

# Agricultural Education

## [27.400]

### STANDARD 1

**The competent agricultural education teacher understands the foundations of work, the career development process, occupational skills standards, and workplace skill requirements.**

**Knowledge Indicators** - *The competent agricultural education teacher:*

- 1A. understands the history, organization, and future of work and how work relates to needs and functions of the economy and society.
- 1B. understands career development concepts, the relationship between work and learning, and the career planning process.
- 1C. understands the use of the relevant Illinois Occupational Skill Standards in the development of curriculum (see "Agriculture Machinery Service Technician" (2001), "Agriculture Sales and Marketing Cluster" (2001), "Floristry Cluster" (1997), "Greenhouse/Nursery Cluster" (1997), "Landscape Technician Cluster" (2002), "Swine Production Cluster" (2000), "Retail Garden Center Cluster" (1997), and "Row Crop Production Cluster" (2000), all published by the Illinois Occupational Skill Standards and Credentialing Council, 2450 Foundation Drive, Springfield, IL 62703-5432; no later editions or revisions are incorporated).

**Performance Indicators** - *The competent agricultural education teacher:*

- 1D. relates workplace cultural expectations to workplace skills.
- 1E. develops partnerships with members of the business community to provide learning opportunities for students.
- 1F. provides advice in the career planning process.
- 1G. selects appropriate skill standards for the program areas.

### STANDARD 2

**The competent agricultural education teacher demonstrates the ability to plan, deliver, and evaluate instruction based upon knowledge of subject matter in the field; student organizations; student, community and work needs; curriculum goals; and findings of educational research.**

**Knowledge Indicators** - *The competent agricultural education teacher:*

- 2A. understands pedagogy unique to the discipline.
- 2B. understands the rationale for integrating student organizations' activities into the curriculum.
- 2C. understands professional literature relating to specific content area and to workplace needs.
- 2D. understands economic/socio-economic conditions, patterns of business development, and changing labor and career opportunities and their impact on the relevancy of classroom instruction.

**Performance Indicators** - *The competent agricultural education teacher:*

- 2E. utilizes appropriate pedagogy unique to the individual discipline within career and technical education.

- 2F. creates learning environments and classroom activities that develop life/workplace skills and knowledge in the discipline.
- 2G. identifies and utilizes educational research findings that justify teaching strategies.
- 2H. applies curricular content and processes in order to achieve the goals of student organizations.
- 2I. applies post-secondary admission standards and occupational skill standards when designing curriculum and assessment.
- 2J. designs appropriate assessment plans for students.
- 2K. develops collaborative partnerships with students, colleagues, community, business/industry, and parents to maximize resources.
- 2L. participates in appropriate professional organizations and develops a plan for continued personal and professional growth.
- 2M. plans, organizes, and manages laboratories/technical facilities for instruction, which meet diverse needs of students (i.e., safety, inventory, filing, requisitioning equipment and materials, maintenance, budgeting).
- 2N. implements laws and policies relating to safe environments and incorporates appropriate safety standards, healthy practices, and ergonomic needs.

### **STANDARD 3**

**The competent agricultural education teacher understands the process of reading and demonstrates instructional abilities to teach reading in the content area of agricultural education.**

#### **Knowledge Indicators - *The competent agricultural education teacher:***

- 3A. understands that the reading process is the construction of meaning through the interactions of the reader's background knowledge and experiences, the information in the text, and the purpose of the reading situation.
- 3B. recognizes the relationships among the four language arts (reading, writing, listening, and speaking), and knows how to provide opportunities to integrate these through instruction.
- 3C. understands how to design, select, modify and evaluate materials in terms of the reading needs of the learner.
- 3D. understands the importance of and encourages the use of literature for adolescents in the curriculum and for independent reading.
- 3E. understands the relationship between oral and silent reading.
- 3F. understands the role of subject area vocabulary in developing reading comprehension.
- 3G. understands the importance of the unique study strategies required of the specific content area in developing reading comprehension.
- 3H. understands the importance of the relationship between assessment and instruction in planning.

#### **Performance indicators: *The competent agricultural education teacher:***

- 3I. plans and teaches lessons for students that develop comprehension of content-area materials through instructional practices that include analyzing critically, evaluating sources, synthesizing and summarizing material.
- 3J. plans and teaches lessons on how to monitor comprehension and correct confusions in misunderstandings that arise during reading.
- 3K. plans and models use of comprehension strategies before, during, and after reading of text.
- 3L. provides opportunities for students to develop content-area vocabulary through instructional practices that develop connections and relationships among words, use of context clues, and understanding of connotative and denotative meaning of words.
- 3M. plans and teaches lessons that encourage students to write about the content read in order to improve understanding.
- 3N. plans and teaches lessons to help students develop study strategies that include previewing and preparing to read text effectively, recognizing organizational patterns unique to informational text, and using graphic organizers as an aid for recalling information.

- 3O. plans and teaches units that require students to carry out research or inquiry using multiple texts, including electronic resources.
- 3P. provides continuous monitoring of students' progress through observations, work samples, and various informal reading assessments.
- 3Q. analyzes and evaluates the quality and appropriateness of instructional materials in terms of readability, content, length, format, illustrations, and other pertinent factors.
- 3R. promotes the development of an environment that includes classroom libraries that foster reading.

## **STANDARD 4**

**The competent agricultural education teacher understands the curriculum in the area of agricultural science.**

**Knowledge Indicators** - *The competent agricultural education teacher:*

- 4A. understands scientific principles and the scientific method of investigation.
- 4B. understands biological concepts and principles in the animal sciences.
- 4C. understands biological concepts and principles of agronomic crops.
- 4D. understands characteristics, components, and properties of soil.

**Performance Indicators** - *The competent agricultural education teacher:*

- 4E. directs students' experimentation following the scientific method of investigation.
- 4F. applies biological concepts and principles to agricultural management practices for animals.
- 4G. applies biological concepts and principles to agricultural management practices for plants.
- 4H. applies characteristics, components, and properties of soil to management practices of drainage irrigation, soil testing, and conservation.

## **STANDARD 5**

**The competent agricultural education teacher understands the curriculum in the area of agricultural mechanization.**

**Knowledge Indicators** - *The competent agricultural education teacher:*

- 5A. understands agricultural power.
- 5B. understands agricultural surveying.
- 5C. understands agricultural electricity.
- 5D. understands agricultural structures.
- 5E. understands agricultural machinery.
- 5F. understands agricultural construction processes.
- 5G. understands agricultural technology.

**Performance Indicators** - *The competent agricultural education teacher:*

- 5H. applies concepts of agricultural power to the repair of engines and machinery.
- 5I. uses surveying equipment in agricultural applications.
- 5J. applies knowledge of electricity to installation and repair of electrical systems.
- 5K. applies knowledge of structures to agricultural applications.
- 5L. applies skills in repairing and maintaining agricultural machinery.

- 5M. applies skills for carpentry, masonry, and plumbing in agricultural construction.
- 5N. uses technology in agricultural applications.

## **STANDARD 6**

**The competent agricultural education teacher understands the curriculum in the area of agricultural business.**

**Knowledge Indicators** - *The competent agricultural education teacher:*

- 6A. understands agricultural marketing and economics.
- 6B. understands the concepts of agricultural sales and service.
- 6C. understands principles of entrepreneurship.
- 6D. understands economic policies and how they influence agriculture.

**Performance Indicators** - *The competent agricultural education teacher:*

- 6E. applies principles of marketing and economics in agricultural business operations.
- 6F. applies strategies for effective sales and service in agricultural applications.
- 6G. applies entrepreneurship principles to the development and operation of an agricultural business.
- 6H. analyzes economic policies and their influence on agriculture.

## **STANDARD 7**

**The competent agricultural education teacher understands the curriculum in the area of horticulture.**

**Knowledge Indicators** - *The competent agricultural education teacher:*

- 7A. understands plant systems.
- 7B. understands plant propagation.
- 7C. understands integrated pest management.
- 7D. understands greenhouse management.
- 7E. understands fruit and vegetable crops.
- 7F. understands floral design.
- 7G. understands landscaping.
- 7H. understands turf management.

**Performance Indicators** - *The competent agricultural education teacher:*

- 7I. applies principles of plant growth and reproduction to the cultivation of horticultural plants.
- 7J. uses approved procedures for propagating horticultural plants.
- 7K. uses integrated pest management practices to control horticultural plant pests.
- 7L. operates a greenhouse facility for the production of plants.
- 7M. uses proven methods for the production of fruit and vegetable crops.
- 7N. applies principles of floral design to create floral arrangements.
- 7O. applies principles of landscaping to design, plant, and maintain landscaped areas.
- 7P. applies principles of turf management to the production and maintenance of turf.

## STANDARD 8

**The competent agricultural education teacher understands the curriculum in the area of agriculture resources.**

**Knowledge Indicators** - *The competent agricultural education teacher:*

- 8A. understands the relationship among agriculture, the environment, and society.
- 8B. understands the role of forest and agricultural management in protecting habitats and species.
- 8C. understands land-use issues in agriculture.

**Performance Indicators** - *The competent agricultural education teacher:*

- 8D. applies principles of ecology in agricultural resource management.
- 8E. applies principles of conservation in protecting habitats and species.
- 8F. applies knowledge of land use to agricultural applications.

## STANDARD 9

**The competent agricultural education teacher is able to develop and implement a comprehensive agriculture program reflective of student, community, and industry interaction.**

**Knowledge Indicators** - *The competent agricultural education teacher:*

- 9A. understands the development and effective use of advisory councils in the agriculture program.
- 9B. understands agricultural literacy programs from kindergarten through the adult level.
- 9C. understands the development of partnerships with constituent support groups.
- 9D. understands students' and industry's needs in career and technical education.

**Performance Indicators** - *The competent agricultural education teacher:*

- 9E. establishes an active advisory council for the agriculture program.
- 9F. conducts agricultural literacy activities for K-adult populations.
- 9G. develops partnerships with constituent support groups.
- 9H. develops programs to meet students' and industry's needs in career and technical education.

## STANDARD 10

**The competent agricultural education teacher understands the principles of leadership and applies that knowledge through the activities of the Future Farmers of America (FFA), an agricultural education students' organization.**

**Knowledge Indicators** - *The competent agricultural education teacher:*

- 10A. understands the development of student development activities in the FFA.
- 10B. understands the development of chapter development activities in the FFA.
- 10C. understands the development of community development activities in the FFA.

**Performance Indicators - *The competent agricultural education teacher:***

- 10D. advises students in planning and conducting student development activities.
- 10E. advises students in planning and conducting chapter development activities.
- 10F. advises students in planning and conducting community development activities.

**STANDARD 11**

**The competent agricultural education teacher understands and provides individual career experiences through experiential learning in Supervised Agricultural Experiences (SAEs).**

**Knowledge Indicators - *The competent agricultural education teacher:***

- 11A. understands that SAEs are to be planned and comprehensive.
- 11B. understands that SAEs are linked to the curriculum and a career.
- 11C. understands that SAEs are individualized and student-managed.
- 11D. understands that SAEs are documented by using recordkeeping and analysis.
- 11E. understands that SAEs allow students to receive recognition.

**Performance Indicators - *The competent agricultural education teacher:***

- 11F. assists students in developing planned and comprehensive SAEs.
- 11G. assists students in selecting an SAE linked to the curriculum and a career.
- 11H. assists students in managing their individualized SAEs.
- 11I. supervises SAEs and assists with recordkeeping and analysis.
- 11J. provides opportunities for recognition of student SAEs.

**STANDARD 12**

**The competent agricultural education teacher understands appropriate instructional strategies integrating the unique components of a comprehensive agricultural education program, including FFA, SAE, classroom and laboratory instruction, and adult education.**

**Knowledge Indicators - *The competent agricultural education teacher:***

- 12A. understands the methods and strategies used in teaching the unique instructional areas of agriculture education, including FFA and SAE.
- 12B. understands the references and resources used in teaching agricultural education.
- 12C. understands the development of effective adult education programs.

**Performance Indicators - *The competent agricultural education teacher:***

- 12D. uses a variety of methods and strategies in teaching agriculture.
- 12E. develops a library of references and resources for teaching agriculture.
- 12F. develops an effective adult education program.