The National Safe Tractor and Machinery Operation Program (NSTMOP) is a project of Hazardous Occupations Safety Training in Agriculture (HOSTA) for youth ages 14 and 15.

**Why NSTMOP?**

Since 1969, the U.S. Department of Labor has declared many agricultural tasks to be hazardous to youth younger than 16. With certain exemptions, employment of youth under 16 for tasks that require operation of a tractor and machinery is illegal unless the youth are certified. By successfully completing this certification program, 14 and 15 year old youth may legally operate farm tractors and powered machinery for hire which they otherwise would not be allowed to operate under the U.S. Department of Labor's Hazardous Occupations Order in Agriculture.

**NSTMOP and HOSTA**

The National Safe Tractor and Machinery Operation Program (NSTMOP) is a project of the United State Department of Agriculture Cooperative States Research, Education and Extension Service's Hazardous Occupations Safety Training for Agriculture (HOSTA) Program. It was developed to respond to the need for resources to inform and support the Youth Farm Safety Education and Certification Regulation which is administered by the U.S. Department of Labor.

Training is designed to consistently cover core content areas including safety basics, agricultural hazards, tractors, connecting and using implements with tractors and materials handling. Testing includes a written exam along with skills and driving tests.

**NSTMOP Overview**

The National Safe Tractor and Machinery Operation Program (NSTMOP) was developed through a collaborative effort involving Penn State University, Ohio State University, and the agricultural division of the National Safety Council. The project was funded by the U.S. Department of Agriculture, National Institute of Food and Agriculture. This program is now managed solely by Penn State.

The NSTMOP was originally developed and designed for 14- and 15-year-olds seeking employment in production agriculture. The U.S. Department of Labor's Hazardous Occupations Order in Agriculture (AgHOs) regulation prohibits 14- and 15-year-olds from operating farm tractors and attached powered equipment unless the youths have successfully completed an approved safe tractor and machinery operation training program. For more information about these regulations, visit the website of the U.S. Department of Labor.
What’s Included for Certification
The training is led by local county extension or high school agricultural educators. Subjects covered include general agricultural safety, tractor and equipment operation, and highway transportation. Students are certified after successfully passing a fifty-question written knowledge test and successfully passing both a operating skills test and a pre-op/driving test.

Student Curriculum
The NSTMOP recommends 24 hours of instruction, divided into six modules, that includes task sheets and skills and safe-driving instruction. The task sheets serve as the basis of the program. The curriculum can be obtained through the following two avenues:

- The National Book Network can be contacted for purchases. Your school or “institution” can be invoiced or pre-paid (customer’s preference) but purchases made in the name of an individual instructor require credit card pre-payment. Discounts for bulk orders are provided for instructors.
- Schools or “institutions” making purchases with National Book Network will need to work directly with a customer service representative in order to provide the information need to set up an account. The process is simple and quick. The contact info for National Book Network’s Customer Service Department is: Phone: 800-462-6420 – option 3 (follow prompts for Customer Service and from there for National Book Network). For questions please Email: customercare@nbnbooks.com

Instructor Information
The National Safe Tractor and Machinery Operation Program (NSTMOP) is primarily a training program for 14- and 15-year-olds seeking employment in production agriculture.

Completing the NSTMOP constitutes compliance with the training requirements of the U.S. Department of Labor’s Hazardous Occupations Order in Agriculture (AGHOs) law.

The curriculum of this program can also be used to teach new and inexperienced tractor operators of all ages and backgrounds on how to safely operate farm tractors and other machinery. In addition, the curriculum provides an introduction to farm and ranch hazards and risks. When students that are 16 years of age and older complete the program, formal evaluation (the written knowledge, operating skills and pre-op/driving tests) and the Department of Labor certificate of completion are not required. Instructors might nevertheless wish to take advantage of these components to add structure to their teaching.

<table>
<thead>
<tr>
<th>Age</th>
<th>Can take class</th>
<th>Can participate in practice driving</th>
<th>Can be tested</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;12</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>12 through 13</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>14 through 15</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>16+</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes, but not required</td>
</tr>
</tbody>
</table>

Important Age: Age of Participants
Youth between the ages of 14 and 15 can be certified only by Extension educators or by high school agriculture instructors (vocational agriculture teachers or agricultural science teachers). The signature of such an educator on the U.S. Department of Labor certificate indicates that a student has successfully passed all requirements of the training program. Only approved NSTMOP instructors can use the NSTMOP curriculum materials.

Instructor Requirements
To become an instructor, you must pass this course with a minimum score of 70%. Once certified, you will gain access to additional instruction materials, including the instructors' manual, PowerPoints to help you teach safety materials, and more.

For those seeking to become a certified NSTMOP Instructor our new online course can be accessed at Instructor Training Course.

If you have questions about the program please email Peggy Newel at png1@psu.edu or call 814-865-7685.

Student Curriculum
The NSTMOP consists of 24 hours of intensive instruction that includes task sheets and skills and safe-driving instruction. The task sheets serve as the basis of the program. The curriculum can be obtained through the following two avenues:

- The National Book Network can be contacted for purchases. Your school or “institution” can be invoice or pre-paid (customer’s preference) but purchases made in the name of an individual instructor require credit card pre-payment.

- Discounts for bulk orders are provided for instructors. The price has not changed, they are $23.50 each. The discounts are as follows: Units Returnable Non-Returnable 0-9 10% 10% 10-99 20% 30% 100-499 30% 40% 500+ 40% 50%

Schools or “institutions” making purchases with National Book Network will need to work directly with a customer service representative in order to provide the information need to set up an account. The process is simple and quick.
The contact info for National Book Network’s Customer Service Department is: Phone: 800-462-6420 – option 3 (follow prompts for Customer Service and from there for National Book Network). For questions please Email: customercare@nbnbooks.com Please reference ISBN# 9780913163498

Due to regulatory updates, a new edition of the student manual is under development with an anticipated publish date in 2020. In the interim, several addendums to the student manual are available to current instructors. Please contact the NSTMOP office at nstmop@psu.edu to receive a customized download link to the addendums.

After the instruction is complete, each student must complete a 50-question written knowledge test and obtain a minimum passing score of 70%. Students who successfully pass the written knowledge test are then permitted to take the operating skills and pre-op/driving tests. Upon successful completion of all parts of the NSTMOP, students receive a formal DOL certificate of completion.

**Student Information**

Youth ages 14 and 15 years old seeking employment in production agriculture must comply with the training requirements of the U.S. Department of Labor’s Hazardous Occupations Order in Agriculture (AgHOs) law.

As part of meeting the training requirements, youth must complete an approved training program. The National Safe Tractor and Machinery Operation Program (NSTMOP) is a comprehensive program that consists of 24 hours of intensive instruction that incorporates the use of task sheets accompanied by skills and driving instruction. After completing classroom instruction, each student must complete a 50-question written knowledge test and obtain a minimum passing score of 70%. Once a student successfully passes the knowledge test, he or she is then be permitted to take the program's operating skills and pre-op/driving tests. Upon successful completion of all parts of the NSTMOP, the student receives a formal DOL certificate of completion.

<table>
<thead>
<tr>
<th>Age</th>
<th>Can take class</th>
<th>Can participate in practice driving</th>
<th>Can be tested</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;12</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>12 through 13</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>14 through 15</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>16+</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes, but not required</td>
</tr>
</tbody>
</table>

Important: Age of Participants

**Curriculum**

Task sheets are the basis of the NSTMOP and were developed as part of a new and updated curriculum. Elements of the curriculum can be obtained through the following two avenues:

- The National Book Network can now be contacted for purchases. Your school or “institution” can be invoice or pre-paid (customer’s preference) but purchases made in the name of an individual instructor require credit card pre-payment. Discounts for bulk orders are provided for instructors. The price has not changed, manuals are $23.50 each. The discounts are as follows: Units Returnable Non-Returnable 0-9 10% 10% 10-99 20% 30% 100-499 30% 40% 500+ 40% 50% Schools or “institutions” making purchases with National Book Network will need to work directly with a customer service representative in order to provide the information need to set up an account. The process is simple and quick. The contact info for National Book Network’s Customer Service Department is: Phone: 800-462-6420 – option 3 (follow prompts for Customer Service and from there for National Book Network).Please reference ISBN# 9780913163498 For questions or purchase via email please contact: customercare@nbnbooks.com

- You may also use the links located below in the “Student Manual” and ”Modules and Task Sheets” section to download and print each section.

- Due to regulatory updates, a new edition of the student manual is under development with an anticipated publish date in 2020. In the interim, several addendums to the student manual are available to current instructors. Please contact the NSTMOP office at nstmop@psu.edu to receive a customized download link to the addendums.

**Student Manual**

The introduction to the student manual (available in English and Spanish) provides an overview of the NSTMOP program and a diagram of the skills and driving course. The manual includes an outline for the six modules in the NSTMOP and a diagram of the layout of the driving course. Each module focuses on a specific agricultural safety and health topic and addresses core competencies that each student should master through the completion of the course. After successfully completing the NSTMOP program (course work, written knowledge test, operating skills and pre-op/driving course tests), students receive a USDOL certificate of completion, which can be viewed in the student manual.

**Modules and Task Sheets**

Task sheets are the main curriculum for the NSTMOP and are divided into six modules. Click on the links below to review the task sheets for each module.

1. Introduction Module (task sheets 1.1-1.5): This module provides an overview of agriculture, types of risks, and regulations related to agricultural safety and health. -
English - Spanish

2. Safety Basics (task sheets 2.1-2.11): This module highlights youth safety and risk and discusses appropriate clothing and personal protective equipment (PPE), warning signs, hand signals, and basic first aid. - English - Spanish

3. Agricultural Hazards (task sheets 3.1-3.14): This module addresses hazards associated with machinery, animals, pesticides, electricity, confined spaces, and farm chemicals. - English - Spanish

4. The Tractor (task sheets 4.1-4.14.1): This module provides a comprehensive overview of the tractor, including but not limited to tractor types, hazards, controls, lightning, and starting and operating a tractor. - English - Spanish

5. Connecting and Using Implements with the Tractor (task sheets 5.1-5.6): This module focuses on various types of implements, such as drawbars, three-point hitches, and so on, and how they are connected and used with the tractor. - English - Spanish

6. Materials Handling (task sheets 6.1-6.10): This module focuses on three machines--skid steers, all-terrain vehicles (ATVs), and utility vehicles—that are used to transport materials on the farm. - English - Spanish

If you need to locate an NSTMOP instructor in your area, contact the NSTMOP office at nstmop@psu.edu.

Frequently Asked Questions

These questions are derived from the NSTMOP instructors.

Q. Can I teach this program to youth (14 and 15 year olds) if I am not an Extension Educator or Ag Instructor?

Yes, however you must have either an Extension Educator or an Ag Instructor present when testing. It is also required that you provide training materials. These individuals are often referred to as the Program Leaders or Community Lead Instructors. Instructors can download course materials from the HOSTA NSTMOP Instructor Material group on our online course management system. Please contact pngl@psu.edu for information.

Q. Where can certified instructors download course materials?

Instructors can download course materials from the HOSTA NSTMOP Instructor Material group on our online course management system. Please contact pngl@psu.edu for information.

Q. What paperwork do I need to fill out at the end of a course?

For each student, you should fill out three copies of the Department of Labor Certificate of Training (appendix J in the instructor manual): One copy for your records, One copy for the student for his or her records, and One copy for the student to give to his or her employer.

Q. How long do I need to keep my student records?

It is recommended that you keep documentation on the completion of training for three years or until the student reaches the age of 16.

Q. I have been a HOSTA master trainer since 2003 and would like to hold a workshop to train community lead instructors. Are there updated materials since this time? Am I responsible for providing training materials?

• Yes, materials have been updated. Both the student manual and Instructor manual were updated in 2013.

Q. I do not know how to drive a tractor. Can I still become an NSTMOP Instructor?

If you are uncertain of your tractor operation skills, plan to practice and familiarize yourself with skill activities and technical content either through professional development workshops or finding a local mentor through the NSTMOP program. We highly recommend that the instructor be an experienced driver with the ability to safely back the tractor in order to hitch properly to farm implements.

Q. Once a student has received the certification, can they drive a tractor on a public road?

Each state’s legislative body has passed laws that govern motor vehicle use in their state. Since farmers sometimes use the highways to transport farm equipment and products, special rules are included in the state motor vehicle code to assure agricultural producers use the roads safely. In Pennsylvania, 14 and 15-year-olds can operate farm tractors only on public roadways that bisect or adjoin their place of residence.

Please review Task Sheets 1.2.5 State Vehicle Codes and 4.14 Operating the Tractor on Public Roads for more information. Be sure you check with your State’s Codes to be compliant.

Q. I do not know how to drive a tractor. Can I still become an NSTMOP instructor?

If you need to locate an NSTMOP instructor in your area, contact the NSTMOP office at nstmop@psu.edu.

Q. Where can certified instructors download course materials?

Instructors can download course materials from the HOSTA NSTMOP Instructor Material group on our online course management system. Please contact pngl@psu.edu for information.

Q. What paperwork do I need to fill out at the end of a course?

For each student, you should fill out three copies of the Department of Labor Certificate of Training (appendix J in the instructor manual): One copy for your records, One copy for the student for his or her records, and One copy for the student to give to his or her employer.

Q. How long do I need to keep my student records?

It is recommended that you keep documentation on the completion of training for three years or until the student reaches the age of 16.

Q. I have been a HOSTA master trainer since 2003 and would like to hold a workshop to train community lead instructors. Are there updated materials since this time? Am I responsible for providing training materials?

• Yes, materials have been updated. Both the student manual and Instructor manual were updated in 2013.
YES, instructors should provide training materials. Student task sheets and manual can be downloaded from the "Student Information " section. Complete manuals can be purchased from Hobar.

Q. Can I substitute a skid steer or another vehicle in place of the tractor for this certificate training program?

No. This certificate program is specifically designed for Tractors (of over 20 power-take-off (PTO) horsepower) only.

Q. When is a support staff person available if I have questions or issues?

The NSTMOP office is open from 8:30 a.m. to 4:30 p.m. (EST) Monday through Friday, except on holidays. There is not a support person available on weekends, holidays, or after 4:30 p.m. (EST). We encourage you to prepare for courses ahead of time if they will take place outside of regular business hours. If you have questions, please contact the NSTMOP office at 814-865-7685 or via email at nstmop@psu.edu.

Q. Do I have any special liability concerns to think about if I hold a tractor safety training for youth?

The liability associated with conducting the NSTMOP is no different from that of any other educational program or activity that Extension agents or agriculture teachers engage in. As long as you have some form of approval as an instructor, and you are following normal teaching protocol, then you have the normal liability protection that all Extension agents and agriculture teachers have when they are teaching approved courses or curriculum's. All state Extension services and high schools have 501(c)3 status as nonprofit organizations. Specialists, agents and teachers are all employees and covered by their employer's liability policy or policies. If a county, state, or school normally has youths sign additional liability waiver forms or collects a small fee for insurance, then the organization should also do so for this program. Note that all practice sessions with tractors and equipment and all tests should be held on property that has injury and liability protection.

Q. Our school district does not own a tractor. What if we use a "borrowed" tractor for our classes, how does this impact our liability?

Your school district should contact their insurer to be sure you are following the policies that are contained within your contract. They should also be able to advise you if you would need any additional liability waiver forms. Most one day polices are for a small fee, which could be integrated into the course fee, if charged.

Q. A student younger than 14 years old wants to learn how to drive a tractor. Can I teach them during my NSTMOP course?

Students younger than 14 years old are not permitted to drive a tractor except on their home farm. Instructors should not let students younger than 14 years old drive a tractor at any time during the course. A 13-year-old can sit through the classroom only part of the training, but per regulation, they cannot do any tractor driving, skills testing, or practicing as part of the course until they are 14 years old. Note: It is recommended that the Written Exam, Operating Skills, and Driving Test be given within 60 days of each other.

Q. Is a 16 year old required to have this certificate to work on a farm?

According to the U. S. Department of Labor Fair Labor Standards Act of 1938 which was amended in 1968, individuals 16 years of age and older can be employed in agriculture without this certification. However, agricultural safety and health training is encouraged for farmworkers of any age.

Q. A previous student received her certificate in New York and is moving to Kentucky. Can she use her certificate in Kentucky?

The curriculum is universal and applies to any state in the United States. However, it is recommended that you check with each state's department of labor to see if their state labor work regulations for youth under the age of 18 are more restrictive than the federal regulations. The most restrictive regulations normally take precedence.

Q. On more than one occasion, I have had young women from various religious sectors ask if they can participate in the NSTMOP training. My concern is for their safety due to wearing loose clothing. It is recommended in the Instructor manual that proper dress for test participation should be snug-fitting clothing and/or long pants. Inappropriate dress includes baggy pants, shorts, sandals, jewelry, watches, and necklaces. Should I permit them to take the Operating and Driving Exam?

Safety is always our number one concern. The NSTMOP does not recommended wearing any type of loose clothing or accessories during the Operating skill test and the Driving test. The final decision, however, about what to allow always rests with the instructor. You may be able to find a reasonable accommodation by speaking with the student and parents. The official USDA certificate of completion cannot be issued if the student does not complete all three parts of the testing procedure.

Q. How does the Independent Study option work?

The NSTMOP materials are designed to be used in a variety of instructional settings. They can be used in:

- a traditional classroom setting (secondary level agricultural classroom setting),
- an Extension/4-H program,
- an independent study format, or
- a combination of these.

There are 48 Task Sheets identified as core (C) that cover the MCCA topics and should be used to prepare students for the NSTMOP Written Test. Written test questions come from these Task Sheets. To meet current requirements of the USDOL HOOA exemption, at least 24 hours should be devoted to these topics.
Students who cannot access 4-H or secondary agriculture classes can use Task Sheets of the NSTMOP program and other educational resources (i.e. Deere & Company's Farm and Ranch Safety Management book, other written texts, other instructional task sheets, student worksheets, tractor and machine operator and service manuals, demonstrations, vendor tractor and equipment safety videos, reputable Internet resources, AgSafety4U online course and guest speakers) along with the Skills and Driving test guidelines and forms, to prepare for testing through the nearest Community Lead Instructor (CLI). These other resources are not substitutes for the NSTMOP course. The student must still maintain contact with the CLI and complete and pass all required exams.

Success for the student selecting the independent study option is increased by:

- The student working with a mentor (parent, teacher, neighbor, farmer, etc.), to answer questions that come up during the study of the Task Sheets.
- The student maintaining contact with the CLI to communicate progress, requesting sample test questions to measure strengths and weaknesses encountered, and to be on track for meeting test dates and times.

The CLI must maintain contact with the student to assure focus and progress toward test date(s). **Note:** It is recommended that the Written Exam, Operating Skills and Driving Test, be given within 60 days of each other.

**Q. How do I handle students who have an Individual Education Plan (IEP) and want to participate in the NSTMOP?**

There are several factors that impact the answer to this question, and instructors must always use professional judgment in responding to the particular needs of individual students.

The NSTMOP is not a mandatory program or course offering. This means that students are not required to take the NSTMOP, no institution is required to offer the course, and instructors are not required to modify an IEP so that a student can participate in the NSTMOP.

In addition, the NSTMOP is primarily for students who expect to be employed outside of school time on a farm, outside of school time, by someone other than a parent or legal guardian. If employment operating agricultural equipment is not a realistic expectation of the IEP student or his or her parents or guardians, the student need not complete the program.

Finally, note that your employer might require informed consent (IC) before the student can participate in the NSTMOP. The IC document must be signed by a parent or legal guardian and the student. The IC indicates, among other things, that the student is 14 years of age and "[does] not have any physical or mental limitations for participation in this project." The NSTMOP should not be offered to anyone for whom this statement would be inaccurate. In most cases, a phone call to the parent or legal guardian to explain the purpose and requirements of the NSTMOP resolves any issues.

IEP students who do not complete the program might nevertheless benefit from some level of participation in the NSTMOP. For instance, they may be able to participate in all learning activities, such as educational sessions and the written exam, aside from the skills and driving tests (including any practice sessions). Any student may have test questions read aloud to him or her and may have extra time to complete the written exam. If you allow an IEP student to participate in only the educational part of the NSTMOP, you do not need to obtain an IC, nor do you need a program evaluation form from the student.

**Contact Information**
National Safe Tractor and Machinery Operation Program The Pennsylvania State University Agricultural and Biological Engineering Ag Safety and Health University Park, PA 16802 Phone: 814-865-7685 Email: nstmop@psu.edu

**Authors**
Dennis Murphy, Ph.D.
Nationwide Insurance Professor Emeritus

extension.psu.edu

Penn State College of Agricultural Sciences research and extension programs are funded in part by Pennsylvania counties, the Commonwealth of Pennsylvania, and the U.S. Department of Agriculture.

Where trade names appear, no discrimination is intended, and no endorsement by Penn State Extension is implied.

**This publication is available in alternative media on request.**

Penn State is an equal opportunity, affirmative action employer, and is committed to providing employment opportunities to all qualified applicants without regard to race, color, religion, age, sex, sexual orientation, gender identity, national origin, disability or protected veteran status.

© The Pennsylvania State University 2019
Code: ART-4294