

**Minnesota State College and University system
Workforce Assessment initiative
July, 2012**

**Central Minnesota
Supply and Demand in Select Agricultural Occupations**

AGRICULTURAL MECHANICS AND EQUIPMENT

**Table 1A. Education and Wages for
Agricultural Mechanics and Equipment**

Occupation Title	Education Level	Median Wage
Farm Equipment Mechanics and Service Technicians	High school diploma or equivalent	\$18.51
Mobile Heavy Equipment Mechanics, Except Engines	High school diploma or equivalent	\$22.58
Regional Average, All Occupations		\$15.82
Statewide Average, All Occupations		\$17.77

**Table 1B. Current and Future Labor Demand
for Agricultural Mechanics and Equipment**

	Current Demand			Future Demand	
	2009 Estimated Employment	Current Occupations in Demand Indicator (5=high)	Job Vacancy Rate	2009- 2019 Percent Growth	2009- 2019 Average Annual Openings
Farm Equipment Mechanics and Service Technicians	451			3.3%	11
Mobile Heavy Equipment Mechanics, Except Engines	267	2		14.6%	9
Regional Total - Agricultural Mechanics and Equipment	718			7.5%	19
Statewide Total - Agricultural Mechanics and Equipment	4,315			14.2%	173
Regional Total - All Occupations	283,497		2.2%	12.9%	10,047
Statewide Total - All Occupations	2,830,000		2.0%	13.0%	104,150

NOTE: NO SUPPLY DATA FOR **AGRICULTURAL MECHANICS AND EQUIPMENT**
AVAILABLE FOR CENTRAL MINNESOTA.

ANIMAL SCIENCE

**Table 2A. Education and Wages for
Animal Science**

Occupation Title	Education Level	Median Wage
Animal Scientists	Doctoral or professional degree	
Farm and Home Management Advisors	Master's degree	
Farmers, Ranchers, and Other Agricultural Managers	High school diploma or equivalent	
First-Line Supervisors of Farming, Fishing, and Forestry Workers	High school diploma or equivalent	\$17.68
Regional Average, All Occupations		\$15.82
Statewide Average, All Occupations		\$17.77

**Table 2B. Current and Future Labor Demand
for Animal Science**

	Current Demand			Future Demand	
	2009 Estimated Employment	Current Occupations in Demand Indicator (5=high)	Job Vacancy Rate	2009- 2019 Percent	2009- 2019 Average Annual Openings
Animal Scientists	NA			0.0%	
Farm and Home Management Advisors	NA			0.0%	
First-Line Supervisors of Farming, Fishing, and Forestry Workers	151	3		0.7%	4
Regional Total - Animal Science	NA			0.7%	4
Statewide Total - Animal Science	984			-2.6%	NA
Regional Total - All Occupations	283,497		2.2%	12.9%	10,047
Statewide Total - All Occupations	2,830,000		2.0%	13.0%	104,150

NOTE: NO SUPPLY DATA FOR **ANIMAL SCIENCE OCCUPATIONS**
AVAILABLE FOR CENTRAL MINNESOTA.

FARM BUSINESS OPERATION AND MANAGEMENT

**Table 3A. Education and Wages for
Farm Business Operation and Management**

Occupation Title	Education Level	Median Wage
Agricultural and Food Science Technicians	Associate degree	\$17.54
Agricultural Equipment Operators		\$15.83
Animal Breeders	High school diploma or equivalent	
Farmers, Ranchers, and Other Agricultural Managers	High school diploma or equivalent	
Farmworkers and Laborers, Crop, Nursery, and Greenhouse		\$9.92
Farmworkers, Farm, Ranch, and Aquacultural Animals		\$9.09
First-Line Supervisors of Farming, Fishing, and Forestry Workers	High school diploma or equivalent	\$17.68
Life, Physical, and Social Science Technicians, All Other	Associate degree	\$26.71
Sales Representative, Wholesale and Manufacturing, Technical Products	Bachelor's degree	\$37.18
Soil and Plant Scientists	Bachelor's degree	\$27.51
Regional Average, All Occupations		\$15.82
Statewide Average, All Occupations		\$17.77

**Table 3B. Current and Future Labor Demand
for Farm Business Operation and Management**

Occupation Title	Current Demand			Future Demand	
	2009 Estimated Employment	Current Occupations in Demand Indicator (5=high)	Job Vacancy Rate	2009- 2019 Percent Growth	2009- 2019 Average Annual Openings
Agricultural and Food Science Technicians	134	3*		17.9%	7
Agricultural Equipment Operators	119	1-3*		5.9%	4
Animal Breeders	NA			0.0%	
Farmers, Ranchers, and Other Agricultural Managers	7,910			0.0%	
Farmworkers and Laborers, Crop, Nursery, and Greenhouse	1,008	3-5*		-0.2%	27
Farmworkers, Farm, Ranch, and Aquacultural Animals	816	3-4*		-6.0%	22
First-Line Supervisors of Farming, Fishing, and Forestry Workers	151	3*		0.7%	4
Life, Physical, and Social Science Technicians, All Other	50			14.0%	3
Sales Representative, Wholesale and Manufacturing, Technical Products	280	4-5*		2.9%	8
Soil and Plant Scientists	49	3*		14.3%	3
Regional Total - Farm Business Operation and Management	NA			0.1%	77
Statewide Total - Farm Business Operation and Management	72,995			0.5%	1,840
Regional Total - All Occupations	283,497		2.2%	12.9%	10,047
Statewide Total - All Occupations	2,830,000		2.0%	13.0%	104,150

**Table 3C. Related Employment Rate, by Program, 2010
for Farm Business Operation and Management***

Program	Number of Awards Conferred	Share of Available Graduates Who Found Employment Related to Major
Agribusiness/Agricultural Business Operations	30	96.3%
Agricultural Production Operations, General	34	100.0%
Animal/Livestock Husbandry and Production	22	100.0%
Farm/Farm and Ranch Management	18	100.0%
Regional Total - Farm Business Operation and Management	104	98.9%
Statewide Total - Farm Business Operation and Management	412	99.2%
Regional Total - Agriculture, Agribusiness and Natural Resources	108	99.0%
Statewide Total - Agriculture, Agribusiness and Natural Resources	431	99.2%

* Includes only graduates of Minnesota State Colleges and Universities system.

** Too few awards to report.

**Table 3D. Number of Program Completers by Award Level, 2009-2010,
for Farm Business Operation and Management**

Program Title	Certificate (< 2 Years)	Associate	Bachelor's	Advanced Degree	Total
Agribusiness/Agricultural Business Operations		30			30
Agricultural Production Operations, General		34			34
Animal/Livestock Husbandry and Production		22			22
Farm/Farm and Ranch Management		18			18
Regional Total - Farm Business Operation and Management		104			104
Statewide Total - Farm Business Operation and Management	218	196	60	14	488

**Table 3E. Percentage of Program Completers by Award Level, 2009-2010,
for Farm Business Operation and Management**

Program Title	Certificate (< 2 Years)	Associate	Bachelor's	Advanced Degree	Total
Agribusiness/Agricultural Business Operations		100.0%			100.0%
Agricultural Production Operations, General		100.0%			100.0%
Animal/Livestock Husbandry and Production		100.0%			100.0%
Farm/Farm and Ranch Managements		100.0%			100.0%
Regional Total - Farm Business Operation and Management		100.0%			100.0%
Statewide Total - Farm Business Operation and Management	44.7%	40.2%	12.3%	2.9%	100.0%

**Table 3F. Number of Awards Conferred by Institution, 2009-2010
for Farm Business Operation and Management**

Institution	Number of Awards Conferred	Percentage of Awards
Ridgewater College	104	100.0%
Regional Total - Farm Business Operation and Management	104	100.0%
Statewide Total - Farm Business Operation and Management	1,275	100.0%

PLANT AND SOIL SCIENCE

**Table 4A. Education and Wages for
Plant and Soil Science**

Occupation Title	Education Level	Median Wage
Conservation Scientists	Bachelor's degree	\$21.84
First-Line Supervisors of Farming, Fishing, and Forestry Worker	High school diploma or equivalent	\$17.68
Life, Physical, and Social Science Technicians, All Other	Associate degree	\$26.71
Microbiologists	Bachelor's degree	\$21.73
Soil and Plant Scientists	Bachelor's degree	\$27.51
Regional Average, All Occupations		\$15.82
Statewide Average, All Occupations		\$17.77

**Table 4B. Current and Future Labor Demand
for Plant and Soil Science**

Occupation Title	Current Demand			Future Demand	
	2009 Estimated Employment	Current Occupations in Demand Indicator (5=high)	Job Vacancy Rate	2009- 2019 Percent Growth	2009- 2019 Average Annual Openings
Conservation Scientists	49	3		6.1%	1
First-Line Supervisors of Farming, Fishing, and Forestry Workers	151	3		0.7%	4
Life, Physical, and Social Science Technicians, All Others	50			14.0%	3
Microbiologists	NA			0.0%	
Soil and Plant Scientists	49	3		14.3%	3
Regional Total - Plant and Soil Science	NA			NA	11
Statewide Total - Plant and Soil Science	3,673			NA	1,068
Regional Total - All Occupations	283,497		2.2%	12.9%	10,047
Statewide Total - All Occupations	2,830,000		2.0%	13.0%	104,150

**Table 4D. Number of Program Completers by Award Level, 2009-2010,
for Plant and Soil Science**

Program Title	Certificate	Associate	Bachelor's	Advanced Degree	Total
Agronomy and Crop Science		4			4
Regional Total - Plant and Soil Science		4			4
Statewide Total - Plant and Soil Science		6	33	21	60

**Table 4E. Percentage of Program Completers by Award Level, 2009-2010,
for Plant and Soil Science**

Program Title	Certificate	Associate	Bachelor's	Advanced Degree	Total
Agronomy and Crop Science		100.0%			100.0%
Regional Total - Plant and Soil Science		100.0%			100.0%
Statewide Total - Plant and Soil Science		10.0%	55.0%	35.0%	100.0%

**Table 4F. Number of Awards Conferred by Institution, 2009-2010
for Plant and Soil Science**

Institution	Number of Awards Conferred	Percentage of Awards Conferred
Ridgewater College	4	100.0%
Regional Total - Plant and Soil Science	4	100.0%
Statewide Total - Plant and Soil Science	60	100.0%

FOOD SCIENCE AND TECHNOLOGY

**Table 5A. Education and Wages for
Food Science and Technology**

Occupation Title	Education Level	Median Wage
Agricultural and Food Science Technicians	Associate degree	\$17.54
Agricultural Inspectors	Bachelor's degree	\$22.56
First-Line Supervisors of Farming, Fishing, and Forestry Workers	High school diploma or equivalent	\$17.68
Food Scientists and Technologists	Bachelor's degree	\$29.57
Plant and Systems Operators, All Other	High school diploma or equivalent	\$26.02
Regional Average, All Occupations		\$15.82
Statewide Average, All Occupations		\$17.77

**Table 5B. Current and Future Labor Demand
for Food Science and Technology**

Occupation Title	Current Demand			Future Demand	
	2009 Estimated Employment	Current Occupations in Demand Indicator (5=high)	Job Vacancy Rate	2009- 2019 Percent Growth	2009- 2019 Average Annual Openings
Agricultural and Food Science Technicians	134			17.9%	74
Agricultural Inspectors	63			4.8%	13
First-Line Supervisors of Farming, Fishing, and Forestry Workers	151			0.7%	41
Food Scientists and Technologists	61			14.8%	29
Plant and Systems Operators, All Other	46			34.8%	26
Regional Total - Food Science	455			0.0%	183
Statewide Total - Food Science	3,244			7.1%	136
Regional Total - All Occupations	283,497		2.2%	12.9%	10,047
Statewide Total - All Occupations	2,830,000		2.0%	13.0%	104,150

NOTE: NO SUPPLY DATA FOR **FOOD SCIENCE AND TECHNOLOGY**
AVAILABLE FOR CENTRAL MINNESOTA.