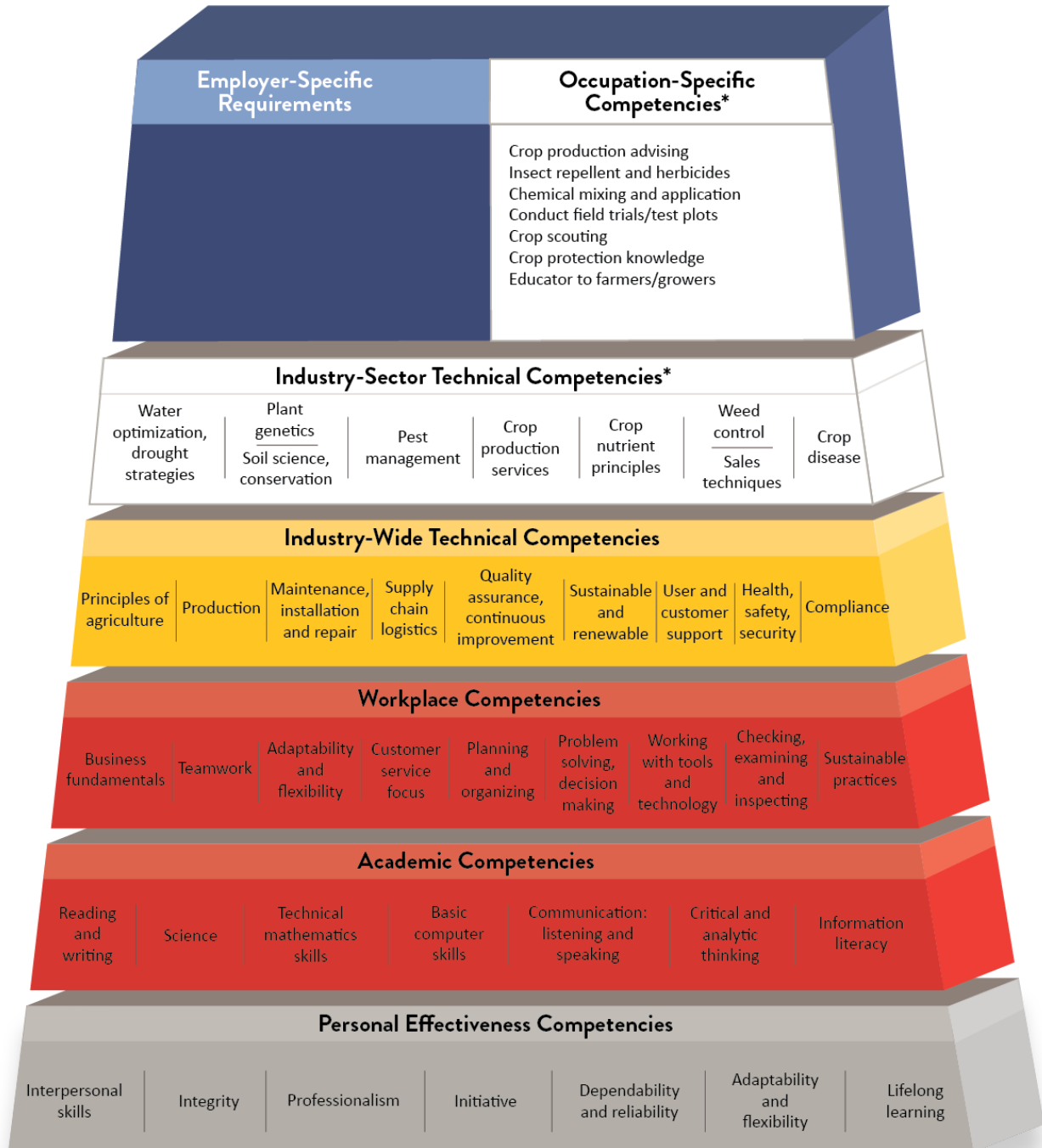


Minnesota Dual-Training Pipeline

Competency Model for Agriculture

Occupation: Agronomist



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

*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 Agronomist

Agronomist – An agronomist is a person trained in agronomy, who 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

Related Instruction for dual training means the organized and systematic form of education resulting in the enhancement of skills and competencies related to the dual trainee's current or intended occupation.

- **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

On-the-Job Training (OJT) is hands-on instruction completed at work to learn the core competencies necessary to succeed in an occupation. Common types of OJT include job shadowing, mentorship, cohort-based training, assignment-based project evaluation and discussion-based training.

- **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.

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