

Sound Measuring Activity

Objectives

- Identify two sources of noise on farms.
- Describe how the noise levels compare with ACGIH threshold limit values or OSHA's permissible exposure limit for noise. Explain why you chose either the ACGIH or OSHA recommendations.
- Using the hierarchy of controls, identify recommendations to reduce worker exposure to noise

Materials

- Sound activity worksheet
- Noise dosimeter (optional)
- Smartphone app (information below)
- Two or more sources of noise (i.e. chainsaw, auger, tractor)

Directions

Students will identify two sources of noise in the farm environment. Using a noise dosimeter or a smartphone app students will identify and record the sound level at various distances from the source. Students will then compare their recorded sound levels with OSHA's permissible exposure limit for noise and make the appropriate recommendations to reduce workers' exposure to noise.

Homework

In a memo to the farm safety manager, discuss your recommendations to reduce worker exposure to the sources of noise you identified. Include noise dosimeter and/or smartphone app output and compare what recorded to the OSHA's permissible exposure limit for noise. Compare the final recommendations you made for each source of noise. Are they different? If so, why?

Smartphone App

Free noise measuring apps are available in the Apple and Android app stores for smartphones or tablets. These apps are easy to use. Take a bit of time to download and familiarize yourself with an app.

Sound Measuring Activity

Identify two sources of noise in the farm environment (i.e. tractor, auger) and complete the table below. Using a noise dosimeter or smartphone app, determine the sound level at various distances from the source. Make recommendations to eliminate or reduce workers' exposure using the hierarchy of controls.

Machine or tool (i.e. chainsaw)		
Sound level at 1 meter (dBA) (using noise dosimeter or smartphone app)		
Sound level at 3 meters (dBA) (using noise dosimeter or smartphone app)		
Recommended engineering control (if any)		
Recommended administrative control (if any)		
Recommended Personal Protective Equipment (PPE) (if any)		
Final recommendation: given the machine and task, what is your final recommendation for reducing worker exposure?		

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