2020 Student Crop Judging Contest Information and Rules

Purpose:
This contest provides an opportunity for undergraduate students to practice tangible agronomic skills used by crop science and management professionals. It also works to encourage students to participate in other crops judging contests throughout the year.

Awards and Recognition:
First Place Team: $400
Individuals:
1st Place: $350
2nd Place: $300
3rd Place: $250
4th Place: $200
5th Place: $150
6th Place: $100

Eligibility:
All contestants must be currently enrolled in a SASES institution in good standing. Registration will be available to teams and individuals. Registrants may organize in teams of up to four individuals for the team competition. No more than 10 contestants may be entered from any one school.

Rules and Procedures:
The 2020 competition will be online at the designated time using Zoom Meetings and Kahoot! game-based learning software. Each participant will need a PC with two monitors OR a PC and a smartphone to participate in the competition. A PC screen will be needed to view the questions through the Zoom meeting software. The second monitor or smartphone will be required to enter answers for scoring into the Kahoot! platform.

The Kahoot! platform can be accessed during the contest through their website (https://kahoot.it/) or a smartphone app. Install the app before the contest by downloading it from Apple Store or Google Play.

Visit this link for more information about Kahoot! - https://kahoot.com/what-is-kahoot/

No communication with other contestants or anyone else except supervisors will be permitted once the contest has started. Coaches may not communicate with a team or individuals until the contest is finished. No cell phones, text messaging, or conferring during the contest will be allowed. Contestants observed in violation of this WILL be disqualified from the competition. Contestants should bring a hand-held calculator to the contest.

All required information and reference material necessary will be provided. Contestants may not bring notes or reference material of any kind. Officials designated by SASES will be responsible for preparation of all contest materials, setting up the contest, providing the official keys for scoring, and overseeing the contest operation and scoring.

Announcements made on the contest day will take precedent over the previously published rules. The contest will be divided into two areas with 50,000 total points as follows:
A. Lab Practical (25,000 points)
B. Crop and Weed Plant and Seed Identification (25,000 points)

Question types may include:
- Multiple-choice
- Images as answers
- Puzzle (arrange answers in the right order)

Points for each question are based on both selecting the right answer and how quickly the question was answered.

How points work

1. Points are awarded based on speed of answer. This is how points are calculated:
2. Divide response time by the question timer. For example, a player responded 2 seconds after a 30-second question timer started. 2 divided by 30 is 0.0667.
3. Divide that value by 2. For example, 0.0667 divided by 2 is 0.0333.
4. Subtract that value from 1. For example, 1 minus 0.0333 is 0.9667.
5. Multiply points possible by that value. For example, 1000 points possible multiplied by 0.9667 is 966.7.
6. Round to the nearest whole number. For example, 966.7 is 967 points.

Mathematically this can be expressed as \[ \left( 1 - \left( \frac{\text{response time}}{\text{question timer}} \right) / 2 \right) \times \text{points possible} \]

The time allowed to answer questions for each section will be thirty minutes in total, but the time for each question may vary based on its complexity. Additional descriptions and specific rules for each section of the contest follow and will be considered official for the contest.

A. Lab Practical

This section will consist of 25 questions worth 1000 points each for a total of 25,000 points. Each question will have photographs of various crop or weed plants, plant parts, growth stages, field problems, nutrient deficiencies, herbicide injury symptoms, fertilizers, pesticides, seed samples, pesticide labels, seed bags, data tables, equipment, insects, diseases, etc. along with specific questions which will require identification, interpretation, calculation, or evaluation of the display material to answer correctly.

These stations will represent activities commonly completed in laboratory classes, crop scouting, investigating agronomic production problems, or field trips in crop production and soil management courses. For example, contestants may have to:
- Identify common crop diseases and disease symptoms (see attached list – copy of list will be provided during contest)
- Identify common crop insects and insect damage (see attached list – copy of list will be provided during contest)
- Identify or describe common crop production and soil management practices from photos, illustrations, or displays
- Evaluate various crop production or soil health problems from photos, illustrations, or displays
- Identify specific plant and seed structures, crop growth stages, or developmental characteristics on plant samples or photos
• Recognize common nutrient deficiency symptoms (N,P,K,S,Fe) on both dicot and grass crops
• Recognize common herbicide injury symptoms on weeds and crops
• Read and interpret information from a commercial seedbag (germination, purity, seed size, noxious weeds, variety or hybrid identification, genetically modified traits, refuge requirements, seed treatments applied, recommended seeding rates, planter adjustments, recognize classes of pedigreed seed from standard color of tags, etc.)
• Interpret information on an insecticide, fungicide or herbicide labels, including composition of active ingredients, common and chemical names, formulation, agricultural use requirements, precautionary statements, environmental restrictions, and recommended rates and application requirements for use on specific crops and/or soils
• Describe common fertilizer carriers (major nutrient supplied, typical analysis, common name) and interpret information on a fertilizer bag
• Recognize common pesticide formulations and their standard abbreviations
• Determine proper sprayer nozzle tip size and type, screens, pressure, etc. for pesticide applications
• Identify and explain the purpose of items such as agricultural lime, inoculum, seed treatments, soil amendments, etc.
• Use a soil textural triangle to name soil textural class
• Determine soil texture by feel, distinguish different types of soil structure, relate soil color to soil properties
• Interpret information found in a soil survey or on a soil test report
• Identify stored or processed crop products and common livestock feed ingredients made from crops (silage as to type, hay as to type, alfalfa pellets and cubes, soybean meal, cottonseed meal and hulls, wheat bran, corn meal, beet pulp, dried distillers grains, flaked or ground grains, etc.)
• Match various food and/or industrial products with the crops (or classes of a crop) from which they are made
• Evaluate crop quality by ranking two or more samples of hay, silage, seed, or cotton and give typical levels for quality factors in various grain and forage crops (i.e., protein content, oil content)
• Write the commercial grade and grade determining factors for market grain samples given various quality factors and official FGIS grain standards tables
• Interpret data from tables or graphs (i.e. analyze a variety trial based on LSD mean comparison statistic, select the proper spray nozzle tip for given conditions from a manufacturer’s spraying equipment manual, read a calibration nomograph for a sprayer or planter, interpret crop yield response to different input levels, determine economic threshold from pest counts vs. yield response given control costs, etc.)

B. Crop and Weed Plant and Seed Identification

1. A total of 25 specimens will be included in the contest. Plants and seeds will be identified by common name as given on the official identification list provided to each contestant. Each sample will be worth 1000 points for a total of 25,000 points.

2. Crop and weed identification materials will be selected from the official identification list. Items are marked with a (p) for plants that may be shown in the flowering to mature plant stage, (v) for plants that may be shown in the vegetative stage, and (s) if seed identification is required.

Participation:
Any student wishing to participate must sign up on the website by the deadline listed there.
Judges and Judging:
Contest results will be tabulated by members of the AC449.13 committee and additional representatives appointed by the chair. All decisions made by the graders will be final and not open for debate.

Contacts

Contest Chair: Lance Gibson, lance.gibson@corteva.com

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