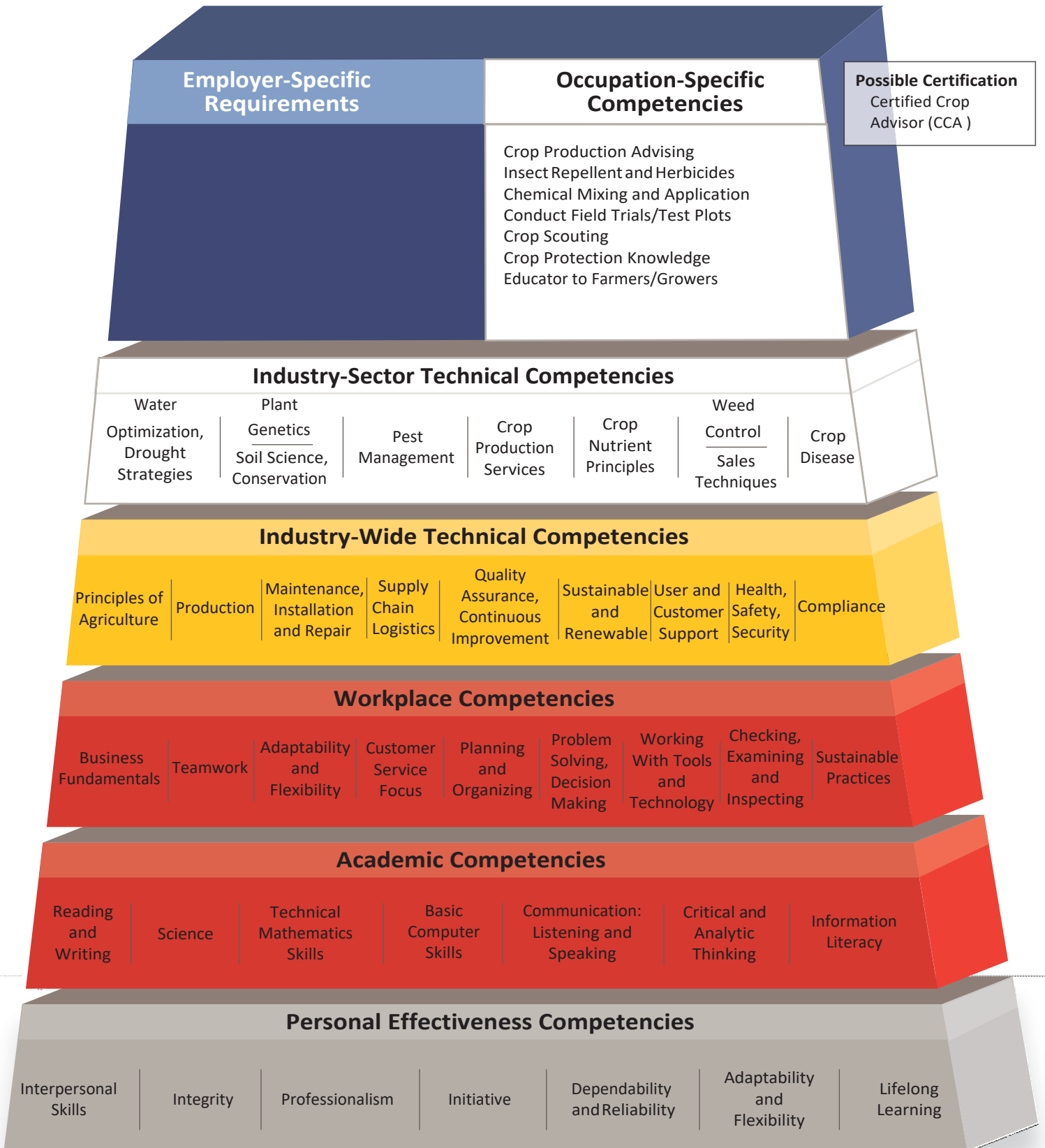


# Minnesota Dual-Training Pipeline

## Competency Model for Agricultural Occupation: Agronomist



Based on: Advanced Manufacturing Competency Model Employment and Training Administration, United States Department of Labor, April 2010.

\* Pipeline recommends the Industry-Sector Technical Competencies as formal training opportunities (provided through related instruction) and the Occupation-Specific Competencies as on-the-job training opportunities.

**Agronomist** – An agronomist is a person trained in agronomy, works in the agricultural sector, gives advice on the cultivation of crops, and deals with the plant growth. This person usually works with agricultural product companies and agricultural cooperatives.

### **Industry-Sector Technical Competencies**

- Plant Genetics – Knowledge of the fundamental processes controlling production, quality and enhanced use for crops.
- Water Optimization/Drought Strategies – Understand maximizing water usage and conservation methods in drought situations.
- Soil Science/Conservation – Training in soil as a natural resource and principles of resource conservation management.
- Pest Management – Understand principles of crop protection and pest control.
- Crop Production Services – Training to assist farmers/growers with crop production.
- Crop Nutrient Principles – Knowledge of nutrients required for healthy, productive crops.
- Weed Control – Understanding of the tools available for weed control.
- Crop Disease – Training to reduce the economic and aesthetic damage caused by plant diseases.
- Sales Techniques – Fundamentals of sales focused on the agricultural industry.

### **Occupation-Specific Competencies**

- Crop Production Advising – Ability to counsel growers in various aspects of crop production.
- Insect Repellent and Herbicides – Select and recognize proper application methods for insect repellents and herbicides.
- Chemical Mixing and Application – Safely mix and apply chemicals to crops.
- Conduct Field Trials/Test Plots – Use scientific methodology when conducting field trials and evaluating test plots.
- Crop Scouting – Assess crop performance and pest pressure to evaluate economic risk from pest infestations and disease, as well as to determine the potential effectiveness of pest and disease control interventions.
- Crop Protection Knowledge – Use crop protection knowledge to advise farmers/growers on how to use seeds, fertilizers, herbicides, insecticides, fungicides and other products for maximum results.
- Educator to Farmers/Growers – Serve as an educator for the farmer/ grower community on crops, hybrids, varieties, resource management and other factors affecting crop production.

**Possible Certification – Certified Crop Advisor (CCA)**

## Agronomist Occupational Competency Training Plan

*Related Instruction means an organized and systematic form of instruction designed to provide the apprentice with the knowledge of the theoretical and technical subjects related to the apprentice's trade of occupation, or industrial courses or, when of equivalent value, by correspondence, electronic media, or other forms or self-study approved by the commissioner.*

	<b>Course</b>	<b>Course Description</b>	<b>Credit/Non-Credit</b>	<b>Hours Spent on Competency</b>
	Water Optimization/ Drought Strategies			
	Plant Genetics			
	Soil Science/Conservation			
	Pest Management			
	Crop Production Services			
	Crop Nutrient Principles			
	Weed Control			
	Sales Techniques			
	Crop Disease			

*On-The-Job Training is the work experience and instruction. Training experience need not be in the exact order as listed below.*

	<b>Trainer/Instructor</b>	<b>Name of person responsible for verifying competency mastery</b>	<b>Hours spent on competency</b>
	Crop Production Advising		
	Insect Repellent and Herbicides		
	Chemical Mixing and Application		
	Conduct Field Trials/Test Plots		
	Crop Scouting		
	Crop Protection Knowledge		
	Educator to Farmers/ Growers		