



Tailgate Safety Training for Landscaping and Horticultural Services

Agricultural Safety Program, 590 Woody Hayes Drive, Columbus, OH 43210

Protecting Against Noise

Objective: Use proper protection against unsafe noise levels.

How to Use This Module

Workers have nothing to lose — but a lot to gain — by protecting their hearing. For this module:

- Read the information below on hearing hazards and hearing protection.
- Ask your supervisor to demonstrate earplugs and earmuffs.
- Test hearing protection to see if it blocks warning signals, machinery, or speech.
- Identify the equipment you use that requires hearing protection.
- Review the important points.
- Take the True/False quiz to check your learning.

Background

Some workers ignore the need for hearing protection. They resist wearing hearing protection because they do not think they need it. Workers might also think that protection will be uncomfortable. This is frightening because hearing loss is gradual; workers can gradually lose some of their hearing before they realize it. By the time workers reach retirement age, they will suffer hearing loss and social isolation.

Hearing Protection Devices

There are earplugs and earmuffs that give good protection. They are comfortable and easy to use.



Formable plugs

are spongy, soft compressed, or shaped prior to insertion. They are expandable to provide a snug fit. These are disposable. Formable plugs are not for reuse.



Premolded plugs

are made of soft, flexible material preformed to fit the ear. They must be fitted (sized) for each ear. These plugs are for reuse. They must be washed after each use. Use premolded plugs when hearing protection is used on a regular basis.



Earmuffs are adjustable headbands with soft cups and cushions that seal around the ear. Workers may wear plugs under muffs for additional protection. Muffs may be more comfortable to wear over a longer period than plugs. Workers should not wear earmuffs with eyeglasses or any other obstruction. Muffs may be the best choice for occasional users or occasional users of noisy equipment, like a grinder.

Not all materials can block the same amount of sound. The manufacturer indicates how much noise (in decibels) the hearing protection device can block if used properly. This is called the noise reduction rating (NRR). For general use, look for a NRR of 25 or greater. In extremely noisy conditions, workers should use both earplugs and earmuffs.

How Noise Can Hurt You

- Prolonged exposure to loud noise can result in permanent hearing loss.
- Short-term exposure to loud noise can result in temporary hearing loss.
- Short-term exposure to very loud noise can result in permanent hearing loss.
- Too much exposure to loud noise can result in stress, from constantly straining to listen and be heard.
- Noise can cause you to miss important safety instructions.

How to Tell if Noise Is Hurting You

- You may have a problem if:
 - ◆ You hear ringing or other noises in your ears.
 - ◆ You have a hard time hearing people when they talk to you.
 - ◆ You are unable to hear high pitched or soft sounds.
- If you experience any of these problems, tell your supervisor. You may need to have your hearing tested.

Noise is defined as sounds people prefer not to hear. Noise is especially dangerous in the workplace because it interferes with communication and disrupts concentration. Sound is measured in decibels. Noise of 85 decibels or greater affects your hearing if you work around it eight hours a day. Some sample decibel levels are listed here.

Noise	Decibels
Conversational voices	60
Idling tractor	80
Conveyor	80
Diesel truck	90-95
Power lawn mower	90-95
One leaf blower	90-100
Power tools	100
Chain saw	110

Protective earmuffs or earplugs can reduce noise levels to the inner ear if used properly. Use hearing protection when noise exposure cannot be controlled adequately by environmental changes or administrative changes,

like moving farther away from the noise. It is a good idea to wear hearing protection when average noise levels exceed 85 decibels for prolonged periods.

Good protection against noise depends on the seal between the surface of the skin and the surface of the hearing protector. Be cautious because protectors can become loose and create leaks. Having a leak does not protect the ears from harmful noise levels. Talking and even chewing can create a leak in the protection. Earplugs should be made of a soft material like neoprene. Earplugs should also be properly designed, well fitted, and clean.

Review These Important Points

- Noise that exceeds 85 decibels for prolonged periods can cause hearing loss.
- Good protection against noise depends on the seal between the surface of the skin and the surface of the hearing protector.
- It is important that hearing protection be worn properly and regularly.
- If workers hear noise in their head or ringing noises in their ears at the end of the workday, they may have been exposed to too much noise. Precautionary measures should be taken.

About These Modules

The author team for the training modules in the landscape and horticultural tailgate training series includes Dee Jepsen, Program Director, Agricultural Safety and Health, Ohio State University Extension; Michael Wonacott, Research Specialist, Vocational Education; Peter Ling, Greenhouse Specialist; and Thomas Bean, Agricultural Safety Specialist. Modules were developed with funding from the Occupational Safety and Health Administration, U.S. Department of Labor, Grant Number 46E3-HT09.

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Answer Key: 1 = F, 2 = T, 3 = T, 4 = T, 5 = T.

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Name _____

True or False?

1. All hearing protection is the same, so there is no reason to worry about the noise reduction rating (NRR). T F
2. Protecting your hearing reduces noise level to the inner ear. T F
3. Hearing loss is gradual, and by the time it is realized, the ability to hear has already diminished. T F
4. Most employees resist wearing earplugs because they believe they are not needed. T F
5. Muffs and plugs can be worn together for additional protection. T F