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## PRESS RELEASE

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### FOR IMMEDIATE RELEASE

#### CAN YOU HEAR ME NOW?

*It's easy to suffer permanent hearing loss, even easier to prevent it.*

Noisy tractors, ATV's, and power mowers – that produce an average 100 decibel level of sound - are just a few noise pollution sources farmers are exposed to on a regular basis.

Some hearing loss is associated with aging. Noise-induced hearing loss generally occurs over a period of time due to exposure to sound exceeding 90 decibels. The fact that this hearing loss is permanent and can lead to social isolation and even depression should be sobering facts for everyone working in a farm environment.

With the average age of farmers at 58.3 years of age (2012 USDA Census report) or more, some 60% to 70% of that group already has age-related and noise-induced hearing loss in either one or both ears. Everyone on the farm can take a few simple steps to reduce noise-induced hearing loss and its consequences.

“The best way to reduce the risk of hearing loss from loud noise is to avoid loud noise whenever

possible,” University of Nebraska Medical Center Associate Professor Chandran Achutan, says. “If you’re exposed to noise loud enough that you have to shout to talk to someone, you know it’s too loud. Move to a quieter place.”

Dr. Achutan also recommends that farmers consider purchasing quieter equipment, such as the Quiet Dryer portable grain dryer introduced at the 2017 National Farm Machinery Show. Simple ear plugs and ear muffs are also effective ways to protect hearing around farm equipment and the farm environment.

Hearing protectors, such as ear plugs and ear muffs, reduce the level of sound reaching hair cells in the inner ear. They don’t block sound 100%, but make noises sound softer.

The Noise Reduction Rating (NRR) provides a value for the level of hearing protection offered by earplugs and ear muffs. The higher the NRR value, the greater the noise reduction.

On the farm, tractor engine noises are typically at 100 decibels. To keep noise decibel levels below 87, select hearing protection with ratings as high as 33 dB. When properly fitted, this type of hearing protection will keep tractor engine decibel levels at approximately 77, a safe level of sound.

Earplugs are soft foam or harder plastic inserts that fit directly into the ear canal. Earplugs are cheaper than earmuffs, and both are available in disposable and reusable types. The small size of earplugs makes them convenient to carry in pocket or purse. Some come with a neck strap to make them readily available.

Earmuffs are rigid cups with soft cushions that seal around the ear to block noise and look like wireless headphones. Earmuffs with high NRR values are generally large, bulky cups with more sound-

reducing insulation than earmuffs with a lower NRR.

The part of the earmuff fitting over the ear is often filled with fluid, foam or both for a customized, close fit. Three common earmuff designs are over the head, cap mounted and behind the neck.

Earmuffs are more costly than earplugs, but easier to use correctly, although individuals wearing glasses may have trouble properly fitting earmuffs. Earmuffs won't slide, as earplugs may.

Electronic earmuffs provide hearing protection while offering other features, such as AM/FM radio reception two-way radio reception and active noise reduction or amplification of low sound levels.

"There's no research that shows either ear plugs or ear muffs to be a superior protection," Achutan says. "The most important thing about these protective devices is using them properly."

To properly insert ear plugs, the plug should be rolled between the thumb and finger to create a cylindrical shape. Once that shape is formed, using the opposite hand to grasp and press it into the ear until it begins to expand will provide the intended noise protection.

"You don't want to just squash the ear plug and insert it," Achutan says. "The cylindrical shape allows for getting it into the proper position to provide noise protection."

Because operators need to listen to equipment engines to ensure they're operating properly, recommendations are that ear plugs are inserted as soon as possible once equipment is running.

Maintaining the integrity of ear plugs is key to their effectiveness. Once they're used, ear plugs should be thrown away. They definitely shouldn't be re-

used if they ended up in a laundered shirt or pants pocket. Ear plugs should also be free of any tears.

Disposable ear plugs are the least expensive ear protection, with average costs around .15 cents per plug. When used around a tractor generating 100 decibels, ear plugs can reduce the decibel level to less than 80.

Keeping equipment well-lubricated, properly adjusted and well maintained will help control noise levels. Keeping noisy shop equipment – such as air compressors – as far away from the work area as possible reduces noise exposure. Acoustic barriers, made out of fire resistant material, can also reduce noise levels in a farm workshop.

Threatening noises on the farm are often associated with equipment, but livestock producers are also regularly exposed to noise generated by animals.

“Pigs create a lot of noise,” Achutan says. “Sometimes farmers have a difficult time judging whether or not a loud noise is affecting their hearing. Anytime a noise is so loud you have to shout to be heard, it’s affecting your hearing.”

Limiting exposure to all loud noise throughout the day is important to anyone seeking to protect their hearing. While it may be tempting to dismiss the need for hearing protection if loud noise exposure is brief, it’s important to understand that damage from loud noise accumulates throughout the day.

“That 5 minutes you spend around the tractor, the 20 minutes you’re exposed to livestock noise and the two hours you listen to loud noise from a television or music source, can add up to hours of noise exposure by the end of the day,” Achutan says. “In my own hearing loss studies, I’m finding that farmers are exposed to about 600% more noise on a daily basis than what is allowed.”

Noise exposure on the farm can happen at any age. Explosions, target shooting and hunting all generate levels of noise that can be harmful to hearing.

Hearing tests conducted by an audiologist reveal where hearing loss is occurring and can help in reducing noise exposure risks.

“Farmers should have their hearing tested at least once each year to detect hearing loss,” Achutan says. “High frequency sound is typically the first area where hearing loss occurs. Audiologists can determine from hearing tests if that loss is due to noise or other factors.”

Achutan also encourages farmers, who may be reluctant to use ear plugs, to explore where that resistance comes from. If it seems inconvenient to wear them, supplies aren’t readily available or users don’t understand how to properly insert ear plugs, Achutan recommends seeking a resolution to the issue.

“Some studies indicate that farmers don’t grasp the importance of protecting their hearing,” Achutan says. “They don’t realize that, once they’re unable to hear what people say, it could isolate them from family members, like their grandchildren. That isolation can lead to a sense of being misunderstood or ignored. From that, depression may develop.”

The longer anyone works on the farm, the greater their potential for permanent hearing loss. Symptoms are usually vague, including feelings of pressure or fullness in the ears, speech that seems to be muffled or far away. Ringing in the ears can also indicate hearing loss. Because inner ear cells may have been destroyed by noise, hearing will not return to “normal.”

“Hearing loss is so different from other types of farm-related injury,” Achutan says. “If you get

something in your eye, you know it right away and you take steps to correct it. Hearing loss is subtle, but very serious. Once noise-induced hearing damage occurs, the loss is permanent.”