

MAFES Dawg Tracks

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MISSISSIPPI STATE UNIVERSITY™
MS AGRICULTURAL AND
FORESTRY EXPERIMENT STATION

Farm Electrical Safety

Farming is extremely important and is one of the most dangerous jobs in the USA. According to the U.S. Department of Labor, farming accounted for 23.3 deaths per 100,000 workers. National Farm Week, which is approaching later in this month, through its Safe Electricity is sharing electric tips and safer practices all across the USA.

Since around the 1930's electric service was being installed all across our country in both rural and urban areas. Electrical hazards can result in electrical shock to human and animals, or in some cases, result in fires in structures or equipment.

Risks associated with electrical hazards on the farm are increased by the presence of moisture, especially by the dampness that is common in confined livestock areas.

SAFETY TIPS FOR REDUCING ELECTRICAL HAZARDS ON THE FARM:

There are several ways to reduce the electrical hazards in farm buildings and around the work areas. The following tips can reduce the likelihood that you and your livestock will receive electrical shock:

- ✓ Select an electrical system. If you have two conductor circuits and a variety of tools, some with two-wire cords and plugs and some with three-wire cords and plugs, you have four alternatives:
 - Install Ground Fault Circuit Interrupters (GFCI) permanently in each electrical circuit in the shop and other farm buildings.
 - Plug in a portable GFCI when individual power tools are used.
 - Convert two-wire plug to three-wire, grounding-type circuits.
 - When possible, replace present tools with new double-insulated tools.
 - Solicit the advice of a competent electrician, familiar with agriculture wiring to assist you decide the safest and most economical installation for your farm.
- ✓ Purchase tools and equipment designed to prevent shock. Look for tools with approved accreditation, such as from Underwriter Laboratories (UL).
- ✓ Do not abuse electrical tools. Handle with care, refrain from picking them up by the cord, dropping them on the floor, or throwing them around.
- ✓ Avoid using grounding adapters. Grounding adapters are risky, because they are two-wire circuits which do not have grounding capabilities.

All equipment plugged into GFCI protected receptacles, including two-prong (two-wire) electric plugs, will have the ground fault protection. Also, a portable GFCI is recommended when using power tools in damp or wet locations. The GFCI is plugged into an outlet and the tool is plugged into the GFCI.

EXTENSION CORDS- Damaged or improperly used cords can result in fires or electric shocks. Recommendations for farm operations is to avoid using extension cords on the farm. If you must use them try to follow these recommendations:

- Do not use in wet areas.
- Do not try to repair damaged cords or splice two cords together. Replace damaged cords.
- Keep the cords away from sharp objects. Heat, oil, and solvents can damage the insulation.
- Check the condition of the cord before each use for abrasions, nicks, or cuts.
- Use a cord with the correct wiring for your job. Example: do not use a light-weight home cord for heavy farm repairs.
- Use a three-wire plug (grounded) plug for tools and machines having a grounded outlet or a portable GFCI.
- Buy extension cords with an approved testing laboratory, like the UL seal.
- Be sure the cord indicates the maximum current and/or wattage rating.
- Route the cord to protect machinery and animals. Protect the cord to eliminate the potential for a trip hazard.
- Refrain from connecting two cords together or a cord to a surge protector.

OTHER SAFETY TIPS-

- **Electrical Panels** – Late model panels use breakers instead of the antiquated ones that use fuses. Be sure that you use the proper size of fuse or breaker. Breakers or fuses will overheat due to incorrect sizes.
- **Outlets** – It is preferable for all outlets to have three-prong grounded type. Older outlets may have only two prongs. If so, you will need an adapter for three-prong tools. In areas that remain wet, you will need the GFCIs.

OUTSIDE HAZARDS-

- Be sure that outside power lines are high enough for machinery to pass safely underneath. This is especially true around grain bins and augers.
- Periodically check the grounded rods and wires around buildings and power poles. These wires and rods can get damaged or broken. If they get damaged, the overall system won't work properly and won't provide sufficient grounding protection. Electricity follows the easiest path to the ground, so these grounding rods and wires are the major source of providing that easy path.

***DON'T BE A FOOL - CAUSE SAFETY IS
COOL --- SO
MAKE THAT YOUR SAFETY RULE.***

***THE BEST SAFETY DEVICE
IS A
SAFE WORKER!***