

Preventing On-the-Farm Electrical Fires

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Electrical fires are caused by electrical system failure. Here is a checklist on how to prevent on-the-farm electrical fires:

- ✓ Inspect all exposed wiring on a regular maintenance schedule. Replace any that are faulty.
- ✓ Have a well-qualified person, such as an electrician, extension specialist, or other informed person, check your system annually for hazardous conditions.
- ✓ Each building should have a single electrical service entrance. The service entrance panel must have a main disconnect and should be surface mounted on a fire-resistant surface in a clean, dry room. If located in an adverse environment, use a dust-tight, watertight, corrosion-resistant enclosure.
- ✓ Each service entrance should be equipped with a grounding electrode. A lightning (surge) arrester should be installed on the service entrance panel.
- ✓ All electrical devices and wiring should be protected to reduce the risk of physical damage caused by machinery, animals or people working around them.
- ✓ Use surge arrestors to provide protection for computers, electronic controls, etc.
- ✓ Do not overload electrical circuits. Symptoms of overloading include dimmed lights, a poor TV picture, and reduced performance from appliances or power tools. When using a high wattage appliance such as a heater or iron, turn off unnecessary lights and electrical devices on that circuit, or connect to a lightly loaded circuit.
- ✓ If a fuse blows or circuit breaker trips more than once while in normal use, check for shorts and other faults in the line and/or the electrical equipment connected to it. Do not resume use until the trouble has been located and fixed.
- ✓ Never over fuse a circuit. Keep plenty of fuses of the correct size near the fuse box. Install tamper resistant fuses to prevent over fusing. Also, for convenience, mount a flashlight near the fuse box.
- ✓ Install Ground-Fault Circuit Interrupters, especially on outdoor receptacles and in wet locations. These protection devices can sense small electrical faults and instantly disconnect the circuit before anyone is injured.
- ✓ If your electrical system cannot safely handle the load, add new circuits or rewire to get more capacity. **CONSULT A QUALIFIED ELECTRICIAN ABOUT THIS.**

- ✓ Use extension cords heavy enough to carry the required current to the equipment being operated. Use only grounding extensions and receptacles for three-wire equipment. Use cords resistant to sunlight damage (label designation includes the letter "E").
- ✓ Take care not to damage concealed electrical wiring when drilling holes or driving nails into walls.

Electrical Equipment

Malfunctioning electrical equipment is often the cause of fires and **(PRESENTS A DANGEROUS SHOCK HAZARD AS WELL)**.

Some preventive safety measures to consider are:

- ✓ Inspect and service all electrical equipment as recommended in the instruction manual or booklet. This includes wheel chairs and any other installed or mounted assistive devices and adapted equipment.
- ✓ Before using a portable appliance or tool, check the condition of the power cord and plug, including the area where the cord enters its body. Repair or replace cords with frayed insulation or worn plugs.
- ✓ Use electric motors that are totally enclosed and rated for farm service.
- ✓ Keep the area around motors and heaters free of flammable or combustible materials.
- ✓ Never pour gasoline or other highly flammable materials near electrical equipment - if vapors are present all it takes to cause a fire or explosion is a spark. Be sure motors are well ventilated and clean, i.e. free of dust and oil.
- ✓ Protect light bulbs with wire guards if they are located where objects could strike them.
- ✓ Cover bulbs near combustible materials such as hay with glass globes for a heat barrier.
- ✓ If an electrical product fails to work, makes unusual noises, smokes, has a burnt smell or sparks, unplug it immediately and fix the electrical trouble.
- ✓ **Remember "Good" maintenance is required to assure continued safety of an electrical system.**

For additional information see MU Guide Sheet G1934, contact your local Outreach and Extension Center or the MU Extension Rural Safety and Health Program at 1.800.995.8503.

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