



ECONOMIC IMPACT

OF A NEW 1,000-COW DAIRY FARM IN STUTSMAN COUNTY



A new 1,000-cow dairy farm located in Stutsman County would generate the following estimated total **construction** and **operations** effects to the local (county) economy ¹.

TOTAL EFFECTS (OPERATIONS)



TOTAL EFFECTS (CONSTRUCTION)

Employment	54	Value Added	\$4,654,220
Labor Income	\$2,979,839	Output	\$9,087,977

TOTAL TAXES PAID (AT ALL JURISDICTIONS)

Construction	\$853,739	Operations	\$492,969
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TOTAL EFFECTS

Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	54	\$3,345,710	\$5,014,437	\$11,305,000
Indirect Effect	11	\$695,698	\$1,119,055	\$1,923,286
Induced Effect	17	\$659,441	\$1,229,121	\$2,137,386
Total Effect	82	\$4,700,848	\$7,362,613	\$15,365,673

¹To arrive at the total effects of a new 1,000-cow dairy farm, we used the following basic assumptions: 1) 32% culling rate; 2) replacement heifers are raised by the producer; 3) average milk price is \$16.97/cwt.

TOP INDUSTRIES IMPACTED: The following are a few of the industries most impacted in terms of value-added by the economic activity from both construction and operations during the first year:

CONSTRUCTION (VALUE-ADDED)	
Industry	Value-Added
Construction of new commercial structures, including farm structures	\$1,979,034
Farm machinery and equipment manufacturing	\$1,047,622
Construction of other new nonresidential structures	\$343,515
Wholesale trade	\$262,957
Owner-occupied dwellings	\$127,418
Truck transportation	\$53,242
Real estate	\$51,977
Retail - Motor vehicle and parts dealers	\$39,757
Monetary authorities and depository credit intermediation	\$36,968
Architectural, engineering, and related services	\$36,706

OPERATIONS (VALUE-ADDED)	
Industry	Value-Added
Dairy cattle and milk production	\$1,388,788
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	\$287,654
Wholesale trade	\$284,783
Owner-occupied dwellings	\$75,130
Support activities for agriculture and forestry	\$71,337
Real estate	\$45,739
Truck transportation	\$41,468
All other crop farming	\$32,565
Monetary authorities and depository credit intermediation	\$25,146
Insurance carriers	\$24,699

OVERVIEW: The entry of a new 1,000-cow dairy farm causes a measurable increase in economic activity within Stutsman County, North Dakota, both in terms of construction and annual operations. Common measures of economic activity are: Employment (jobs), Labor Income, Value Added, and Output (sales). When a dairy farm enters a local economy, it causes a series of new economic activities (impacts) to take place. For this summary, economic impacts are broken into two categories: Construction and Operations. Construction and operations will generate tax revenue through federal taxes as well as state and local taxes. Of the estimated \$1,346,708 generated in tax revenue, about \$446,147 is at the state and local level, and about \$900,561 at the federal level. The magnitude of these new economic activities is largely related to the presence of industries which supply the needed inputs for a new dairy farm. A 1,000-cow dairy farm in Stutsman County sources roughly 20% of all inputs locally.

The construction of a new 1,000-cow dairy farm requires purchases such as steel, concrete, and equipment. Once construction is completed, dairy producers purchase feed, veterinary and other professional services, and many other inputs to produce milk for sale. The direct purchase of supplies and equipment are known as *direct effects*. The suppliers and vendors used by the dairy farm then must purchase inputs to supply the dairy farm; these are known as *indirect effects*. Those who work in the construction of the farm, for the dairy farm once complete, and for the farm'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 accounts for the total multiplier effect present from the construction and operations of a new dairy farm. The dairy industry in South Dakota has been growing due to many processors in the area, leading to higher prices for producers which demonstrates an opportunity for North Dakota to grow in this industry².

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

²<https://www.agriculture.com/livestock/dairy/south-dakota-works-to-expand-its-dairy-industry>