

MAFES Dawg Tracks



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Farm Electrical Safety



Because of the standards of electrical convenience that we enjoy now, it is easy to perceive that the risks of electrical hazards are minimal. But this isn't necessarily true, as we can get careless and not stay focused. The net result of this is an accident of varying degrees.

Every Year:

- There are approximately 290 accidental electrocutions.
- An additional 800 people die in fires caused by faulty electrical systems each year.
- Thousand of folks are shocked and burned each year as a result of accidental contact with electricity.
- It is estimated that \$1.2 billion dollars in property damage occurs each year due to faulty use of electricity.

Electrical accidents happen in many different ways:

- Degrading of electrical wiring because of rodents, weather exposure, normal wear, improper wiring, and improper installation of wrong size wiring or maybe the corrosion of circuits.
- Entanglement of equipment into power lines such as: grain elevators or augers, combines, or raised dump beds.
- Some accidents have been recorded where entanglement was caused by the movement of irrigation pipes.

In 1998, electricity was the 7th leading cause of deaths and resulted in untold numbers of losses of cattle and property. Following are some items that we should be aware of that will cause some problems, if left undetected or overlooked.

Electric Panels:

In recent installations, breakers are used as opposed as to the old fuse boxes.

- Be sure to use the proper size breakers or fuses, which will prevent them from overheating. If a breaker keeps tripping or a fuse continues to blow, you must find the cause and correct it.
- All panels should be locked and fuse boxes should be in the "off" position. This will prevent turning on the power while the equipment or wiring is being worked on.
- Occasionally the panel boxes should be checked for the presence of spider webs, dust, or other debris that could cause the box to overheat.

**CHANCE TAKERS ARE ACCIDENT
MAKERS!!
ACCIDENTS HURT – SAFETY
DOESN'T**

Outlets: It is preferred that all outlets have a 3-pronged grounded plug.

- Many older outlets have only 2 slots, which will need a 3-prong adapter. If the outlets are really old, the slots will be the same size, as opposed to the newer ones with one slot being longer. The cost is minimal, so it would be better to convert all the older plugs to the newer 3-prong type, which will provide more protection.
- In areas where water is prevalent, it is recommended to change out old plugs and the 3-prong type to GFCI's. (Ground Fault Circuit interrupters). A GFCI can interrupt a power surge in as little time as 25/1000 of a second. Adapters to plug into 3-prong outlets are available; also there are ground fault interrupters that will protect the whole circuit.

Extension Cord:

- How many times have you seen an extension cord that is "temporary," but ends up being a permanent fixture? We need to try to avoid this happening for the obvious reasons of safety for the cord and an employee that might trip on the cord. An extension cord can become damaged easily by foot traffic or equipment traffic.
- Extension cords can also be misused when the wire is not long enough for the tool that is being used. It matters less that the cord may not be used for a long period of time. Because, even for a short period of time, the short wire can cause overheating with the large tool, damaging the insulation. The damaged insulation can be overlooked for a period of time, creating a potential fire hazard.

Outside Hazards:

- Be sure that all outside lines are high enough to avoid contact with machinery.
- Special attention should be taken around grain augers, as they are the #1 electrical hazard on the farm.
- Periodically check the grounding rods and wires around buildings and power poles. These wires can be damaged or broken. If they are damaged, they won't provide adequate 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.

We should treat every electrical wire as a "hot" one. For most jobs, you should call in a qualified electrician. But if someone at your facility has electrical expertise, be sure that they use the proper PPE and double insulated tools.

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