Soybean growing contest provides learning opportunity for Kansas students

MANHATTAN, Kan. - April 15, 2014 - This spring, Kansas students took on the challenge of growing the largest potted soybean plant. Their motivation was to win the "Willie and the Beanstalk" contest, a project organized by Kansas State University's Department of Agronomy.

The contest, sponsored by the Kansas Soybean Commission, was created as a way to encourage plant and soil science in the school curriculum, to increase student interest in agronomy, and to attract students to K-State's annual Open House festivities, where they can interact with agronomy faculty and students.

Nathan Nelson, associate professor of soil fertility, is the contest's coordinator. Nelson shared that since the contest began, participation has grown. In 2008, the contest's inaugural year, 126 students entered the contest. This year, 459 students participated. There have been 2,392 total students who have entered the contest since its start. In 2012, a second contest was established at the K-State Olathe campus to reach out to urban students.

The contest begins on a common seeding day, usually in March, and ends on the day of K-State Open House for the Manhattan contest. The Olathe entries end a week after the K-State Open House. Students bring their soybean plants to the Manhattan or Olathe campus to be judged. The plants are evaluated using the following criteria: cultural practices documentation, plant height, plant mass, leaf area and leaf greenness. Winners within each criterion and overall winners in each age division - 9-12th grades (Division 1) and K-8th grades (Division 2) - are selected.

The winners for the 2014 Willie and the Beanstalk competition are as follows:

Best Documentation

Manhattan Division 1: Plant and Soil Science (Blue Valley FFA)
Manhattan Division 2: Ag Explorations (Blue Valley FFA)
Olathe Division 1: Bubba Plants (FL Schlagle Environmental Science Classes)
Olathe Division 2: Stillwell Organic Growers (Stone Rabbitry)

Most Biomass

Manhattan Division 1: The Golden Gophers (Wellington FFA)
Manhattan Division 2: Live Wires/EB 4H Club (Moundridge FFA)
Olathe Division 1: Girard FFA Baked Beans (Girard FFA)
Olathe Division 2: Stillwell Organic Growers (Stone Rabbitry)

Tallest Plant

Manhattan Division 1: Ellinwood #2 (Ellinwood FFA)
Manhattan Division 2: Wild Jay Beans (Minneapolis Grade School); Beanstalk Masters (Minneapolis Grade School)
Olathe Division 1: Organic II (Erie High School)
Olathe Division 2: Straight A's (Williamsburg Elementary School)

Largest Leaf

Manhattan Division 1: The Golden Gophers (Wellington FFA)
Manhattan Division 2: Live Wires/EB 4H Club (Moundridge FFA)
Olathe Division 1: Girard FFA Trojans (Girard FFA)
Olathe Division 2: Stillwell Organic Growers (Stone Rabbitry)

Greenest Leaf

Manhattan Division 1: Ellinwood #2 (Ellinwood FFA)
Manhattan Division 2: Little Sprouts (Piqua 4H Club)
Olathe Division 1: Organic II (Erie High School)
Olathe Division 2: Stillwell Organic Growers (Stone Rabbitry)

Grand Champion

Manhattan Division 1: The Golden Gophers (Wellington FFA)
1. Taylor Corley

2. Kyle Nichols
Adviser: Linda Chase

Manhattan Division 2: Live Wires/EB 4H Club (Moundridge FFA)
1. Lane McMannis
2. Payton Smith
3. Isom Marston
Adviser: Shad Marston

Olathe Division 1: Girard FFA Baked Beans (Girard FFA)
1. Tyler Workman
2. Ethan Reed
Adviser: Johanna Ryckert

Olathe Division 2: Stillwell Organic Growers (Stone Rabbitry)
1. Katherine Stone
2. Kimberly Stone
3. Christina Stone
Adviser: Chris Stone

Because the contest is a large effort, Nelson is dependent on the help of agronomy faculty, staff and students for its success. Faculty and graduate students score documentation sheets and provide equipment necessary for plant evaluation. Staff assist with website development and promotional efforts. Undergraduate students work with contestants to score the soybeans on the contest day.

Due to the hands-on nature of the contest, it can easily be incorporated in the classroom as a strong experiential learning activity. "The contest exposes students to the many factors that influence plant growth and gives them a way to evaluate the effects of each factor," Nelson said. "They can easily explore the importance of soil fertility, water and light, and genetics."

Lesson plans that focus on soybean and plant growth and development are available from Kansas Foundation for Agriculture in the Classroom, an agricultural education non-profit organization, at www.ksagclassroom.org.

Nelson anticipates that registration information and rules for the 2015 contest will be available in October. It is his hope that more students from urban school districts participate so they may be exposed to agricultural applications of science that may be unfamiliar to them. A list of this year's winners as well as contest forms and rules are available on the Willie and the Beanstalk website.

In thinking about next year's contest, Nelson encourages students to plan ahead and grow many soybean plants. He challenges them to consider conducting experiments of their own so that they can evaluate what combination of factors produces the largest soybean plant. "By experimenting with multiple factors, students will learn about the science, challenges and opportunities present in producing sustainable food supply. They will experience the excitement of discovery and the contest will be a success," Nelson said.

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Additional Information:
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Resources:
Willie and the Beanstalk: http://beanstalk.agronomy.ksu.edu
Kansas Soybean Commission: http://www.kansassoybeans.org
Kansas Foundation for Agriculture in the Classroom: www.ksagclassroom.org

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About KFAC

The Kansas Foundation for Agriculture in the Classroom is a 501(c)(3) non-profit foundation that provides educational resources for Kansas teachers to help students connect Kansas agriculture to their own lives while meeting curriculum goals.