

## *Farm Safety Series*

# Hearing Protection for Agricultural Workers

Farmers and farm workers often work around loud noises that can ultimately lead to hearing loss if hearing protection is not used. The noise of a tractor running or sawing operations in a farm shop can cause unnecessary fatigue, discomfort, and mental un-ease in addition to a gradual or sudden, but temporary, hearing loss. Working in such a noisy environment often results in ringing in the ears after cessation of the noise with normal hearing returning overnight. However, repeated exposure will result in gradual, permanent hearing loss.

Sound is radiant energy that is transmitted through space by sound waves and is the objective cause of hearing. Noise is best defined as unwanted sound of sufficient intensity to damage hearing. Sound intensity or level is measured in units called decibels.

### *Decibel levels of common sounds*

- 0** acute threshold of hearing
- 20** soft whisper
- 65** normal conversation
- 90** the maximum level not to exceed for an 8-hour duration
- 100** tractor under load, motorcycle
- 120** jack hammer, amplified rock music
- 140** shotgun blast

The louder the sound you are subjected to, the shorter the exposure time should be for any 24-hour period. For example, a 100 decibel (db) sound should be limited to no more than 2 hours duration per 24-hour period.

There are two ways of protecting hearing in a loud environment:

1. Move away from the sound source if possible. Doubling the distance from the source reduces the sound level to 0.25 the original level.

2. If you cannot move away from the sound source, wear a hearing protection device, such as earmuffs or earplugs.

Ear muffs are more comfortable to wear on a long term basis and can be positioned to muffle loud noise but not shut it out completely. Shutting out all sound can enhance the danger of ignoring saw blades or other hazardous moving parts on equipment. You need to hear the sound but muffle it to a level that does not damage your ears. Earplugs will muffle loud noise but they must fit snugly and often require repositioning to maintain proper protection. Earplugs can also cause ear discomfort and introduce infection from contaminants entering the ear canal after extended periods of use.

### *Have your hearing checked*

Have your hearing checked to know the degree of hearing loss already sustained. The procedure, performed by an otorhinolaryngologist (ear, nose, and throat physician) will let you know if you have already experienced significant hearing loss. Noise-induced hearing loss cannot be reversed. By knowing about the hazard and taking protective measures, you can guard against further loss of hearing.

### *Learning Points*

- Wear hearing protection for all noisy jobs
- Stay as far away from the source of noise as possible
- Muffle the noise with hearing protection but do not completely shut it out

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For more information, call your county Extension office. Look in your telephone directory under your county's name to find the number.

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