



Glossary of Terms for Research Articles
(One set for each Research Folder)

CAFOs (Concentrated Animal Feeding Operations)

Article 1: Understanding Concentrated Animal Feeding Operations and Their Impact on Communities (pages 2-3: Benefits and Environmental Health Effects of CAFOs)

CAFO	Concentrated Animal Feeding Operation
efficient	operating in an effective and competent manner, with little wasted effort
livestock	the horses, cattle, sheep, and other useful animals kept or raised on a farm or ranch
infrastructure	the fundamental facilities and systems serving a country, city, or area, as transportation and communication systems, power plants, and schools
contaminant	something that makes impure, esp by touching or mixing; something that pollutes
nutrient	any of the mineral substances that are absorbed by the roots of plants for nourishment
pathogen	any disease-producing agent, especially a virus, bacterium, or other microorganism
absorptive capacity	the ability to absorb
degraded	lowered in quality or value
odor	a disagreeable smell
vector	an insect or other organism that transmits a pathogenic fungus, virus, bacterium, etc.
validate	to confirm
contentious	causing, involving, or characterized by argument or controversy

CAFOs

Concentrated Animal Feeding Operations

The Economic Impact of the Indiana Livestock Industries

EXPERT
REVIEWED

SOCIAL/ECONOMIC
ISSUES

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This publication is one title in the *Concentrated Animal Feeding Operations* series.

To view the entire series, visit <<http://www.ansc.purdue.edu/CAFO/>>.

Introduction

The livestock industry is an important source of employment and economic activity in the state of Indiana. The four largest livestock sectors in Indiana combined create an economic impact on the state of nearly \$6 billion and generate employment for more than 35,000 persons. The economy benefits not only directly from the industry, in terms of jobs and business income, but also because these businesses and their employees buy other products and services including cars, food, and other high-end items. This paper summarizes analysis of the economic importance and impact of the pork, poultry, dairy, and beef industries to the Indiana economy based on data from 2004, the most recent information available for this analysis.

Measuring Economic Impact

The total economic impact of an industry is measured in three categories – direct, indirect, and induced impacts. Direct economic impacts are expenditures a firm or industry makes in the local economy. For the livestock industry, if we consider the packinghouse or processor as producing the final product, the direct impacts of the industry would include all expenditures made to produce meat products. These would include livestock purchases from farmers, building and equipment purchases, utilities, as well as management and labor costs.

Indirect economic impacts are expenditures made by firms that sell goods and/or services to livestock processors. Examples include trucking firms, equipment manufacturers, suppliers, veterinary services, and financial institutions. Payroll expenses for these firms are also part of the indirect impacts.

The induced economic impacts are purchases that occur because the employees, business owners, and others earn income and spend it within the state on consumer goods and services, such as food, clothing, and housing.

Direct, indirect, and induced impacts are measured three general ways: 1) gross receipts that are dollars spent on purchases and the value of the processed product; 2) the total wages paid by firms producing direct, indirect, or induced impacts; and 3) the number of jobs associated with direct, indirect, and induced economic activity.

The Pork Industry

Indiana had 3,200 pork farms with 3.2 million hogs and pigs in inventory in 2004 (National Agricultural Statistics Service). It is the largest in terms of economic impact of the four livestock sectors studied. The value of output or sales of the Indiana pork industry was estimated in 2004 as \$1,375,858,176 at the processor level. The industry directly employed 3,021 people and paid \$109,394,440 in salaries (Table 1). After

Table 1. Direct, indirect, and induced impacts attributed to Indiana's pork industry

	Output	Labor Income	Employment
Direct	\$1,375,858,176	\$109,394,440	3,021
Indirect	\$1,274,840,450	\$247,566,943	7,092
Induced	\$276,120,022	\$89,340,027	3,130
Total	\$2,926,818,649	\$446,291,410	13,243

Source: IMPLAN

including the indirect and induced effects, the total economic impact attributable to Indiana's pork industry included an estimated \$2,926,818,649 in industrial sales, 13,243 jobs, and personal income of approximately \$446,291,410 million. The average salary for all jobs associated with the Indiana pork industry was \$33,700.

The Poultry Industry

The Indiana poultry industry includes firms that produce and process ducks, turkeys, broilers, and eggs. Total poultry output was estimated as \$806.6 million in 2004 (Table 2). The industry paid \$142 million in salary and wages to the 5,031 persons directly employed. Additionally, the industry had growing contracts with 651 farmers. With indirect and induced effects, the total economic impact associated with Indiana's poultry industry is an estimated \$1,739,553,923 in sales or expenditures, 12,277 jobs and personal income of approximately \$368,929,866. The average salary for all jobs associated with the Indiana poultry industry was \$30,050.

The Dairy Industry

Indiana's milk production in 2004 was estimated at 3 billion pounds (344 million gallons) of milk, or 1.7% of the total U.S. milk production. The direct output by the dairy industry was \$533 million in 2004 (Table 3). The industry paid \$107 million in salaries to its 3,570 full-time employees. With indirect and induced economic impacts, the total economic activity associated with the Indiana dairy industry was \$986 million in sales and \$229 million in income paid to the 7,357 persons employed in Indiana. The average salary for all jobs associated with the dairy industry is \$31,184.

The Beef Industry

Indiana had 19,000 cattle and calf farms with 830 thousand cattle and calves in inventory in 2004. Generally, beef produced in Indiana are shipped out of state for processing. Cattle production is considered the direct activity for the state beef industry. The value of beef output or sales was estimated as \$173,787,696 in 2004 (Table 4). The industry employed 910 people and paid \$27,297,498 in salaries. Including the indirect and induced effects, the total economic impacts attributable to the Indiana beef industry included an estimated \$317,070,117 in industrial sales, 2,178 jobs, and personal income of approximately \$65,663,063. The average salary for all jobs associated with the Indiana beef industry was \$30,148.

Summary

If all economic impacts of the four analyzed livestock industries are added together, the resulting economic impact in Indiana is nearly \$6 billion. Employment in the industry, in firms that serve them and induced employment to support all the livestock sectors generate more than 35,000 jobs. Real economic impacts in the state due to livestock industries are actually greater since this analysis looked at only the largest livestock sectors in Indiana and does not include smaller enterprises such as aquaculture, lamb, and goat meat production. In the livestock industry, pork production has the greatest economic impact in Indiana, followed by poultry, dairy, and beef production. Pork leads in total output, income and employment.

Table 2. Direct, indirect, and induced impacts attributed to Indiana's poultry industry

	Output	Labor Income	Employment
Direct	\$806,594,240	\$141,886,960	5,031
Indirect	\$707,309,699	\$153,757,291	4,672
Induced	\$225,650,003	\$73,285,607	2,574
Total	\$1,739,553,923	\$368,929,866	12,277

Source: IMPLAN

Table 3. Direct, indirect, and induced impacts attributed to Indiana's dairy industry

	Output	Labor Income	Employment
Direct	\$533,064,264	\$107,099,704	3,570
Indirect	\$313,255,560	\$76,713,872	2,189
Induced	\$140,080,831	\$45,607,640	1,598
Total	\$986,399,636	\$229,421,219	7,357

Source: IMPLAN

Table 4. Direct, indirect and induced impacts attributed to Indiana's beef industry

	Output	Labor Income	Employment
Direct	\$173,787,696	\$27,297,498	910
Indirect	\$102,187,218	\$24,985,908	799
Induced	\$41,095,207	\$13,379,656	469
Total	\$317,070,117	\$65,663,063	2,178

Source: IMPLAN

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