

Virtual Traction Inspection

An Online Tractor Safety Program Teaching Students to Recognize Hazards



2015 NAAE Convention

November 17 – 21, 2015

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WWW.MC.UKY.EDU/SCAHIP



National Ag Safety Database (NASD) History

- National Institute of Occupational Safety and Health (NIOSH) provided funding in October 1993 to develop the first National Ag Safety Database (NASD).
- NASD is a broad-based collection of agricultural safety information contributed by safety professionals and organizations from across the nation, in order to educate workers and managers about occupational hazards associated with agriculture-related injuries, deaths and illnesses.



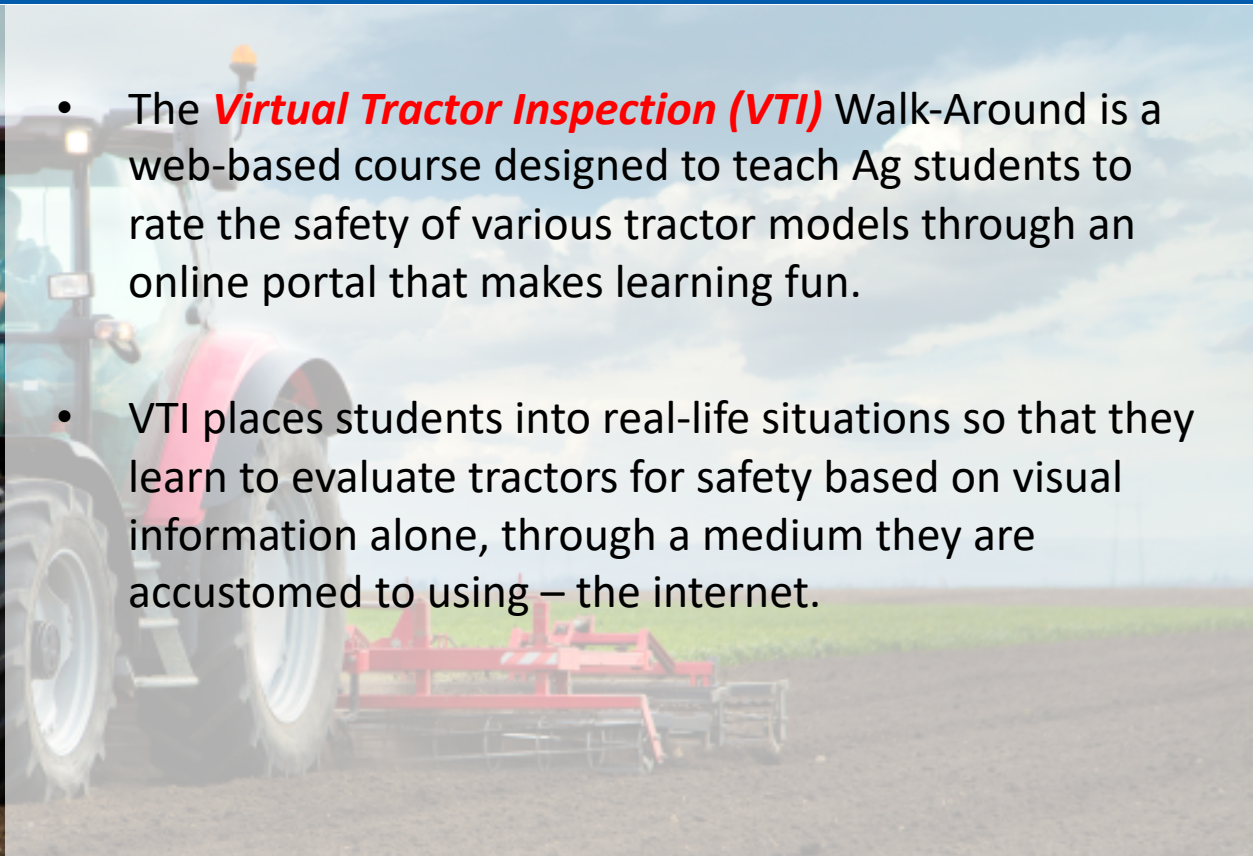
Did you know?

- Agriculture ranks among the most dangerous occupations in the U.S.
- An average of 113 young adults (ages 16-20) die each year from farm-related incidents, most of which are caused by tractor overturns.
- The annual estimated cost of agricultural injuries exceeds \$4.5B.

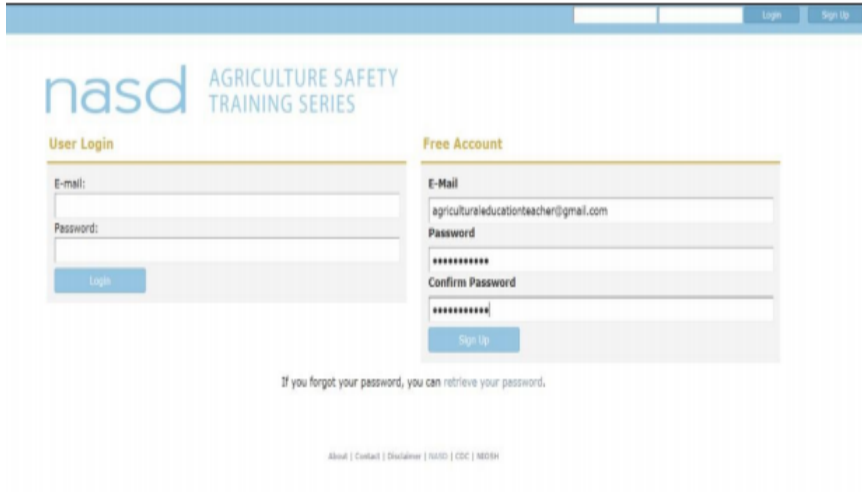
Virtual Tractor Inspection Walk-Around



- The ***Virtual Tractor Inspection (VTI)*** Walk-Around is a web-based course designed to teach Ag students to rate the safety of various tractor models through an online portal that makes learning fun.
- VTI places students into real-life situations so that they learn to evaluate tractors for safety based on visual information alone, through a medium they are accustomed to using – the internet.



Instructor Interface



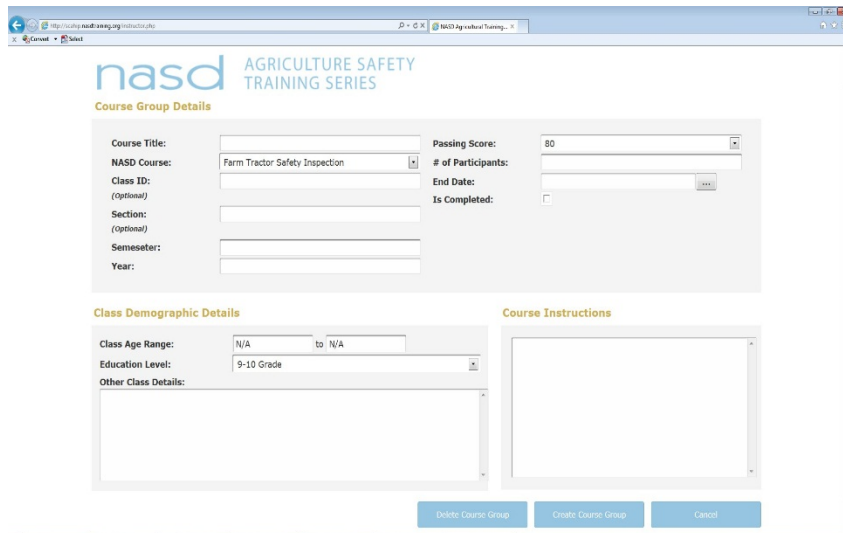
The screenshot shows the top navigation bar with 'Login' and 'Sign Up' links. Below the 'nasd AGRICULTURE SAFETY TRAINING SERIES' logo, there are two main sections: 'User Login' and 'Free Account'. The 'User Login' section has fields for 'E-mail:' and 'Password:' with a 'Login' button. The 'Free Account' section has fields for 'E-Mail', 'Password', and 'Confirm Password' with a 'Sign Up' button. A link for 'Forgot your password?' is located below the 'Free Account' section. At the bottom, there are links for 'About | Contact | Disclaimer | NASD | CDC | NIOSH'.

Step 1: Setting Up Your Classes for VTI:

To begin, go to <http://scahip.nasdtraining.org/instructor.php> and enter your login information or choose the option to set up a new free account.

Step 2: Entering Course Group Information

Each of your classes needs its own course group. To create a course, click on the blue “Create Course Group” button. A form will appear so you can record information, including number of participants, passing score, age range and dates and set the level for mastery (80% and above).



The screenshot shows the 'Course Group Details' form. It includes fields for 'Course Title:', 'NASD Course:' (with a dropdown menu showing 'Farm Tractor Safety Inspection'), 'Class ID: (optional)', 'Section: (optional)', 'Semester:', and 'Year:'. On the right side, there are fields for 'Passing Score:' (set to 80), '# of Participants:', 'End Date:' (with a calendar icon), and 'Is Completed:' (checkbox). Below the main form are sections for 'Class Demographic Details' (with 'Class Age Range:' set to 'N/A to N/A' and 'Education Level:' set to '9-10 Grade') and 'Course Instructions'. At the bottom, there are three buttons: 'Delete Course Group', 'Create Course Group', and 'Cancel'.

Instructor Interface

nasd AGRICULTURE SAFETY TRAINING SERIES

HOME | SIGN UP FOR COURSES | MY ACCOUNT | LOGOUT
You are logged in as agriculturalteacher@gmail.com

Course Group Details [Edit Details](#)

| | | | |
|-----------------------------|--------------------------------|--------------------------|------------|
| Course Title | Ag Education Group 1 | Passing Score | 80 |
| NASD Course Assigned | Farm Tractor Safety Inspection | Class Age Range | 15-16 |
| Class ID | | Education Level | 9-10 Grade |
| Section | 001 | # of Participants | 30 |
| Semester | Spring | End Date | 2016-05-06 |
| Year | 2016 | Class Code | AEG1AGUR |

Class URL to Send to Participants
<http://scahip.nasdrtraining.org/signup/AEG1AGUR>

Participant Information

| First Name | Last Name | Reg Date | Completed Date | Status | Score |
|------------|-----------|----------|----------------|--------|-------|
| | | | | | |

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Step 3: Reviewing Course Group Info

This screen lets you review at the course information again before finalizing. Make any changes by clicking on the blue "Edit Details" button. A link is created for each course you create and you can forward the link to your students

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Active Course Groups [Create Course Group](#)

| Course Title | NASD Course Assigned | Class ID | Section | Semester | Year | |
|----------------------|--------------------------------|----------|---------|----------|------|------------------------|
| Ag Education Group 1 | Farm Tractor Safety Inspection | | 001 | Spring | 2016 | Manage |
| Ag Education Group 2 | Farm Tractor Safety Inspection | | 002 | Spring | 2016 | Manage |
| Ag Education Group 3 | Farm Tractor Safety Inspection | | 003 | Spring | 2016 | Manage |

Completed Course Groups

| Course Title | NASD Course Assigned | Class ID | Section | Semester | Year |
|----------------------|--------------------------------|----------|---------|----------|------|
| Ag Education Group 1 | Farm Tractor Safety Inspection | | 001 | Spring | 2016 |
| Ag Education Group 2 | Farm Tractor Safety Inspection | | 002 | Spring | 2016 |
| Ag Education Group 3 | Farm Tractor Safety Inspection | | 003 | Spring | 2016 |

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Step 4: Reviewing Your Dashboard

Your dashboard allows you to review your list of classes. You can edit course details or add more courses as needed.



Student Start-up for VTI

HOME | SIGN UP FOR COURSES | MY ACCOUNT | LOGOUT
You are logged in as agriculturalteacher@gmail.com, John Safety

nasd AGRICULTURE SAFETY TRAINING SERIES
Training Unit Registration Process

| | |
|---------------------------|---|
| Course: | Ag Education Group 1 001 Spring 2016 John Safety |
| Instructor / Coordinator: | John Safety |
| Email: | agriculturalteacher@gmail.com |
| Name: | John Safety |

Congratulations! You have completed the registration process!
Your deadline for completing this training unit is: 2016-05-06

You must achieve a passing score of: 80

Please complete the introduction and two learning modules.

[Continue](#)

[About](#) | [Contact](#) | [Disclaimer](#) | [NASD](#) | [CDC](#) | [NIOSH](#)

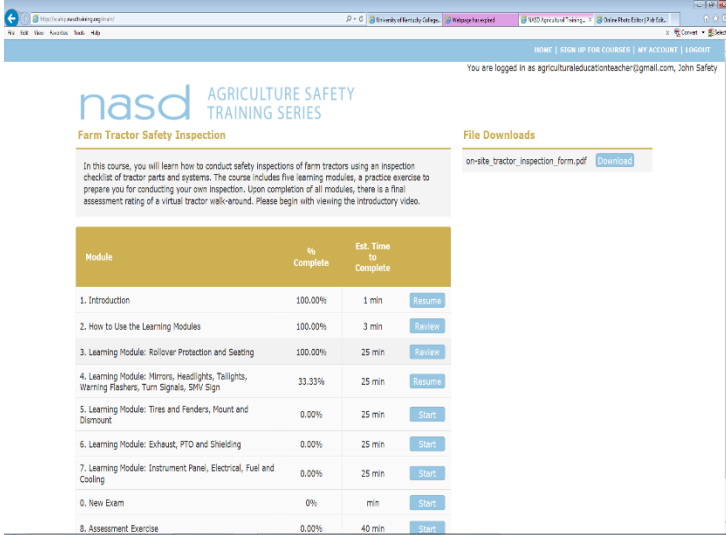
After clicking the link, students will need to input their name and click “Submit” to continue. Students will then see a completion screen after they submit their name and will also give them details about what to do next (which you previously entered in the Course Instruction box) and what grade constitutes a passing score.

Student Start-up for VTI

To begin, students watch a short instructional video and then enter **8** modules in succession that teach them how to evaluate the condition and operational safety of various tractors.

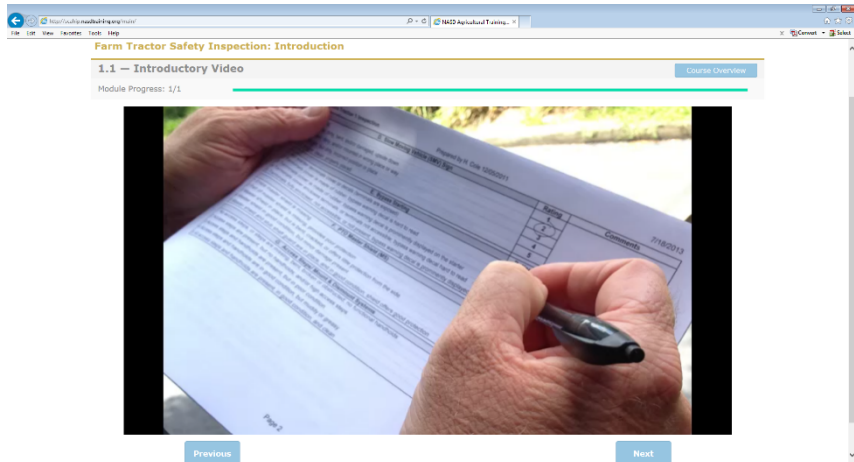
Students determine whether the tractor is in safe operating condition, and receive feedback on their responses.

Next, students can take a practice assessment; complete a virtual tractor walk-around; or perform an onsite tractor assessment developed by their instructor.



The screenshot shows the NASD Agriculture Safety Training Series website. The main heading is "Farm Tractor Safety Inspection". Below this, there is a table with the following data:

| Module | % Complete | Est. Time to Complete | Action |
|--|------------|-----------------------|--------|
| 1. Introduction | 100.00% | 1 min | Resume |
| 2. How to Use the Learning Modules | 100.00% | 3 min | Review |
| 3. Learning Module: Rollover Protection and Seating | 100.00% | 25 min | Review |
| 4. Learning Module: Mirrors, Headlights, Tailights, Warning Flashers, Turn Signals, 24V Sign | 33.33% | 25 min | Resume |
| 5. Learning Module: Tires and Fenders, Mount and Dismount | 0.00% | 25 min | Start |
| 6. Learning Module: Exhaust, PTO and Shielding | 0.00% | 25 min | Start |
| 7. Learning Module: Instrument Panel, Electrical, Fuel and Cooling | 0.00% | 25 min | Start |
| 8. New Exam | 0% | min | Start |
| 8. Assessment Exercise | 0.00% | 40 min | Start |



The screenshot shows the "Farm Tractor Safety Inspection: Introduction" module. The main heading is "1.1 - Introductory Video". Below this, there is a video player showing a person filling out a form. The form has the following sections:

- 1. General Information
- 2. Inspection
- 3. Comments

At the bottom of the video player, there are "Previous" and "Next" buttons.

Virtual Walk Around

Farm Tractor Safety Inspection: Assessment Exercise

[Course Overview](#)[View Answers](#)

8.1 — Inspection point 1 of 13

Module Progress: 1/14

7%



Rollover Protective Structure (ROPS) and ROPS Type

- | | |
|---|--|
| 1 | No ROPS, homemade ROPS or 2-post, 4-post or ROPS cab that is bent, loose, or has structure damage. |
| 2 | A homemade non-certified 2 or 4 post ROPS with all parts present, functional and in good condition |
| 3 | A certified commercial 2-post ROPS with all parts present, functional, and in good condition |
| 4 | A certified commercial 4-post ROPS with all parts present, functional and in good condition |
| 5 | A certified ROPS cab with doors, windows, an all other parts present, functional and in good condition |

My Safety Rating: 5

[Previous](#)[Next](#)

The final module challenges students to rate a tractor by doing a virtual walk around. Students are also able to download a tractor inspection form in order to rate any tractor, whether at home or at school.

Question Analysis Report

| Question | # of answers | % correct | % incorrect |
|--|--------------|-----------|-------------|
| Rollover Protective Structure (ROPS) and ROPS Type | 176 | 10.80% | 89.20% |
| Seatbelt | 86 | 18.60% | 81.40% |
| Tractor Seat | 115 | 9.57% | 90.43% |
| Rear-View Mirror | 114 | 21.05% | 78.95% |
| Headlights and Taillights | 82 | 14.63% | 85.37% |
| Warning Flashers & Turn Signals | 52 | 7.69% | 92.31% |
| Slow Moving Vehicle Emblem (SMV) | 111 | 17.12% | 82.88% |
| Tires & Wheels Front/Rear | 110 | 10.00% | 90.00% |
| Rear Wheel Fenders | 136 | 11.03% | 88.97% |
| Access Steps/ Mount & Dismount Systems | 164 | 4.27% | 95.73% |
| Operator Platform | 108 | 5.56% | 94.44% |

The Question Analysis report aggregates the answers from an entire class or group of classes in order to understand what students are getting incorrect within the virtual walk around and which items could use more instruction.



Knowledge Report

Course Group Details

| | | | |
|----------------------|--------------------------------|-------------------|------------|
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[Class URL to Send to Participants](http://scahip.nasctraining.org/signup/AEG1AGUR)
<http://scahip.nasctraining.org/signup/AEG1AGUR>

Knowledge Chart Report

| Inspection Point | Assessment Exercise <small>correct response</small> |
|--|--|
| Rollover Protective Structure (ROPS) and ROPS Type | 0% |
| Seatbelt | 0% |
| Tractor Seat | 0% |
| Slow Moving Vehicle Emblem (SMV) | 100% |
| PTO Master Shield (MS) | 100% |
| Access Steps/ Mount & Dismount Systems | 0% |
| Operator Platform | 0% |
| Rear Wheel Fenders | N/A |
| Rear-View Mirror | N/A |
| Headlights and Taillights | N/A |

Dashboard

Admin Dashboard
Ag Education Group 1

Reporting

Pass/Fail Report
Knowledge Chart Report

Instructions for Participants

Please complete the Introduction and two learning modules.

The Knowledge Reports provides agricultural educators with significant insight into the degree and depth of student understanding while learning is happening. This provides students with instant feedback and better guide instruction so that it better meets student needs.