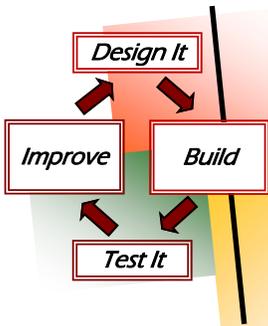


MICRO-TRACTOR CHALLENGE

DESIGN/BUILD/TEST/RUN COMPETITION

September 24-26, 2017
Tippecanoe County Fairgrounds, Lafayette, IN



Agricultural Equipment is more complex than ever!

Tractors have revolutionized the agricultural production system in the United States. Through technological innovations tractors have become more efficient and productive. These innovations have resulted in an agricultural system that is the best in the world.

GOAL

To challenge youth to develop and exhibit the skills necessary to design and create an agricultural vehicle that optimizes the energy consumed to the amount of work produced.



1.



CORE

1. The event will be structured such that the focus is on engineering design
2. The event will use challenge/problem-focused learning strategies.

PARTICIPANT REQUIREMENTS

1. This is a team-focused event. Each team will consist of 2-4 individuals.
- 2 Participants must have passed their 14 but not 19th birthday as of January 1st of the current year.

3. Registration details are available at www.youthengineering.org

OTHER PARAMETERS

- Internet access would be available to all contestants..
- Each team using a kit of components (*i.e., 1/16 scale tractor, gearbox, gears, weights, electric motor*) will construct, prior to the event, a 1/16 scale micro-scale tractor.
- All basic machining (rear portion of tractor machines to accept the provided gearbox) will be done by contest official prior to the event.
- Teams will have the opportunity to determine several variables such as: tractor weight up to a pre-determined maximum limit , gear ratio within limits of the gearbox, and weight placement.
- A basic set of tools will be provided but teams may bring additional tools.
- Teams will have approximately 12-hours to test their design make adjustments.
- Scores will be calculated based on tractor weight categories, amount of weight on the sled and the distance pulled.

It is the policy of the Cooperative Extension Service that all persons shall have equal opportunity and access to the programs, services, activities and facilities without regard to race, color, sex, religion, national origin, age, marital status, parental status, sexual orientation, disability or status as a veteran.