



The University of Georgia

Center for Agribusiness and Economic Development

College of Agricultural and Environmental Sciences

Economic Impact of the Green Industry in Oconee County

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Executive Summary

The green industry in Oconee County is composed of three sectors. These sectors are nursery and greenhouse production, landscape services, and retail sales. Production of plant material, landscape services, as well as retail sales are a stimulus to the entire Oconee County economy. Purchases of inputs within the county create secondary economic activity, while wages earned by employees lead to spending in all sectors of the economy. Greenhouse and nursery production has a total economic output impact of \$27.9 million in the Oconee County economy. A total of 197 jobs related to the production industry lead to \$11.9 million in wages and benefits. County governments realize \$402,667 in tax revenues due to greenhouse and nursery production. Economic output impacts of landscape services total \$8.9 million. Wages and benefits are \$3.6 million for 142 jobs associated with landscape services. Local governments in Oconee County receive \$184,763 in tax revenues due to landscape services. Retail sales of greenhouse and nursery products, as well as related supplies result in \$148,495 of wages and benefits for 4 jobs for each \$1.0 million of retail sales. In addition to the direct sales taxes associated with sales, each \$1.0 million of retail sales generates \$26,774 in local tax revenues.

Economic Impact of the Green Industry in Oconee County

The green industry in Oconee County is composed of three sectors. These sectors are nursery and greenhouse production, landscape services, and retail sales. The 2006 farm gate value of production reported by the Center for Agribusiness and Economic Development at the University of Georgia is \$22.2 million. Landscape services including installation and maintenance totaled \$6.3 million of sales in 2006. Production of plant material, landscape services, as well as retail sales are a stimulus to the entire Oconee County economy. Purchases of inputs within the county create secondary economic activity, while wages earned by employees lead to spending in all sectors of the economy.

Principles of Economic Impact Analysis

Economic impacts can be estimated with input-output models (IMPLAN) that separate the economy into various industrial sectors such as agriculture, construction, manufacturing, trade, and services. An input-output model calculates how a change in one industry changes output, income, and employment in other industries. These changes, or impacts, are expressed in terms of direct and indirect effects. Impacts are interpreted as the contribution of the enterprise to the total economy. Direct effects represent the initial impact on the economy of either construction or operations of an enterprise. Indirect effects are changes in other industries caused by direct effects of an enterprise and include changes in household spending due to changes in economic activity generated by direct effects. Thus, the total economic impact is the sum of direct and indirect effects. Input-output analysis can interpret the effects of an enterprise in a number of ways including output (sales), labor income (employee compensation and proprietary income), employment (jobs), and tax revenue.

Economic impacts result from a multiplier effect that begins with expenditures of an enterprise stimulating business to business spending, personal income, employment, and tax revenue. IMPLAN models include a regional purchase coefficient (RPC) for each impact variable that represents percentage of demand that is satisfied by production within an impact area. Demand for inputs not satisfied within the impact area represent leakages that have no indirect impacts in the impact area. Enterprises vary in their multiplier effects due to differing expenditure levels, RPC's, and sectors in which their expenditures are directed. Impact analysis involves quantification of spending levels and proper allocation to impacted sectors.

Output impacts are a measure of economic activity that results from expenditures in a specific industrial sector. Output is equivalent to sales, and this multiplier determines how initial economic activity in one sector leads to sales in other sectors. Personal income impacts measure purchasing power that is created due to the output impacts. This impact provides the best measure of how standards of living are affected for residents in the impact area.

An enterprise involves a specified number of employees that is determined by the technology of the enterprise. Employment multipliers indicate the effect on employment resulting from the enterprise initiating economic activity. IMPLAN indirect employment includes both full-time and part-time jobs without any distinction. Jobs calculated within an IMPLAN industrial sector are not limited to whole numbers and fractional amounts represent additional hours worked

without an additional employee. With no measure of hours involved in employment impacts, IMPLAN summations for industrial sectors which include fractional employment represent both jobs and job equivalents. Since employment may result from some employees working additional hours in existing jobs, instead of terming indirect employment impacts as “creating” jobs, a more accurate term is “involving” jobs or job equivalents.

Economic Impacts of Greenhouse and Nursery Production

Direct sales of \$22.2 million in Table 1 create additional sales of \$5.7 million for a total output impact of \$27.9 million in Oconee County. There are 143 employees and proprietors directly employed in production earning a total of \$10.1 million in wages and benefits. Indirect employment for 55 jobs totals \$1.8 million in wages and benefits. The average income for all jobs related to greenhouse and nursery production is \$60,379. Total Georgia tax revenues generated by production in Oconee County are \$1.3 million. Local governments in Oconee County receive \$402,667 in tax revenues from nursery and greenhouse production. Appendix 1 shows the distribution of impacts by major industrial sectors.

Table 1. Economic Impacts of Green Industry Production, Oconee County, 2006

	Direct Impact	Indirect Impact	Total Impact
Output (\$)	22,185,440	5,696,639	27,882,079
Labor Income (\$)	10,119,806	1,774,828	11,894,634
Employment	143	55	197
State Taxes (\$)			903,959
Local Taxes (\$)			402,667

Economic Impacts of Landscape Services

Residences and commercial developments create a demand for landscape services in Oconee County. Direct sales from installation and maintenance in Table 2 are \$6.3 million. Indirect sales related to landscape services are \$2.7 million for a total output impact of \$8.9 million. A total of 113 employees and proprietors directly involved in landscape services earn \$2.6 million in wages and benefits. Indirect employment for 29 jobs adds \$926,904 of earned income. Total wages and benefits for 142 jobs related to landscape services are \$3.5 million. This averages \$24,920 per job. Local governments in Oconee County receive \$184,763 of the total tax revenues generated in Georgia due to landscape services in the county. Appendix 2 shows the distribution of impacts among the major sectors in the local economy.

Table 2. Economic Impacts of Landscape Services, Oconee County, 2006

	Direct Impact	Indirect Impact	Total Impact
Output (\$)	6,259,810	2,684,311	8,944,121
Labor Income (\$)	2,611,792	926,904	3,538,696
Employment	113	29	142
State Taxes (\$)			274,233
Local Taxes (\$)			184,763

Economic Impacts of Retail Sales

Data is not available for the value of retail sales of garden supplies in Oconee County. Table 3 presents the economic impacts attributable to the retail margins associated with each \$1.0 million in sales. The total output impact is \$397,090. Total employee and proprietor wages and benefits are \$148,495 for 4 total jobs. Tax revenues in Table 3 include only those associated with the impacts of retail margins. Tax revenues associated with direct sales taxes are calculated by multiplying total retail sales by the applicable tax rate.

Table 3. Economic Impacts of Garden Supply Stores, Retail Margins for \$1,000,000 in Sales, Oconee County, 2006

	Direct Impact	Indirect Impact	Total Impact
Output (\$)	281,000	116,090	397,090
Labor Income (\$)	111,335	37,160	148,495
Employment	3	1	4
¹ State Taxes (\$)			25,604
¹ Local Taxes (\$)			26,744

¹Does not include direct sales taxes on retail purchases. Multiply \$1,000,000 by applicable tax rate for direct sales taxes.

Summary

Greenhouse and nursery production has a total economic output impact of \$27.9 million in the Oconee County economy. A total of 197 jobs related to the production industry lead to \$11.9 million in wages and benefits. County governments realize \$402,667 in tax revenues due to greenhouse and nursery production. Economic output impacts of landscape services total \$8.9 million. Wages and benefits are \$3.6 million for 142 jobs associated with landscape services. Local governments in Oconee County receive \$184,763 in tax revenues due to landscape services. Retail sales of greenhouse and nursery products, as well as related supplies result in

\$148,495 of wages and benefits for 4 jobs for each \$1.0 million of retail sales. In addition to the direct sales taxes associated with sales, each \$1.0 million of retail sales generates \$26,774 in local tax revenues.

Appendix 1. Green Industry Production, Economic Impacts to Major Sectors,
Oconee County, 2006

Sector	Labor		
	Output (\$)	Income (\$)	Employment
Agriculture	22,496,260	10,258,756	145
MC ¹	58,349	22,139	1
Utilities	120,269	31,189	1
Manufacturing	114,707	22,564	1
Transportation, Warehousing	120,917	52,156	2
Trade	1,333,620	539,466	16
FIRE ²	919,387	228,573	7
Services	1,542,511	721,051	26
Government & Non NAIC's	1,176,060	18,741	1
Total	27,882,079	11,894,634	197

¹Mining and Construction

²Finance, Insurance, and Real Estate

Appendix 2. Landscape Services, Economic Impacts to Major Sectors,
Oconee County, 2006

Sector	Labor		
	Output (\$)	Income (\$)	Employment
Agriculture	5,128	1,614	0
MC ¹	22,612	8,613	0
Utilities	29,715	8,106	0
Manufacturing	23,194	6,796	0
Transportation, Warehousing	88,166	39,165	1
Trade	852,482	350,080	11
FIRE ²	408,038	102,490	3
Services	7,168,074	3,013,652	126
Government & Non NAIC's	346,712	8,180	0
Total	8,944,121	3,538,696	142

¹Mining and Construction

²Finance, Insurance, and Real Estate

The Center for Agribusiness & Economic Development



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To provide feasibility and other short term studies for current or potential Georgia agribusiness firms and/or emerging food and fiber industries.

To provide agricultural, natural resource, and demographic data for private and public decision makers.

To find out more, visit our Web site at: <http://www.caed.uga.edu>

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J. Scott Angle, Dean and Director