Understanding Blindness and Vision Impairment

Everyone experiences vision impairment and blindness in different ways. Most people are born with excellent eyesight, but many lose vision due to an injury, aging or disease over time. For some people vision loss is sudden, and for others it may be gradual. For example, those with diabetes may have fluctuating levels of visual function or sometimes people with the same eye condition may have different degrees of remaining vision.

Age and Lighting Level Can Impact Vision

Vision impairments can develop gradually over a period of years. Impairments have an impact on the ability to recognize objects at different distances, distinguish patterns and colors, adapt to changing light levels and clearly focus on objects. For example, 45-year-olds may need four times as much light to see objects as they did at age 25. By age 65, the light needed to see clearly may double compared to age 45. Farmers often work in low light conditions such as early morning or late evenings. As farmers age, it may become harder to efficiently operate controls or levers and react to potential hazards in low light conditions.

Five Common Conditions that Cause Vision Loss

- **Glaucoma**—Gradual loss of peripheral vision because of an increase in pressure inside the eye caused by a build-up of excess fluid. Usually occurs in individuals age 40 or older.
- **Cataracts**—A clouding that develops in the lens of the eye, growing progressively darker and more dense, preventing light from easily passing through the lens resulting in vision loss.
- **Age-related macular degeneration**—A progressive retinal disease with multiple environmental and genetic factors that often affects central vision. Usually occurs at age 55 or older.
- **Diabetic retinopathy**—An eye condition that results from diabetes when blood vessels stop feeding the retina properly.
- **Retinitis pigmentosa**—A degeneration of the retina resulting in decreased night vision, a gradual loss of peripheral vision, and in some cases, loss of central vision.

Legal Blindness

Approximately 10 percent of individuals considered legally blind have no vision. Ninety percent have some degree of vision, from only light perception to relatively good perception with some useful sight. A person is considered legally blind if they need to use corrective lenses to see an object at 20 feet with the same degree of clarity as someone with unaffected eyesight at 200 feet. This is also known as “20/200” eyesight. Also individuals with restricted visual field (peripheral vision loss) of less than 20 degrees are considered legally blind compared to normal peripheral vision of 180 degrees.

The Impact of Job Performance on the Farm

A person with visual limitations can remain active and productive during farm activities. The key to this is for individuals to understand their needs and limitations...
that impact their work performance. Individuals can utilize workplace adjustments or modifications to remain productive and seek ideas from peers with similar impairments. Some simple suggestions to keep an individual with vision impairment safe and productive on the farm include the following:

- Make sure work areas and walkways are well lighted and that light bulbs are checked and replaced regularly.
- Utilize motion sensitive lighting or install timers on the lights and have them set to turn on for the normal time you typically enter that building.
- Always unplug electric bench tools to prevent them from being powered on unintentionally.
- Ensure traveled paths are solid and free from obstructions to prevent trips and falls. Changes in elevation should be marked or a smooth transition should be created.
- Using contrasting colors between floors, walls, tools and equipment can help assist with problems of depth perception.
- Organize tools so they are easily accessible. Hang or store tools in specific locations where they are more visible to aid in recognition of sizes.
- Color code tools like rakes, hoes and shovels, by wrapping a wide band of colored duct or electrical tape around handles. For example, put red tape on Phillips screwdrivers and green tape on flat head screwdrivers.
- Wrap rubber bands around handles to distinguish between metric and standard wrenches.
- Utilize magnetized trays to keep parts, such as nuts and bolts, organized while working on equipment.
- Use pieces of wood cut to a variety of measurements instead of straining to read a tape measure.
- When transferring liquid from a larger container to a smaller one, place the smaller container into another container, such as a bucket, to catch any spill over that can then be poured back into the original container. You can also divide liquid and powders into smaller amounts that are typically used at one time, such as in pounds or ounces.
- Hang an old burlap feed bag about two feet away from a low-hanging beam or light fixture as a reminder to duck your head. Burlap works best because it is more likely to catch on a cap than smoother materials.
- Suspend a tennis ball or playground ball from a piece of twine to mark when to stop a vehicle as you drive into a building. The idea is that when the vehicle’s windshield bumps into the ball it’s time to stop.

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References


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**About AgrAbility Based Fact Sheets**

These fact sheets were developed to promote success in agriculture for Ohio’s farmers and farm families coping with a disability or long-term health condition. AgrAbility offers information and referral materials such as this fact sheet, along with on-site assessment, technical assistance, and awareness in preventing secondary injuries. Fact sheets were developed with funding from NIFA, project number OHON0006.