

# New York State Safe Tractor and Machinery Operation Program Certification Guidelines



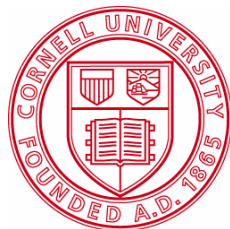
4-H Youth Development



Revised in 2008 by:

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**(Revised from 1999 Tractor and Machinery Certification Training Program Guidelines)**



**Cornell University**  
Cooperative Extension

## Preface

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Agriculture continues to be recognized as one of the most hazardous industries in the United States. According to the Department of Labor's Bureau of Labor Statistics (BLS) 2005 data, there were an estimated 31.4 fatalities per 100,000 workers in agricultural occupations. This fatality rate is *eight* times greater than the fatality rate for all industries combined (4.0/100,000 workers) and indicates a continuing need to improve safety in the agricultural work place. Youth ages 16-19 employed in agriculture, incur an estimated 3.3 injuries/100 farm household youth as compared to 2.3 injuries/100 non-farm youth. BLS data (2004-05) also indicate a fatality rate of 12.5 deaths/50,000 youth agricultural workers, while the fatality rate for youth in non-agricultural jobs is 1.6/50,000. Many of these deaths are tractor-related. National Safety Council data indicates that tractor and machinery related fatalities account for 50% of all agricultural fatalities annually. Data on agricultural fatalities in New York State mirrors that of the national statistics; 43% of farm fatalities during 1996-2000 were tractor-related.

For rural youth, part-time and summer work on farms and in other agribusiness ventures provides them with a viable opportunity to earn money and gain valuable work skills in locations where jobs are not too plentiful. These part-time positions can lead to career awareness, full-time positions, and establishment of important skills and good references. Safety is an important job skill that employers require and reward. The NYS Safe Tractor and Machinery Operation Program will provide participating youth with the education needed to:

- appreciate the dangers of farm work activities;
- understand how to act safely in different farm work settings;
- obtain safety information about equipment that they may be asked to operate;
- identify and correct farm hazards to prevent injuries and illnesses;
- educate others on safe farm work practices;
- explore and secure job opportunities.

In essence, the main goal of the program is to educate youth to be responsible for their own safety in the farm work place.

Most farm youth learn how to complete farm work activities by watching their parents or others and many times these practices are unsafe. Other youth have no farm background, yet they want to work on a farm. The NYS Safe Tractor and Machinery Operation Program will help all youth who work in agriculture to be safer employees. In addition, they can promote safe work practices and identify hazards in the work place.

The following guidelines have been developed to assist you in conducting the NYS Safe Tractor and Machinery Operation Program. This program will provide youth ages 14 or 15 who successfully complete the training, the opportunity to be employed in agricultural work activities such as operating a tractor over 20 PTO hp and specified power-driven equipment.

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# NYS SAFE TRACTOR AND MACHINERY OPERATION PROGRAM CERTIFICATION GUIDELINES

Revised: January 2008

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Originally produced by Cornell Cooperative Extension, 4-H Youth Development in cooperation with the 1999 4-H Tractor Certification Work Group funded, in part, by a grant from the New York State 4-H Foundation. Revised by: Ellen Abend, Extension Associate and Kimberly Fleming, State 4-H Program Specialist.

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## ***U.S. Department of Labor Regulations on Hazardous Occupations in Agriculture***

In January, 1970, Part 1500 of Title 29 of the Code of Federal Regulations declared certain occupations in agriculture to be particularly hazardous for the employment of youth below the age of 16. Through this regulation Tractor and Machinery Certification programs were initiated to provide exemptions from the first two requirements. There are no restrictions on employment of workers 16 years of age or older in agricultural work activities.

The Hazardous-Occupations Order for Youth Under 16 makes it unlawful to hire or even permit without pay any youth under the age of 16 to participate in any work activities listed as hazardous, unless:

1. The youth is working on a farm owned or operated by the youth's parents or legal guardian, or
2. The youth has a training certificate which provides an exemption from certain hazardous work activities, or
3. The youth is employed under a cooperative student-learner program in which there is a written agreement between the employer and the school.

The designated hazardous work activities are listed on pages 2 and 3. Any 14 or 15 year old is allowed to work outside of school hours in any job not listed as a hazardous job activity. These non-hazardous activities may even be done by youth under the age of 14 if they are employed by their parent or guardian on a farm owned and operated by the parent or guardian.

Youth who are 12 or 13 years of age may also be employed on other farms in jobs not classified as hazardous if they have the written consent of their parent or guardian. Written consent is not required for youth who are 12 or 13 years old and work on a farm where their parent or guardian is also employed.

### ***Training Program Allows Exemptions to Youth Under 16***

The NYS Safe Tractor and Machinery Operation Program allows for youth under the age of 16 who successfully complete the program to engage in agricultural work activities listed below if they are 14 or 15 years of age despite the fact the activities are listed as "agricultural work activities classified as hazardous for youth under 16." Youth who do not successfully complete or participate in the training program cannot be employed to do any of the following activities in addition to those listed as "Prohibited Agricultural Work Activities Classified As Hazardous for Youth Under 16."

This training allows youth who successfully complete requirements to operate a tractor over 20 PTO horsepower and to operate or assist to operate equipment listed below. This includes starting, stopping, adjusting, feeding, or any activity involving physical contact associated with the operation of the equipment listed. This equipment includes: hay mower, hay baler, forage harvester, forage blower, unloading mechanism of a non-gravity-type self-unloading wagon or trailer, grain combine, corn picker, auger conveyor, feed grinder, crop dryer, cotton picker, power post-hole digger, power post driver, a non-walking type rotary tiller, potato digger, or mobile pea viner.

## ***Prohibited Agricultural Work Activities Classified as Hazardous for Youth Under 16***

Regardless of training certification, youth cannot participate in the following Agricultural Work Activities Classified as Hazardous for Youth under 16:

1. Specialized Machinery - Operating or assisting to operate machinery listed below. This includes starting, stopping, adjusting, feeding, or any other activity involving physical contact associated with the operation of the listed machines. These machines include: trencher or earthmoving equipment; forklift; potato combine; power-driven circular, band or chain saw.
2. Livestock - Working on a farm in a yard, pen or stall with the following livestock: a bull, boar, or stud horse maintained for breeding purposes; or sow with suckling pigs; or a cow with a newborn calf (with umbilical cord present).
3. Woodlot Operations - Felling, bucking, skidding, loading, or unloading timber with butt diameter of more than 6 inches.
4. Ladder and Scaffold - Working from a ladder or scaffold at a height of over 20 feet. This includes painting, repairing, or building structures; pruning trees; picking fruit; etc.
5. Transport - Driving a bus, truck or automobile when transporting passengers, or riding on a tractor as a passenger or helper.
6. Toxic Environments - Working inside an upright silo within 2 weeks after silage has been added or when top unloading device is in operating position; a manure pit; a horizontal silo while operating a tractor for packing purposes; and in a fruit, forage, or grain storage designed to retain an oxygen deficient or toxic atmosphere.
7. Agricultural Chemicals - handling or applying agricultural chemicals classified under the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. 135 et seq.) as Category I of toxicity, identified by the word “poison” and the “skull and crossbones” on the label; or Category II of toxicity, identified by the word “warning” on the label. These activities include cleaning or decontaminating equipment, disposal or return of empty containers, or serving as a flagman for aircraft applying chemicals.
8. Blasting - handling or using a blasting agent, including but not limited to: dynamite; black powder; sensitized ammonium nitrate; blasting caps; and, primer cord.
9. Fertilizers - Transporting, transferring, or applying anhydrous ammonia.

## ***Agricultural Work Activities Not Covered Under Hazardous Occupations Order for Youth Under 16***

Below are some of the typical farm activities that youth may participate in without receiving training. They are not necessarily recommended. For specific minimum age and work requirements refer to Laws of Governing the Employment of Minors in New York State (September, 1996).

- Pruning Christmas trees
- Mowing lawns
- Picking berries
- Picking tree fruit (on ladders less than 20 feet off the ground)
- Picking vegetables
- Milking cows (not cows with newborn calves)
- Feeding hogs or chickens (without an auger conveyor and not sows with suckling pigs)
- Operating a garden-type tractor (under 20 horsepower)
- Work on transplanter
- Loading hay bales on a wagon
- Unloading hay bales onto a portable elevator
- Detasseling corn
- Carpentry (but not using a power saw)
- Painting machinery
- Trimming and pruning hedges, grape vines, etc.
- Handling irrigation pipes
- Harvesting or curing tobacco
- Fueling tractor and performing machinery maintenance
- Riding a horse
- Setting fence posts and repairing fences, and numerous other jobs

## ***Objectives of the NYS Safe Tractor and Machinery Operation Certification Training Program***

The overall objective of the Hazardous Occupation Order and training program is to prevent injuries and fatalities associated with farm work to youth under the age of 16. In addition, the training provided to the youth participating in the program will help to prevent farm injuries well beyond the age of 16. Specific objectives of the program are:

1. To provide youth with the means to develop positive attitudes toward tractor and machinery safety.
2. To provide youth with education on the basic principles of tractor and machinery safety.
3. To allow youth to acquire basic knowledge and ability and to develop safe work practices in the use of tractors and machinery.

4. To provide youth with education on how to identify and correct agricultural work hazards.
5. To prepare youth to find and secure a job, explore and discover career options, and take responsibility to learn and work in the agricultural industry.

## ***NYS Safe Tractor and Machinery Operation Program Requirements for Exemptions***

### ***I. Cooperative Extension Training Program***

The 1970 Federal Registry and the September 4, 1998, NYS DOL Labor Law Section 133.5 (Revised 7/95) -- Occupations in Agriculture Particularly Hazardous for the Employment of Children Below the Age of 16 offers two different certification options. Youth can be certified in Tractor Operation or with additional training a youth can be certified in Tractor and Machinery Operation. The New York State Safe Tractor and Machinery Operation Program follows the National Safe Tractor and Machinery Operation Program which requires a minimum of 24 hours of training for both tractor and machinery operation certification. Most farm employees – including 14 and 15 year olds – operate machinery as well as tractors while working on a farm and will benefit from additional safety training.

#### ***A. Requirements***

1. The youth must enroll or be currently enrolled as a 4-H member or within a 4-H Special Interest program. If students are enrolled within a 4-H Special Interest program, the Cornell Cooperative Extension Association must elect to have 4-H Accident Insurance for 4-H Special Interest programs.
2. The youth must be 14 years of age or older in order to drive a tractor during the certification course. Thirteen year olds may participate in the class for safety awareness. They may only get certified if they turn 14 and pass the driving exam within 60 days of taking the final written exam pending all other requirements are met.
3. The youth must complete 24 hours of instruction including the Minimum Core Content Areas of the National Safe Tractor and Machinery Operation Program (NSTMOP) guidelines and materials.
4. The youth must pass a standardized written examination on tractor and machinery safety based on the NSTMOP materials. (See Appendix A for sample exam. Refer to NSTMOP “Written Test Guidelines” for more details on testing and scoring.)
5. The youth must demonstrate the ability to operate a tractor safely with a two-wheeled trailed implement on a course similar to the recommended course in NSTMOP. (See Appendix B or the NSTMOP website at: <http://www.nstmop.psu.edu/> for Skills and Driving Test Layout Map. Refer to NSTMOP “Skills and Driving Test Guidelines” for more tools and details on testing and scoring.)

## ***II. Agricultural Education/Vocational Agriculture Training Program***

### ***A. Requirements***

The youth must meet the following criteria:

1. The student must be 14 years of age or older in order to drive a tractor during the certification course. Thirteen year olds may participate in the class for safety awareness. They may only get certified if they turn 14 and pass the driving exam within 60 days of taking the final written exam pending all other requirements are met.
2. The youth must complete 24 hours of instruction including the Minimum Core Content Areas of the National Safe Tractor and Machinery Operation Program (NSTMOP) guidelines and materials.
3. The youth must pass a standardized written examination on tractor and machinery safety based on the NSTMOP materials. (See Appendix A for sample exam. Refer to NSTMOP “Written Test Guidelines” for more details on testing and scoring.)
4. The youth must demonstrate the ability to operate a tractor safely with a two-wheeled trailed implement on a course similar to the recommended course in NSTMOP. (See Appendix B or the NSTMOP website at: <http://www.nstmop.psu.edu/> for “Skills and Driving Test Layout Map.” Refer to NSTMOP “Skills and Driving Test Guidelines” for more tools and details on testing and scoring.)

### ***B. Agricultural Education Student Learners Program Exemption***

If an agricultural education department chooses to meet certain requirements, they can qualify to offer the student learner option exemption. This allows any agricultural education student to work in any of the two agricultural work activities classified as hazardous for youth under 16 years of age listed on pages 2 and 3 as well as the first four “Prohibited Agricultural Work Activities Classified as Hazardous for youth under 16 listed on page 3. There must be a written agreement, properly signed and filed which states that: training is the major purpose and the work is incidental; the work shall be intermittent, for short periods of time and under the direct and close supervision of a qualified and experienced person; safety instruction shall be given by the school and correlated by the employer with on-the-job training; and, a schedule of organized and progressive work processes to be performed on the job have been prepared. Reference “Occupations in Agriculture Particularly Hazardous for the Employment of Children Below the Age of 16.” (Statutory authority: Labor Law 11[5]). Exemptions. Reissued 7/95.

## *Training Program Materials*

- A. For basic coordination of the Tractor/Tractor and Machinery Operation Training and Certification Program, obtain the following from Cornell Cooperative Extension 4-H Youth Development, 340 Roberts Hall, Ithaca, NY 14853 at (607) 255-6506 or from the State 4-H Staff website at: <http://nys4h-staff.cce.cornell.edu/TractorSafety.php>
  - 1. New York's Tractor and Machinery Certification Training Program Guidelines (2008)
  - 2. Training Certificates - Students who successfully complete the training program for either Tractor and Machinery Operation exemption are to be provided with a Certificate of Training. See Appendix C for sample Certificate of Training. Certificates of Training are available from Kimberly Fleming, Cornell Cooperative Extension 4-H Youth Development, 340 Roberts Hall, Ithaca, NY 14853 or by email at [kff2@cornell.edu](mailto:kff2@cornell.edu). The Extension Educator must submit on the master score sheet a list of all students with their addresses, dates of birth and test scores, who successfully completed the training program and all certification requirements. See Appendix D for the Master Score Sheet, NYS version.
  
- B. Use the following materials available from HOSTA's National Safe Tractor and Machinery Operation Program, <http://www.nstmop.psu.edu/>
  - 1. HOSTA National Safe Tractor and Machinery Operation Program. Student Manual
  - 2. HOSTA National Safe Tractor and Machinery Operation Program Instructor's Manual.
  
- C. Other Resources – see Appendix E for a list of supplementary educational resources and teaching aids.

## *Suggested Training Procedure*

Involve as many people in your county or community as possible. This includes Cornell Cooperative Extension educators, agricultural education instructors, county public health nurses, emergency medical service personnel, first responders (FARMEDIC), first-aid instructors, machinery dealers, farm supply stores, farmers and farm families, other youth, and many others. These people can serve as a member of a planning group, guest instructor, or host for a field trip.

- A. Registration - At the beginning of the first training session or when students are signing up for course use Tractor Certification Course Registration Form. The CCE Acknowledgement of Risk form is on the back. See Appendix F for sample form which requires the following information:
  1. Name
  2. Address
  3. Home Phone Number
  4. Social Security Number
  5. Date of Birth
  6. Name of Parent or Legal Guardian
  7. Acknowledgement of Risk form to be signed by parent or guardian
  
- B. Throughout the course, the instructor should record the additional information on the Master Score Sheet – NY Version. See Appendix D for sample Master Score Sheet form which records the following information:
  1. Name and address of student
  2. Date of Birth of each student
  3. Exam scores for written, skills and driving test
  4. If student successfully passed the course, did not pass or is “Under 14”
  5. A class attendance sheet with date and number of hours for each class and attendance of each student should also be kept to ensure 24 hour minimum instruction time is met for tractor and machinery operation certificate.
  6. Date Certificate of Training was issued to student
  
- C. Provide an overview of the common types of agricultural injuries, illnesses, and fatalities that occur on New York farms.
  
- D. Use the HOSTA National Safe Tractor and Machinery Operation Program. The instructor’s manual includes outlines, resources, and test questions. The student manual has questions at the end of each student task sheet.
  
- E. Obtain farm safety and health material from local organizations to share with the youth. See Appendix E for a list of organizations with resources.
  
- F. Emphasize how many agricultural work hazards can be controlled by acquiring knowledge on how to recognize and correct hazards.

- G. Have students complete hazard inspections of farm tractors, farm equipment, and self-propelled equipment. This may be done as a class activity or independently on a family farm.
- H. Utilize field trips to provide a better educational setting for explaining various farm hazards. Suggested field trips include: a tractor and machinery dealer; private farm; or an Agricultural Research Station.
- I. Invite others in your county and community who can provide presentations on various aspects of farm safety and emergency response to farm injuries.
- J. Help students prepare for promising future employment. Incorporate workforce preparation into safety lessons.
  - 1. Stress that safety is an important job skill. Employers want safe employees. Job performance reviews and sometimes pay raises can be affected by the safety skills an employee practices from day to day.
  - 2. Instructors, Extension educators, and each guest speaker throughout the course should briefly speak about what career they are in and why, training and education are required, and good and bad points of current position. This will help to expand each student's awareness of career potentials. Offer hints on what to look for in selecting a career such as education required, expected rewards, and potential challenges.
  - 3. Ask students to list potential careers related to farm management, machinery operation, agricultural engineering, and agricultural education. Career fields may include: agricultural educator; agricultural engineer; equipment/implement dealer; Extension educator; farm manager; farm mechanic; feed manager; field crop manager; health educator; herdsman; safety specialist; tractor and equipment engineer/designer, etc.
  - 4. Introduce SCANS skills as they relate to tractor and machinery related jobs and encourage students to develop these skills. See Appendix G for Sample Outline of SCANS Competencies and SCANS Foundation skills important for employees in agriculturally-related positions.
  - 5. For one homework assignment, have each student write an essay on a career he/she would most likely consider in this field and why.

## *Employer Responsibility*

Students who successfully complete the training program for the Safe Tractor and Machinery Operation Program are to be provided with a Certificate of Training. The youth should provide a copy of the certificate to their employer along with a letter to the employer from the Cornell Cooperative Extension Educator. See Appendix H for sample letter to the employer.

By law, the employer is to:

1. Train the youth, including those over 16 years of age on the safe and proper operation of the equipment that they are to operate;
2. Have on file records for any employees under 16 years of age who are operating tractors and machinery indicating the youth's name, address and date of birth. The Safe Tractor and Machine Operation Program Certificate of Training should be maintained in the file.
3. Employers are to also maintain close supervision of youth under the age of 16 whenever possible. If close supervision cannot be maintained, periodic checks must be made on the youth midmorning, noon, and mid-afternoon.
4. Accidents are to be reported to proper authorities including the instructor or the training program.
5. Employers who violate the provisions of the "Hazardous Occupations Order for Youth under 16 years of Age" may be subject to a civil penalty of up to \$1,000. A willful or intentional violation of the regulation can result in a fine of up to \$10,000; or for a second offense committed after conviction of a similar offense may result in a fine of not more than \$10,000, or imprisonment for not more than 6 months, or both.

## *NSTMOP Sample Written Test*

### *Appendix A*

1. What is not a safe practice when working near a manure storage facility?

- A. smoking around the storage area
- B. ventilating the storage area
- C. warning workers and visitors
- D. locking entry access

Correct Answer: A

2. True or False? You can contact the agricultural safety specialist at your state university for agricultural safety information.

Correct Answer: True

3. True or False? Two recommended types of hearing protection are acoustical muffs and ear plugs.

Correct Answer: True

4. At what moisture content does stored hay become a fire risk?

- A. 1-5%
- B. 6-10%
- C. 11-20%
- D. over 25%

Correct Answer: D

5. True or False? Welding fumes pose no breathing hazard.

Correct Answer: False

6. Work on a farm can be:

- A. irregular, erratic, and uncertain
- B. steady, calm, and predictable
- C. rigid, specialized, and homogenous
- D. irregular, calm, and homogenous

Correct Answer: A

7. To prevent heat-related illness, you should:

- A. do the hardest jobs in the afternoon
- B. drink caffeinated drinks
- C. take periodic breaks in the shade
- D. limit water intake

Correct Answer: C

8. True or False? There is no standard retirement age for agriculture.

Correct Answer: True

9. Wind speeds in a tornado can reach up to:

- A. 150 mph
- B. 250 mph
- C. 1000 mph
- D. 2000 mph

Correct Answer: B

10. Which skid steer loader practice is NOT a safe work practice?

- A. lowering the bucket for travel
- B. using slower speeds over rough ground
- C. avoiding overhead power lines
- D. carrying a passenger in the bucket

Correct Answer: D

11. Which of the following is a potentially hazardous traffic situation?

- A. wide machine being transported
- B. left turns across traffic into narrow field lanes
- C. slow tractor travel speeds
- D. all of the above

Correct Answer: D

12. True or False? All tractors should have a PTO master shield to protect workers.

Correct Answer: True

13. Which of the following increases the chance of a rollover?

- A. leaving the tractor seat without first shutting off the tractor
- B. lack of a ROPS and seat belt
- C. no master PTO shield
- D. driving near an embankment

Correct Answer: A

14. What percent of tractor-related fatalities come from tractor overturns?

- A. 0.1
- B. 0.25
- C. 0.5
- D. 0.75

Correct Answer: C

15. True or False? Ground speed controls are designed to be used by pushing forward to move forward and pulling to the rear to move the tractor in reverse.

Correct Answer: True

16. True or False? SMV emblems are made of a material that does not fade and never needs to be replaced.

Correct Answer: False

17. According to NAGCAT, which age group is recommended for driving an articulated tractor?

- A. 12-13 year-olds
- B. 14-15 year-olds
- C. 16+ year-olds
- D. there is no age limit

Correct Answer: C

18. To prevent runaways when parked with heavy tractor loads, you should:

- A. chain wheels together
- B. unhitch the load
- C. chock the wheels
- D. let out some tire pressure

Correct Answer: C

19. What can happen if you crank the tractor's starter motor too long?

- A. The starter motor can be damaged
- B. The battery can be run down
- C. nothing can happen
- D. a and b are likely to happen

Correct Answer: D

20. Throttle controls next to the tractor seat increase engine speed when moved:

- A. rearward and downward
- B. rearward and upward
- C. forward or upward
- D. forward or downward

Correct Answer: C

21. When operating a high lift bucket, where should you keep the bucket while moving the tractor?

- A. as low as possible
- B. as high as possible
- C. halfway up
- D. it doesn't matter

Correct Answer: A

22. The letters "ROPS" stand for:

- A. rear-over protection source
- B. rolling protective source
- C. rollback protective structure
- D. rollover protective structure

Correct Answer: D

23. True or False? At the end of a day's work, it does not matter if equipment attached to the tractor is lowered to the ground or left in the upright position.

Correct Answer: False

24. What must you do to the tractor engine before engaging the PTO to operate an implement?

- A. slow down the RPMs
- B. speed up the RPMs
- C. maintain idle speed
- D. RPMs do not affect PTO operation

Correct Answer: B

25. The ROPS on a tractor:

- A. prevents overturns
- B. protects the seat-belted operator from being crushed to death in an overturn
- C. is used to provide air-conditioning to tractor cabs
- D. is sold as optional equipment only

Correct Answer: B

26. What type of controls are pedals?

- A. hand controls
- B. foot controls
- C. combination controls
- D. all of the above

Correct Answer: B

27. True or False? Field conditions do not pose any special hazards to tractor operators.

Correct Answer: False

28. True or False? When tractors have no shock absorbers, the tires must absorb all ground shocks.

Correct Answer: True

29. Which lethal gas is given off by a gasoline engine?

- A. carbon dioxide
- B. carbon trioxide
- C. carbon monoxide
- D. carbon tetrachloride

Correct Answer: C

30. True or False? States vary in their highway regulations regarding the ages and places where someone can operate a farm tractor.

Correct Answer: True

31. True or False? A red-color coded control could be used for a gearshift knob to catch a new operator's attention.

Correct Answer: False

32. Bypass starting of older tractors may result in operator death from:

- A. being run over by the tractor when it starts
- B. being thrown from the tractor when it starts
- C. being shocked by the starter
- D. being pulled into the starter

Correct Answer: A

33. What is the recommended minimum distance for SMV emblem visibility by ASAE?

- A. 100 ft
- B. 600 ft
- C. 500 ft
- D. 200 ft

Correct Answer: B

34. To move a skid steer loader forward in a straight line, the operator must

- A. push the hand control levers forward
- B. pull the hand control levers rearward
- C. push only the left hand control lever forward
- D. push only the right hand control lever forward

Correct Answer: A

35. Tractor brake pedals are located on the:

- A. right side
- B. left side
- C. can be on either side
- D. left of the clutch

Correct Answer: A

36. Which of the following can extend the life of tractor tires?

- A. ignoring tire repairs
- B. driving at high speeds
- C. checking tire pressure regularly
- D. allowing excess slippage

Correct Answer: C

37. True or False? To lower equipment with a foot control, push forward with your foot.

Correct Answer: True

38. According to NAGCAT, which age group should not be assigned the task of pesticide application?

- A. 12-13 year-olds
- B. 14-15 year-olds
- C. 16+ year-olds
- D. all of the above

Correct Answer: D

39. True or False? Use a lower gear to start moving and a higher gear for operation.

Correct Answer: True

40. True or False? When backing a tractor with an implement, use a low engine speed and always maintain foot contact with the clutch and brake.

Correct Answer: True

41. The saying "riding the clutch" means you are:

- A. popping wheelies
- B. releasing the clutch pedal fully
- C. resting your foot on the clutch pedal
- D. stalling the tractor

Correct Answer: C

42. Which of the following scenarios is NOT a designed use of a farm tractor?

- A. operating a PTO-powered implement
- B. dragging logs from the woods
- C. towing a wagon

D. using a high-lift bucket to move silage

Correct Answer: B

43. Start the tractor engine with the:

- A. clutch pushed in and the brake on.
- B. clutch pushed in and the brake off.
- C. clutch out and the brake on.
- D. clutch out and the brake off.

Correct Answer: A

44. A tractor has one seat for the operator. Passengers should:

- A. stand on the drawbar
- B. hold onto the fenders
- C. sit on the axle
- D. never be allowed to ride on the tractor

Correct Answer: D

45. Power-engagement controls are associated with:

- A. changing engine speed
- B. turning lights on/off
- C. breaking the tractor
- D. activating the PTO

Correct Answer: D

46. True or False? A person can easily be knocked out of a pan-type tractor seat.

Correct Answer: True

47. True or False? For every degree the tractor is turned tighter, there is an equal amount of increased centrifugal force.

Correct Answer: True

48. True or False? Young, inexperienced operators are often assigned to the newer and safer tractors and equipment.

Correct Answer: False

49. True or False? Orange color-coded controls are used to operate the 3-point hitch.

Correct Answer: False

50. True or False? When cars are traveling slowly behind the tractor you are driving, you should signal the traffic to pass you.

Correct Answer: False





# National Safe Tractor and Machinery Operation Program

## Guidelines and Materials

## Appendix C

### USDOL Certificate of Training

#### CERTIFICATE OF TRAINING

This is to certify that: Certificate No. USDL \_\_\_\_\_

\_\_\_\_\_  
(Name) (Date of Birth) Date \_\_\_\_\_

\_\_\_\_\_  
(Address) (Zip Code)

is 14 years of age or more and has successfully completed the \_\_\_\_\_  
training program and examinations in: (4-H or Vo-Ag)

- (Cross out one) 1. Tractor Operation
- 2. Tractor and Machinery Operation

as specified by the U.S. Department of Labor in the Agricultural Hazardous Occupations Order (Subpart E-1 of 29 CFR, Part 570) pertaining to the employment of youth under 16 years of age.

Certifying Authority (Extension Agent or Vocational Agriculture teacher only)	Person who conducted the training program
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#### TO THE EMPLOYER

1. The above youth is qualified to be employed as (a) a tractor operator as described in item 1 on the reverse side of this sheet; or (b) as both a tractor and machinery operator as described in items 1 and 2 on the reverse side of this sheet, if certified for both tractor and machinery operation. This certificate is acceptable by the U.S. Department of Labor as proof of training.

U.S. Department of Labor  
Employment Standards Administration  
Office of Fair Labor Standards

2. The above youth may not be employed in any of the occupations listed in items 3 through 11 described on the reverse side of this sheet.
3. This certificate does not certify training in adjustment of equipment or proficiency in operation, nor does it mean that the holder knows how to safely operate any particular make or model of tractor or machine.
4. It is the responsibility of the employer to instruct the employee on the safe and proper operation of the equipment he is to use.
5. The U.S. Department of Labor requires the employer to "maintain close supervision where feasible, or, where not feasible, in work such as cultivating, the employer or his representative checks on each youth's progress at least midmorning, noon, and midafternoon.
6. Any accident that results in an injury to this person should be reported by the employer to the proper authority including the certifying authority who signed this certificate.
7. This certificate must be kept on file by the employer.

#### OCCUPATIONS IN AGRICULTURE PARTICULARLY HAZARDOUS FOR THE EMPLOYMENT OF CHILDREN BELOW THE AGE OF 16

- Item ( 1). Operating a tractor of over 20 PTO horsepower, or connecting or disconnecting an implement or any of its parts to or from such a tractor.
- Item ( 2). Operating or assisting to operate (including starting, stopping, adjusting, feeding, or any other activity involving physical contact associated with the operation) any of the following machines:
  - ( i) Corn picker, cotton picker, grain combine, hay mower, forage harvester, hay baler, potato digger or mobile pea viner;
  - ( ii) Feed grinder, crop dryer, forage blower, auger conveyor, or the unloading mechanism of a nongravity-type self-loading wagon or trailer; or
  - (iii) Power post-hole digger, power post driver, or nonwalking rotary tiller.
- Item ( 3). Operating or assisting to operate (including starting, stopping, adjusting, feeding, or any other activity involving physical contact associated with the operation) any of the following machines:
  - ( i) Trencher or earthmoving equipment;
  - ( ii) Fork lift;
  - (iii) Potato combine; or
  - (iv) Power-driven circular, band, or chain saw.
- Item ( 4). Working on a farm in a yard, pen, or stall occupied by a:
  - ( i) Bull, boar, or stud horse maintained for breeding purposes; or

( ii) Sow with suckling pigs, or cow with newborn calf (with umbilical cord present).

- Item ( 5). Felling, bucking, skidding, loading, or unloading timber with butt diameter of more than 6 inches.
- Item ( 6). Working from a ladder or scaffold (painting, repairing, or building structures, pruning trees, picking fruit, etc.) at a height of over 20 feet.
- Item ( 7). Driving a bus, truck, or automobile when transporting passengers, or riding on a tractor as a passenger or helper.
- Item ( 8). Working inside:
  - ( i) A fruit, forage, or grain storage designed to retain an oxygen deficient or toxic atmosphere;
  - ( ii) An upright silo within 2 weeks after silage has been added or when a top unloading device is in operating position;
  - (iii) A manure pit; or
  - ( iv) A horizontal silo while operating a tractor for packing purposes.
- Item ( 9). Handling or applying (including cleaning or decontaminating equipment, disposal or return of empty containers, or serving as a flagman for aircraft applying) agricultural chemicals classified under the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. 135 et seq.) as Category I of toxicity identified by the word "poison" and the "skull and crossbones" on the label; or Category II of toxicity, identified by the word "warning" on the label;
- Item (10). Handling or using a blasting agent, including but not limited to, dynamite, black powder, sensitized ammonium nitrate, blasting caps, and primer cord; or
- Item (11). Transporting, transferring, or applying anhydrous ammonia.

# Master Score Sheet- NYS Version

## Appendix D

**National Safe Tractor and Machinery Operation Program**

**Guidelines and Materials**

**Appendix D (Adapted by NYS)**

**Mail Master Score Sheet to:** Cornell Cooperative Extension  
 State 4-H Office  
 Attn: Kimberly Fleming  
 340 Roberts Hall  
 Ithaca, NY 14853

**Community Lead Instructor:** \_\_\_\_\_  
**County :** \_\_\_\_\_  
**Location (City/State):** \_\_\_\_\_  
**Exam Date:** \_\_\_\_\_

Instructions: There should be a record for each student who takes the Written Exam. Prior completion of the first three columns will save time on test day.

Student Name Last, First, MI	Street Address City, State	Zip Code	Date of Birth MM/DD/YY	Written Test Score (%)	Skills Test Score (%)	Driving Test Score (%)	“Passed Course,” “Did Not Pass,” or “Under 14”

## *Supplementary Resources - written, audio-visual, and other*

### *Appendix E*

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#### *Videos*

- “The Wake-Up Call” video. Approximately \$10.00 from N.A.E.D.A. Fulfillment Center, Aurora Pictures, 2525 E. Franklin Ave., Minneapolis, MN 55406 (612) 338-2825.
  - John Deere Consolidated Safety Video. Available for loan at no cost from any John Deere dealer.
  - Tractor Safety Is No Accident (1996). Sent to county 4-H office from the Rural, Health, and Safety Council. E-mail [info@farmsafety.ca](mailto:info@farmsafety.ca). **Shipping charges may apply.**
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#### *Safety Related Organizations*

- American Red Cross – Regional Office

636 S. Warren St.  
Syracuse, NY 13202  
(315) 464-1476  
<http://www.redcross.org/>

- Farm Safety 4 Just Kids

11304 Aurora Avenue  
Urbandale, IA 50322  
(800) 423-5437  
<http://fs4jk.org/>  
Written resources for younger children.

- National Safety Council

Agricultural Division  
1121 Spring Lake Drive  
Itasca, IL 60143-3201  
(800) 621-7619  
<http://www.nsc.org/issues/agrisafe.htm>

- New York Center for Agricultural Medicine and Health (NYCAMH)

One Atwell Road  
Cooperstown, NY 13326  
(800) 343-7527  
Local farm safety presenters available.  
<http://www.nycamh.com/>

- New York Farm Bureau

159 Wolf Road  
PO Box 5330  
Albany, NY 12205-0330  
(800) 342-4143  
<http://www.nyfb.org/>

Local:

- Volunteer Fire Department
- County Farm Bureaus
- Red Cross Programs
- Implement Dealers

**Sample Tractor Certification Course Registration Form – Appendix F**

**Participant Information**

For Office Use Only:			4-H Age: _____
County Code: _____	Club Code: _____	Member Code: _____	Tractor Safety Code: <u>EEF</u>

Circle One:    M-4-H Member            G-Organization Leader            P-Project Leader  
                  A-Activity Leader            R-Resource Leader                S-Special

Circle One:    N-New Enrollment    R-Re-enrollment                    Drop From Club  
                  C-Currently enrolled as a 4-H member

Last Name: \_\_\_\_\_ First Name: \_\_\_\_\_ M.I. \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Home Phone: (\_\_\_\_) \_\_\_\_\_ Soc. Sec. No. \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_

Birthdate: \_\_\_\_/\_\_\_\_/\_\_\_\_ Sex \_\_\_\_\_

Year in 4-H: \_\_\_\_\_ Grade: \_\_\_\_\_

Other 4-H Memberships: \_\_\_\_\_

**Parent Information**

Last Name: \_\_\_\_\_ First Name: \_\_\_\_\_ MI \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Home Phone: (\_\_\_\_) \_\_\_\_\_ Work Phone: (\_\_\_\_) \_\_\_\_\_

Occupation: \_\_\_\_\_

Circle One:    Primary Parent            Additional Parent            Other

Legal Guardian: Yes    No            Send Mailings: Yes    No

***Please complete the “Acknowledgement of Risk Form” on the back of this form.***

**COOPERATIVE EXTENSION ACKNOWLEDGEMENT OF RISK FORM**

**THIS FORM MUST BE COMPLETED BEFORE CHILD MAY PARTICIPATE IN  
TRACTOR SAFETY PROGRAMS IN WHICH THEY WILL BE IN CONTACT  
WITH TRACTORS OR MACHINERY**

I hereby grant permission for my child \_\_\_\_\_ to participate in the \_\_\_\_\_ activity sponsored by Cornell Cooperative Extension of \_\_\_\_\_ on the date(s) of and acknowledge as follows:

I fully understand and acknowledge that there are inherent risks and dangers in my child's participation in the above activities and my child's participation in such activities and use of any equipment related to such activities may result in injury, illness or death, and damage to personal property. I understand other participants, accidents, forces of nature or other causes may cause these risks and dangers and I hereby accept these risks and dangers.

My child is in good health. I understand that he/she will participate in strenuous physical activity. I permit the use of any photos, slides, films, or sketches of him/her taken during the day's activities for publicity, advertising, and promotion.

**I HAVE READ THE ABOVE AND BY SIGNING BELOW, I AGREE IT IS MY INTENTION TO GRANT PERMISSION FOR MY CHILD TO PARTICIPATE IN THE INDICATED ACTIVITY.**

The above agreement shall be binding on my heirs, successors, assigns, administrators, and executors. Any claims or disputes arising out of my child's participation in this activity shall be venued in the Supreme Court of the State of New York located in county of Extension office.

PARENT/GUARDIAN'S NAME (print) \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

CHILD'S NAME: \_\_\_\_\_ AGE: \_\_\_\_\_ DATE: \_\_\_\_\_

# *Sample Outline of SCANS Competencies & Skills*

## *Appendix G*

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### *SCANS Competencies*

- I. Resources
  - A. Plans and prioritizes personal goals and work tasks (can plan and allocate time)
  - B. Shows Respect for Property
    - 1. Careful treatment of work site, animals, tools and equipment
    - 2. Maintains clean work site, animals, tools and equipment in good order
- II. Interpersonal
  - A. Teamwork: Cooperates with others in a variety of roles
    - 1. Shows respect, consideration, and courtesy to others
    - 2. Works with others in a professional manner
    - 3. Cooperates with others to complete team goals and help others to meet their goals
    - 4. Contributes to and participates productively with ideas and suggestions in group meetings
- III. Information & Systems
  - A. Excellence: Commits to high standards of practice and to continuous improvement
    - 1. Responds to suggestions for improvement; seeks and accepts constructive criticism
    - 2. Finds and suggests new and improved ways of doing things
    - 3. Interprets and communicates ideas
    - 4. Is efficient, remains on task
    - 5. Asks questions in a timely fashion
- IV. Technology (Safety)
  - A. Understands and observes safety precautions (Judges which set of safe procedures will produce the desired results)
    - 1. Around machinery, equipment, vehicles, animals
    - 2. Around chemicals
  - B. Knows accident procedures

## *SCANS Foundation Skills*

- I. Basic Skills
  - A. Is able to read, write, and do math to get the job done
  - B. Communication
    - 1. Listens actively; receives and understands information or directions
    - 2. Asks questions to learn, to solve problems, and to clarify
    - 3. Communicates effectively with others
- II. Thinking Skills
  - A. Identifies problems, their causes and appropriate solutions
  - B. Thinks creatively
  - C. Makes decisions
  - D. Learns and reasons well
- III. Personal Qualities(Displays responsibility, self-management)
  - A. Adheres to schedule
    - 1. Has regular attendance
    - 2. Is prepared for work
    - 3. Is punctual
    - 4. Informs supervisor if late or absent
  - B. Shows integrity and honesty
  - C. Works independently; identifies tasks to be done
  - D. Dresses appropriately and is appropriately groomed

## *Sample Letter to the Employer*

### *Appendix H*

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Dear Employer:

Congratulations on hiring a student who has successfully completed the 4-H Safe Tractor and Machinery Operation Certification program! The focus of this training was on safety awareness in an agricultural environment rather than on the hands-on operation of actual equipment. Please note that this student aged 14 or 15 years is certified in Tractor and Machinery Operation. The certificate will indicate the specific certification along with a complete description of what the youth is now qualified and not qualified to do by law. If you have questions about the certification, please contact the Certifying Authority on the certificate for more information.

As the employer of youth under age 16, please consider the responsibilities below to ensure the safety of your young employees and to protect yourself:

1. Train the youth, including those over 16 years of age on the safe and proper operation of any and all equipment that they are to operate.
2. Have on file for employees under 16 years of age who are operating tractors and machinery, a record indicating the youth's name, address and date of birth. The Tractor/Tractor and Machine Operation Exemption Certificate should be maintained in this file.
3. According to Federal Law, employers are to also maintain close supervision of youth under the age of 16 whenever possible. If close supervision cannot be maintained, periodic checks must be made on the youth midmorning, noon, and mid-afternoon.
4. Please report accidents to proper authorities including the instructor of the training program.

Please note that employers who violate the provisions of the Hazardous Occupations Order for Youth under 16 years of age may be subject to a civil penalty of up to \$1,000. A willful or intentional violation of the regulation can result in a fine of up to \$10,000; or for a second offense committed after conviction of a similar offense may result in a fine of not more than \$10,000, or imprisonment for not more than 6 months, or both.

Thank you.

Sincerely,