

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

**Southeast 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	\$16.64
Mobile Heavy Equipment Mechanics, Except Engines	High school diploma or equivalent	\$23.95
Regional Average, All Occupations		\$16.83
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	236	3		-0.8%	5
Mobile Heavy Equipment Mechanics, Except Engines	173	1		8.1%	4
Regional Total - Agricultural Mechanics and Equipment	409			2.9%	9
Statewide Total - Agricultural Mechanics and Equipment	4,315*			14.2%	173
Regional Total - All Occupations	257,203		1.7%	8.9%	7,973
Statewide Total - All Occupations	2,830,000*		2.0%	13.0%	104,150

* Data represent employment estimates for 2010.

NOTE: NO SUPPLY DATA FOR **AGRICULTURAL MECHANICS AND EQUIPMENT**
AVAILABLE FOR SOUTHEAST 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	
First-Line Supervisors of Farming, Fishing, and Forestry Workers	High school diploma or equivalent	\$20.02
Regional Average, All Occupations		\$16.83
Statewide Average, All Occupations		\$17.77

**TABLE 2B. Current and Future Labor Demand
for Animal 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
Animal Scientists	NA			0.0%	
Farm and Home Management Advisors	NA			0.0%	
First-Line Supervisors of Farming, Fishing, and Forestry Workers	117	2		1.7%	3
Regional Total - Animal Science	NA			NA	3
Statewide Total - Animal Science	984*			-2.6%	968
Regional Total - All Occupations	257,203		1.7%	8.9%	7,973
Statewide Total - All Occupations	2,830,000*		2.0%	13.0%	104,150

* Data represent employment estimates for 2010.

NOTE: NO SUPPLY DATA FOR **ANIMAL SCIENCE**
AVAILABLE FOR SOUTHEAST 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	\$20.93
Agricultural Equipment Operators		\$11.77
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		\$8.91
Farmworkers, Farm, Ranch, and Aquacultural Animals		\$9.32
First-Line Supervisors of Farming, Fishing, and Forestry Workers	High school diploma or equivalent	\$20.02
Life, Physical, and Social Science Technicians, All Other	Associate degree	\$20.99
Sales Representative, Wholesale and Manufacturing, Technical and Scientific Products	Bachelor's degree	\$38.31
Soil and Plant Scientists	Bachelor's degree	\$34.90
Regional Average, All Occupations		\$16.83
Statewide Average, All Occupations		\$17.77

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

	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	137	3		16.1%	7
Agricultural Equipment Operators	76	2		1.3%	2
Animal Breeders	11			0.0%	0
Farmers, Ranchers, and Other Agricultural Managers	8,087	4		0.0%	
Farmworkers and Laborers, Crop, Nursery, and Greenhouse	634	3		12.1%	25
Farmworkers, Farm, Ranch, and Aquacultural Animals	657	2		-5.2%	18
First-Line Supervisors of Farming, Fishing, and Forestry Workers	117	2		1.7%	3
Life, Physical, and Social Science Technicians, All Other	44			2.3%	2
Sales Representative, Wholesale and Manufacturing, Technical and Scientific Products	321	4		-9.7%	7
Soil and Plant Scientists	NA	2		0.0%	
Regional Total - Farm Business Operation and Management	NA			1.9%	64
Statewide Total - Farm Business Operation and Management	72,995*			0.5%	1,840
Regional Total - All Occupations	257,203		1.7%	8.9%	7,973
Statewide Total - All Occupations	2,830,000*		2.0%	13.0%	104,150

* Data represent employment estimates for 2010.

**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
Farm/Farm and Ranch Management	**	**
Horse Husbandry/Equine Science and Management	**	**
Regional Total - Farm Business Operation and Management	**	**
Statewide Total - Farm Business Operation and Management	412	99.2%
Regional Total - Agriculture, Agribusiness and Natural Resources	**	**
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	Associate	Bachelor's	Advanced Degree	Total
Agricultural Business Technology		6			6
Farm/Farm and Ranch Management		1			1
Horse Husbandry/Equine Science and Management	2	3			5
Regional Total - Farm Business Operation and Management	2	10			12
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	Associate	Bachelor's	Advanced Degree	Total
Agricultural Business Technology		100.0%			100.0%
Farm/Farm and Ranch Management		100.0%			100.0%
Horse Husbandry/Equine Science and Management	40.0%	60.0%			100.0%
Regional Total - Farm Business Operation and Management	16.7%	83.3%			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 Conferred
Riverland Community College	1	8.3%
Rochester Community and Technical College	11	91.7%
Regional Total - Farm Business Operation and Management	12	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	\$32.31
First-Line Supervisors of Farming, Fishing, and Forestry Worker	High school diploma or equivalent	\$20.02
Life, Physical, and Social Science Technicians, All Other	Associate degree	\$20.99
Microbiologists	Bachelor's degree	\$36.00
Soil and Plant Scientists	Bachelor's degree	\$34.90
Regional Average, All Occupations		\$16.83
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	42	2		2.4%	0
First-Line Supervisors of Farming, Fishing, and Forestry Workers	117	2		1.7%	3
Life, Physical, and Social Science Technicians, All Others	44			2.3%	2
Microbiologists	NA	4		0.0%	
Soil and Plant Scientists	NA	2		0.0%	
Regional Total - Plant and Soil Science	NA			2.0%	5
Statewide Total - Plant and Soil Science	3,673*			-2.1%	1,068
Regional Total - All Occupations	257,203		1.7%	8.9%	7,973
Statewide Total - All Occupations	2,830,000*		2.0%	13.0%	104,150

* Data represent employment estimates for 2010.

NOTE: NO SUPPLY DATA FOR **PLANT AND SOIL SCIENCE**
AVAILABLE FOR SOUTHEAST MINNESOTA.

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

Occupation Title	Education Level	Median Wage
Agricultural and Food Science Technicians	Associate degree	\$20.93
Agricultural Inspectors	Bachelor's degree	\$21.02
First-Line Supervisors of Farming, Fishing, and Forestry Workers	High school diploma or equivalent	\$20.02
Food Scientists and Technologists	Bachelor's degree	\$36.84
Plant and Systems Operators, All Other	High school diploma or equivalent	\$25.89
Regional Average, All Occupations		\$16.83
Statewide Average, All Occupations		\$17.77

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

	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	137			16.1%	72
Agricultural Inspectors	34			8.8%	13
First-Line Supervisors of Farming, Fishing, and Forestry Workers	117			1.7%	32
Food Scientists and Technologists	74		16.6%	18.9%	44
Plant and Systems Operators, All Other	NA			15.4%	
Regional Total - Food Science	NA				161
Statewide Total - Food Science	3,244*			7.1%	136
Regional Total - All Occupations	257,203		1.7%	8.9%	7,973
Statewide Total - All Occupations	2,830,000*		2.0%	13.0%	104,150

* Data represent employment estimates for 2010.

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