

News Column

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Huh what did you say? Avoid hearing losses on the farm

A few weeks ago was Farm Safety Awareness week and I talked about silage safety and how silage avalanches can occur without warning at any time. Which can lead to serious injury or even death by suffocation as a result of being covered by tons of silage. If you happened to catch me on KVGB last week I talked about avoiding hearing losses on the farm.

Working on the farm can sometimes be a noisy job with operating machinery and working in the shop. Noises that are 85 decibels and above can damage tiny sensory cells in our inner ear, causing Noise-induced hearing loss (NIHL). These cells, called hair cells, convert sound energy into electrical signals that travel to the brain. Once damaged, our hair cells in our inner ear cannot grow back.

Noise-induced hearing loss occurs when our hearing is exposed for too long to sounds that are too loud. The higher the decibel level, the shorter the time before damage may occur. How close we are to the sound also matters.

Remember that 85 decibels and above for prolonged periods can cause gradual hearing loss. Did you know that a normal conversation with someone is at 60 decibels, a push mower running is 90 decibels, a chain saw 110.

The decibel level inside an acoustically-insulated tractor cab performing typical field operations can be around 80 to 85 decibels. At this sound level, there is no threat of hearing damage regardless of the length of time in the cab. But, take off the cab, let corrosion deteriorate the exhaust system, and now this same tractor is producing 100 decibels. These 15 additional decibels, limits safe operation to two hours before the threat of hearing damage becomes an issue. Older tractors without cabs frequently produce sound levels that allow less than eight hours of exposure before noise induced hearing loss is a problem.

In instances, when it is not possible to reduce tractor or equipment noises below the safe 85 decibel limit, such as open cab tractors. In these situations, the only choice is to use ear plugs or earmuffs.

Disposable ear plugs are the least expensive method of ear protection. Quantity discount prices begin at 15 cents a pair. Earmuff prices begin at about \$10.

These protective devices have a noise reduction rating (NRR) which is an indicator of how many decibels a hearing protector reduces noise. For ear plugs to be most effective they should be properly inserted, https://www.youtube.com/watch?v=xF1CjCuqD_M

Ear plugs have an NRR ranging from 26 to 31; most earmuffs have a NRR ranging from 23 or more. In the example of a tractor producing 100 decibels, an operator wearing ear plugs can reduce his or her noise level exposure to less than 80 decibels.

Limit exposure to the noise. The risk of hearing damage increases with the amount of time spent in a noisy area. Limiting the amount of time spent in a noisy area reduces the risk of hearing damage. If you can't reduce exposure, wear earmuffs or rated ear plugs that are properly inserted. Cotton makes a great T-shirt, but it is ineffective as ear plugs.

When working in a shop, keep as much distance between you and noisy equipment. Locate a noisy air compressor or other shop equipment as far away from the work area as possible. Doubling the distance from the source of a noise reduces the sound level by one-fourth (1/4). An acoustic barrier, made out of fire resistant material, could also reduce the noise level in a shop.

When purchasing new equipment, consider the noise output level of the machine. The additional cost of purchasing a small utility tractor or skid steer with a cab may be outweighed by the increased benefits of reduced noise and operator comforts. Sound levels inside the cab of a new tractor are often listed in the manufacturer's literature. Lowering noise levels in the tractor cab is an indication of quality construction for "comfort of the operator" and can avoid hearing loss.

Noise induced hearing loss knows no age discrimination; older workers as well as teenagers have suffered hearing loss from farm-related activities. Even workers who have suffered some hearing loss can save what they have left with consistent use of ear plugs or earmuffs when working around noisy equipment.