Introduction

Farm work is different from most other jobs. Many of these differences increase the chance that you will get hurt.

This task sheet talks about why and how the farm work environment can be different from other jobs, and why these differences increase hazards and risk of injury.

Farm Differences and Safety

A farm is defined by the U.S. Dept. of Agriculture as any place from which $1,000 or more of agricultural products was produced. A farm can be as small as 10 acres or as large as ten thousand acres. In 2007, 64% of all farms were 180 acres or less, and just over 80% of all farms sold less than $100,000 of agricultural products.

Farming is characterized by a big variety of products. For example, in addition to farms with beef, dairy, hog, sheep and poultry, there are farms with mules, llamas, buffalo, mink, fish and bees. Common farm crops are corn, soybean, wheat, and hay, but less common ones are grass and tree, bush and flower plants. Added to these types of farms are orchard, nut, fruit, and vegetable farms.

Farming takes place on land that is flat for miles around, but also on land that can be hilly and mountainous. Some farming takes place where there are buildings that protect against the cold, wind and rain, but most farming takes place where there is little or no shelter from the sun, rain, cold and wind.

All these differences make it hard to find easy ways to reduce your chance of injury. However, constantly thinking about what can go wrong will help you avoid getting hurt.

Learning Goals

- To understand the variability of agriculture and how this relates to farm safety and health
- To identify factors and situations that contribute to agricultural hazards and risks

Related Task Sheets:
- Safety and Health Regulations 1.2
- Hazardous Occupations Order in Agriculture 1.2.1
**Unique Characteristics**

There are many ways to organize the information that describes why the farm work environment is different from other types of work environments. One of the simplest ways is to list the four main characteristics of farming that makes it different from other types of work environments.

1. A lack of uniformity and control of workplaces and work activities
2. An overlap of home and work sites
3. Most farms are operated by family members using labor without age related restrictions
4. Little government regulation of work hazards and risk (except with pesticides)

The combined effect of these four characteristics helps make farming one of the most hazardous occupations.

**Factors That Make It Difficult To Improve Safety**

The four main characteristics are simple to learn, but hide a better understanding of why farming has many hazards and risks and why they are hard to eliminate or control.

Another way to look at this issue is to think of “factors that influence farm work and risk of injury”. This method results in factor or areas:

- Environmental
- Personal
- Work Activity
- Social, Economic and Political

These four factors are explained in greater detail in the following tables. Review these tables for a good understanding of why so many hazards and risks remain a part of farming and why there are so many injuries.

**Environmental factors that influence farm work and risk of injury**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weather</td>
<td>Farm work must often be completed regardless of weather extremes.</td>
</tr>
<tr>
<td>Work sites</td>
<td>Commonly overlap with residence.</td>
</tr>
<tr>
<td>Emergency services</td>
<td>Not readily available; often involves a delayed response due to isolation of work site.</td>
</tr>
<tr>
<td>Isolation of work</td>
<td>Co-workers often not in eyesight or hearing distance when trouble occurs.</td>
</tr>
<tr>
<td>Personal hygiene</td>
<td>Often required and made available in other occupations. Up to individual workers in agriculture.</td>
</tr>
<tr>
<td>Environmental hazards (noise, vibration, lighting, dusts, etc.)</td>
<td>Hazards and exposures are not monitored or regulated in agriculture as they are in most hazardous industries.</td>
</tr>
</tbody>
</table>
### Personal factors that influence farm work and risk of injury

| **Young workers** | Children younger than 16 years old, and as young as five, are commonly exposed to and interact with work hazards and environments that are beyond their normal physical, mental and/or emotional abilities to respond to safely. |
| **Senior workers** | There is no standard retirement age in agriculture. This results in farmers with significant physical limitations and slow reaction times continuing to work in high-risk situations. |
| **Minimal physical limits** | Initial physical exams or minimum performance requirements are often required to begin work or to continue work in other hazardous occupations. |
| **Physical exams** | Routine medical surveillance is not common. |
| **Special care for physical or mental conditions** | Special care is not available or only by self-imposed restrictions. These issues are tightly controlled in other hazardous occupations. |
| **Transfers to light duty** | Transfer of workers to light duty is usually not usually an option in agriculture. |
| **Dispersion of workforce** | It is difficult to provide health and safety services because of geographic dispersion and mobility of the workforce. |
| **Farm operators** | The farm population ranges from those with advanced college degrees to those with a high school education or less; from farming full time and working significant hours off the farm; to working full time off the farm and farming for supplemental income; to farming only as a hobby or lifestyle statement. |

### Work Activity factors that influence farm work and risk of injury

| **Work hours** | 60 to 80 hour work weeks are common hours of labor in agriculture |
| **Labor and management functions** | Usually these jobs represent separate functions in other hazardous occupations, but not in farming. |
| **Work pace** | The work pace can be highly erratic rather than steady, and is frequently affected by weather situations and machinery breakdowns. |
| **Work routine** | The work routine can be highly irregular with many tasks being seasonal or done once or twice per season or year. |
| **Specialization** | Specialization is not normally possible; the phrase, “jack-of-all-trades” often applies. |
| **Instructions** | Farmers often learn their trade by observation and experience. |
| **Holidays and vacations** | Days off are normal for most occupations, but not for the farm worker. |
| **Labor demands** | Farmers frequently make use of any temporarily available labor: migrant, spouse, children, friends, visitors, new acquaintances, and off-the-street employees. |
| **Uncertainty** | Farming is characterized by an uncertain future. Weather, fast spreading plant and animal disease, broad economic policy, and unexpected world events can result in financial hardship for the farmer. |
| **Agriculture production** | There are great differences in size and type of farms, and the technology used. This makes grouping the types of modern agriculture difficult. |
Social, Economic and Political factors that influence farm work and risk of injury.

<table>
<thead>
<tr>
<th>Lifestyle vs.</th>
<th>Farming is commonly viewed as a “way of life” rather than as an occupation.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agrarianism</td>
<td>This is a term applied to agriculture that says farmers are owed a social debt by society because they suffer so that a democratic society can prosper.</td>
</tr>
<tr>
<td>Day care</td>
<td>Often not available, practical, or affordable in rural areas. Results in parents babysitting infants, toddlers, preschoolers and other children during farm work.</td>
</tr>
<tr>
<td>Occupational safety and health legislation</td>
<td>New standards and regulations often exempt production agriculture because of a combination of lack of practicality to farming, lack of ability to enforce the standards or regulations, and the burden on farmers to comply.</td>
</tr>
<tr>
<td>Cultural beliefs about farm safety and health</td>
<td>There is a cultural belief that farming is a hazardous and unpredictable occupation. This contributes to the belief by farm workers that little can be done about farm safety and health except to be careful.</td>
</tr>
<tr>
<td>Market forces</td>
<td>Farmers do not set their own prices for products produced. They cannot add the costs of safety and health to products to recoup costs.</td>
</tr>
<tr>
<td>Self-reliance for safety</td>
<td>Farmers primarily rely on their own knowledge and awareness of hazards to work safely, and often accept blame when an injury occurs, especially when they commit an unsafe behavior that directly results in an injury.</td>
</tr>
<tr>
<td>Enculturation</td>
<td>Children are taught values, responsibility, good work ethics, decision making, and about life and death. Strong bonds among children, parents, grandparents, neighbors and communities are developed and nourished from the shared experiences of farming.</td>
</tr>
</tbody>
</table>

Safety Activities

1. How many of these characteristics and factors are present on the farms where you live or work. Discuss these with your parents, instructor, or mentor.
2. Show the factors tables to one or two area farmers and have them identify how many factors may have contributed to a farm work injury to themselves or someone on their farm.
3. How many of these factors might be present in non-farm work environments? Are there any occupations with high numbers of serious injuries that have as many of these factors as farming? Discuss these with your parents, instructor, or mentor.

References

2. Area farmers.

Contact Information

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Credits


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Introduction

Safety and health regulations affecting agricultural workers have existed for many years. Not as many safety regulations are applied to agriculture as there are in other hazardous occupations. The ones that do exist are important because they help keep you and co-workers from being hurt or killed. Fines and imprisonment may also be given to employers who do not follow these regulations.

This task sheet explains safety and health regulations important to youth who plan to work in the field of agriculture.

Hazardous Occupations Order in Agriculture

Since 1969, the U.S. Department of Labor has declared many agricultural tasks to be hazardous for youth younger than age 16. With certain exemptions, employment of youth under age 16 for these tasks is illegal. The law does not apply to youth younger than age 16 who are employed, either with or without compensation, by their parents or legal guardian.

As part of this declaration, a procedure was established by the Department of Labor so that youths 14 and 15 years of age could be exempted from certain portions of the law. This exemption applies to agricultural tractors and specific types of farm machinery. This exemption is explained in more detail in Task Sheet 1.2.1.

Penalties for subjecting youth to hazardous occupations are relatively strict. Youth are not penalized for the infractions, but the employer can be. The penalty to the employer for the first offense can be up to a $10,000 fine for a willful violation. For a second offense, up to a $10,000 fine and/or imprisonment for not more than six months can be assessed.

Learning Goal

- To become aware of the regulations that affect agricultural workers

Related Task Sheets:

- Hazardous Occupations Order in Agriculture 1.2.1
- OSHA Act 1.2.2
- Worker’s Compensation Laws 1.2.3
- Worker Protection Standards 1.2.4
- State Vehicle Codes 1.2.5
- Environmental Regulations 1.3
- Operating the Tractor on Public Roads 4.14
Important points about OSHA regulations are sometimes confusing or misunderstood. An employer/employee relationship has to exist for OSHA to apply to a business or operation. This means that if a farm operator uses only his or her own labor, or uses only family labor, OSHA has no jurisdiction in that operation.

OSHA became effective in 1971 but has had little direct influence upon most agricultural operations since October 1976. That is when Congress restricted OSHA from expending any funding to enforce rules on farms employing fewer than 10 employees. This restriction, known as the “small farm exemption,” has been in effect since 1976.

This does not mean that farms with 10 or fewer employees are exempt from OSHA’s requirements, only that OSHA cannot inspect those farms for compliance. Although these two statements appear to be similar, the differences could be significant in a court of law.

Concerns about injury and worker’s compensation costs may cause your employer to be especially concerned about your safety behavior. Do not feel that you are being singled out as not being able to work safely.

**Worker Protection Standard**

EPA’s Worker Protection Standard (WPS) is a regulation aimed at reducing the risk of pesticide poisonings and injuries among agricultural workers and pesticide handlers. The WPS offers protection to over 3.5 million people who work with pesticides at over 560,000 workplaces. The WPS contains:

- requirements for pesticide safety training
- notification of pesticide applications
- use of personal protective equipment
- restricted entry intervals following pesticide application
- decontamination procedures and supplies
- emergency medical assistance recommendations

The Worker Protection Standard regulates the workplace and promotes guidelines for the safety and health of workers.
**Insurance Company**

Some insurance companies have rules and regulations which they insist be followed by their customers. Usually this is based upon studies they make of customers’ claims (actuarial studies). Since agriculture is known to be a particularly hazardous occupation, some insurance companies may view the employment of young workers as a liability risk. Some farmers have been notified not to use young people for certain jobs because of the possibility of increased insurance premiums. Additionally, if you are going to work for a farmer, you or your parents may want to ask if the farmer has insurance coverage in case of an injury.

**Vehicle Codes**

Most state vehicle codes will contain provisions that apply to the movement of agricultural equipment on public roadways. The rules and regulations vary greatly from state to state. Check your state vehicle code for information regarding the following points:

- **Definition of “public road or highway.”** Your state may define highway as, “the entire width between the boundary lines of every highway publicly maintained when any part is open to the use of the public for purposes of vehicle travel.” Any road open to the public is referred to as a highway, including shoulders and berms.

- **Your state’s vehicle code may have a statement that requires all persons who operate motor vehicles upon a highway to have a license unless specifically exempted elsewhere in the code. Exemptions to the licensing requirement may show some language similar to the following: “Persons 14 or 15 years of age are restricted to the operation of implements of husbandry on one- and two-lane highways which bisect or immediately adjoin the premises upon which such person resides.” In other words, 14- and 15-year-old youths can operate farm tractors only on public roadways that bisect or adjoin their place of residence.**

Consider these points also:

- **Use of the SMV emblem laws are fairly constant nationwide. The SMV emblem must be used properly.** See Task Sheet 4.14.

- **Lighting and marking regulations can be found in most state vehicle codes.**

- **Load restrictions for width, length, weight, number of towed implements, and safety chains use can be found in vehicle codes.**

- **State vehicle codes may also address trucks licensed for farm use only, riders as passengers on the bed of a truck, and farm use of ATVs.**

**Check with your local Highway Police and Department of Transportation to learn what the traffic laws are in your state.**
Safety Activities

1. Use the Internet to search for information about the federal safety regulations mentioned in this task sheet. Find additional details on how the regulations may affect agricultural workers.

2. Talk to your parents’ insurance agent, and ask about injury and liability concerns that he or she may have regarding your employment in agriculture.

3. Complete the following chart with a list of tasks you have done, mark whether or not the task was covered by federal safety regulations, and note what hazard you encountered. Are there any jobs/tasks you have done which may be prohibited for youth your age?

<table>
<thead>
<tr>
<th>Tasks I Have Completed</th>
<th>Is the Task Covered By Federal Safety Regulations?</th>
<th>Safety Hazard of the Task</th>
</tr>
</thead>
</table>

References

1. www.osha.gov
2. www.epa.gov/oppfead1/safety/workers.htm
3. Your state’s motor vehicle code. The code may be on the Internet or a printed copy may be available in your community library.
4. Local Highway Patrol troopers

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Introduction
Since 1969, the U.S. Department of Labor (DOL) has declared many agricultural tasks to be hazardous for youth younger than age 16. With certain exemptions, employment of youth under 16 for these tasks is illegal. However, the regulation does not apply to youth younger than age 16 who are employed, either with or without compensation, by their parents or legal guardian.

The Exemption
As part of the DOL’s Fair Labor Standards Act, a declaration known as the Hazardous Occupations Order in Agriculture (HOOA) established a procedure whereby youth 14 and 15 years of age could be exempted from certain portions of the regulation. This exemption has to do with the operation of agricultural tractors and specific types of farm machinery.

Specifically, the exemption states that with successful completion of a 10-hour training program, 14- and 15-year-old youth can be employed to: “operate a tractor of over 20 PTO horsepower, or connect or disconnect an implement or any of its parts to or from such a tractor.”

Additionally, with successful completion of a 20-hour training program, these youth can be employed to:

“operate or assist 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 non-gravity type self-unloading wagon or trailer;

(iii) power post-hole digger, power post driver, or non-walking rotary tiller.

With the 10-hour training program, youth are allowed only to operate a tractor with no powered equipment attached. To do field work of any kind, youths need to complete the 20-hour training program.

The law defines “agriculture” as: “farming in all its branches including: preparation for market, delivery to market, delivery to storage, or to carriers for transportation to market.” This statement allows a properly trained youth to haul produce and other products to markets, between farms, etc. Provisions in your state vehicle code may preclude this activity by 14- and 15-year-olds.

Not all jobs are considered hazardous for young people. There are many tasks on farms that are not considered hazardous.

Prohibited Work
HOOA prohibits all 14 and 15-year-olds from these tasks (no exemptions):

- Handling animal sires or sows and cows with newborns within a pen or corral
- Working more than 20 feet above the ground
- Working with Category I and II agricultural chemicals
- Handling and using explosives and anhydrous ammonia

Learning Goals
- To understand the Fair Labor Standards Act and HOOA
- To understand the reason for Hazardous Occupations Safety Training in Agriculture

Related Task Sheets:
The Work Environment 1.1
Safety and Health Regulations 1.2
Worker Protection Standards 1.2.4

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HAZARDOUS OCCUPATIONS ORDER IN AGRICULTURE

The Exemption (from page 1) by the DOL and are permitted under the Fair Labor Standards Act. Some of these include:

- Loading and unloading trucks
- Operating small tractors (under 20 horsepower)
- Picking vegetables and berries
- Placing vegetables and fruits on conveyors or into boxes
- Clearing brush and harvesting trees up to 6 inches in butt diameter
- Working with animals on the farm or at fairs and shows (except for specified breeding stock in confined areas, such as cows with newborn calves in closed box stalls, bulls, or sows with newborn piglets)
- Raising and caring for poultry
- Milking cows
- Cleaning barns, equipment, and storage buildings

- Mowing lawns
- Riding, driving, or exercising horses
- Picking cotton
- Handling irrigation pipes
- Riding on transplanters

Penalties for subjecting youth to hazardous occupations are relatively strict. Youth are not penalized for the infractions; the employer is held accountable. First offense—up to a $10,000 fine for willful violation. Second offense—up to a $10,000 fine and/or imprisonment for not more than six months.

**Workers younger than age 14**

HOOA regulations do not permit youth younger than age 14 to complete the exemption training. This means youth younger than age 14 cannot be hired by an agricultural employer to operate tractors or machinery.

**Safety Activities**

1. Make a list of jobs or tasks you have done on the farm. How many of them are included in the list of activities prohibited by the Hazardous Occupations Order in Agriculture for youth younger than age 14?

2. Discuss with your classmates or interested friends why you think some tasks have been included in the Hazardous Occupations Order in Agriculture list and why other tasks have not.

**References**

1. USDA publications. These publications are available from many state farm safety specialists located at land grant universities.

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Introduction
The 1971 Occupational Safety and Health Administration (OSHA) regulations were created to save lives, prevent injuries, and to protect the health of all American workers.

Since 1971 workplace fatalities have been decreased by 50%. Workplace injury and illness numbers have been decreased by 40%. This has happened despite the fact that workforce numbers and job sites doubled in numbers.

This task sheet examines how OSHA affects agricultural workplaces. The entire law cannot be presented here.

OSHA’s Jurisdiction
An employer/employee relationship has to exist in order for OSHA to apply to a business or operation. If a farm operator uses only his or her own labor, or uses only family labor, OSHA does not apply. Since 1976 Congress has restricted OSHA from expending any administrative funds to enforce rules and regulations on any farm with 10 or fewer employees.

The 10 or fewer employees restriction in agriculture is known as the “small farm exemption.” Small farms, however, are not actually exempt from OSHA regulations. Legally OSHA covers all farms, even though OSHA cannot inspect farms with 10 or fewer employees. One important reason for understanding that small farms still fall under OSHA is that, in a court of law, OSHA rules and regulations may be used to identify safe and unsafe conditions on the farm.

General OSHA Rules
A general rule of OSHA requires employers to provide employees a place of employment that is free from recognized hazards that have caused or are likely to cause death or serious injury. A second part of this rule states that employers must comply with OSHA safety and health standards. These two rules apply to small farms as well as larger farms. This could also be important in a court of law if an employee is killed or injured from farm work.

OSHA also requires that each employee comply with safety and health rules, such as shutting off power to equipment before working on any machine; wearing personal protective equipment; and informing employers of hazards. An employee who is injured or causes injury to another worker by deliberately acting in an unsafe way may find themselves in legal difficulty due to the OSHA standards.

Learning Goals
• To become aware of OSHA regulations affecting agricultural work

Related Task Sheets:
Safety and Health Regulations 1.2
Mechanical Hazards 3.1
Electrical Hazards 3.6
Confined Spaces 3.8
Tractor Stability 4.12
Operating the Tractor on Public Roads 4.14
Lighting and Marking 4.14.1
Tractor Rollover Protection (ROPS)

Rollover Protective Structure (ROPS) Requirements

ROPS have been required on all tractors operated by employees since 1976. In addition, OSHA regulations state that employers are also required to provide safe operating instructions to employees at initial assignment and on an annual basis thereafter. Employers are to insure that seatbelts are used by the employees on ROPS-equipped tractors. Exempted from the standards are low-profile tractors used in orchards, greenhouses, and other buildings.

Operating Instructions

The following instructions are to be provided to the employee at their initial assignment and at least once a year thereafter:

- If the tractor has a ROPS, use the seat belt.
- Avoid ditches, embankments, and holes.
- Reduce speed when turning, crossing slopes, and on rough, slick, or muddy surfaces.
- Avoid slopes too steep for safe operation.
- Exercise care at row ends, on roads, and around trees.
- Do not permit extra riders on the tractor.
- Operate the tractor smoothly with no jerky starts, turns, and stops.
- Hitch only to the drawbar and recommended hitch points.
- Set the brakes and use the park lock if available when the tractor is stopped.

Agriculture and OSHA

There are just a few OSHA regulations that are specific to farming. Some of the rules are not related to the type of farm work that 14- and 15-year-olds are allowed to do under the Hazardous Occupations Order in Agriculture (see Task Sheet 2.1). The OSHA agricultural standards most important to tractor and machinery operators are the Tractor Rollover Protection, Machinery Guarding, and Accident Prevention Signs and Tags regulations. They are discussed in more detail in the following sections of this task sheet.
**Accident Prevention Signs and Tags**

**SMV Emblems**

The OSHA accident prevention signs and tags regulation defines use of the SMV emblem. The SMV emblem must be displayed at the rear of the tractor and/or tractor implement combination to warn others that the farm vehicle is incapable of traveling at more than 25 mph. See Task Sheet 4.14.

Properly use the SMV emblem. Be sure it is clean and visible if you are required to operate farm tractors and equipment on public roads. In some states, it is illegal to improperly use SMV emblems as driveway and mailbox markers.

Nip points are pinch points on gears, belts, and pulleys. See Task Sheet 3.1.

Means must be provided to prevent accidental application of electrical power to farmstead equipment. Electrical power devices must be locked out (LO) or tagged out (TO) during maintenance and service of the equipment (See Task Sheet 3.6).

Employee education is part of this OSHA standard as well. The law states, “Employees must be instructed in the safe operation and servicing of all equipment which they operate or will operate.” The following instructions must be given at the time of assignment and at least once a year:

- Keep all guards in place when the machine is in operation.
- Permit no riders on farm field equipment other than those necessary for instruction or assistance.
- Stop the engine, disconnect the power source, and wait for all machine movement to stop before servicing, adjusting, cleaning, or unclogging the equipment except where the machine must be running to be serviced or maintained. If the machine must be running to do such tasks, then employees are to be instructed in all steps and procedures to safely do the service or maintenance.
- Clear the machine area before starting the engine, engaging the power, or operating the machine.
- Lock out electrical power before working on farmstead equipment.

You have a Right to a Safe and Healthy Workplace.

It’s the Law!

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**Machinery Guarding**

**Moving Parts Guarding and Instruction**

Guarded machine parts prevent the worker from exposure to entanglement and dismemberment risks. OSHA Machine Guarding Standards require the following:

- All farm field and farmstead equipment, regardless of date of manufacture, must be provided with PTO guarding.
- All power transmission components on new field and farmstead equipment must be provided with nip point guarding.

- You have a Right to a Safe and Healthy Workplace.

- It’s the Law!
Confined Spaces

Although OSHA regulations for confined spaces do not apply to agriculture, the general duty clause expresses that hazards such as confined spaces (silos, manure pits, grain bins and elevators, and controlled atmosphere storages) must be explained to the employee. No worker should be exposed to risk of injury or death while working within a confined space. See Task Sheet 3.8.

For more information on OSHA Confined Space standards, go to www.osha.gov. Search the website for OSHA standard 1910.146 to learn more.

Safety Activities

Use the Internet to access the OSHA website. Search the website for information regarding agricultural operations. Report on specific training and instructions employers must provide to employees about tractor and ROPS use, machine guarding, SMV emblems, and field sanitation.

What percentage of the farms in your community employ more than 10 employees? Hint: Do a survey of the total number of farmers in your community. This is the denominator. The numerator will be the total number of farms employing more than 10 employees. Divide the number of farms with more than 10 employees into the total number of farms. Make the calculation.

Form as many words as you can from the title “Occupational Safety and Health Act.” If you can, include in your list words or phrases that are related to safety, risk, or injury. For instance, the words “safe” and “unsafe action” can be found. Make your list here or on a separate sheet of paper. Score yourself as an expert in recognizing safety if you get more than 10 words dealing with safety, risk, or injury.
**Introduction**

In the early years of the Industrial Revolution, laws protecting workers did not exist. To correct this problem worker’s compensation laws were passed. Worker’s compensation laws provide financial help to workers injured on the job no matter who is at fault.

This task sheet discusses worker’s compensation laws. Each state’s law may be worded a little differently. Federal Worker’s Compensation laws apply only to federal employees.

**The Law**

Use the Internet to check your state’s worker’s compensation rules. For example, www.state.pa.us takes you to the Pennsylvania state website. Typing in the keyword, “worker’s compensation” leads you to this information. Most states have a minimum level of hours worked or pay received before worker’s compensation takes effect.

Regarding agriculture, the Pennsylvania law states, “Any employer employing persons in agricultural labor shall be required to provide worker’s compensation coverage for such persons if such employer is covered by the law or

if during the calendar year wages in excess of $1,200 are paid to one employee for agricultural labor, or employment to one employee in excess of 30 or more days is provided. If such conditions are met, then all employees are to be provided the workmen’s compensation coverage.”

**How the Law Works:**

The following information is important for an agricultural employee.

- Compensation for injury, disability, and death is provided as a benefit to employees and their surviving family members by law.
- Employers and employees pay into the Worker’s Compensation fund of their home state according to the hours of employment provided.
- Claims are filed with the employer and medical attention is provided by approved providers.
- Depending upon the extent of the injury, compensation during recuperation is paid, but is limited to two-thirds of the statewide average weekly wage.
- Medical checkups may be required to determine the return-to-work date or how long the benefits will be paid.
What You Should Expect
As a beginning worker, these points will help you understand how Worker’s Compensation relates to your participation in a work environment.

- Notification of employees rights and filing of claims should be clearly posted for employees to see.
- The notice should state, “Remember, it is important to tell your employer about your injuries.”
- Report all injuries no matter how small. For example, a deeply imbedded splinter can become infected. This could lead to blood poisoning resulting in emergency medical treatment and/or amputation.
- Injuries must be reported within 72 hours of the occurrence to be covered by compensation.
- If the worker has suffered some disability, he/she has the right to be transferred to a different job or a modified job when he/she returns to work.

These points do not represent legal opinions. This may alter the procedures you will encounter if you must file a claim.

Safety Activities

1. Locate a Worker’s Compensation Notice at your place of employment and read the notice. If you are not employed, ask any employer to show you one of these documents.

2. Conduct a survey of farm employees or classmates employed by farmers to determine if any of them have received worker’s compensation due to injuries in the workplace.

3. Visit your state government website to research the worker’s compensation laws. The law may be several hundred pages long; therefore, do not print it.

References
2. The website of your state government.
**Introduction**

The Worker Protection Standard (WPS) regulations of the Environmental Protection Agency (EPA) require employers to take steps to reduce the risk of pesticide-related illness and injury to those persons who use or are potentially exposed to pesticides.

This task sheet discusses the WPS. Youthful farm workers younger than age 16 years are prohibited from being involved with pesticide applications (see Task Sheet 1.2.1 for allowable work tasks). Youth farm workers may, however, come into contact with pesticide-treated areas in the course of their daily work. Understanding the WPS will explain the need for safety when exposure to agricultural chemicals exists.

**The Standard**

Workers who perform hand work in fields (farm and orchards), forests, nurseries, and greenhouses, as well as employees who handle (transport, mix, load, apply) pesticides in agricultural operations, must be provided information about the materials they are using.

There are no exemptions based on the size of the farming operation.

WPS regulations require information to be provided to workers.

Minimum standards include:

- Oral (verbal) or posted, written notice of a pesticide application and the restricted entry interval (See page 2, Figure 1.2.4.a.)
- Pesticide safety training
- Pesticide safety posters placed where all workers and handlers can access the information
- Informing workers of pesticide label safety information
- Centrally posted list of recently applied pesticides

WPS regulations also require employers to provide:

- Decontamination facilities nearby to work sites
- Periodic pesticide safety training and ongoing information availability
- Notice of pesticide application and pesticide information
- Clean and well-maintained personal protective equipment
- Location and contact information for emergency assistance

As an employee, you may see or be informed of pesticide safety information even though you are not eligible to apply the pesticides. If you are asked to apply pesticides, inform your employer that you are ineligible for the work.

**Note:** WPS’s also require the employer to monitor and assist workers in avoiding heat stress.

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**Learning Goals**

- To become aware of the risks of exposure to agricultural pesticides
- To gain knowledge of Worker Protection Standard (WPS) designed to reduce personal exposure to agricultural pesticides

**Related Task Sheets:**

- Safety and Health Regulations 1.2
- Hazardous Occupations Order in Agriculture 1.2.1
- Heat and Sun 2.5.1
- Personal Protective Equipment 2.10
- Agricultural Pesticides 3.5
MSDS (SDS) Information

Material Safety Data Sheets (MSDS), recently renamed Safety Data Sheets (SDS), are provided to consumers for products ranging from paints and solvents to medicines and pesticides. These data sheets provide the consumer with much information regarding the product they have purchased.

MSDS’s (SDS’s) supplement the pesticide labels. MSDS data does not offset the need to keep pesticide labels on file to meet WPS record-keeping requirements.

Restricted Entry Interval (REI)

MSDS’s (SDS’s) should be kept on file.

WPS designed signs must be used at entrances to treated areas to warn workers and others that a pesticide treatment has been made.

These are the rules for posting signs.
- Post signs no more than 24 hours before the pesticide application.
- Keep signs posted during the REI period for 4-48 hours.
- Remove signs within 3 days of application.
- Keep workers out of the area.

Safety Activities

1. Ask your employer or local agricultural chemical sales representative to show you a pesticide label from the pesticide files. Use the label and/or MSDS (SDS) to answer these questions. MSDS (SDS) information can also be found on the Internet.
   a) What are the health hazards of the product to humans?
   b) What personal protective equipment is required to use the product?
   c) What are the spill control procedures to use for the product?
   d) What is the REI of the product?

2. Use the Internet to search for specific WPS regulations for farm, greenhouse, nursery, and forest pesticide applications.

3. Review the Hazardous Occupations Order in Agriculture for the exact wording of the rule which prohibits workers younger than age 16 from working with pesticides.

References

2. www.epa.gov.

Contact Information

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Introduction

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 motor vehicle codes to assure agricultural producers use the roads safely.

This task sheet discusses State Vehicle Codes from the Pennsylvania viewpoint. Inclusion of every state’s interpretation or language regarding farm implements is not possible.

See the Safety Activity Section for an assignment for your location.

The Pennsylvania Code

The Pennsylvania Vehicle Code includes several provisions that apply to the movement of agricultural equipment upon public roadways. The definitions for implements of husbandry and highway are of concern to agricultural employers and youthful tractor operators. References concerning licensing and exemptions from licensing are also noteworthy.

Implement of Husbandry Defined

“Implement of husbandry” is defined as “a vehicle designed or adapted and determined by the Department of Transportation to be used exclusively for agricultural operations and only infrequently operated or moved upon highways.”

Highway Defined

A second definition of importance is that of “highway.” Highways include the entire width between the boundary lines of every way publicly maintained when any part is open to the use of the public for purposes of vehicle travel.” Any road open to the public is referred to as a highway, including shoulders and berms.

Licenses Required

Section 1501 of the PA Code has a general statement that requires all persons who operate motor vehicles upon a highway to have a license unless specifically exempted elsewhere in the Code. Section 1502 then goes on to explain exemptions to the licensing requirement. Part (5) says:

“Persons 14 or 15 years of age are restricted to the operation of implements of husbandry on one and two-lane highways which bisect or immediately adjoin the premises upon which such person resides.”

In other words, 14 and 15-year-old youths can operate farm tractors only on public roadways that bisect or adjoin their place of residence.

Many farm employers, parents and youth are probably unaware of this restriction.
**Other Rules of the Road**

Regulations, and the exemptions to those regulations, standardize the “rules of the road.” Vehicle codes may exempt farm equipment from brake systems, bumpers, mirrors, horns, lights, and inspection.

**Wide Loads and Passing**

PA law states that a wide load (wider than a single lane) should be pulled entirely off the road at the first reasonable and safe location to allow following motorists to pass. Be sure to use the correct signals to show your intended actions. **Never wave the traffic around you as that makes you responsible for what the other driver does.**

**Safety Activities**

1. Use the Internet to access your state government website. Search for the vehicle code for your state.

2. Using any Internet search engine, type in “implement of husbandry” and “public roadways” to search for your state’s vehicle code or information regarding this subject.

3. If you cannot find the information in Question 1 above, contact your local representative to the state House of Representatives, and ask for a copy of the state motor vehicle code. This is a long document. Use the Table of Contents and the index to locate the rules and exemptions your state makes for agriculturists using the public roadways. **The local public library may also be a good source for this document.**

4. Use a poster presentation with local farm groups to review the requirements of your state’s vehicle code.

**References**


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Learning Goals

• To understand that farm equipment operators are responsible for environmental protection

• To understand what to do if a spill poses a hazard to the environment

Introduction

Twelve-year-old Jesse was assigned to haul manure down the highway to the leased farm. Traffic was heavy that day, and he panicked in the sharp turn. The manure spreader upset into the road ditch spilling the load. Jesse ran the 1/2 mile to the barn afraid of what he had done. Someone stopped by the farm a short time later to tell the owner about the tractor and spreader sitting in the ditch.

There are several problems described in this short story. Can you identify them? This task sheet will discuss the environmental regulations that farm equipment operators must know.

Environmental Rules

Environmental laws are enforced by the Environmental Protection Agency (EPA). These laws include provisions for clean air, clean water, safe pesticide use, and safe drinking water standards.

These federal laws also have state and local counterparts and enforcement officials. States have Department of Environmental Resources (DER), and local governments have ordinances as well. Farmers and farm employees should have an understanding of all the regulations that are designed to protect our environment.

What Typical Laws Cover

Laws that regulate environmental hazards do not have agricultural exceptions. Typically farmers are held to high standards in protecting the environment. What do you know about these areas?

• Water pollution
• Air pollution
• Drinking water standards
• Pesticide rules and regulations
• Shifting load violations
• Used tire disposal
• Trash burning hours and rules
• Battery disposal
• Oil and fuel spills
• Used oil disposal
• Sink hole protection
• Manure spreading

Each of these subjects will have a federal, state, or local ordinance which affects each citizen. Penalties for violating the law can include fines for breaking the law and payment for property damages.

If you think a task you are assigned can pollute the air, water, or soil, ask your employer if you are causing a legal problem for him or her.
Manure Handling and Spills

Manure and pesticide applications can pollute water if not done properly. This section will discuss manure loading, transporting, and application.

*Manure Handling*

Manure handling can take many forms. Solid, semi-solid, and liquid manure handling involves several types of equipment. Front-end loaders or gravity flow storages may be used. Gravity fill liquid manure tanks are more likely to pose environmental spill risks than a manure fork used to clean a calf pen. A stuck manure pit valve can cause immense problems due to spills.

*Manure Transportation/Spills*

Drivers of farm equipment who use the highway pose a risk to others using the same road. Hauling manure poses a greater threat to safety, since manure can take different forms and can be difficult to handle. Shifting load violations carry penalties under law. Pennsylvania regulations require farmers to use methods, equipment and facilities in such a way that do not pose a health or safety risk to the environment. Should a spill occur, the operator must take immediate steps to control, contain, and clean up the spill. In addition the Department of Environmental Resources must be notified. Penalties may be assessed. Notifying local police and fire officials is important if traffic is to be controlled and directed.

*Manure Application*

Manure application on farm fields should be done with water quality and nutrient management regulations in mind. Here are a few points to consider:

- Manure spread on frozen soil eventually finds its way into waterways.
- Manure spread close to streams, ponds, wells and springs contaminates these water resources.
- Manure contains nutrients such as nitrogen and phosphorus that feeds plants, but in excess can pollute underground water and streams.

Farms should have a plan in place to deal with manure leaks or spills. The plan should be posted and known by employees. Adequate equipment and supplies should be available, and phone numbers of local police and fire officials should be available too.

*Pesticides*

*Handling of pesticides in any manner by workers younger than age 16 is forbidden by labor laws.*
**Burning Trash**

Youthful farm workers may be assigned the task of burning trash from around the farm. While such a job seems easy, there may be some hidden environmental risks involved. Toxic materials may pose air pollution threats. Local burning laws may be violated.

*Toxic materials*

Pesticide containers, chemical cleaners, and tires have found their way to burning areas. The toxic fumes released from these materials may make you sick or cause severe health problems. Ask your employer what hazard is associated with what he or she has assigned you to burn.

* Burning Ordinances*

Local government laws may limit burning to certain items on certain days and at certain times of the day. Ask your employer about these local laws.

**Fuel, Oil, Lubrication—Spills and Disposal**

Laws exist to protect the environment, but farmers should also want to prevent their own properties from becoming polluted. Waste from equipment service and maintenance often becomes a source of pollution.

Sources of farm shop machinery, and buildings pollution include:

- Used oil
- Oil filters

- Antifreeze
- Paint and solvents
- Air-conditioner refrigerant
- Spilled or dumped fuel
- Fuel, oil and lubricant containers

Material spills happen. If fuel, oil, lubricants, or coolants are spilled, check the container label for the method of cleanup. Major spills require contacting local and state authorities.

Disposal information for hazardous materials can also be found on labels. Community collection points can be used to dispose of many materials. Contact your local recycling coordinator or Cooperative Extension Service for information on local recycling efforts.

**Tire, Battery, and Garbage Disposal**

Some materials are more difficult or costly to discard. Tires laying around become water-filled breeding grounds for mosquitoes. Batteries pile up in the corner. Some garbage should not be burned. What should be done?

Tire dealers and battery suppliers must accept these items from you. A disposal fee may be charged. Alternative uses for tires may be found as well.

Garbage that cannot be burned should be disposed of properly. Off-farm burial or use of landfills is possible. Read the labels on all materials to know the proper disposal methods.
Safety Activities

1. Write a report concerning the problems you can identify as you read the introduction to this task sheet. In the report, name the problem and explain why there is a problem.

2. Word Find. Make as many words (three or more letters) as you can from the title “Environmental Protection Agency.” Score 1 point for each word you find. To challenge yourself further, list only words that deal with clean air, clean water, safe pesticide use, and soil contamination.

3. Contact local municipal authorities (township supervisors) to request a copy of local burning ordinances.

4. Ask a state highway officer to tell you about farm machinery accidents involving manure and pesticide spills. Ask them about shifting load violation penalties also.

5. Write a short essay about how to control, contain, and clean up a manure spill.

6. Research the subject of nutrient management to determine how much nitrogen, phosphorus, and potassium is needed by corn, alfalfa, and soybeans. Explain how nitrogen and phosphorus from manure can become a pollutant in our water supplies.

7. What problem does excess nitrogen and phosphorus cause in our waterways?

References
1. www.epa.gov (Environmental Protection Agency)
2. www.dep.state.pa.us (or Department of Environmental Protection for your state)
3. www.dot.state.pa.us (or Department of Transportation for your state)
Introduction

There are “safety” experts found throughout the United States. Do you know where to find information about agricultural safety in your state? Safety professionals offer a wide variety of information, materials, demonstrations, and programs.

This task sheet discusses state agricultural safety resources who can help farm youth learn more about working safely and successfully on the farm. Learn who your state resources are and how to contact them.

State Level Resources

Some of these state safety resource programs employ specialists who provide safety training, may be able to travel to meet with you and your group, and can guide you to other resources to answer safety questions. Here are safety resources you may have in your state.

- College of Agriculture specialists in agricultural safety and health
- Cooperative Extension Service (offices in each county)
- Agriculture and Extension Education program specialists in 4-H and FFA at the state level (Contact your state 4-H office and Department of Education)
- State Farm Bureau Safety Leaders
- Colleges of Health/Nursing and University Medical Centers/Hospitals
- Veterinary Medicine Colleges
- State Departments of Health
- State Fire Instructors

How can you contact these resources? The government section of the phone book and the Internet provide information, but may take time. Consider your state’s Land Grant University as well.

A goal of your state’s Land Grant University is to provide agricultural training as a means of improving agriculture. Agricultural safety is one area of this training. In Pennsylvania for instance, Penn State University started as a “Farmers High School.” Where is your land grant university located?

Contact your State University Ag Safety and Health Specialist using the Internet to find the Land Grant University in your state. For example www.cas.psu.edu accesses the College of Ag Science at Penn State University. Search for “agricultural safety” sources. Next search “Cooperative Extension Service” sites to access your county Cooperative Extension Service location and contacts.

Your state has ag safety resources. Learn who these experts are.

Learning Goal

- To become familiar with your state’s ag safety professionals as a source of safety information

Related Task Sheet:
National Ag Safety and Health Resources 1.5
Community Level Resources

There are local safety resources that provide safety information.

Public Sources

Public organizations are government-related and are taxpayer supported. Information may be free or inexpensive. Some of these resources include:

- State Police or Highway Patrol (traffic laws and road hazards)
- County Coroner (investigations into farm-related fatalities)
- Regional Departments of Agriculture (statewide and county data on the scope of agriculture, agricultural fairs and expositions, and grants for farm safety projects)
- Local Departments of Health (safety information)

Private Sources

Private sources are businesses that serve the agricultural industry. Several examples include:

- Electrical service suppliers and vendors (safety programs)
- Machinery and equipment dealers (Films on safety and equipment operation training materials)
- Veterinarians (animal health and animal handling safety)
- Local doctors and nurses (emergency medical help for farm accident victims and injury prevention ideas)
- Ag pesticide representatives (pesticide use and safety training seminars)
- Volunteer Fire Departments (fire prevention and agricultural rescue programs.)
- American Red Cross chapters (CPR and first aid training)

Safety Activities

1. Use the Internet to visit the website of your Land Grant University(ies) to learn more about farm safety.

2. Use the Internet to visit the website of your state’s Department of Agriculture to learn more about farm safety programs. Do they have a grant program for youth organizations to conduct safety activities? Do they have a Safety Quiz Bowl competition? Learn how you can participate.

3. Ask your local Extension Agent to sponsor and help train a Safety Quiz Bowl Team for competition.

References

1. Your State Land Grant University. For example, the website for the Pennsylvania State University is www.cas.psu.edu/
2. Your State Department of Agriculture
3. Your local county Cooperative Extension Service, or County Agent’s Office
4. www.ffa.org (National FFA Organization website)
5. www.4-H.org (National 4-H Organization website)

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Introduction

Agricultural safety issues do not rest in the hands of a few concerned people. There are many groups at the national level who understand the hazards of the agricultural industry. They are dedicated to protecting a vital part of the farm workforce—young people.

This task sheet discusses national sources of farm safety information. Contact them to learn how you can increase your safety knowledge.

Public/Governmental Agencies

Federal and state government departments are considered public agencies because they exist due to public funding through tax dollars. Many of these can be contacted through the Internet.

**OSHA:** The Occupational Safety and Health Administration is the safe workplace regulatory agency. See Task Sheet 1.2.2 to learn more about OSHA regulations relating to agriculture. Use www.osha.gov to access the website.

**USDA:** The United States Department of Agriculture serves rural America and the agricultural community through education, research, and regulation of food production and safety, conservation, and worldwide market development. Go to www.usda.gov.

**CES:** The Cooperative Extension Service of USDA brings safety information to the state and local level. A Cooperative Extension Service office can be found in your county or parish.

**AgrAbility:** Education, technical and financial information, and support systems to farmers with disabilities, is the function of AgrAbility programs in several states. AgrAbility works with non-profit disability service organizations (e.g. Easter Seals) to provide services to those farmers suffering disability. USDA and National Easter Seals sponsor this program.

**NIOSH:** The National Institute for Occupational Safety and Health (NIOSH) is a branch of the Centers for Disease Control and Prevention (CDC). NIOSH is responsible for conducting research and making recommendations for the prevention of work-related injury and illness, including agriculture. Check out www.cdc.gov/NIOSH.

Consumer Product Safety Commission

Figure 1.5.a. Many government agencies can provide information about farm safety. What are these two organizations and what do they do?
More Governmental Agencies

ASH Centers: Agriculture Safety and Health Centers are supported by NIOSH. Centers currently serve 10 areas of the United States. Regional ASH Center locations include:

- Pacific Northwest, Washington
- Western, California
- High Plains Intermountain, Colorado
- Southwest, Texas
- Great Plains, Iowa/Nebraska
- National Farm Medicine Center, Wisconsin/Minnesota
- Southeast, Kentucky
- Northeast, New York
- Great Lakes, Ohio
- Southern Coastal Area, North Carolina

These centers provide safety education programs specific to their geographic location. Use the Internet to locate each center through www.cdc.gov/niosh.

National Children’s Center for Rural and Agricultural Health and Safety: This center, also sponsored by NIOSH, promotes farm safety for children. One program creating safe play areas on farms draws attention to helping small children grow up safely on farms. Explore their resources by contacting www.marshfieldclinic.org.

CPSC: The U.S. Consumer Product Safety Commission is a federal regulatory agency working with industry to develop and implement standards for safety in consumer products. This agency can recall unsafe products. Contact www.cpsc.gov.

EPA: The Environmental Protection Agency of the federal government is assigned the responsibility to protect the air, water, and natural resources of the U.S. Pesticide laws and air and water pollution regulations affect our farms. See www.epa.gov to learn more about this regulatory agency.

OVR: An Office of Vocational Rehabilitation can be found in each state as part of the state’s Bureau of Labor and Industry (Pennsylvania designation). This agency assists citizens with disabilities to gain economic independence. Specialized services are available from OVR offices. Financial aid may be available to assist disabled farmers.

Figure 1.5.b. Corporate manufacturing and supply vendors are sources of safety information about their products. Some of the information can be accessed via the Internet, while local dealers can provide training videos, brochures, field days, field trips, and demonstrations for you or your group. Read more about national level associations and organizations on page 3.
Corporate Sources

Many corporate groups are sources of information about agricultural safety. A few are listed here. You may discover more as you develop your safety awareness. Try finding them on the Internet.

Vendors:
- Gempler’s Inc.
- NASCO

Equipment Manufacturer:
- Deere and Company
- Case IH
- New Holland
- AGCO
- Kubota

Chemical Company:
- Dow
- Monsanto
- DuPont
- Novartis

*This listing is used as an example and does not represent endorsement of any specific vendor or manufacturer (Figure 1.4.2.b.).*

Other Sources

Some organizations or associations exist as nonprofit groups. They work toward a common good for their industry or interests.

NSC: The National Safety Council is a federally chartered nonprofit, nongovernmental source of safety and health information. Education in safety, safety resources, and farm safety statistics are available from this group. Check out www.nsc.org.

AEM/FEMA: The Association of Equipment Manufacturers (AEM) and the Farm Equipment Manufacturers Association (FEMA) represent large and small companies. AEM is a trade and development resource. FEMA represents the common interests of hundreds of smaller companies. Find them at www.aem.org and www.farmequip.org.

ASAE: The American Society of Agricultural and Biological Engineers is a professional and technical organization dedicated to the advancement of engineering in agriculture, food, and biological systems. Find them at www.asae.org.

NLSI/NLPI: The National Lightning Safety Institute (NLSI) and the National Lightning Protection Institute (NLPI) are two similar associations. The NLSI promotes lightning safety for people and structures. The NLPI promotes high quality, safe design, and safe installation of lightning protection systems. Use www.lightningsafety.com or www.lightning.org to access their websites.

You may also try these sources:
- National 4-H Organization
- The National FFA
- National SAFE KIDS Campaign
- Farm Safety 4 Just Kids
- The National Center for Farm Worker Health

For example, the Farm Safety 4 Just Kids (FS4JK) program provides educational opportunities and resources to make the farm a safe and healthy environment for children. Contact them at www.fs4jk.org.

Would you consider a career in the field of agricultural safety?

NSD: The National Agriculture Safety Database is the national central storehouse of agricultural health, safety, and injury prevention materials. Agricultural statistics on injury and death can be found there. Funding for this effort comes from USDA and NIOSH. Use www.cdc.gov/nasd to locate this source.

Figure 1.5.c. These youth organizations serve agriculture. What safety programs do they offer? Use the Internet or local 4-H leaders and agriculture teachers to find out more.
Safety Activities

1. Organize a list of Internet websites that discuss agricultural safety. Hint: Try the Land Grant University in your state first. Then begin using any search engine on the Internet to look for those references discussed in this task sheet. You can expect to find dozens of sources.

2. Use the NAGCAT website (www.nagcat.org) to find out more about this resource. Find out how to produce a safety calendar. The website describes how to customize a safety calendar for your family or group. Perhaps you could make a farm safety calendar for your home, club, or school.

3. Call your local County Cooperative Extension Service and ask to have safety publications mailed to you.

4. Use a national chain store catalog (Sears, Gemplers, etc.) to make a list of their available safety materials. List the price tag as well. Safety is a large and important business.

5. Call your local Volunteer Fire Department to inquire as to whether they have a Junior Member eligibility. Perhaps you could join the group to learn more about fire safety and rescue techniques.

6. Volunteer at local Red Cross and/or Easter Seals chapters to help these groups help others in the community.

References
1. The Internet; use any search engine.
2. Local Cooperative Extension Service offices
3. Local Secondary Agricultural Education Instructors
4. State Land Grant Universities
5. Federal and State Government Agencies
6. Safety Associations and Corporations

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