

# **The Economic Impacts of Increased Fruit and Vegetable Production in Iowa**

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# Initial Terms

- **Economic Impact:** Net change in \$ in an economy from some change in industrial activity

$$\text{\$} = \text{C} + \text{X} - \text{I} + \text{or - (Lots of Other Stuff)}$$

**C = Consumption**

**X = Exports**

**I = Imports**

One way we can enhance \$ in an economy is producing goods locally that we would normally import. We call that **Import Substitution**.

# Scenario 2

- Twenty-five percent of 37 selected fruits and vegetables consumed (at current rates) in the state over a calendar year are grown by Iowa farmers?
- *Apples, Apricots, Asparagus, Beans (Snap), Blackberries, Blueberries, Broccoli, Cabbage, Cantaloupes, Carrots, Cauliflower, Cherries, Cucumbers, Eggplant, Garlic, Grapes, Greens/Collards, Lettuce (Head), Lettuce (Leaf), Nectarines, Okra, Onions, Peaches, Pears, Peppers (Bell), Plums, Potatoes (Fresh), Potatoes (Sweet), Pumpkins, Radishes, Raspberries, Spinach, Squash, Strawberries, Sweet Corn, Tomatoes, Watermelons*

# Assumptions

- Increased production in fruits and vegetables will reduce corn and soybean production
- Half of the new fruit and vegetable sales would be farmer to consumer (direct-market) sales, the other half are wholesaled and retailed conventionally
- Existing food store retail sales (actually retail margins) will be reduced by an amount proportionate to coincide with the new direct market sales
- All of the production to meet this goal of 25 percent is for in-state consumption (therefore, primarily import substitutes)

# Modeling Foundations

- *Iowa Produce Market Potential Calculator* data base
- *IMPLAN*, as modified for this assessment
- Census of Agriculture

# Modeling Data Inputs

- Farm Pounds
- Farm Receipts
- Farm Acres
- Retail Pounds
- Retail Receipts (and margins)
- Corn and Soybean Offsets

# Baseline Values

<b>Scenario 2</b>			
	<b>Fruits</b>	<b>Vegetables</b>	<b>Total</b>
<b>Farm Pounds</b>	31,903,024	154,976,807	186,879,831
<b>Farm Acres</b>	4,881	10,508	15,389
<b>Farm Receipts</b>	8,921,120	28,149,128	37,070,249
<b>Retail Pounds</b>	26,450,359	126,047,947	152,498,306
<b>Gross Retail Receipts</b>	31,217,012	105,322,688	136,539,699
<b>Retail Margin Offset</b>	(4,292,339)	(14,481,869)	(18,774,208)
<b>Corn Offset</b>	(785,053)	(1,690,176)	(2,475,228)
<b>Soybean Offset</b>	(486,896)	(1,048,260)	(1,535,155)
<b>Direct Marketing Output</b>	11,147,946	38,586,780	49,734,725

# **Net Direct Economic Activity**

Total Industrial Output \$	64,020,381
Labor Income \$	24,552,446
Jobs	852

# Farm Level Outcomes

	Direct	Indirect	Induced	Total	Total Multiplier
<b>Fruit and Vegetable Farming</b>					
Total Industrial Output \$	37,070,248	9,007,737	9,515,237	55,593,224	1.50
Labor Income \$	9,629,401	3,319,123	3,056,805	16,005,329	1.66
Jobs	190	124	120	434	2.28
<b>Grain and Soybean Offset</b>					
Total Industrial Output \$	(4,010,383)	(1,261,203)	(1,134,362)	(6,405,948)	1.60
Labor Income \$	(1,107,308)	(406,059)	(364,417)	(1,877,784)	1.70
Jobs	(42)	(14)	(14)	(71)	1.69

# Retail Outcomes

	Direct	Indirect	Induced	Total	Total Multiplier
<b>Direct Marketing</b>					
Total Industrial Output \$	49,734,724	12,880,250	21,323,381	83,938,355	1.69
Labor Income \$	24,746,176	4,283,422	6,850,216	35,879,814	1.45
Jobs	1,171	128	269	1,567	1.34
<b>Retail Offset</b>					
Total Industrial Output \$	(18,774,208)	(2,924,114)	(6,858,095)	(28,556,416)	1.52
Labor Income \$	(8,715,823)	(1,024,734)	(2,203,207)	(11,943,764)	1.37
Jobs	(467)	(33)	(86)	(586)	1.26

# Combined Outcomes

	<b>Direct</b>	<b>Indirect</b>	<b>Induced</b>	<b>Total</b>
<b>Total Economic Effects</b>				
Total Industrial Output \$	64,020,381	17,702,671	22,846,161	104,569,216
Labor Income \$	24,552,446	6,171,752	7,339,397	38,063,595
Jobs	852	204	288	1,345
<b>Total Economic Impacts (considering existing production)</b>				
Total Industrial Output \$	56,336,321	15,577,904	20,104,046	92,018,273
Labor Income \$	21,605,534	5,430,986	6,458,484	33,495,004
Jobs	750	180	253	1,183