

# **ECONOMY-WIDE IMPACTS OF AGRICULTURAL SECTORS IN NORTH CAROLINA**

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This note answers a very simple question: what are the economy-wide impacts of expansion in agricultural sectors in North Carolina. By “economy-wide” is meant not only the economic impact within the sector, but also the economic impacts on supplier firms within the state as well as the economic impacts on state consumer industries as workers spend their salaries. Economy-wide impacts include the total from these individual impacts.

Two impact measures are provided. First is the “value-added multiplier”. This number gives the total additional dollars of spending within North Carolina from every additional dollar of production in the agricultural sector using North Carolina inputs. Excluded are the impacts of inputs supplied from outside the state – like out-of-state manufactured tractors or similar equipment. Second is the “total effects employment multiplier”. This is the total number of jobs generated in the state from every \$1 million of additional output production from the agricultural sector.

Values for the two impact measures are from the “IMPLAN” statistical program.<sup>1</sup> In existence for over three decades, IMPLAN is the most commonly used impact analysis program in the country. IMPLAN divides the agricultural sector into fourteen sub-sectors. The table gives the “value-added multiplier” and “total effects employment multiplier” for each of the sub-sectors for North Carolina.

The value-added multipliers range from a low of 1.45 (other animal production) to a high of 3.74 (tobacco). The total effects employment multipliers go from a low of 4.7 (poultry and eggs) to a high of 16.8 (timber). Many factors influence the size of these impact measures, including length and depth of the sub-sector’s supply chain within North Carolina, production complexity of the sub-sector, and the relative use of labor (workers) and capital (machinery, technology) in the sub-sector’s production process.

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<sup>1</sup> IMPLAN is based in Huntersville, North Carolina

<u>Agricultural Sub-Sector</u>	<u>Value-Added Multiplier</u>	<u>Total Effects Employment Multiplier</u>
Oilseeds	2.07	11.4
Grains	3.23	15.3
Vegetables and melons	2.08	10.1
Fruit	2.18	11.5
Tree nuts	1.81	12.0
Greenhouses & nurseries	1.69	9.5
Tobacco	3.74	16.1
Cotton	3.24	9.2
All other crops	2.55	8.8
Beef cattle	2.38	6.1
Dairy	1.51	5.9
Poultry & eggs	2.61	4.7
Other animal production	1.45	15.8
Timber	3.45	16.8

Value-added multiplier is total spending in the state per dollar of additional product output using North Carolina inputs; Total effects employment multiplier is total employment in the state per \$1 million of additional output. Data are for 2012, the latest year available.

Source: IMPLAN (Huntersville, N.C.)