

Minnesota Dual-Training Pipeline

Competency Model for Agriculture

Occupation: Agriculture Applicator Technician

Employer-Specific Requirements	Occupation-Specific Competencies*
Key Behavior Indicators	Record and maintain application information. Applicator machinery operations. Farm data/ mapping Applicator materials preparation. Fertilizer and pesticide purchasing laws awareness. Proficiency with applicator sales practices. Maintenance and repair of applicator equipment. Hazardous Material Handling Safety Personal Protective Equipment

Industry-Sector Technical Competencies*	
Agribusiness systems of farm cooperatives, fertilizer suppliers and herbicide companies.	Chemical properties of fertilizers and pesticides
Soil science and cropnutrient principles	Proficiency with water runoff properties
	Weed control Weather Patterns

Industry-Wide Technical Competencies						
User and customer support	High level of data read/write accuracy	Maintain sanitary environmental conditions	Practice personal and environmental safety at all times	Excellent driving record	Compliance	Root Cause Analysis

Workplace Competencies								
Business Basics	Teamwork	Adaptability and Flexibility	Technical Work Instructions	Planning and Organizing	Problem Solving, Decision Making	Working With Tools, Technology	Checking, Examining and Recording	Sustainable Practices

Academic Competencies						
Science	Basic Computer Skills	Mathematics	Reading and Writing	Communication: Listening & Speaking	Critical & Analytic Thinking	Information Literacy

Personal Effectiveness Competencies					
Interpersonal Skills	Integrity	Professionalism	Initiative	Dependability and Reliability	Lifelong Learning

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.

Competency Model for Agriculture

Agriculture Applicator Technician

An agriculture applicator technician works to promote the maximum production of the farm. The position primarily focuses on applying fertilizer and crop protection products on farmland using heavy agriculture equipment. Agriculture Applicator Technicians are also responsible for maintaining accurate data and log books for chemical application as well as for assisting with general maintenance and repair of agricultural applicator vehicles and machinery.

Industry-Sector Technical Competencies

- Agribusiness systems of farm cooperatives, fertilizers and herbicide suppliers– Learn basic agricultural business principles and practices of key applicator utilizers including farm cooperatives, fertilizers and herbicide suppliers.
- Soil science and crop nutrient principles- Training in soil as a natural resource and principles of resource conservation management as well as knowledge of nutrients for healthy, productive crops.
- Chemical properties of fertilizers and pesticides- Understand principles of crop protection and pest control and impact of commonly used fertilizer and pesticide materials.
- Proficiency with water runoff properties – Understand maximizing water usage and water flow on soil and crops.
- Weed control – Understanding of the tools available for weed control.
- Weather patterns – Understanding of the state of the atmosphere (troposphere) and its impact on the degree to which it is hot or cold, wet or dry, calm or stormy, clear or cloudy.

Occupation-Specific Competencies

- Record and maintain application information – Keep track of detailed information on how fertilizer and chemical are applied, how much is applied, where they were applied throughout the farm and on which dates/times that application occurred.
- Applicator machinery operations – Know how to run the applicator machinery
- Farm data/ mapping - Ability to read detailed layouts and maps on where precisely to apply chemicals and fertilizers on crops.
- Applicator materials preparation – Safely mix and apply chemicals to crops.
- Fertilizer and pesticide purchasing law awareness – Ability to purchase applicator materials from safe and lawful applicator materials sellers.
- Hazardous Material Handling Safety - Demonstrate knowledge of risks associated with hazardous materials and to take necessary steps to mitigate those risks when interacting with the materials.
- Personal Protective Equipment - Demonstrate ability to routinely use gloves, masks, etc. needed to conduct applicator processes safely for the applicator.
- Proficiency with applicator sales practices – Fundamentals of sales related to the agriculture industry

- Maintenance and repair of applicator equipment – Serve as a staff person capable of assisting with conducting routine maintenance and repair of farm equipment with particular focus on applicator materials.

Possible Certification(s)

- Certified Crop Advisor Certification from American Society of Agronomy
- Ag Chemical Applicator Technician Certificate and/or Associates in Applied Science or Farm Business Management
- Landscape Industry Certified Horticultural Technician
- Landscape Industry Certified Technician - Exterior
Private Pesticide Applicator Certificate

Agriculture Applicator Technician Training Plan

	List Course/Training Name and Title	Description of Courses and/or Training Program	List Responsible Provider: Company, College, Trainer, or other	Anticipated Completion Date
<i>Related Instruction Competencies</i>				
Agribusiness systems of farm cooperatives, fertilizers and herbicide suppliers				
Soil science and crop nutrient principles				
Chemical properties of fertilizers and pesticides				
Proficiency with water runoff properties				
Weed control				
Weather patterns				
<i>On-The-Job Training Competencies</i>				
Record and maintain application information				
Applicator machinery operations				
Farm data/ mapping				
Applicator materials preparation				

Fertilizer and pesticide purchasing law awareness				
Proficiency with applicator sales practices				
Maintenance and repair of applicator equipment				
Hazardous material handling safety				
Personal protective equipment				