

Safe Sound Levels

Sound levels are included as an industrial standard of OSHA. As sound levels increase, the safe permissible duration of exposure decreases. The National Safety Council recommends no more than 8 hours of 85-dB exposure as the safe limit for farm operations.

| Permissible Noise Exposures | |
|-----------------------------|------------------|
| Duration per day (hours) | Sound Level (dB) |
| 8 hr | 85 |
| 4 hr | 90 |
| 1 hr | 100 |
| 1/4 hr | 110 |
| Threat to Hearing | 120 |

Always Wear Hearing Protection

Good maintenance practices are an effective way to reduce noise exposure because they reduce noise at the source.

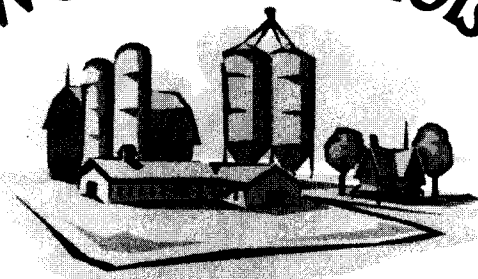
Examples are:

- Replace worn, loose, or unbalanced machine parts to cut down on the amount of vibration generated
- Make sure that machine parts are well-lubricated to cut down on noise exposure created by friction
- Install a good, high-quality muffler on all engine-powered equipment to reduce vibration

There is no effective treatment for Noise Induced Hearing Loss.

The key to good hearing is **PREVENTION!!**

Western Illinois



Agri-Health Program

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Western Illinois AHEC



Southern Illinois University
School of Medicine



BLESSING HOSPITAL

For more information about hearing testing and personal protective equipment, contact:

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HEARING IN THE AGRICULTURAL SETTING



One way to obtain information and know what is happening around you is sound. You talk with others, get weather information, know if a machine is working properly, or learn if an animal is ill or injured by the use of sound. Chronic exposure to noise can impact your hearing. Most hearing loss is due to too much noise exposure. Simple hearing protection tools can save your hearing.

Effects of Excessive Noise

One in 10 Americans has a hearing loss that affects his or her ability to understand normal speech. Excessive noise exposure is the most common cause of hearing loss.

The amount of hearing loss experienced is related not only to the loudness of sound but also to the frequency (pitch) and to the length of time exposed.

Higher frequency sounds are much more damaging than low ones. People who experience a hearing loss may first notice an inability to hear higher pitched sounds. Eventually the ability to understand speech is affected.

Some danger signals to be aware of:

- Your ears ring or you experience head noises a few hours after you get off the tractor or other equipment following a day's work.
- Your speech seems muffled after being around loud noises for extended periods



Protect Yourself Against Noise

Operators of noisy farm equipment should get and use proper hearing protection. The cost and inconvenience of protecting hearing is practically nothing compared to not being able to hear at all.

The time to take action is now before permanent damage is done. Have your hearing level checked, then avoid noisy situations...and protect your ears from those situations you can't avoid.

Typical Hearing Protection

Disposable Ear Plugs

- Made of dense foam
- Plugs are compressed or shaped prior to insertion
- Expandable to provide a snug fit
- One size fits all

Reusable Ear Plugs

- Made of flexible rubber or silicone
- May be joined by cord or headband to prevent loss
- Must be fitted (sized) for each ear

Earmuffs

- Adjustable headband with rigid cups and cushions that seal around the ear.
- Muffs and plugs may be worn together for extra protection

Sound

Movement of people, animals, machines, and other things cause pressure waves in the air. If the pressure waves are within a certain range of frequencies, your ears interpret them as sound.

Measuring Sound

Loudness is measured in decibels (dB). As decibels rise, loudness quickly increases. A 10-dB rise is a 10-times leap in loudness. That means a 130-dB sound (a pig squeal) is 10 times louder than a 120-dB sound (an old chain saw) and it is 100 times louder than a 110-dB sound (full-throttle combine).

| Common Noise Levels | |
|--------------------------|---------------|
| Sounds | Decibels (dB) |
| Gun Shot | 140* |
| Pig Squeal | 130* |
| Old Chain Saw | 120* |
| Loud Rock Music | 115 |
| Full-throttle Combine | 110 |
| Power Tools | 100 |
| Full-throttle Lawn Mower | 90 |
| Idling Tractor/Combine | 85-90 |
| Normal Conversation | 60 |
| Quiet Whisper | 20 |
| Lowest Audible Sound | 0 |

*Above 120 dB will cause pain