

01005 AGRICULTURE TEACHER EDUCATION STANDARDS

Institutions will be expected to demonstrate the use of performance assessments within their programs. Examples of such assessments are provided by the Education Standards and Practices Board as guidelines. Institutions are not restricted to using the given examples, but may develop others that demonstrate candidates' ability to apply what they have learned in the P-12 school setting.

The following standards pertain to programs preparing teachers of agriculture for secondary schools. Programs preparing vocational agriculture teachers must, in addition, meet the standards set out in the North Dakota State Plan for Career & Technical Education.

01005.1 The program requires the study of the biological, physical, and applied sciences and mathematics as basic to understanding their application to solving agricultural problems. The program uses a variety of performance assessments of candidates' understanding and ability to apply that knowledge.

Examples of performance assessments may include how to:

- demonstrate the use of math and science skills in agricultural applications and problem solving, i.e. engine and mechanical performance, feed efficiency/rations, electrical systems, chemical applications, etc.
- explain the socioeconomic importance of agriculture and its relationship to natural resources and the environment.

01005.2 The program requires study and experiences in (1) agricultural engineering and mechanization; (2) plant and soil science and technology; (3) animal science and technology; (4) agricultural economics and business management, and technology related to these areas; and (5) leadership in agriculture. The program uses a variety of performance assessments of candidates' understanding and ability to apply that knowledge.

Examples of performance assessments may include how to:

- describe the physiology, reproduction, and growth of plants and animals.
- identify and use tools and equipment useful in agricultural engineering and mechanization.
- define and describe agricultural economic concepts such as supply, demand, and net worth.
- develop and analyze agricultural financial statements (net worth, cash flow, income statement).
- demonstrate leadership, written/oral communication, and interpersonal skills, i.e. parliamentary procedure, public speaking, group dynamics and meeting organization.

01005.3 The program requires experience in one or more of the specialized occupational areas related to agricultural production and marketing, agricultural equipment and supplies, occupational sales and services, agricultural products, horticultural sciences, agricultural business, natural resource management, or environmental science. The program uses a variety of performance assessments of candidates' understanding and ability to apply that knowledge.

Examples of performance assessments may include how to:

- develop, supervise, and evaluate Supervised Agricultural Experience (SAE) programs including entrepreneurship, placement and exploratory activities.
- develop occupational job entry skills in resume writing, letters of application, completing job application forms, interviewing, career planning, etc.
- develop a plan for landscape and turf management, use of greenhouses, or urban forestry
- demonstrate proper sales techniques from the initial customer contact to closing the sale.
- understand and use principals related to conservation, natural resource management and the environment.
- identify common methods and practices used to process agricultural crop and livestock products.
- describe differences and advantages/disadvantages in agricultural business types such as sole-proprietorships, corporations, cooperatives, partnerships, limited liability cooperatives, etc.
- describe the importance of community relationships in the agricultural education program..

01005.4 The program requires experiences designed to develop knowledge and involvement in agricultural youth organizations. The program uses a variety of performance assessments of candidates' understanding and ability to apply that knowledge.

Examples of performance assessments may include how to:

- plan a calendar of events.
- describe the purpose and history of agricultural youth organizations.
- organize, develop, and supervise career development events and the preparation of career development event teams.
- advise regular meetings of agricultural youth organizations.
- supervise completion of award applications of members of agricultural youth organizations.

01005.5 The program requires studying the methods of teaching agriculture including current trends in agricultural education and safe and appropriate laboratory and classroom practices, with an examination of a variety of teaching methods and

techniques. The program uses a variety of performance assessments of candidates' understanding and ability to apply that knowledge.

Examples of performance assessments may include how to:

- organize and manage the agriculture classroom and mechanics laboratory for learning, demonstrating appropriate and safe laboratory practices.
- use visual hands-on teaching in relation to a variety of agriculture topics.
- design cooperative learning opportunities for students in the agricultural lab setting to meet individual students' needs.
- identify and evaluate educational resources that are appropriate and accurate for agricultural education.
- design, construct, and administer effective learning objectives and assessments for agricultural education.

01005.6 The program requires the study of current, appropriate instructional and agri-science technologies. The program uses varied assessments of candidates' understanding and abilities to apply that knowledge.

Examples of performance assessments may include how to:

- demonstrate appropriate use of various technologies within their instructional practices.
- select and use appropriate technology tools specific to agri-science applications, such as global imaging and bio-technologies.
- use technology to effectively manage communications, instructional planning, and record keeping.

History

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