

## Purpose

Oklahoma FFA Agronomy CDE promotes interest and understanding of agronomy through the demonstration of skills and proficiencies.

## Objectives

By participating in this contest, students will:

- A. Demonstrate basic knowledge of agronomic principles and practices
- B. Learn to identify agronomically important crops and weeds and measure grain quality using standard grain grading practices
- C. Practice applying science and mathematics to solve real-world agricultural problems
- D. Explore career opportunities, skills, and proficiencies in the agronomic industry
- E. Experience challenges and find success

## Event Rules

These rules and regulations are official for the 2023 State FFA Interscholastic Career Development Event in Agronomy. They may be supplemented as necessary after consultation with Agricultural Education officials. Changes will be communicated via this webpage.

- A. Coordinators of district and invitational contests throughout the state are encouraged to follow these rules for their contests but are not required to do so. The sponsoring institutions are fully responsible for contest set-up, operation, supervision; interpretation of rules; scoring, tabulation, and awards. As well as announcing the location and time of district and invitational contests. The OSU Department of Plant and Soil Sciences will prepare contest materials for purchase by district contest sponsors only if requested by February 15, 2023. An order form is included in the rules as Appendix A.
- B. Students attending any Oklahoma high school approved for competition by the Agriculture Division, Oklahoma State Department of Vocational/Technical Education may enter the contest. Any student entering the contest must be a regularly enrolled agricultural education student and eligible for competition under Oklahoma Secondary Schools Activities Association rules.
- C. All participants will be assigned a contestant letter. This letter must be written on all answer sheets.
- D. Participants will be divided into three or four groups depending on the contest size and location. Each participant must stay with their assigned group until they are told otherwise by the contest supervisor.
- E. The contest will be scored as follows:
  - a. Identification – 60 samples (5 pts each) ..... 300 points
  - b. Grain Grading – 6 samples (50 pts each) ..... 300 points
  - c. Agronomic Knowledge Exam – 50 questions (6 points each) ..... 300 points
  - d. Total Points ..... 900 points

- F. An identification list is found in Appendix B. Detailed instructions for grain grading are found in Appendix C.
- G. The coaches will have the privilege of checking all materials used in the contest. A coach shall not object to anything being included in the contest because it was not secured for study.
- H. The contestants will not communicate with anyone except contest officials while the contest is in progress. This includes verbal communication as well as telephone calls and text messages.
- I. Legible writing and proper spelling are required and will be considered in scoring. Points will be deducted for misspelling according to the grain grading rules.
- J. In view of fairness to all schools, no team will be permitted to practice in the OSU crops teaching laboratory, except during supervised training workshops conducted prior to the contest.
- K. Please feel free to contact [Beatrix.haggard@okstate.edu](mailto:Beatrix.haggard@okstate.edu) to set up a review session for your team. The review session can either be held on zoom or in person at the OSU campus. There is no charge for a review session.
- L. The semester prior to the contest, teams are free to walk through greenhouse 110 in the teaching greenhouses and study crops and weeds that are actively growing. Plants will be actively growing starting in January, but they will mostly be immature seedlings until after the end of February into late March. The greenhouse is closed on weekends unless you an appointment.

## **Format**

The event consists of three sections:

1. Identification (30 minutes)
2. Grain Grading (30 minutes)
3. Agronomic Knowledge Exam (30 minutes)

## **Event Format**

### **Team Makeup**

- 1) A team will consist of three or four members. The top three scores will be counted for the team total. If an entire team is not entered, one or two individuals may compete for individual honors.
- 2) If more than four students from a given school wish to participate, the additional students may compete and be scored as individuals, but these scores will not count for the team scores, even if their totals are higher than the assigned team members.

## Equipment

- 1) A contestant may take the following into the contest:
  - a. Magnifying lens, clipboard, pencil, calculator, watch, and grain grading papers (The grain grading papers can be placed in a ½ or 1 inch binder or a small presentation folder.) These binders cannot be accessed during any other part of the contest. If they are referenced, then the student will be disqualified from the contest.
  - b. If a student is caught using a cell phone or smart watch during the contest, the student will be disqualified from the contest.
  - c. An ID list, answer sheets, and givens will be provided by the contest superintendent.

## Event Schedule

Each contestant shall complete the events in the time allotted.

### Identification of Plant Materials (300 points)

- 1) The contestant will identify a total of 60 plants, seeds, damages, insects, diseases, disorders, and machinery in 30 minutes. It is possible that the same species may occur more than one time in the contest. Each sample will be given a value of 5 points, for a total of 300 points. Students will be provided an official sheet of numbered ID specimens to help fill in the corresponding number with the sample on their scan sheet.
- 2) Plants will generally be shown in the reproductive stage (flower bud through seed maturity). Samples may be presented as preserved mounts, dried bundles or specimens, fresh cuttings, live specimens, photographs, or replicas. A magnifying lens is suggested to aid in identification.
- 3) A numbered list of the names of all samples on the official identification list arranged in alphabetical order (Appendix B) will be included with the official answer form used by the contestant. The contestant will identify each sample, select the appropriate number from the answer list, and record that number in a scan sheet provided. Both pages of the form must be turned in when the contestant is finished with the identification section.

### Grain Grading (300 points)

- 1) Six samples of grain will be graded according to the Federal Grain Inspection Standards. This section is worth 300 points, with each sample worth 50 points; 30 points for recording the correct grade designation plus 20 points for recording the factors determining the grade (see a grading description in Appendix C.)
- 2) The samples will be from the following classes:
  - a. Wheat Classes: Hard Red Winter Wheat, Hard White Wheat, Durum Wheat, Mixed Wheat, Soft Red Winter Wheat
  - b. Sorghum Classes: Sorghum, Tannin Sorghum, White Sorghum, Mixed Sorghum,
  - c. Corn Classes: Yellow Corn, White Corn, Mixed Corn

- d. Soybean Classes: Yellow Soybeans, Mixed Soybeans
- 3) Samples will consist of grain placed in sealed bags with the grain grading factors separated out with the corresponding percentages. Each bag will include a base sample of grain to be graded, the necessary visual factors, up to 6 visual factors (weed seed, damaged grain, other grains). The base sample must be evaluated to determine the market class of the crop. Given factors are those which cannot be determined by the student, and for which values must be provided. These include test weight per bushel, odors, percent of material sieved from the sample, certain sample grade factors, and all factors determining the special grades. The visual factors are small quantities of materials which may affect the commercial quality of the grain. These are shown in the sealed bag with the percentage of the sample they comprise. Students must determine the effect of each factor on the grade of the sample. Other market classes that might cause the grain to be graded as class "mixed" may also be shown as visual factors. The contestant must consider all the evidence accompanying each sample, and record the market grade designation, together with the factors which determine the designation on the scoring sheet as shown in the explanation and examples given in Appendix C.
  - 4) Each contestant will be provided a summary sheet containing the grade requirement table and special grades, market classes, and grading factors as shown in Appendix C. (These summary sheets are abbreviated and may differ from FGIS. For the Oklahoma event, the guidelines for grade and class determination on the provided summary sheets will apply.) Contestants will also be provided with a worksheet if they decide to not bring their own. Contestants still must answer the grain grading answers on the provided answer sheet. Handouts are in Appendix C.

### Agronomic Knowledge Exam (300 points)

- 1) The general agronomic examination will be comprised of 50 questions; multiple choice questions will be utilized for this year's event. Calculations will still be worked out, but the answers will be provided in a multiple-choice format. All answer choices will be filled out on the official scan sheet.
- 2) Questions will be of general agronomic nature based on crops produced in Oklahoma, including but not limited to winter wheat, winter canola, alfalfa, cotton, peanut, soybean, and sorghum. Topics will include but are not limited to crop biology and adaptation, planting, nutrient and water requirements, common pests, harvesting and storage.
- 3) There will be 5 of the 50 questions that are not on the sample study questions. They will focus on new and changing agronomic technology in the current year.
- 4) Sample questions for study purposes are available in Appendix D.

## Scoring

Plant Identification .....	300 points
Grain Grading .....	300 points
Knowledge Exam .....	300 points

## Total Points

Individual .....	900 points
Team .....	2700 points

## Tiebreakers

Ties will be broken based upon scores in identification. If the tie remains unbroken, grain grading, then general agronomic knowledge exam will be used to break the tie.

## Awards

Trophies and certificates for winners are presented by the OSU Division of Agricultural Sciences and Natural Resources. The Department of Plant and Soil Sciences offers a scholarship to the high individuals if he or she attends Oklahoma State University and majors in Plant and Soil Sciences.