



# The Economic Impact of Blueberry Growers in Michigan

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Presented to:

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# **EXECUTIVE SUMMARY**

# Introduction and Purpose

In February 2025, the U.S. Highbush Blueberry Council, retained The Tootelian Company to assist it in conducting a study to assess the economic impact blueberry growers (hereafter, growers) have within Michigan (hereafter, State). This impact includes the increased business activity created by growing blueberries, the jobs created as a result of this activity throughout the various sectors of the State's economy, the increased labor income generated for those employed, and the indirect business taxes that are created.

## ***Issues of the Study***

The specific issues addressed in this study of blueberry growers in Michigan were:

- How much business activity do growers create and how is the overall impact diffused through the various sectors of the State's economy?
- How many jobs does this business activity create?
- How much labor income is created and how could that income be diffused within the State?
- How much does this business activity generate in indirect business taxes?

Economic impact is a function of spending within a defined geographic area. Accordingly, two models were used in this analysis. A specially designed economic input model was created to help define expenditure levels by growers in an average year. Then, IMPLAN was used to compute the total economic impact.

# Findings and Conclusions

Economic impact analyses were conducted for the total expenditures by growers in Michigan. ***It is important to note that these projections are based on annual average expenditures, which means that this impact is expected to occur each year that such spending occurs.***

Based on available data, on the average Michigan blueberry growers spend nearly \$270.4 million annually for their acres in production and acres in development. This expenditure averages nearly \$740,800 per day.

Expenditure levels are based on acres reported by the United States Department of Agriculture and estimates of average costs per acre for acres in production and acres in development. Based on this data, and discounted for some possible outmigration of spending, the economic impact of Michigan blueberry growers is estimated to be more than \$529.4 million annually, or nearly \$1.5 million per day. This does not include the economic impact of handlers and other intermediaries that help bring blueberries from farm to market. Thus, the total impacts shown below are conservative in nature.

Total Economic Impact	Total	Per Day
Output	\$529,444,066	\$1,450,532
Employment	6,079	n.a.
Labor Income	\$108,908,238	\$298,379
Indirect Business Taxes	\$10,760,817	\$29,482

The findings of this study show that blueberry growers have a significant impact on the State's economy. Overall, the growers create:

- More than \$529.4 million in economic output, the best measure of economic impact, each year. This equates to nearly \$1.5 million each day of the year.



- Nearly 6,100 jobs on an annual full-time equivalent basis as a result of the business activities of growers and the multiplier effect their purchases generate in a variety of farming and non-farming economic sectors.
- More than \$108.9 million in labor income as a result of grower activities, or nearly \$298,400 per day. These are dollars going to wages and salaries for new employment as well as expanded incomes for those already in the labor force (e.g., overtime pay). These dollars are diffused throughout the State's economy as the funds are spent by households for an array of goods and services.
- Nearly \$10.8 million in indirect business taxes, not including income taxes. This equates to nearly \$29,500 per day. Depending on how these funds are used, they can help pay for some or all of the State government's programs that further benefit the people residing in Michigan.

Overall, it is clear that blueberry growers play a significant role in strengthening the economic climate of Michigan. Their activities are diffused throughout the economy, touching nearly every aspect of life in the State.

# **SUMMARY REPORT OF FINDINGS**

# Introduction and Purpose

In February 2025, the U.S. Highbush Blueberry Council (hereafter, USHBC), retained The Tootelian Company to assist it in conducting a study to assess the economic impact blueberry growers (hereafter, growers) have within Michigan (hereafter, State). This impact includes the increased business activity created by growing blueberries, the jobs created as a result of this activity throughout the various sectors of the State's economy, the increased labor income generated for those employed, and the indirect business taxes that are created. This is a follow-up to a previous economic impact study conducted in 2020.

## ***Issues of the Study***

Economic impact is a function of spending within a defined geographic area. The specific issues addressed in this study of blueberry growers in Michigan were:

- How much business activity do growers create and how is the overall impact diffused through the various sectors of the State's economy?
- How many jobs does this business activity create?
- How much labor income is created and how could that income be diffused within the State's economy?
- How much does this business activity generate in indirect business taxes?

This study focused exclusively on growers. However, there are handlers and other intermediaries that also are involved in bringing the blueberries from farm to market which are important components of the entire blueberry industry. They were excluded from this analysis because insufficient financial data was available relative to their spending. Accordingly, this analysis understates the total economic impact of the blueberry industry.



## **The Consultant**

The Tootelian Company is a Sacramento, California-based marketing and management consulting firm. It specializes in performing economic impact studies, conducting cost-benefit analyses, conducting market research surveys, and assisting its clients with their business and marketing plans.

The founder of the company and consultant for this study was Dennis H. Tootelian, Ph.D. Dr. Tootelian is an Emeritus Professor of Marketing and former Director of the Center for Small Business in the College of Business at California State University, Sacramento. He received his Ph.D. in Marketing from Arizona State University, with minor fields in Accounting and Management.

Dr. Tootelian has conducted numerous economic impact studies for a wide variety of commodities in the agricultural sector. In addition, other clients for which economic impact studies have been conducted include the Chicago 2016 Olympic Games Committee, McDonald's Corporation, various trade and professional associations, and governmental entities.

Dr. Tootelian also has published approximately 100 articles dealing with all facets of business and has co-authored six college-level textbooks on marketing, small business management, and pharmacy management. His academic research has appeared as peer-reviewed articles (i.e., reviewed by academicians for quality of research methodology) in such journals as the *Journal of Marketing*, *Journal of Retailing*, *Journal of Business Research*, *Journal of Food Products Marketing*, *Journal of Health Care Marketing*, and *Journal of Professional Services Marketing*. Results of some of his applied research and writing have appeared in *The Congressional Record*, *The Wall Street Journal*, *Forbes*, *The Kiplinger Report*, *USA Today*, *ABC National News* website, and even *The National Enquirer*.

# **METHODOLOGY**

Two models were used in this analysis. A specially designed economic input model was created to help define an average expenditure level by blueberry growers within Michigan in an average year and to examine the IMPLAN-generated results. IMPLAN was used to compute the total economic impact created by blueberry growers.

### ***Specialty Economic Input Model***

To measure grower expenditures, a specialty economic model was created to measure the critical issues associated with growing blueberries within Michigan. This model not only provided the data used in the IMPLAN analysis but analyzed the resulting total economic impact in more detailed ways.

Statistics were available from the United States Department of Agriculture (hereafter, USDA) for the number of acres in production and in development. However, statistics were not available for the average costs per acre to grow and harvest blueberries or for the average cost per acre to develop acres for future blueberry production. Accordingly, historical data was used to estimate average costs. This is explained further in the Findings section of this Summary Report.

### ***IMPLAN***

The model used to compute economic impact was IMPLAN. It provides modeling based on data and tools to assess economic impacts at the national, state, and local levels. IMPLAN is widely used by a variety of clients, including federal and state governments, universities, and private sector consultants.

The benefit of using an input-output model like IMPLAN is that it helps evaluate the effects industries have on each other based on the supposition that industries use the outputs of other industries as inputs. An input-output model makes it possible to examine economic relationships between businesses and between businesses and consumers.

Each industry that produces goods and services has an influence on, and in turn is influenced by, the production of goods and services of other industries. These interrelationships are captured through a multiplier effect as the demand and supply trickle over from industry to industry and thus impact total output,

employment, employee compensation, and indirect business taxes.

The range of economic impacts includes direct, indirect, and induced benefits:

- **Direct benefits** consist of economic activity contained exclusively within the wholesale sector. This includes expenditures made and people employed.
- **Indirect benefits** define the creation of additional economic activity that results from linked businesses, suppliers of goods and services, and provision of operating inputs.
- **Induced benefits** measure the consumption expenditures of direct and indirect sector employees who spend their incremental income. Examples of induced benefits include employees' expenditures on items such as food, housing, transportation, and professional and medical services.

The total direct, indirect, and induced benefits arising due to the multiplier effect are presented in four ways:

- **Output** accounts for total dollar revenues, including all sources of income for a given time period. ***This is the best overall measure of business and economic impact.***
- **Employment** demonstrates the number of jobs generated and is calculated on an annual full-time equivalent basis.
- **Labor Income** includes all forms of employee compensation paid by employers (e.g., total payroll costs including benefits, wages and salaries of workers), and proprietary income (e.g., self-employment income, income received by private business owners).
- **Indirect Business Taxes** consist of property taxes, excise taxes, fees, licenses, and sales taxes paid by businesses. Taxes on profits or income are not included.

The **multiplier effect** for sales and employment reflects the increased economic activity that comes from sales being generated, and expenses being incurred, by blueberry growers. For example, when a grower plants, cultivates, and harvests blueberries, it must spend money to purchase a variety of goods

and other services and hire people through the cultivating and harvesting processes. Purchases made by the grower represent sales to other firms who must then also purchase goods and services and hire people to meet their new demand. The additional hiring to meet demand means more people will have income which they will use to purchase goods and services for their households. All of this brings added sales to firms across nearly all economic sectors in Michigan. The net effect is that sales dollars are recycled in the State through this process of sales requiring additional purchases and employment, which results in sales for other firms who must use that money to make their own purchases and hire people.

### **Data Sources**

Government and industry statistics were used to determine average numbers of acres and expenses per acre, as well as some other operating data for this study. However, to ensure that this information was appropriate, the USHBC was asked to verify that the statistics being used were reasonable for Michigan growers. Based on the information received from the USHBC, the statistics were modified as deemed appropriate. Information from economic impact studies conducted by the analyst previously for the blueberry industry and for other commodity organizations also were used as deemed appropriate.

Information about the industry and data used to assess the economic impact came from such sources as:

- State of Michigan's official website
- United States Bureau of the Census
- United States Bureau of Labor Statistics
- United States Department of Agriculture, National Agricultural Statistics Service
- United States Department of Agriculture, Census of Agriculture
- United States Government official website

## **Caveats**

The results of any research should be used with caution and at the reader's own discretion. Every study, no matter how well constructed, contains the possibility of some degree of error. Accordingly, the reader assumes sole responsibility for the use of this information.



# **FINDINGS OF THE ANALYSES**

The findings of this study are presented in four sections: Computation of Expenditures Used in the Analyses, Economic Impact of Growers, Possible Diffusion of Labor Income Spending, and Possible Uses for Indirect Business Taxes Generated. Tabled data is presented at the end of this Summary Report.

## **Computation of Expenditures Used in the Analyses**

Expenditure estimates for growers were based on multiplying the average number of acres by the average costs per acre. Total grower expenditures were the combined costs of growing and harvesting blueberries for acres in production and the costs of acres in development.

An “average” year was created by using acres and expenditure estimates for 2021, 2022, and 2023. This process was preferred to using just a single year because it eliminated the possibility of using one year which might have had abnormally large or small expenditures. Using a three-year average gave a better representation of what might occur each year.

### **Number of Acres**

The numbers of acres in production were obtained from the USDA’s National Agricultural Statistics Service (hereafter NASS). This source provided the number of acres harvested (i.e., acres in production) from 2021 through 2023.

Statistics on the State’s acres in development were obtained from the most current Census of Agriculture reports. To estimate the number of acres in development for the years 2021 through 2023, the historical ratios of acres in development to acres of blueberries in production were computed and averaged. This ratio was then applied to the average acres in production to estimates of acres in development for this study.

After consultations with the USHBC, the three-year average number of acres used for this study was 17,567 for acres in production and 2,408 acres in development.

## **Cost per Acre**

Since current statistics were not available for the average cost per acre for acres in production and for acres in development, it was necessary to update the costs used for the 2020 study which were derived from relatively current studies at that time by an inflation factor.

Average costs for this study were computed by determining the average annual growth rate in crop farms production expenditures. The average growth rate for crop farm production expenditures from 2020 through 2023 was 11.6% per year. This growth rate was then applied to the 2020 costs per acre to arrive at costs per acre for each year from 2021 through 2024. Then, a three-year average for costs per acre for acres in production and acres in development was developed.

It was not considered appropriate to include depreciation and amortization since this is not an immediate expenditure. However, by eliminating depreciation and amortization costs, this study excludes future investments that growers will be making to replace depreciable assets such as equipment and facilities. Eventually, growers have to make capital purchases, but the timing of those expenditures is unknown. The net effect of eliminating these costs is to make the analysis considerably more conservative than it might otherwise be in terms of estimating the economic impact on the U.S. economy by growers.

Expenditures per acre also were adjusted downward to reflect the possible out-migration of some dollars for purchases of goods and services made outside of the State. Making this adjustment also results in the net total expenditures for growers being more conservative.

After these reductions, the three-year average cost for acres in production was found to be \$14,747 per acre and the cost for acres in development was \$4,705 per acre.

It is recognized that grower costs per acre can vary widely based on geographic area, the methods of growing employed, whether the blueberries are for fresh or processed markets, prevailing wage rates, and other factors. However, estimates used in this

study for the costs per acre for acres in production and for acres in development represent averages that span the range in grower expenditures.

### **Net Grower Expenditures**

Net total expenditures by growers were a function of the average costs per acre multiplied by the average number of acres. Based on these computations, the net total expenditures for growers were computed to be nearly \$270.4 million in an average year, or nearly \$740,800 per day. Average annual expenditures for acres in production are nearly \$259.1 million and more than \$11.3 million for acres in development. This is shown below and also presented in Table One.

Grower Operations	Average Acres	Average Cost Per Acres	Net Expenditures	Expenditures per Day
Acres in Production	17,567	\$14,747	\$259,054,247	\$709,738
Acres in Development	2,408	\$4,705	\$11,330,007	\$31,041
Total Spending	n.a.	n.a.	\$270,384,254	\$740,779

It is again important to note that these expenditures are for growers only. This analysis does not include expenditures by handlers and other intermediaries who are part of the process of bringing blueberries from field to market. The result is that the expenditures included in this analysis is even more conservative as a result of this omission.

# Economic Impact of Growers

Economic impact analyses were conducted based on the average net total expenditures of blueberry growers in Michigan.

**It is important to note that these projections are based on average annual expenditures, which means that this impact is expected to occur each year that such spending occurs.**

## **Total Economic Impact**

The Output, Employment, Labor Income, and Indirect Business Taxes for Michigan blueberry growers are presented in Table Two in total and Table Three on a per-day basis and summarized below.

Total Economic Impact	Total	Per Day
Output	\$529,444,066	\$1,450,532
Employment	6,079	n.a.
Labor Income	\$108,908,238	\$298,379
Indirect Business Taxes	\$10,760,817	\$29,482

**Output.** The Output, or the amount of overall business activity created, is projected to total more than \$529.4 million, equating to nearly \$1.5 million each day of the year. This includes the direct spending by growers (“Direct”), the amount of additional business activity created by that spending (“Indirect”), and the amount of additional business activity created by people’s spending caused by the incremental labor income (“Induced”). About 51.1% of this impact is caused by grower spending, and the remainder (48.9%) is the result of increased business activity.

As shown below, the industries generating the largest increases in overall business activity were farming (\$316.9 million), real estate/construction/finance/insurance (\$66.4 million), manufacturing (\$35.2 million), wholesaling (\$25.0 million), and professional services (\$21.1 million).

Industry	Output
Farming	\$316,883,351
Real Estate, Const., Fin., Ins.	\$66,387,828
Manufacturing	\$35,230,677
Wholesaling	\$25,045,105
Professional Services	\$21,081,630

**Job Creation.** Nearly 6,100 additional jobs are expected to be created as a result of the increased business activity. This is computed on an annual full-time equivalent basis. About 67.9% of this is the result of grower operations and the rest (32.1%) is due to the increased business activity caused by the ripple effect of grower spending and the spending of others.

As shown below, the industries generating the largest increases in full-time-equivalent job creation were farming (5,099 jobs), real estate/construction/finance/insurance (270 jobs), retailing (147 jobs), professional services (115 jobs), and health (89 jobs).

Industry	Employment
Farming	5,099
Real Estate, Const., Fin., Ins.	270
Retailing	147
Professional Services	115
Health	89

**Labor Income.** Labor Income resulting from the additional people employed and current employees earning more is projected to be more than \$108.9 million, equating to about \$298,400 each day of the year. About 12.9% of this income is the direct result of spending by growers, while 87.1% is due to increased business activity. How these funds are likely to be spent across various sectors of the State's economy is based on consumer purchasing patterns described later in this Summary Report.

As shown below, the industries generating the largest increases in labor income were farming (\$50.7 million), real estate/construction/finance/insurance (\$13.6 million), professional services (\$8.5 million), wholesaling (\$7.2 million), and health (\$6.4 million).

Industry	Labor Income
Farming	\$50,733,171
Real Estate, Const., Fin., Ins.	\$13,575,297
Professional Services	\$8,475,499
Wholesaling	\$7,245,445
Health	\$6,395,526



**Indirect Business Taxes.** Finally, nearly \$10.8 million in additional indirect business taxes are created from the increased business activity, equating to nearly \$29,500 each day of the year. These tax dollars are generated from businesses benefiting from the heightened economic activity and the increased employment. About 1.3% of these indirect business taxes are the direct result of spending by growers, while 98.7% is due to the increased business activity. As is described later in this Summary Report, these tax dollars can be used for programs that further serve residents of communities within Michigan.

As shown below, the industries generating the largest increases in indirect business taxes were wholesaling (\$3.0 million), real estate/construction/finance/insurance (\$2.3 million), retailing (\$1.6 million), farming (\$1.5 million), and professional services (\$584,725).

Industry	Business Taxes
Wholesaling	\$2,974,807
Real Estate, Const., Fin., Ins.	\$2,333,646
Retailing	\$1,568,663
Farming	\$1,462,623
Professional Services	\$584,725

### ***Possible Diffusion of Labor Income Spending***

The labor income that is created will be diffused throughout the various sectors of the State's economy. As people spend this added income, those funds will be used to purchase a wide array of goods and services.

To illustrate how those funds could be distributed to various economic sectors in Michigan, consumer expenditures across various categories were obtained from the U.S. Bureau of Labor Statistics. Assuming that those funds will be spent in the same proportion as consumers currently spend their incomes, the dollars that are generated for selected sectors are shown below and in more detail in Table Four.

Possible Household Spending	Annual	Per Day
<b>Food</b>	<b>\$14,098,089</b>	<b>\$38,625</b>
Food at home	\$8,842,833	\$24,227
Food away from home	\$5,255,257	\$14,398
<b>Housing</b>	<b>\$33,650,151</b>	<b>\$92,192</b>
Shelter & utilities	\$25,969,039	\$71,148
Household operations & supplies	\$3,882,592	\$10,637
Household furnishings & equipment	\$3,798,520	\$10,407
<b>Apparel and services</b>	<b>\$2,803,415</b>	<b>\$7,681</b>
<b>Transportation</b>	<b>\$18,668,542</b>	<b>\$51,147</b>
Vehicle purchases (net outlay)	\$7,485,454	\$20,508
Public and other transportation	\$1,173,949	\$3,216
Other	\$10,009,139	\$27,422
<b>Healthcare</b>	<b>\$10,117,668</b>	<b>\$27,720</b>
<b>Entertainment</b>	<b>\$5,814,717</b>	<b>\$15,931</b>
<b>Personal care products &amp; services</b>	<b>\$1,293,178</b>	<b>\$3,543</b>
<b>Education</b>	<b>\$2,318,855</b>	<b>\$6,353</b>

As shown above, the greatest amount of spending was for housing (\$33.7 million), transportation (\$18.7 million), and food (\$14.1 million). These three account for 61.0% of the total additional labor income spending.

### ***Possible Uses for Indirect Business Taxes Generated***

To illustrate how the indirect business tax dollars could be used to help fund some of Michigan's departments/agencies, the 2024 fiscal year budgets of a variety of agencies were obtained from the State's government's official website. Some caution should be exercised in using these numbers since budgets are adjusted over the course of the fiscal year. Accordingly, these only are presented as illustrations of general amounts spent by State agencies.

Presented below is the percent of various 2024 fiscal year federal agency budgets that could be covered by the indirect business tax dollars generated by the increased business activity within Michigan. It is important to recognize that the total indirect business tax dollars generated were applied to **each** State department/agency. A sample of department/agencies' budgets is listed below and a larger list is presented in Table Five.

State of Michigan	FY2024 Exec. Recommendation General Funds	% of Budget Could Fund*
Agriculture & Rural Development	\$124,605,100	8.6%
Education	\$123,299,600	8.7%
Environment, Great Lakes, & Energy	\$149,238,800	7.2%
Labor & Economic Opportunity	\$278,276,000	3.9%
Military & Veterans Affairs	\$91,543,500	11.8%
Natural Resources	\$120,136,100	9.0%
School Aid	\$49,500,000	21.7%
State Police	\$602,852,300	1.8%
Transportation	\$303,000,000	3.6%

# **SUMMARY AND CONCLUSIONS**

Economic impact analyses were conducted for the total expenditures by growers in Michigan. ***It is important to note that these projections are based on annual average expenditures, which means that this impact is expected to occur each year that such spending occurs.***

Based on available data, on the average Michigan blueberry growers spend nearly \$270.4 million annually for their acres in production and acres in development. This expenditure averages nearly \$740,800 per day.

Expenditure levels are based on acres reported by the United States Department of Agriculture and estimates of average costs per acre for acres in production and acres in development. Based on this data, and discounted for some possible outmigration of spending, the economic impact of Michigan blueberry growers is estimated to be more than \$529.4 million annually, or nearly \$1.5 million per day. This does not include the economic impact of handlers and other intermediaries that help bring blueberries from farm to market. Thus, the total impacts shown below are conservative in nature.

Total Economic Impact	Total	Per Day
Output	\$529,444,066	\$1,450,532
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The findings of this study show that blueberry growers have a significant impact on the State's economy. Overall, the growers create:

- More than \$529.4 million in economic output, the best measure of economic impact, each year. This equates to nearly \$1.5 million each day of the year.
- Nearly 6,100 jobs on an annual full-time equivalent basis as a result of the business activities of growers and the multiplier effect their purchases generate in a variety of farming and non-farming economic sectors.

- More than \$108.9 million in labor income as a result of grower activities, or nearly \$298,400 per day. These are dollars going to wages and salaries for new employment as well as expanded incomes for those already in the labor force (e.g., overtime pay). These dollars are diffused throughout the State's economy as the funds are spent by households for an array of goods and services.
- Nearly \$10.8 million in indirect business taxes, not including income taxes. This equates to nearly \$29,500 per day. Depending on how these funds are used, they can help pay for some or all of the State government's programs that further benefit the people residing in Michigan.

Overall, it is clear that blueberry growers play a significant role in strengthening the economic climate of Michigan. Their activities are diffused throughout the economy, touching nearly every aspect of life in the State.



## **TABLE ONE: AVERAGE ANNUAL GROWER EXPENDITURES WITHIN MICHIGAN**

### **Total Impact**

Grower Operations	Average Acres	Average Cost Per Acres	Net Expenditures
Acres in Production	17,567	\$14,747	\$259,054,247
Acres in Development	2,408	\$4,705	\$11,330,007
Total Spending	n.a.	n.a.	\$270,384,254

**TABLE TWO: AVERAGE ANNUAL ECONOMIC IMPACT OF MICHIGAN BLUEBERRY GROWERS**

**Total Impact**

	Output Direct	Output Indirect	Output Induced	Output Total
Manufacturing	n.a.	\$32,594,173	\$2,636,504	\$35,230,677
Wholesaling	n.a.	\$21,739,787	\$3,305,318	\$25,045,105
Retailing	n.a.	\$3,353,312	\$9,876,811	\$13,230,123
Real Estate/ Const./Fin./Ins..	n.a.	\$42,150,951	\$24,236,877	\$66,387,828
Professional Services	n.a.	\$12,568,354	\$8,513,275	\$21,081,630
Administrative	n.a.	\$4,916,974	\$3,730,894	\$8,647,868
Education	n.a.	\$37,410	\$875,787	\$913,197
Health	n.a.	\$539	\$12,011,036	\$12,011,575
Arts, entertainment, recreation	n.a.	\$1,282,076	\$2,010,822	\$3,292,897
Accommodations, food services	n.a.	\$1,129,066	\$3,374,123	\$4,503,189
Other	n.a.	\$13,560,665	\$4,862,939	\$18,423,604
Farming	\$270,384,254	\$46,204,874	\$294,223	\$316,883,351
Federal	n.a.	\$294,357	\$169,829	\$464,186
State and local	n.a.	\$2,648,513	\$680,322	\$3,328,835
Total	\$270,384,254	\$182,481,051	\$76,578,761	\$529,444,066

## AVERAGE ANNUAL ECONOMIC IMPACT OF MICHIGAN BLUEBERRY GROWERS *(continued)*

### Employment

	Employment Direct	Employment Indirect	Employment Induced	Employment Total
Manufacturing	n.a.	35	5	40
Wholesaling	n.a.	71	9	80
Retailing	n.a.	28	119	147
Real Estate/ Const./Fin./Ins.	n.a.	199	71	270
Professional Services	n.a.	61	54	115
Administrative	n.a.	36	28	64
Education	n.a.	1	14	15
Health	n.a.	0	89	89
Arts, entertainment, recreation	n.a.	11	19	30
Accommodations, food services	n.a.	16	46	62
Other	n.a.	30	22	52
Farming	4,127	969	3	5,099
Federal	n.a.	3	2	4
State and local	n.a.	8	3	11
Total	4,127	1,467	484	6,079

## AVERAGE ANNUAL ECONOMIC IMPACT OF MICHIGAN BLUEBERRY GROWERS *(continued)*

### Indirect Labor Income

	Labor Income Direct	Labor Income Indirect	Labor Income Induced	Labor Income Total
Manufacturing	n.a.	\$3,320,796	\$392,773	\$3,713,568
Wholesaling	n.a.	\$6,314,302	\$931,143	\$7,245,445
Retailing	n.a.	\$1,204,185	\$4,260,568	\$5,464,753
Real Estate/ Const./Fin./Ins.	n.a.	\$9,979,400	\$3,595,898	\$13,575,297
Professional Services	n.a.	\$5,064,719	\$3,410,780	\$8,475,499
Administrative	n.a.	\$2,865,494	\$1,908,715	\$4,774,209
Education	n.a.	\$18,365	\$526,673	\$545,037
Health	n.a.	\$267	\$6,395,258	\$6,395,526
Arts, entertainment, recreation	n.a.	\$466,122	\$667,337	\$1,133,459
Accommodations, food services	n.a.	\$374,308	\$1,042,231	\$1,416,539
Other	n.a.	\$2,912,479	\$1,348,667	\$4,261,145
Farming	\$14,041,403	\$36,653,048	\$38,721	\$50,733,171
Federal	n.a.	\$255,286	\$147,868	\$403,155
State and local	n.a.	\$592,840	\$178,594	\$771,434
Total	\$14,041,403	\$70,021,611	\$24,845,225	\$108,908,238

## AVERAGE ANNUAL ECONOMIC IMPACT OF MICHIGAN BLUEBERRY GROWERS *(continued)*

### Indirect Business Taxes

	Business Taxes Direct	Business Taxes Indirect	Business Taxes Induced	Business Taxes Total
Manufacturing	n.a.	\$379,230	\$25,698	\$404,927
Wholesaling	n.a.	\$2,584,389	\$390,418	\$2,974,807
Retailing	n.a.	\$383,178	\$1,185,485	\$1,568,663
Real Estate/ Const./Fin./Ins.	n.a.	\$839,800	\$1,493,846	\$2,333,646
Professional Services	n.a.	\$316,921	\$267,803	\$584,725
Administrative	n.a.	\$47,973	\$55,311	\$103,284
Education	n.a.	\$765	\$17,083	\$17,848
Health	n.a.	\$3	\$106,591	\$106,594
Arts, entertainment, recreation	n.a.	\$37,206	\$113,338	\$150,544
Accommodations, food services	n.a.	\$58,255	\$182,794	\$241,049
Other	n.a.	\$772,239	\$223,881	\$996,120
Farming	\$144,416	\$1,314,067	\$4,140	\$1,462,623
Federal	n.a.	-\$11,549	-\$13,925	-\$25,474
State and local	n.a.	-\$127,660	-\$30,878	-\$158,538
Total	\$144,416	\$6,594,817	\$4,021,584	\$10,760,817

# TABLE THREE: AVERAGE DAILY ECONOMIC IMPACT OF MICHIGAN BLUEBERRY GROWERS

## Total Impact — Per Day

	Output Direct	Output Indirect	Output Induced	Output Total
Manufacturing	n.a.	\$89,299	\$7,223	\$96,522
Wholesaling	n.a.	\$59,561	\$9,056	\$68,617
Retailing	n.a.	\$9,187	\$27,060	\$36,247
Real Estate/ Const./Fin./Ins.	n.a.	\$115,482	\$66,402	\$181,884
Professional Services	n.a.	\$34,434	\$23,324	\$57,758
Administrative	n.a.	\$13,471	\$10,222	\$23,693
Education	n.a.	\$102	\$2,399	\$2,502
Health	n.a.	\$1	\$32,907	\$32,908
Arts, entertainment, recreation	n.a.	\$3,513	\$5,509	\$9,022
Accommodations, food services	n.a.	\$3,093	\$9,244	\$12,338
Other	n.a.	\$37,153	\$13,323	\$50,476
Farming	\$740,779	\$126,589	\$806	\$868,174
Federal	n.a.	\$806	\$465	\$1,272
State and local	n.a.	\$7,256	\$1,864	\$9,120
Total	\$740,779	\$499,948	\$209,805	\$1,450,532



**AVERAGE DAILY ECONOMIC IMPACT OF  
MICHIGAN BLUEBERRY GROWERS** *(continued)*

**Employment — Per Day (not applicable)**

	Employment Direct	Employment Indirect	Employment Induced	Employment Total
Manufacturing	n.a.	n.a.	n.a.	n.a.
Wholesaling	n.a.	n.a.	n.a.	n.a.
Retailing	n.a.	n.a.	n.a.	n.a.
Real Estate/ Const./Fin./Ins.	n.a.	n.a.	n.a.	n.a.
Professional Services	n.a.	n.a.	n.a.	n.a.
Administrative	n.a.	n.a.	n.a.	n.a.
Education	n.a.	n.a.	n.a.	n.a.
Health	n.a.	n.a.	n.a.	n.a.
Arts, entertainment, recreation	n.a.	n.a.	n.a.	n.a.
Accommodations, food services	n.a.	n.a.	n.a.	n.a.
Other	n.a.	n.a.	n.a.	n.a.
Farming	n.a.	n.a.	n.a.	n.a.
Federal	n.a.	n.a.	n.a.	n.a.
State and local	n.a.	n.a.	n.a.	n.a.
Total	n.a.	n.a.	n.a.	n.a.

**AVERAGE DAILY ECONOMIC IMPACT OF  
MICHIGAN BLUEBERRY GROWERS** *(continued)*

**Indirect Labor Income — Per Day**

	Labor Income Direct	Labor Income Indirect	Labor Income Induced	Labor Income Total
Manufacturing	n.a.	\$9,098	\$1,076	\$10,174
Wholesaling	n.a.	\$17,299	\$2,551	\$19,851
Retailing	n.a.	\$3,299	\$11,673	\$14,972
Real Estate/ Const./Fin./Ins.	n.a.	\$27,341	\$9,852	\$37,193
Professional Services	n.a.	\$13,876	\$9,345	\$23,221
Administrative	n.a.	\$7,851	\$5,229	\$13,080
Education	n.a.	\$50	\$1,443	\$1,493
Health	n.a.	\$1	\$17,521	\$17,522
Arts, entertainment, recreation	n.a.	\$1,277	\$1,828	\$3,105
Accommodations, food services	n.a.	\$1,026	\$2,855	\$3,881
Other	n.a.	\$7,979	\$3,695	\$11,674
Farming	\$38,470	\$100,419	\$106	\$138,995
Federal	n.a.	\$699	\$405	\$1,105
State and local	n.a.	\$1,624	\$489	\$2,114
<b>Total</b>	<b>\$38,470</b>	<b>\$191,840</b>	<b>\$68,069</b>	<b>\$298,379</b>

**AVERAGE DAILY ECONOMIC IMPACT OF  
MICHIGAN BLUEBERRY GROWERS** *(continued)*

**Indirect Business Taxes — Per Day**

	Business Taxes Direct	Business Taxes Indirect	Business Taxes Induced	Business Taxes Total
Manufacturing	n.a.	\$1,039	\$70	\$1,109
Wholesaling	n.a.	\$7,081	\$1,070	\$8,150
Retailing	n.a.	\$1,050	\$3,248	\$4,298
Real Estate/ Const./Fin./Ins.	n.a.	\$2,301	\$4,093	\$6,394
Professional Services	n.a.	\$868	\$734	\$1,602
Administrative	n.a.	\$131	\$152	\$283
Education	n.a.	\$2	\$47	\$49
Health	n.a.	\$0	\$292	\$292
Arts, entertainment, recreation	n.a.	\$102	\$311	\$412
Accommodations, food services	n.a.	\$160	\$501	\$660
Other	n.a.	\$2,116	\$613	\$2,729
Farming	\$396	\$3,600	\$11	\$4,007
Federal	n.a.	-\$32	-\$38	-\$70
State and local	n.a.	-\$350	-\$85	-\$434
Total	\$396	\$18,068	\$11,018	\$29,482

**TABLE FOUR: POSSIBLE DIFFUSION OF ANNUAL INCREMENTAL LABOR INCOME**

Total Labor Income		\$108,908,238	\$298,379
Possible Household Spending		Annual	Per Day
<b>Food</b>		<b>\$14,098,089</b>	<b>\$38,625</b>
Food at home		\$8,842,833	\$24,227
Food away from home		\$5,255,257	\$14,398
<b>Housing</b>		<b>\$33,650,151</b>	<b>\$92,192</b>
Shelter		\$19,044,573	\$52,177
Utilities, fuels, and public services		\$6,924,466	\$18,971
Household operations		\$2,621,514	\$7,182
Housekeeping supplies		\$1,261,078	\$3,455
Household furnishings and equipment		\$3,798,520	\$10,407
<b>Apparel and services</b>		<b>\$2,803,415</b>	<b>\$7,681</b>
<b>Transportation</b>		<b>\$18,668,542</b>	<b>\$51,147</b>
Vehicle purchases (net outlay)		\$7,485,454	\$20,508
Gasoline and other fuels		\$4,273,909	\$11,709
Other vehicle expenses		\$5,721,473	\$15,675
Public and other transportation		\$1,173,949	\$3,216
<b>Healthcare</b>		<b>\$10,117,668</b>	<b>\$27,720</b>
<b>Entertainment</b>		<b>\$5,814,717</b>	<b>\$15,931</b>
<b>Personal care products and services</b>		<b>\$1,293,178</b>	<b>\$3,543</b>
<b>Reading</b>		<b>\$166,615</b>	<b>\$456</b>
<b>Education</b>		<b>\$2,318,855</b>	<b>\$6,353</b>
<b>Miscellaneous</b>		<b>\$3,161,103</b>	<b>\$8,661</b>
<b>Cash contributions</b>		<b>\$2,994,487</b>	<b>\$8,204</b>
<b>Personal insurance and pensions</b>		<b>\$13,821,417</b>	<b>\$37,867</b>
Life and other personal insurance		\$779,576	\$2,136
Pensions and Social Security		\$13,041,841	\$35,731

**TABLE FIVE: POSSIBLE COVERAGE OF MICHIGAN BUDGETS WITH INCREMENTAL INDIRECT BUSINESS TAXES**

State of Michigan	FY2024 Exec. Recommendation General Funds	% of Budget Could Fund*
Agriculture & Rural Development	\$124,605,100	8.6%
Education	\$123,299,600	8.7%
Environment, Great Lakes, & Energy	\$149,238,800	7.2%
Health & Human Services	\$6,261,614,700	0.2%
Labor & Economic Opportunity	\$278,276,000	3.9%
Military & Veterans Affairs	\$91,543,500	11.8%
Natural Resources	\$120,136,100	9.0%
School Aid	\$49,500,000	21.7%
State Police	\$602,852,300	1.8%
Transportation	\$303,000,000	3.6%

*\*Percent is total of Indirect Business Taxes applied to EACH budget line. If the percentage exceeds 100.0%, it indicates the indirect business taxes would pay more than the budget.*