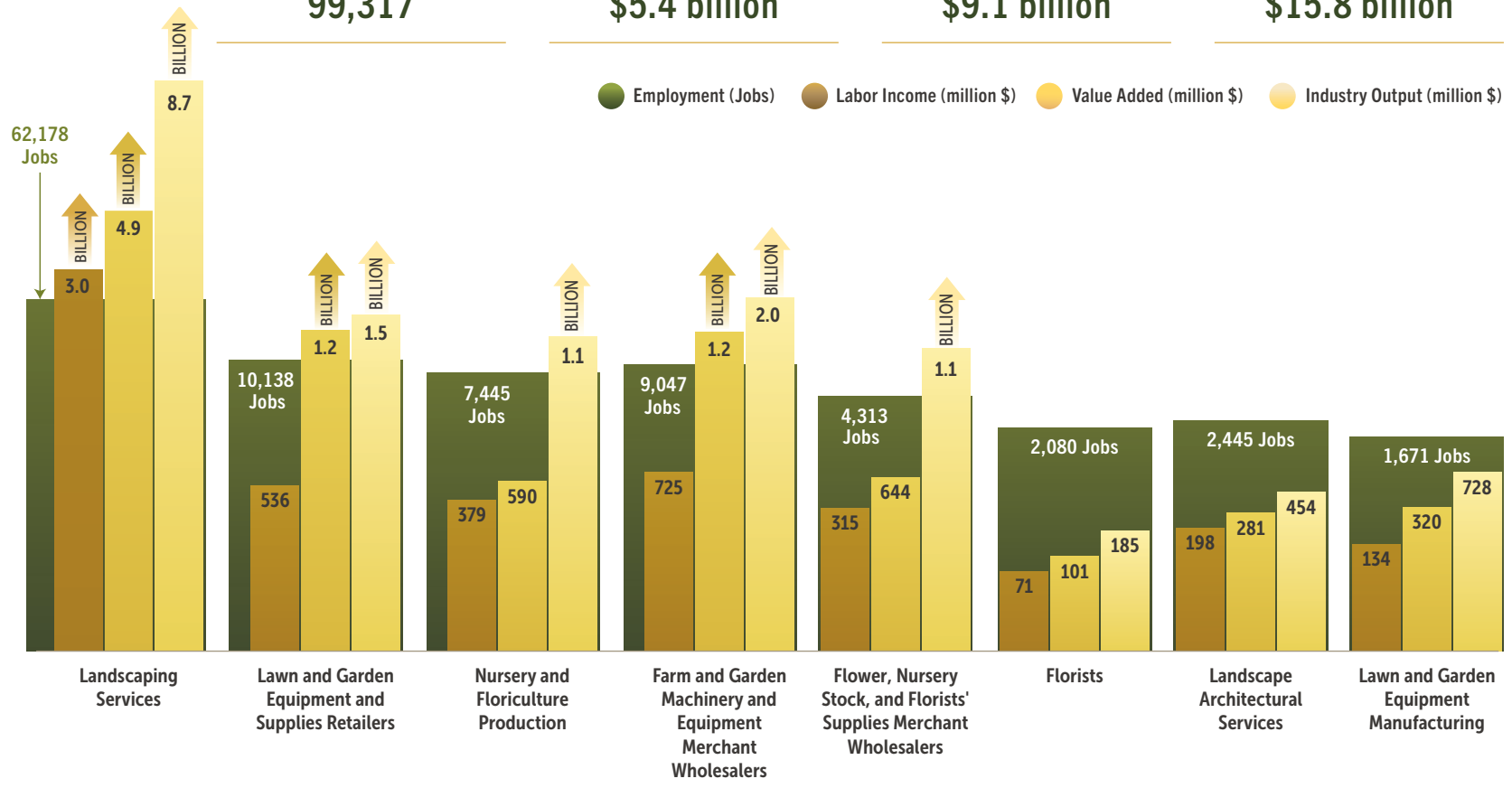
continued . . .

ECONOMIC CONTRIBUTION

by Sub-Industry

F7B TOTAL EFFECT ECONOMIC CONTRIBUTION OF THE GREEN INDUSTRY IN NORTH CAROLINA IN 2023 BY SUB-INDUSTRY, REPORTED IN 2023 DOLLARS

– TOTAL EMPLOYMENT –	– TOTAL LABOR INCOME –	– TOTAL VALUE ADDED –	– TOTAL INDUSTRY OUTPUT –
99,317	$5.4 billion	$9.1 billion	$15.8 billion



continued . . .

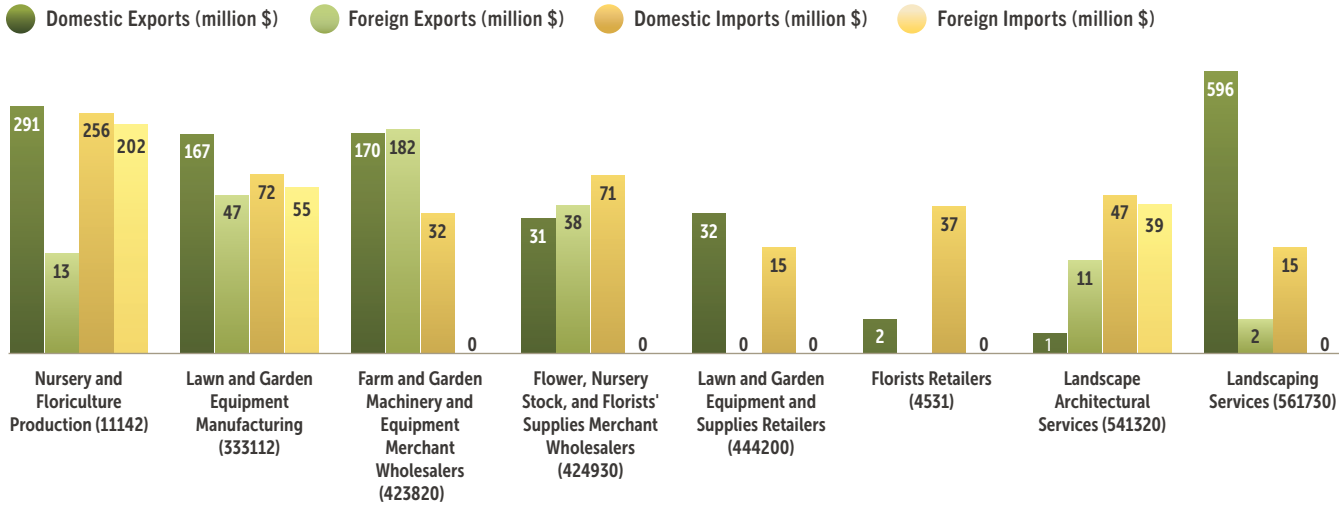
TOTAL IMPORTS AND EXPORTS

by Sub-Industry

Landscaping services contributed the most among the green industry sub-industries to domestic export, $596 million, followed by the nursery and floriculture production at $290 million. Farm and garden machinery and equipment merchant wholesalers contributed the most to foreign exports with $181 million followed by lawn and garden equipment manufacturing at $47 million ***(F8).*** Nursery and floriculture production imported the most product, $256 million, followed by lawn and garden equipment manufacturing at $72 million and flower, nursery stock, and florists' supplies merchant wholesalers at $71 million. Nursery and floriculture production imported the most foreign products at $202 million followed by lawn and garden equipment manufacturing at $55 million and landscape architectural services at $39 million.

F8 IMPORTS AND EXPORTS OF THE GREEN INDUSTRY IN NORTH CAROLINA IN 2023 BY SUB-INDUSTRY, REPORTED IN 2023 DOLLARS

– DOMESTIC EXPORTS –	– FOREIGN EXPORTS –	– DOMESTIC IMPORTS –	– FOREIGN IMPORTS –
$1.3 billion	$292 million	$547 million	$296 million



continued . . .

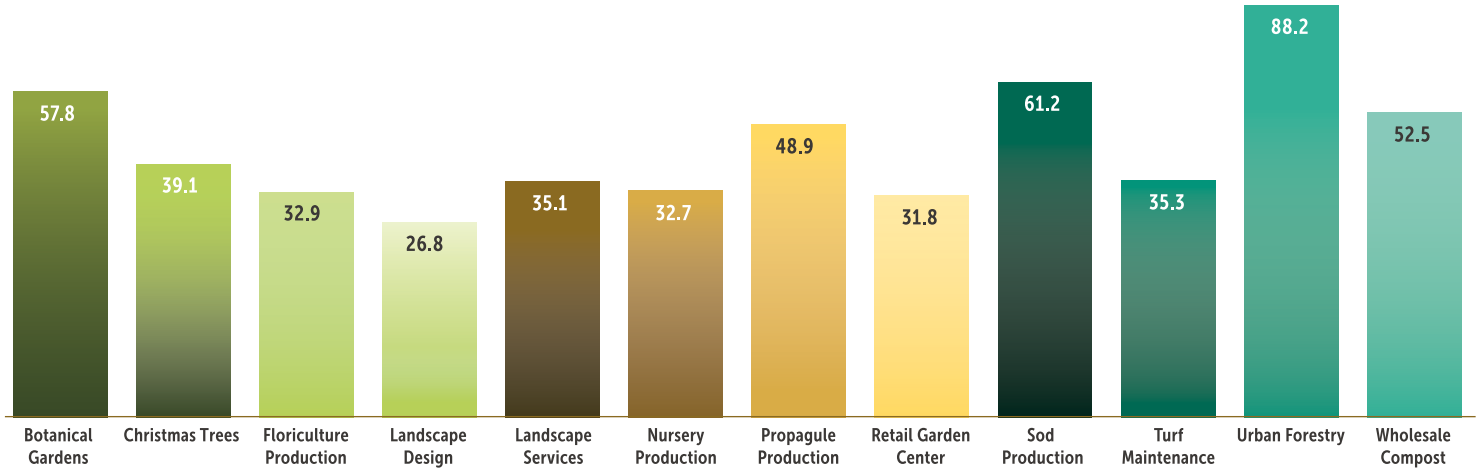
SURVEY Results

Survey participants' business activity categories are reported in **(T1).** To note: many businesses participate in multiple categories within the green industry and therefore the table does not equal 975 (size of sample).

T1 NUMBER OF SURVEY RESPONDENTS PER BUSINESS ACTIVITY CATEGORY

BUSINESS ACTIVITY CATEGORIES	NUMBER OF RESPONSES
Christmas Tree Growers	51
Floral Wholesalers	12
Floriculture Production/Growers	82
Retail Florists	6
Public Gardens	53
Landscape Designers	141
Landscape Services	316
Nursery Production/Growers	127
Nursery, Garden Center, and Farm Supply Retailers	69
Parks and Airports	49
Pine Needle/Pine Straw Producers	61
Propagative Material Producers	55
Substrate Wood Producers	27
Allied Supplier	19
Turfgrass	81
Turfgrass Production/Growers	21
Urban Forestry	44
Utility/Tree line/Roadside Vegetation Management	30
Wholesale Compost/Wood Products	6
Making Compost/Wood Products	19

F9 AVERAGE YEARS IN BUSINESS BY INDUSTRY TYPE WITHIN THE GREEN INDUSTRY



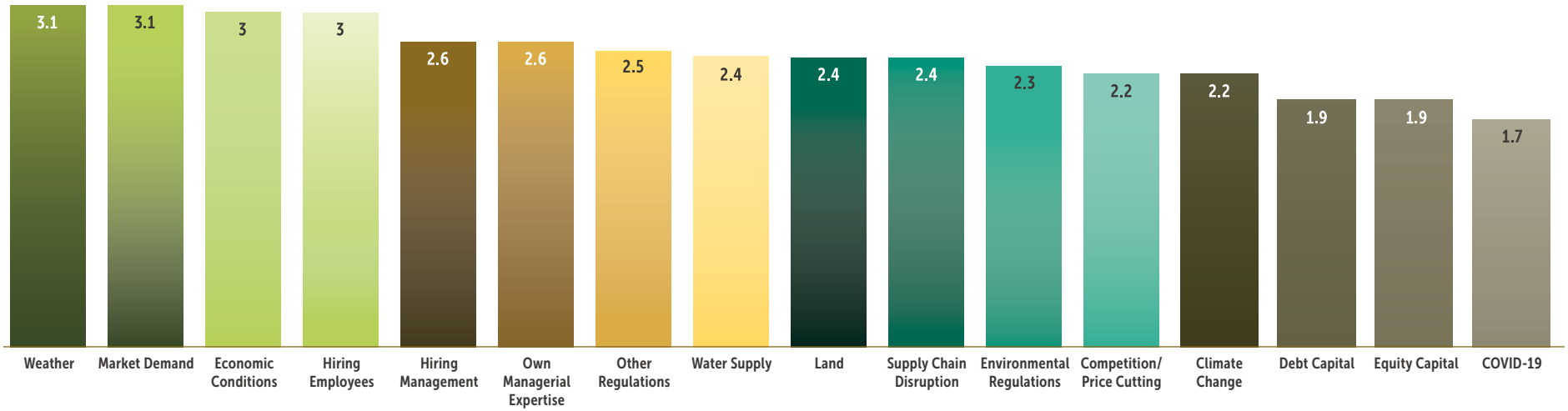
AGE OF BUSINESS

Across green industry segments, the average age of firms is 32.4 years with a range from just established *(under one year)* to 234 years of business. Looking per segment, the age of the firms is shown in **(F9).**

continued . . .

SURVEY
Results

F10 AVERAGE LEVEL OF IMPORTANCE PLACED ON FACTORS AFFECTING BUSINESS (IN GENERAL)



PERCEIVED CHALLENGES

When asked about factors affecting their business, industry members responded with three factors that they considered to be important in affecting them *(scored as 3.00 out of 4.00 on level of importance): Demand (3.14/4.00)*, economic conditions *(3.02/4.00),* and weather *(3.13/4.00).*

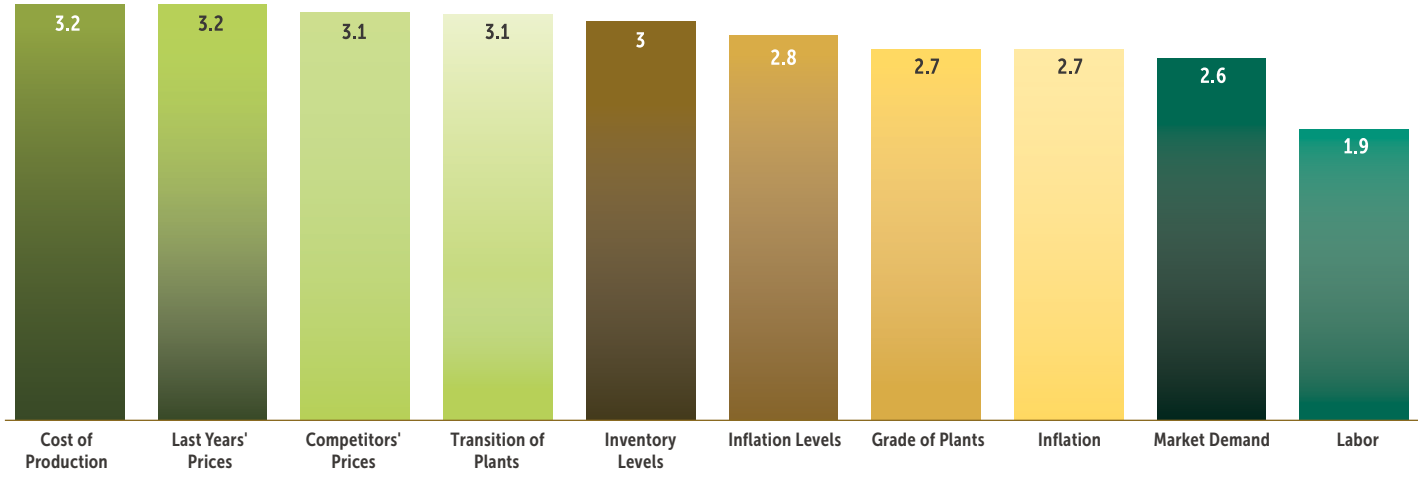
Note: This survey was distributed before Hurricane Helene impacted North Carolina. Therefore, the response of 'weather' was not a reaction of industry members to the natural disaster. On average, factors that were ranked as somewhat important were climate change *(2.18/4.00),* competition *(2.24/4.00),* employees *(2.99/4.00),* environmental regulations *(2.32/4.00),* land *(2.41/4.00),* other non-environmental regulations *(2.54/4.00),* managerial expertise *(2.64/4.00),* supply chain *(2.41/4.00),* and water supply *(2.37/4.00).* All factors affecting business are reported in **(F10).**

continued . . .

SURVEY

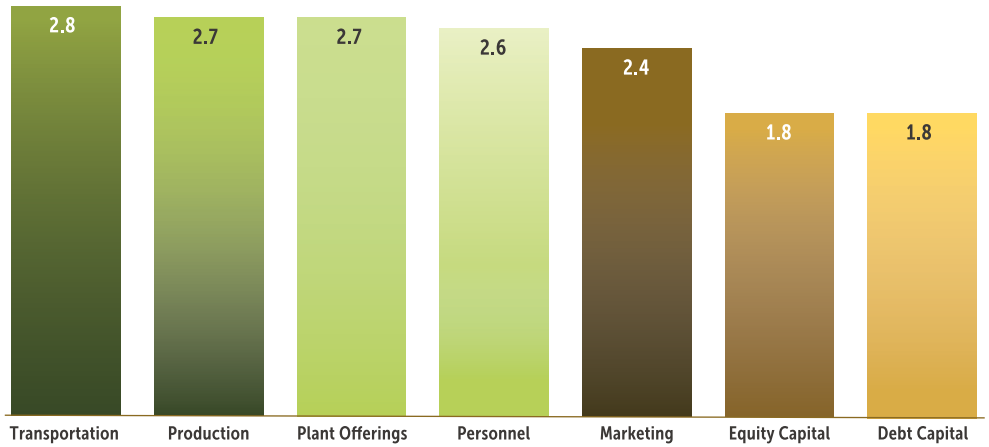
Results

F11 AVERAGE LEVEL OF IMPORTANCE PLACED ON FACTORS AFFECTING PRICES



When asked about factors that determine prices, industry members responded that on average four factors were important *(scored as 3.00 out of 4.00 on level of importance):* Cost of production *(3.24/4.00),* market demand *(3.23/4.00),* inflation *(3.09/4.00),* and uniqueness *(3.09/4.00).* No factors were scored as "Very Important" indicating that opinions were mixed as to the significance of these factors. This was also shown by the size in standard deviation *(range of +/- 1 to the average score per factor).* Only one factor on average, transition, was not important *(1.90/4.00).* All factors affecting prices asked in the survey are shown in **(F11).**

F12 AVERAGE LEVEL OF IMPORTANCE PLACED ON FACTORS AFFECTING GEOGRAPHICAL RANGE OF MARKET AREA



Factors affecting the geographical range of market area showed that all of the factors listed in the survey including debt capital, equity capital, marketing, personnel, production, transportation, plant offerings, and other reasons *(listed individually by respondents)* were of minor importance or were not important, on average. None of the factors were ranked on average as important or very important, indicating that across the board there was no concern that these factors were barriers or advantages, but played a lesser part in business decision-making. All factors affecting geographical range of market area are shown in **(F12).**

References

Dillman, D., & Edwards, M. (2016). Designing a mixed-mode survey. *The Sage Handbook of Survey Methodology*, 255-268.

Khachatryan, H., Hodges, A. W., Hall, C., & Palma, M. (2020). *Production and marketing practices and trade flows in the United States green industry, 2018.* South. Coop. Ser. Bull, 421, 2020-2021.

Miller, R. E., & Blair, P. D. (2009). *Input-output analysis: Foundations and Extensions.* Cambridge University Press.

Peters, M. (2014). *Guidelines for Economic Impact Analysis with IMPLAN.*

GLOSSARY OF Terms

Green Industry: The U.S. environmental horticulture industry, or green industry, is comprised of wholesale nurseries, greenhouses, and turfgrass sod producers, landscape design, construction and maintenance firms, and wholesale and retail distribution firms such as garden centers, home stores, mass merchandisers with lawn/garden departments, brokers and re-wholesale distribution centers, and allied trades suppliers of inputs to the industry.

Direct Effects: The expenditures or initial production changes associated with an industry or sector in the study area, which are entered into the Input-Output analysis. These changes can be positive or negative and display how the study area's economy will respond.

Employee Compensation: Total payroll cost of an employee, inclusive of wages, salaries, payroll taxes, and benefits such as health insurance and retirement.

Employment: The number of full-time, part-time, temporary, and seasonal jobs associated with a specific industry.

IMPLAN©: Modeling software that performs Input-Output analysis. The modeling framework enables users to create regional economic models and multipliers for one or more counties or states in the United States. The 2023 version of the IMPLAN© cloud software accounts for commodity production and consumption for 528 industry sectors, 10 household income levels, taxes to local/state and federal governments, capital investment, imports and exports, transfer payments, and business inventories.

Indirect Effects: The economic effects of local industries purchasing goods and services from other industries along supply chains.

Induced Effects: The economic effects of household spending of labor income following deductions from taxes, savings, and income for commuting.

Industry: A group of entities or businesses participating in similar types of economic activities.

Labor Income: The sum of employee compensation and proprietor income.

Multipliers: The measure of an industry's connection to the economy of the study area in terms of purchases, payments of wages and taxes, and other transactions.

North American Industry Classification System (NAICS): An industrial classification scheme established and utilized by countries in North America for grouping entities by similar production processes.

Output: The value in dollars of production within a study area. It equates to the total of sales and net inventory change.

Proprietor income: Production income of sole proprietorships, partnerships, and tax-exempt cooperatives.

Region or Regional Economy: The geographic area of interest (i.e., one or more counties or state) and its economic activity.

Sector: The industries that make up the complete economy including businesses, households, institutions, and government. In the North American Industrial Classification System *(NAICS),* sectors are one of the major areas of economic activity and are classified at the 2-digit level.

Social Accounting Matrix *(SAM):* SAMs capture all monetary market transactions, including what are called an economy's "ripple effects," during a study period by building upon Input-Output models to include transactions between industries and institutions, including those between institutions themselves. SAM is the basis or deriving the economic impact of the studied industry.

Total Effects: The sum of direct, indirect, and induced effects.

Value-added (or Gross State Product [GSP]): The total of labor income, other property income, and production and import taxes. It is also the difference between an industry's total output and the cost of its intermediate inputs. GSP equals the sum of value-added for all economic sectors within the state.

To understand the relationship between labor income, value added and output:

Labor Income = Employee compensation **+** proprietor income

Value Added = Labor income **+** Taxes on production and imports **+** Other property income such as corporate profit

Output = Value added **+** intermediate inputs

Methods

The methods of this collection differ from the North Carolina 2005 impact report due to the differences in resources available and mode of communication typically used in research. In addition, the 2005 survey was distributed by the National Agricultural Statistical Service *(NASS)* based within the North Carolina Department of Agriculture & Consumer Services *(NCDA&CS)* using printed surveys and phone calls. NASS was unable to collaborate with this survey due to reduced staffing.

Lastly, current methodology indicates that a mixed-mode application with mailed and emailed responses works best for participant response and that phone calls do not work as well due to spam call capabilities *(Dillman, 2016)*. Thus, this report and the 2005 report should not be compared directly due to these methodological differences. For direct comparisons, the research team has used historical information using the same methodology for 2023 to compare to 2005, 2010, and 2015 for accurate comparisons across time. These comparisons are included in this report.

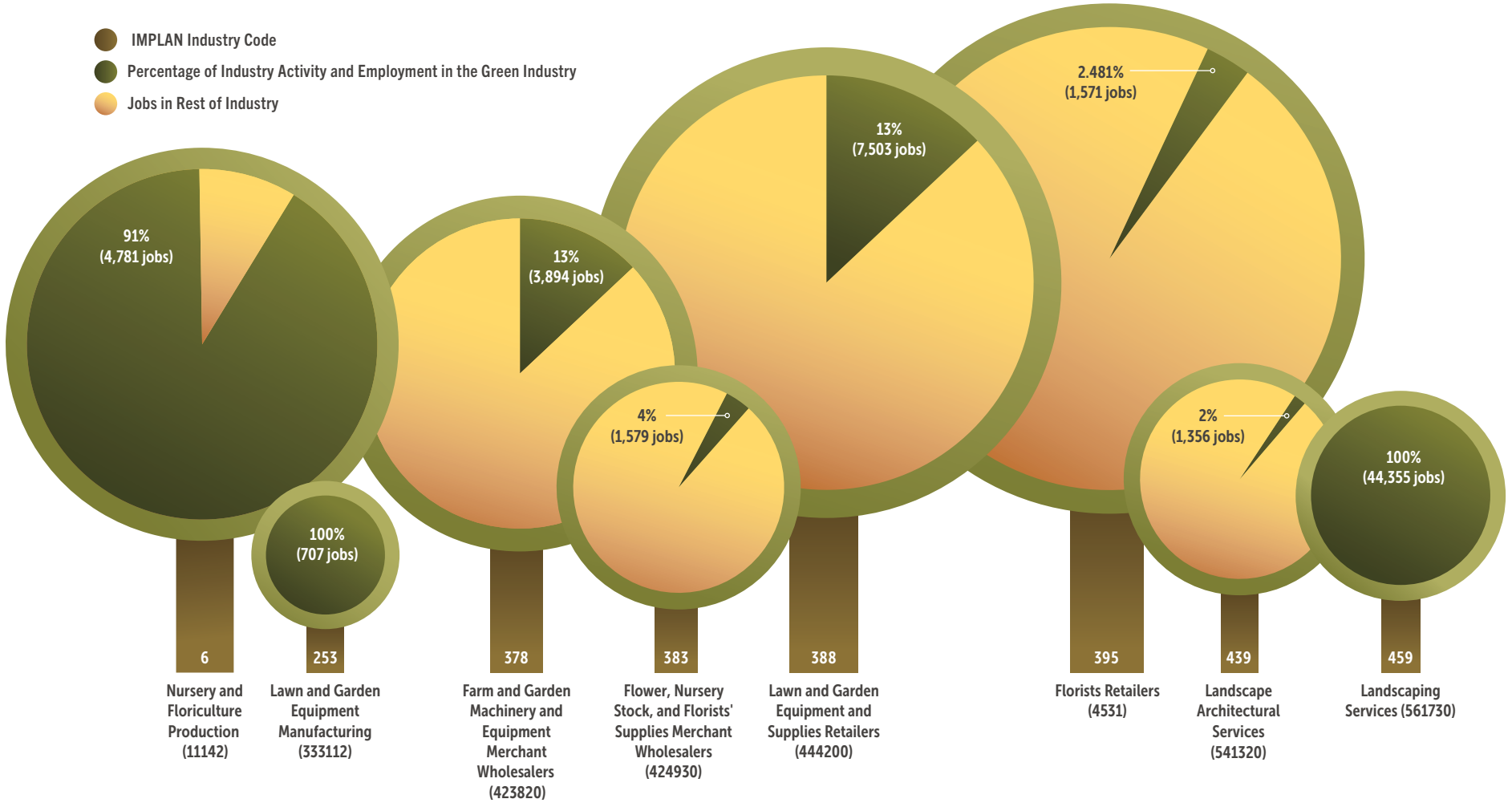
Consistent with Hall et al. *(2020),* the research team identified green industry related North American Industry Classification System *(NAICS)* sub-industries in North Carolina, and utilized their bridge with IMPLAN industry classification to evaluate the overall economic contribution of the green industry sector in North Carolina.

Economic contributions are usually evaluated in terms of several business and economic metrics, such as employment, labor income, value-added, industry output, and local, state, and federal tax collections *(Miller and Blair 2009; Hall et al. 2020)*. Each term is defined clearly in the glossary of terms section in the beginning of the report. The IMPLAN software, an input-output regional economic modeling system, was used to estimate economy-wide ripple effects in the North Carolina economy stemming from direct economic activities in green industries. The research team used the 2023 North Carolina state-level IMPLAN model to develop a state input-output model with a trade flows specification and social accounts for households. Regarding the economic contribution method, we used the built-in option in IMPLAN online cloud system, referred to as an industry contribution analysis. The green industry percentages of each industry estimated in **F7** were the primary input to the 2023 NC IMPLAN model to evaluate the economic contribution of the NC green industry in various business and economic metrics. IMPLAN data models covering the entire state of North Carolina were used from 2023, i.e., both data year and dollar year were 2023.

continued . . .

Methods

F13 PERCENTAGES USED FOR CONVERTING FROM NAICS TO IMPLAN INDUSTRY CODES



continued . . .

AUTHORS

Biographies

Dr. Melinda Knuth is an assistant professor in the Department of Horticultural Science. Her research priorities are on consumer and market research experience by focusing on the interface between people and plants, helping the horticulture industry understand consumer preferences, perceptions, and motivations. Dr. Knuth received her Ph.D. from Texas A&M University in Horticultural Science with a certificate in Applied Statistics. She served as the Young Professional Council Advisor for American Floral Endowment's Executive Board and as the International Society for Horticultural Science Division Chair of Horticulture for Development. Dr. Knuth received *Greenhouse Product News* Magazine's 40 under 40 award in 2021 and was a 2017 AmericanHort Scholar.

Dr. Daniel Tregeagle is an assistant professor and extension specialist in the Department of Agricultural and Resource Economics. He received his Ph.D. and M.S. in agricultural and resource economics from the University of California, Berkeley and his Bachelor of Resource Economics *(Hons. 1M)* from the University of Sydney, Australia. During his postdoctoral studies at the University of California, Davis, Dr. Tregeagle co-authored several inter-disciplinary reports for the California Department of Food and Agriculture analyzing the expected impacts of proposed pesticide regulations. His current work is focused on the economics of specialty crop production.

Dr. Rajan Parajuli is an associate professor of forest economics and policy in the Department of Forestry and Environmental Resources at NC State University. He received his Ph.D. in forest economics and policy, an M.S. in forest economics and management, and another M.S. in finance from Louisiana State University. Dr. Parajuli specializes in economic impact and contribution analysis, forest product market modeling, forest products trade and policy analysis, financial incentive programs, and urban and social forestry.

NORTH CAROLINA GREEN INDUSTRY COUNCIL

Letter from the President

"On behalf of the North Carolina Green Industry Council, it is with great pleasure that I present the findings of our comprehensive economic impact study. This report underscores the vital role our industry plays in the state's economic prosperity, environmental well-being, and overall quality of life.

As you know, the green industry encompasses a diverse range of businesses and activities, from nurseries and greenhouses to landscape design, installation, and maintenance. This study, conducted in collaboration with esteemed researchers at NC State University's College of Agriculture and Life Sciences, provides an analysis of the industry's contributions to our state.

This report demonstrates the significant and growing influence of the green industry in North Carolina. Beyond the purely economic benefits, our industry creates and maintains the beautiful landscapes that attract residents and businesses to our state. The beautification, ecosystem services, and health and social benefits that plants provide are essential to making North Carolina a desirable place to live and work.

This study would not have been possible without the invaluable support of our partners. I extend my sincere gratitude to:

- The **NC State University College of Agriculture and Life Sciences** research team for their expertise and dedication to this project.
- The **North Carolina Department of Agriculture and Consumer Services,** particularly Commissioner Troxler, for their ongoing commitment to the success of our industry.
- The **North Carolina Farm Bureau Federation** for their advocacy and collaboration.
- The **Joint Legislative Oversight Committee** for their attention to this important issue.
- The dedicated board members and advisors of the **North Carolina Green Industry Council** for their guidance and support.

We trust that this report will serve as a valuable resource for policymakers, industry stakeholders, and all those interested in the continued growth and success of North Carolina's green industry."

Sincerely,

Jonathan Richardson, *NCCTP President*
North Carolina Green Industry Council

Acknowledgements

The NC green industry is a vibrant and growing segment of agriculture and the economy in North Carolina. Greenhouse, nursery and floriculture crops are one of the state's most important cash crops. Undergraduate turf management programs at NCSU named number one in the United States by TurfNet Magazine. North Carolina homeowner's average past expenditure for lawn and landscape services was $800. Over 2.9 million North Carolina homeowners spent an average of $718 for green goods, equipment and supplies.

The North Carolina Green Industry Council (GIC) unites the Carolinas Irrigation Association, NC Compost Council, NC Pine Needle Producers, NC Sod Producers Association, NC Urban Forest Council, and Turfgrass Council of NC associations and constituents under one umbrella organization to represent the interests of members regarding local, state and federal legislation and regulation, to promote the value of green industry products and services directly to the consumer, and to advocate on behalf of the green industry as an environmental steward.

THANK YOU

We would like to thank the North Carolina Joint Legislative Oversight Committee for allocating funds to provide the necessary resources and support for the project. Thank you to the North Carolina Green Industry Council and collaborators for your guidance throughout the research. In particular, thank you to Jonathan Richardson, Marcy Cottle, Debbie Hamrick, Ashley Thomas, Weston McCorkle, and Tony Haywood for the monthly meetings and advice. Your insightful feedback and encouragement played a crucial role in shaping the direction and quality of this study. Thank you to the industry experts who reviewed the survey drafts and question content. Thank you to Tricia Peterson of Blueraven Creative, LLC for graphic design work. Lastly, but not least, we would like to extend their gratitude to the undergraduate and graduate students who assisted with the project. Thank you for your diligent work.