

Economic Impact of a New Greenhouse in Alabama

► The entry of a new 2,880-square-foot greenhouse producing hydroponic lettuce (or something similar) in Alabama causes an increase in economic activity within the state, both in construction and in ongoing annual operations. Consider the following economic activity created during construction and one full year of operations of a greenhouse in Alabama.

\$202 THOUSAND

Output or Sales (Total Effects)

\$130,869 of which is supported each year from ongoing operations

Jobs
1.5

1 of which is supported each year from ongoing operations

Value Added
\$98 THOUSAND

\$70,125 of which is supported each year from ongoing operations



Labor Income
\$70 THOUSAND

\$52,531 of which is supported each year from ongoing operations

25%

A greenhouse in Alabama sources roughly 25% of all inputs locally

Taxes Paid

\$18 THOUSAND

\$12,345 of which is supported each year from ongoing operations

Construction Impacts

A new 2,880-square-foot greenhouse in Alabama would generate the following estimated *total* impact from its construction to the local (state) economy.¹

Construction	
Employment (jobs)	0.5
Value added	\$27,543
Labor income	\$17,696
Output (sales)	\$71,557
Taxes paid (all levels)	\$5,637

Operations Impacts

In the first full year of operations, a new 2,880-square-foot greenhouse in Alabama would generate the following estimated *total* impact on the local (state) economy.²

Operations	
Employment (jobs)	1
Value added	\$70,125
Labor income	\$52,531
Output (sales)	\$130,869
Taxes paid (all levels)	\$12,345

Top Industries Impacted

From a construction standpoint, the top ten industries within Alabama most impacted by the economic activity include the following:

Industry	Value Added
Prefabricated metal buildings and components manufacturing	\$14,798
Wholesale trade	\$1,747
Real estate	\$679
Iron and steel mills and ferroalloy manufacturing	\$562
Monetary authorities and depository credit intermediation	\$444
Employment services	\$404
Offices of physicians	\$272
Limited-service restaurants	\$268
Hospitals	\$257
Truck transportation	\$231

From an operations standpoint, the top ten industries within Alabama most impacted by the economic activity include the following:

Industry	Value Added
Greenhouse, nursery, and floriculture production	\$40,649
Wholesale trade	\$3,629
Real estate	\$1,956
Support activities for agriculture and forestry	\$1,361
Electric power transmission and distribution	\$1,023
Monetary authorities and depository credit intermediation	\$988
Offices of physicians	\$797
Hospitals	\$735
Limited-service restaurants	\$642
Truck transportation	\$626

Overview³

When a greenhouse enters a local economy, it causes a series of new economic activities (impacts) to take place. For this summary, we break the economic impacts into construction and operations. The magnitude of these new economic activities is largely related to the presence of industries that supply the needed inputs for the greenhouse. Common measures of economic activity are employment (jobs), labor income, output (sales), and value added (output minus the cost of inputs).

The construction of a new 2,880-square-foot greenhouse requires several purchases including lumber, steel, concrete, and specialized equipment. Once construction is completed, the greenhouse operators use water, equipment, electricity, supplies, maintenance, and other professional services. The direct purchases of supplies and equipment are known as *direct effects*. The suppliers and vendors used by the greenhouse operators and farmers then purchase inputs to supply the greenhouse; these are known as *indirect effects*. Those who construct the greenhouse, those who work for the greenhouse once complete, and those who work for the operation's suppliers and vendors then use their additional income to make household purchases. These are known as *household* or *induced effects*. Taken together, the sum of direct, indirect, and induced effects are known as *total effects* and account for the total multiplier effect present from the construction and operations of a new greenhouse in Alabama.

¹ To arrive at the total effects of a new 2,880-square-foot greenhouse, the following basic assumptions (from Auburn University) were used: (1) construction costs to build a new greenhouse were assumed to be \$15.98 per square foot.

² To arrive at the total effects of a new 2,880-square-foot greenhouse, the following basic assumptions (from Auburn University) were used: (1) \$73,826 is produced each year in lettuce sales with 1/3 sales of direct-individual at \$2.50/head, 1/3 sales of direct-case at \$2.00/head, and 1/3 sales of wholesale at \$1.75/head; (2) increases in labor from the use of a crisper and increases in the size of the cooler depending on the sales method were not included. One hundred percent of the crop was marketed, and the scenario is dependent on location.

³ Additional details on methodology can be obtained through communication with the study's author, Decision Innovation Solutions (info@decision-innovation.com).

