

# AGRICULTURE CAREERS

## IN SOUTHWEST AND SOUTH CENTRAL MINNESOTA



Minnesota ranks #4 in the nation in agricultural production, with \$17 billion in agricultural sales per year. Minnesota farmers produce high quality agricultural products that meet consumer demand domestically and around the world. We rank in the Top 10 nationally in turkeys raised, hogs, soybeans, corn, sugarbeets, and several other commodities.

Agriculture added over 4,250 net new jobs from 2007 to 2017, a 25.5 percent growth rate, compared to a 6.2 percent growth rate across all industries state-wide.

Southern Minnesota was home to 42 percent of the state's farms. More impressively, Southern Minnesota accounted for 55 percent of the state's market value of agricultural products sold, reaching almost \$12 billion. Four of the top 6, 6 of the top 10, and 13 of the top 20 agriculture counties in the state are located in Southern Minnesota.

### NON-TRADITIONAL AGRICULTURE CAREERS FOR WOMEN IN SOUTHWEST/SOUTH CENTRAL MINNESOTA

**ENVIRONMENTAL ENGINEER  
TECHNICIANS**  
\$35.28/HR

**FARM EQUIPMENT MECHANICS**  
\$23.97/HR

**TRUCK DRIVERS**  
\$21.48/HR

**DIESEL ENGINE SPECIALIST**  
\$21.29/HR

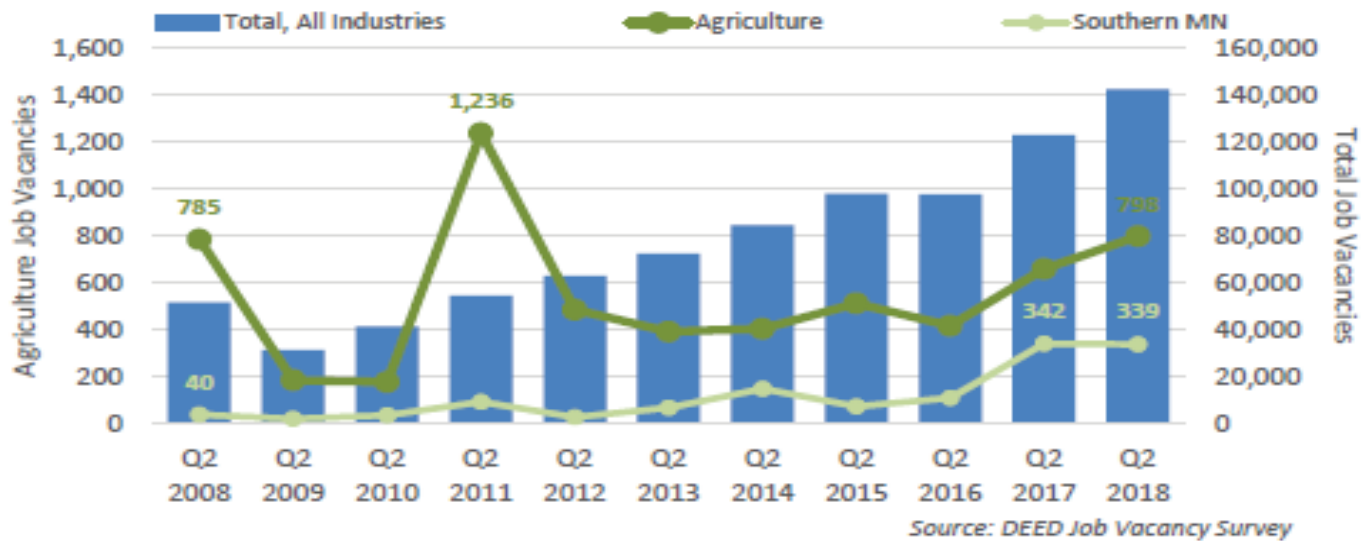
**PESTICIDE HANDLERS**  
\$17.95/HR

**BUTCHER AND MEAT CUTTERS**  
\$15.10/HR

**SLAUGHTERERS AND MEAT PACKERS**  
\$14.05/HR

**LANDSCAPING AND  
GROUNDSKEEPING WORKER**  
\$12.02/HR

Women held 23% of jobs in the agriculture, fishing, forestry industry in 2017. For farms, women were the primary operator for 8.5% of the farms in Minnesota.



Agriculture comprised more than 20 percent of total jobs added in the region over the past decade. Nearly half of the agriculture vacancies are at employers in Southern Minnesota.

Well over one-third of this agriculture employment is located in Southern Minnesota. According to the Quarterly Census of Employment and Wages (QCEW) data, Southern Minnesota provides about 15 percent of total jobs in the state, but over 39 percent of the state's jobs in agriculture, forestry, fishing and hunting.

### CAREER PATHS IN AGRICULTURE AND FOOD INDUSTRY IN SW/SO MN

**1-2 YEAR COLLEGE DEGREE (OR CREDENTIAL)**

- Diesel Engine Specialists \$21.29
- Farm Equipment Mechanics and Service Technicians \$23.97
- Agricultural Inspectors \$16.23
- Heavy & Tractor Trailer Drivers \$21.48

**4-YEAR OR MORE COLLEGE DEGREE AND/OR EQUIVALENT EXPERIENCE**

- Agricultural and Food Science Technicians \$19.31
- Veterinarians \$38.40
- Precision Agriculture Technicians \$22.89
- Biological Technicians \$18.91

**HIGH SCHOOL DIPLOMA OR GED AND/OR EXPERIENCE**

- Farmers, Ranchers, and Other Agricultural Managers \$44.88
- Farmworkers and Laborers, Crop, Nursery, and Greenhouse \$16.60
- Slaughterers and Meat Packers \$14.05
- Agricultural Equipment Operators \$15.25

These jobs are in demand in Southwest and South Central Minnesota and these are SW/SO Minnesota Median Wages. Data collected from Department of Employment and Economic Development.

**WHY CHOOSE A CAREER IN AG?**

The Agriculture and food industry is the 2nd largest employer in Minnesota and job growth is expected to be steady and indirectly related to the industry.

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### In Demand Agricultural Careers

#### AGRICULTURAL & FOOD SCIENCE TECHNICIANS

#### DIESEL MECHANIC

**EDUCATION**

- AGRICULTURAL & FOOD SCIENCE TECHNICIANS:** An associate's degree in biology, chemistry, crop or animal science, or a related field. Some positions may require a bachelor's degree.
- DIESEL MECHANIC:** High school diploma or equivalent. Completion of postsecondary training programs in diesel engine repair and industry certification preferred.

**IMPORTANT QUALITIES**

- AGRICULTURAL & FOOD SCIENCE TECHNICIANS:** Analytical skills, Communication skills, Critical-thinking skills, Interpersonal skills, Physical stamina.
- DIESEL MECHANIC:** Customer-service skills, Detail oriented, Diligently, Mechanical skills, Organizational skills, Physical strength, Troubleshooting skills.

**WHAT THEY DO**

- AGRICULTURAL & FOOD SCIENCE TECHNICIANS:** Work with agricultural and food scientists in food, fiber, and animal research, production, and processing. Assist with animal breeding and nutrition. Conduct tests and experiments to improve crop yields or increase the resistance of plants and animals to disease and insects.
- DIESEL MECHANIC:** Inspect, repair, and overhaul buses and trucks, or maintain and repair any type of diesel engine. Consult with customers, road work orders, and determine work required. Perform basic care and maintenance, including oil changes and tire rotations, read and interpret diagnostic test results to identify problems, and repair or replace worn parts.

**EMPLOYMENT OPPORTUNITIES**

- AGRICULTURAL & FOOD SCIENCE TECHNICIANS:** Employment of agricultural and food technicians is projected to grow 4 percent from 2016 to 2026, about as fast as the average for all occupations. Demand will continue for research in a large variety of areas.
- DIESEL MECHANIC:** Employment of diesel mechanics is projected to grow 9 percent from 2016 to 2026, about as fast as the average for all occupations. As more freight is hauled cross-country more diesel mechanics will be needed to maintain and repair the trucks.

**WORK ENVIRONMENT**

- AGRICULTURAL & FOOD SCIENCE TECHNICIANS:** Agricultural and food science technicians work in a variety of settings, including laboratories, processing plants, farms, and greenhouses. Technicians typically work full time, have standard work schedules, and may travel for work.
- DIESEL MECHANIC:** Diesel mechanics usually work in well-ventilated and sometimes noisy repair shops. Occasionally repair vehicles on roadways and at work sites. Most work full time and overtime is common.

Median Hourly Wage: **\$16.06** (Agricultural & Food Science Technicians) vs **\$22.53** (Diesel Mechanics)

Median Hourly Wage: **\$17.04** (Diesel Mechanics) vs **\$25.49** (Agricultural & Food Science Technicians)

These jobs are in demand in Southwest and South Central Minnesota and these are SW/SO Minnesota Median wages. Data collected from Department of Employment and Economic Development.

### CAREER PATHS IN AGRICULTURE AND FOOD INDUSTRY

**4-YEAR OR MORE COLLEGE DEGREE AND/OR EQUIVALENT EXPERIENCE**

- Agricultural and Food Science Technicians \$19.31:** Work with agricultural and food scientists in food, fiber, and animal research, production, and processing, and assist with animal breeding and nutrition. Conduct tests and experiments to improve yield and quality of crops or to increase the resistance of plants and animals to disease or insects. Includes technicians who assist food scientists or technologists in the research and development of production technology, quality control, packaging, processing, and use of foods.
- Precision Agriculture Technicians \$22.89:** Apply specialized technologies, including global positioning systems (GPS), to improve production or management activities, such as soil mapping, weed-and-pesticide application, yield mapping, or variable-rate irrigation. May use computers to develop or analyze maps or maps sending images to compare present topography with satellite, terrain, aerial, or weather.
- Veterinarians \$38.40:** Diagnose, treat, or research human and/or animal diseases, including farm animals who conduct research and development, inspect livestock, care for pets and companion animals.
- Biological Technicians \$18.91:** Operate biological and medical sciences in laboratories, lab operations, and maintain laboratory instruments and equipment, monitor measurements, make observations, and record results. May analyze organic substances, such as blood, food, and drugs.

**1-2 YEAR COLLEGE DEGREE (OR CREDENTIAL)**

- Diesel Engine Specialists \$21.29:** Diagnose, adjust, repair, or overhaul any type of diesel engines. Includes precision testing, primarily with automotive or farm equipment, and conventional diesel engines.
- Farm Equipment Mechanics and Service Technicians \$23.97:** Diagnose, adjust, repair, or overhaul farm machinery and related equipment, farm vehicles, dairy equipment, and tractor systems.
- Agricultural Inspectors \$16.23:** Inspect agricultural commodities, processing equipment, and facilities, and file and log inspection reports to ensure compliance with regulations and laws governing health, quality, and safety.
- Heavy & Tractor Trailer Truck Drivers \$21.48:** Operate a tractor-trailer combination or a truck with a weight of at least 20,000 pounds on a highway or in an off-highway environment to transport goods or materials. May be required to unload/truck. Requires commercial driver's license.

**HIGH SCHOOL DIPLOMA OR GED AND/OR EXPERIENCE**

- Farmers, Ranchers, and Other Agricultural Managers \$44.88:** Plan, direct, or coordinate the management or operations of farms, ranches, greenhouses, aquacultural operations, nurseries, timber tracts, or other agricultural establishments. May hire, train, and supervise farm workers or contract for services to carry out the day-to-day activities of the operation. May engage in or supervise planting, cultivating, harvesting, and financial and marketing activities.
- Farmworkers and Laborers, Crop, Nursery, and Greenhouse \$16.60:** Plan, direct, or coordinate the management or operations of farms, ranches, greenhouses, aquacultural operations, nurseries, timber tracts, or other agricultural establishments. May hire, train, and supervise farm workers or contract for services to carry out the day-to-day activities of the operation. May engage in or supervise planting, cultivating, harvesting and financial and marketing activities.
- Slaughterers and Meat Packers \$14.05:** Plan, direct, or coordinate the management or operations of slaughterhouses, meat processing plants, or other agricultural establishments. May hire, train, and supervise farm workers or contract for services to carry out the day-to-day activities of the operation. May engage in or supervise planting, cultivating, harvesting and financial and marketing activities.
- Agricultural Equipment Operators \$15.25:** Drive and operate farm tractors, combines, harvesters, and other agricultural machinery, such as plows, harrows, and seed drills. May perform tasks such as crop tending or hay baling. May operate machinery or equipment to perform post-harvest tasks, such as husking, winnowing, threshing, and ginning.

In addition, there is also a large number of vacancies and a higher level of demand were also emerging for agriculture-related occupations such as truck mechanics and diesel engine specialists; heavy and tractor-trailer truck drivers; and agricultural, biological, chemical, and environmental technicians and engineers.

