

# ASABE 1/4 Scale Tractor

International Student Design Competition

IT'S AN EXCELLENT WAY for students to prepare for and gain exposure to what they are going to be facing when they get out into the professional world—technical capabilities, problem solving, team player environment, project management and communication skills.

—Gale Holloway  
CNH-Case Corporation

WHEN YOU ACTUALLY PRODUCE something from scratch, you get a feeling of accomplishment, which is a great reward for most engineers.

—Prof. Robert Bledsoe  
Univ. of Tennessee

IT WAS PARTICULARLY VALUABLE that the team got to experience the process from conception through proving their product under a “must perform” situation.

—Prof. James Koelliker  
Kansas State University



## American Society of Agricultural and Biological Engineers

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The American Society of Agricultural and Biological Engineers is a scientific and educational organization dedicated to the advancement of engineering applicable to agricultural, food, and biological systems. Founded in 1907 and headquartered in St Joseph, Michigan, ASABE comprises 9,000 members representing more than 100 countries.



## ASABE 1/4 Scale Tractor International Student Design Competition

*Pulling it all together*



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*The Society for engineering  
in agricultural, food, and biological systems*

[www.asabe.org](http://www.asabe.org)

turning today's great students into

# TOMORROW'S INDUSTRY LEADERS

When it comes to preparing students for today's workplace, even the best college education can fall a bit short.

Consider product development and all the steps that go into it: Market research, cost and risk analysis, design, testing, manufacture, promotion.

And consider all the characteristics that an outstanding team member brings to the process: creativity, initiative, technical proficiency, communication and time management skills, and an understanding of the challenges and advantages one's share of the work presents for the rest of the team.

How does a classroom experience provide these skills? It can't.

## Pulling it all together

Employers and educators agree there's nothing quite like a well-organized design contest when it comes to putting theory into practice. And there's nothing like team competition for building the non-technical skills most engineering students won't get in an academic setting.

The ASABE ¼-Scale Tractor International Student Design Competition bridges that divide between classroom and career.



## Keeping it real— the 360-degree experience

It's a design competition like no other. While similar events focus on technical skill and innovation, the ASABE ¼-Scale Tractor Student Design Competition also demands that participants analyze market factors, document their development and test efforts, and sell the merits of their product—just as an engineering team would in the workplace.

The contest has four components: written design report, team presentation, static design judging, and performance—the last element comprising a multi-stage tractor pull.

Each team is challenged to optimally design their off-road vehicle according to that year's regulations,

taking into account performance, safety, serviceability, manufacturability, and cost effectiveness. Teams document their work in a written report and then "sell" their product in an oral presentation.

## Designing from scratch

Participating teams are each given a set of tires and an engine—the rest is up to them. All additional components are supplied by the team, making clear budget planning and sponsor procurement a valuable dimension of the project.

Rules and regulations are published every autumn and are modified each year to keep pace with emerging technologies and to keep the challenge fresh.

Through involvement in the ASABE ¼-Scale Tractor Student Design Competition, students gain practical experience in the complete design of a marketable product, nurturing the skills every student needs to be productive and fully engaged in the workplace—and in life.

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*One of my best college experiences.*  
—Casee Eisele, Deere & Co.

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For more information on the Competition, visit: [www.asabe.org/students/tractor/asaecomp.html](http://www.asabe.org/students/tractor/asaecomp.html)

