

# Profile of Value-Added Agriculture in Lincoln

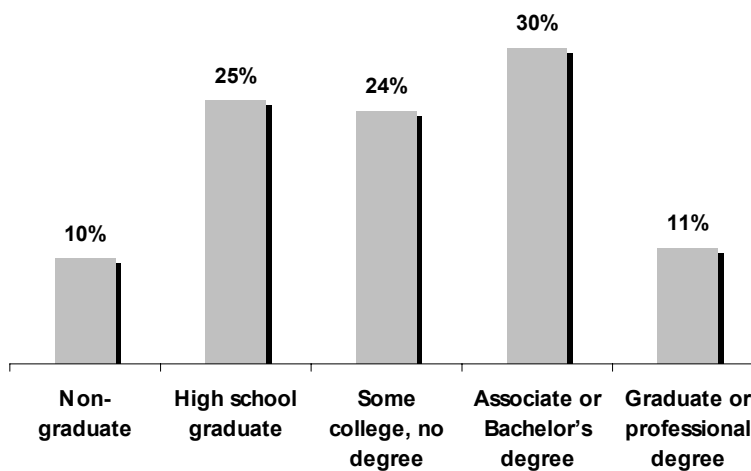
## Introduction

Value-added agriculture has traditionally been defined as food processors but has come to include production of foods with a higher intrinsic value such as organic, kosher, and vegetarian food products as well as convenience foods. Food processing is an extremely labor-intensive industry with nearly half of all employees classified as production workers. However, the industry is gradually beginning to demand an increasing number of industrial and mechanical engineers along with computer programmers, systems analysts, and chemists who create and regulate new automation systems that improve efficiency and safety.

## Why Lincoln?

Lincoln, a centrally located community of nearly 240,000, is well positioned to cultivate this industry through its highly educated workforce (see below), existing value-added agriculture industry presence, extensive university research and outreach, and outstanding quality of life. Lincoln offers the ambiance of a friendly small town and the amenities, attractions and entertainment opportunities of a major metropolitan area. Lincoln is both the **state capital and home to the flagship campus of the University of Nebraska**; as a result it provides a greater range of offerings than might be expected in a community of its size. Efficient transportation, a stable business environment, advanced health care technology and an excellent educational system are just a few of the reasons why **Lincoln ranks highly in livability studies**.

## Education Attainment, Age 25 and Over, Lincoln



Lincoln's position and access to raw materials for food processing is one that can only be rivaled by a handful of communities. In the heart of some of the most fertile soils in the nation, Nebraska and surrounding states are able to supply food processors with the raw materials that provide the impetus for locating their operations in the Midwest and specifically in the Lincoln area.

As the third largest corn producing state in the U.S., Nebraska is able to supply food processors in Lincoln with some of the finest raw materials in the nation. Iowa, the largest corn producing state in the nation, is also located perfectly to supply the inputs for food processing endeavors in the Lincoln MSA.

In 2005, Nebraska produced a nearly 1.3 billion bushels of corn. Of that amount, Nebraska was third in its utilization of the raw material for food and industrial use. While livestock continues to be the largest consumer of Nebraska corn, the fastest growing segment of corn usage is the **ethanol industry**. It is projected that corn processing for ethanol, sweeteners and starches will use nearly 30 percent of the state's corn production in the coming years. That figure has doubled in just the last five years, primarily due to ethanol expansion.<sup>1</sup>

In addition to being a large corn producing region, Nebraska counties produce much of the country's wheat, soybeans, and other vital raw materials needed for food processing.

## Research, Education and Industry Services

Lincoln benefits from the **significant agricultural education, research and service presence at the University of Nebraska-Lincoln (UNL)** as well as outstanding vocational and technical education services provided by **Southeast Community College (SCC)**.

UNL, designated a top 100 research institution by the National Science Foundation, is the state's only land-grant university and primary research and doctoral-degree granting institution. Areas of excellence include **plant genomics, bioinformatics, entrepreneurship** as well as, materials research, electronics engineering and testing, and remote sensing technology. A number of local firms have their origins in research conducted at UNL. In addition, **UNL graduates hundreds of agriculture, agribusiness, engineering and life sciences students per year**—individuals who are ideal professionals for the agricultural products industry.

UNL researchers are developing a **cholesterol-lowering compound** out of beef tallow and soybeans, formulating better methods to detect microbial pathogens in processed foods, and using new catalysts to strip hydrogen from **alternative fuels**, particularly plant-based alcohols and acids.<sup>2</sup> In addition, University of Nebraska-Lincoln wheat breeders and geneticists are part of a national scientific team that has received a \$5 million grant to harness genetic technologies to improve U.S. **wheat quality and disease resistance**.

The **University of Nebraska-Lincoln's** extensive agricultural processing infrastructure includes:

### ***Food Processing Center***

The Food Processing Center at UNL is a vital asset for nurturing the growth, retention, and expansion of the food processing industry in Lincoln and surrounding communities. The Food Processing Center is a "one stop shop" for the food industry and for individuals looking to enter the market. FPC is a comprehensive **resource for established businesses and start-up companies**. The information and services provided help to ensure the successful implementation of new products into the marketplace. **FPC resources include:**

*Business and Market Development*...research and evaluation of products, pricing, distribution channels and target markets...strategy development for product introduction, marketing and promotion...assistance with electronic commerce, expansion planning and exporting.

*Product and Process Development*...development of concept, prototype and product/process specifications...assistance with line extensions and reformulations, ingredient substitution and quality improvements...scale-up from benchtop...assessment of food safety regulatory issues/requirements.

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<sup>1</sup> Nebraska Corn Board, <http://www.nebraskacorn.org/necornfacts/cornproduction.htm>

<sup>2</sup> UNL Office of Research, <http://www.unl.edu/research/news/annuals.shtml>

*Pilot Plant Services*...processing of fruits and vegetables, bakery items, tortillas and chips, meat and poultry...extrusion, dehydration and packaging technologies...dairy productions and research...protein separations, purification and scale-up.

*Laboratory Services*...microbiological analysis, mold isolation and identification, and shelf-life testing...analytical and rapid methods development...nutritional analysis and labeling assistance...sensory evaluation...food allergen residue analysis.

*Specialized Services*...Custom Processing Network...Food Entrepreneur Assistance Program...Food Allergy Research and Resource Program...workshops and seminars.

For more information link to: <http://fpc.unl.edu>

### ***Industrial Agricultural Products Center***

Through this center, created in 1988, UNL scientists are researching and **developing new industrial uses for agricultural commodities** and **exploring potentially profitable new crops**. One thrust of the center is to turn corn and wheat starch into environmentally and economically promising **bioplastics**. Center researchers invented a system to produce biodegradable plastics made mostly from starch. The system blends corn or wheat starch with conventional plastic resins. For more information link to: <http://agproducts.unl.edu>

### ***Agricultural Research Division (ARD)***

The Agricultural Research Division is the major research agency of the University of Nebraska's Institute of Agriculture and Natural Resources and is **Nebraska's Agricultural Experiment Station**. ARD scientists make important contributions to the state's agriculture, food industries, environment, the well-being of families, and community development.

### ***Plant Sciences Initiative***

The **Plant Sciences Initiative**, an interdisciplinary research and training program in the basic plant sciences. The initiative involves the work of faculty with research strengths in several areas of plant biology research including **plant-microbe interactions, plant signaling and organellar biology, abiotic and biotic stress responses, and genomics/proteomics**. For more information link to: <http://psiweb.unl.edu>

### ***Agribusiness Program***

The Agribusiness Program at UNL is a joint degree program between the College of Business Administration and the College of Agricultural Sciences and Natural Resources. **Nationally recognized for its innovation and quality**, the program is designed to meet the agribusiness industry's need for professionals and entrepreneurs who have the educational background to become successful decision-makers in the rapidly changing agribusiness world. The UNL Agribusiness Program graduates approximately 45 students annually.

### ***University of Nebraska Technology Park***

The Park promotes synergy between the University of Nebraska and park tenants by **facilitating technology transfer and interaction with the private sector** via basic and applied research of technology-based projects and services. Permitted activities include laboratories and related facilities intended for basic and applied research, development of technology-based products and services or testing of technology-based products and services as well as facilities intended for production or assembly of products of a technological nature. For more information link to: <http://www.unebtechpark.com>

### **Southeast Community College (SCC)**

SCC provides quality **applied technology and academic educational opportunities** for the students, businesses and communities of the district. The Southeast Community College Area contains approximately 10,000 square miles and has a population of 423,386. Enrollment, including full-time students on the three campuses and part-time students in programs and continuing education, is more than 27,000 students.

Technical/career programs include an outstanding **Agricultural Business and Management** program which has a **model land and animal laboratory**. Complete **manufacturing programs** include traditional welding and machine tool, as well as cutting-edge CAD/CAM and nondestructive testing technologies.<sup>3</sup> For more information link to: <http://www.southeast.edu>

### **Organic Agriculture**

Lincoln is home to the **Organic Crop Improvement Association/OCIA International** a non-profit member-owned organization that since 1985 has **provided organic certification services** to organic farmers, processors and handlers from over 20 countries in North, Central and South America, Europe, Africa and Asia. OCIA's certification process facilitates **access to numerous global organic markets** including those in Japan, Central America, Europe and Canada.

OCIA also **facilitates connections** between farmers, researchers, consumers and decision makers, and educates organic producers and local and global communities regarding organic farming and foods. The goals of OCIA's research and education efforts include:

- promoting the image of organic products
- identifying the needs of organic farmers and producers and facilitating the exchange on information
- supporting crop improvement and marketing efforts

For more information link to: <http://www.ocia.org>

## **Lincoln's Value-Added Agriculture Industry**

Given the state's massive agricultural complex, it is not surprising that Lincoln is home to numerous companies that manufacture agricultural products. Lincoln also enjoys a significant **biotechnology industry** presence particularly in the areas of veterinary pharmaceuticals and genetic testing. The outlook for future partnerships between these two industries is promising.

Lincoln's value-added agriculture industry includes companies that develop and manufacture a variety of **human and animal products**, conduct **research and testing**, produce **instruments and controls**, and provide **specialized industry-related services**. More than 34,000<sup>4</sup> individuals are employed in the value-added agriculture industry in Nebraska. Approximately 2,100 of those individuals are employed in the Lincoln area drawing an average wage of \$32,000.

**Lincoln area firms include:**

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<sup>3</sup> <http://www.southeast.edu>

<sup>4</sup> <http://www.dol.state.ne.us/lmiwages/PAGE0374.HT>

**Affinity Production Co.**  
Snack foods manufacturing  
<http://www.affinitysnacks.com>  
Local employment: 50-99

**AGP Pet Foods**  
Pet foods  
<http://www.agp.com>  
Local employment: 50-99

**Archer Daniels Midland (ADM) Co.**  
Soybean products, specialty food ingredients, including soy meal and oil, animal feed  
<http://www.admworld.com>  
Local employment: 100-249

**Archer Daniels Midland (ADM) Milling**  
Flour, pancake mix, corn meal  
<http://www.admworld.com>  
Local employment: 100-249

**Arck Foods, Inc.**  
Deli Hams  
<http://www.cedarhollowfoods.com>  
Local employment: 20-49

**Coffee Roaster**  
Roasted coffees  
Local employment: 1-4

**Cook's Foods**  
Ham & pork products  
Local employment: 500-749

**Corn and More, Inc.**  
Popcorn & flavored popcorn products  
<http://www.colbyridge.com>  
Local employment: 5-9

**Del Gould Meats**  
Beef, pork, and poultry products for wholesale and retail markets.  
<http://www.nesteaks.com>  
Local employment: 10-19

**Empyrean Ales Brewery**  
Draft and bottled small batch specialty ales and lagers.  
<http://www.telesis-inc.com>  
Local employment: 5-9

**Fisco, Inc.**  
Meat processing plant construction, equipment fabrication & installation  
Local employment: 20-49

**Fisher Foods, Inc.**  
Meat proteins, powdered beef, milk & eggs  
Local employment: 10-19

**Grain Bin Bread Company**  
Bakery products  
Local employment: 1-4

**Gramas, Inc.**  
Jams, jellies, fruit butters & fruit syrups  
<http://www.gramasjellies.com>  
Local employment: 5-9

**Hills Sunflower Seeds**  
Roasted & salted sunflower seeds  
Local employment: 1-4

**Holland Scientific**  
Plant canopy & crop circle sensors; geographic data logging systems.  
<http://www.hollandscientific.com>

**James Arthur Vineyards**  
Wine, processed & bottled  
<http://www.jamesarthurvineyards.com>  
Local employment: 5-9

**JP Chocolates**  
Chocolates  
Local employment: 10-19

**Kamterter II, LLC**  
Proprietary product development of vegetable and flower crops; seed enhancement and coating systems; chemical dispersion systems  
<http://www.kamterter.com>  
Local employment: 10-19

**Lincoln Snacks Company**  
Snack foods including Poppycock, Screaming Yellow Zonkers and Fiddle Faddle & private label brands  
<http://www.lincolnsnacks.com>  
Local employment: 100-249

**Marsland Laboratories LLC**  
Nutrition for high performance dogs & dogs with Arthritis or Hip Dysplasia  
<http://www.amaize.com>

**NCIS Deans Foods - Meadow Gold Dairies**  
Dairy products; bottled waters & juices  
<http://www.meadowgold.com>  
Local employment: 100-249

**Meyer Natural Foods**  
Meat products- natural angus beef  
<http://www.meyernaturalangus.com>

**MI Industries, Inc.**  
Dietary & treat products for zoo animals & pets  
<http://www.naturesvariety.com>  
Local employment: 50-99

**NC+ Hybrids**  
Production, research and sales of pest and herbicide-resistant agricultural seeds  
<http://www.nc-plus.com>  
Local employment: 20-49

**Norland International**  
Design, mfr, and sales of plastic bottles, bottled water equip, and bottled water products including private label brands  
<http://www.norlandintl.com>  
Local employment: 20-49

**Pharma Chemie, Inc.**  
Human & companion animal nutritional supplements  
<http://www.pharma-chemie.com>  
Local employment: 20-49

**Precision Machine Company, Inc.**

Agricultural & animal research lab equipment  
<http://www.pmcinc.biz/>  
 Local employment: 10-19

**Purina Mills, Inc.**

Liquid cattle feed  
<http://www.purina-mills.com>  
 Local employment: 20-49

**Premium Protein**

Beef, pork and poultry processing including precooked foods for private labels  
<http://www.premiumprotein.com>  
 Local employment: 100-249

**R U Nuts Co.**

Distributor of bulk & packaged nuts, candy, snack mixes & specialty coffees  
 Local employment: 10-19

**Shuster's Meats**

Meat & sausage products; pet foods  
 Local employment: 5-9

**Super Bakes, Inc.**

Frozen doughs & dry baking mixes including organic line  
<http://www.raisingdough.com>  
 Local Employment: 20-49

**Universal Cold Storage**

Cold storage & dry storage; packaging & labeling of meat products  
 Local employment: 100-249

**US Foods**

Contract manufacturer of ready-to-eat breakfast cereals  
<http://www.u-s-foods.com>  
 Local employment: 100-249

**Average Annual Wage, Food Manufacturing, Lincoln MSA 2006<sup>5</sup>**

| Occupation  | Mean    | Entry  | Experience |
|---|---------|--------|------------|
| TOTAL ALL OCCUPATIONS   | 31,918  | 19,356 | 38,200     |
| MANAGEMENT OCCUPATIONS  | 86,469  | 54,092 | 102,657    |
| General and Operations Managers   | 106,002 | 73,404 | 122,301    |
| Industrial Production Managers  | 63,164  | 48,040 | 70,727     |
| BUSINESS AND FINANCIAL OPERATIONS OCCUPATIONS                           | 52,433  | 36,431 | 60,434     |
| Accountants and Auditors  | 50,109  | 39,255 | 55,537     |
| LIFE, PHYSICAL, AND SOCIAL SCIENCE OCCUPATIONS                          | 33,837  | 28,132 | 36,689     |
| SALES AND RELATED OCCUPATIONS   | 24,572  | 14,579 | 29,569     |
| Retail Salespersons   | 16,201  | 14,005 | 17,299     |
| Sales Representatives   | 48,396  | 34,427 | 55,380     |
| OFFICE AND ADMINISTRATIVE SUPPORT OCCUPATIONS                           | 26,671  | 21,308 | 29,352     |
| Bookkeeping, Accounting, and Auditing Clerks                            | 25,096  | 21,372 | 26,958     |
| Shipping, Receiving, and Traffic Clerks                                 | 24,861  | 20,543 | 27,020     |
| INSTALLATION, MAINTENANCE, AND REPAIR OCCUPATIONS                       | 35,749  | 27,792 | 39,728     |
| First-Line Supervisors/Managers of Mechanics, Installers, and Repairers | 55,361  | 49,903 | 58,090     |
| Industrial Machinery Mechanics  | 34,810  | 31,489 | 36,472     |
| Maintenance and Repair Workers, General                                 | 33,538  | 25,645 | 37,484     |
| PRODUCTION OCCUPATIONS  | 26,779  | 19,094 | 30,621     |
| First-Line Supervisors/Managers of Production and Operating Workers     | 42,608  | 33,377 | 47,223     |
| Meat, Poultry, and Fish Cutters and Trimmers                            | 20,769  | 18,538 | 21,885     |
| Roasting, Baking, and Drying Machine Operators and Tenders              | 20,917  | 18,609 | 22,071     |
| Food Batchmakers  | 23,467  | 12,931 | 28,735     |
| Food Cooking Machine Operators and Tenders                              | 23,593  | 20,995 | 24,892     |
| Inspectors, Testers, Sorters, Samplers, and Weighers                    | 25,286  | 19,789 | 28,034     |
| Packaging and Filling Machine Operators and Tenders                     | 22,301  | 18,177 | 24,363     |
| Helpers--Production Workers   | 22,421  | 16,644 | 25,311     |
| TRANSPORTATION AND MATERIAL MOVING OCCUPATIONS                          | 29,075  | 19,858 | 33,683     |
| First-Line Supervisors/Managers of Transportation                       | 49,012  | 38,393 | 54,320     |
| Industrial Truck and Tractor Operators                                  | 30,221  | 25,931 | 32,365     |
| Laborers and Freight, Stock, and Material Movers, Hand                  | 27,991  | 20,469 | 31,752     |

<sup>5</sup> Nebraska Workforce Development, Labor Market Information, <http://www.dol.state.ne.us/lmiwages/PAGE1901.HTM>, Mar 2006 ECI Factors