MAFES Dawg Tracks

March 12, 2007 ***Electric Hazards on the Farm***

Since about the 1930's, or at the beginning of the "big D" (Depression), which most of us only know through stories handed down, rural electric service has been brought to almost every state. As this electric service became available to most farmers, the surge of productivity in agriculture began increasing. Like any other industries, misuse, mishandling, or improper use of electricity can many times result in incidents or accidents. It can be the source of fires and/or injuries; and some of these can be fatal.

Electric hazards on the farm can result in shocks to humans or livestock, fires within buildings, and/or farm equipment. These risks are increased when there is a presence of moisture. This is more prevalent in areas of livestock presence, where dampness is common in confined livestock areas.

REDUCING ELECTRICAL SHOCKS:

- Select a shock protector system - Many shops will have a mixture of 2-wire and 3-wire plugs in their shop tools. If this is the case, there are several alternatives that you should or could consider.
  ~ Have ground fault circuit interrupters installed in each electrical circuit in your shop and all farm buildings.
  ~Plug in portable GFCI's when using individual power tools.
  ~Replace all 2-cord plugs with 3-wire plugs.
  ~Replace your present tools with newer ones with new double insulation.
  ~Convert all 2-cord appliances to 3-cord.
- Seek the help of a professional electrician and let him/her advise you on what is the most economical and safest method to handle this problem.
- Purchase tools and equipment designed to prevent shock. Look at the various tools before you purchase them and be sure that Underwriters Laboratories or an equivalent institution has approved the construction.
- Avoiding using grounding adapters. These grounding adapters are risky because they only have two cords, and they don't have provisions for a third cord or ground wire.
- Refrain from abusing the tools. Be careful not to drop them, allow them to be thrown around, or be continuously picked them up by the cord. Dropping them can cause the internal insulation to become damaged and also may cause faulty connections. If you use a tool for an extended period of time and feel it getting hot, let it cool before continuing on.

DON'T LEARN SAFETY BY ACCIDENT! *BE ALERT- ACCIDENTS HURT!*

EXTENSION CORDS:

We know to not use damaged cords, but sometimes we do anyway because that damaged one may be the only one available. However, a damaged cord can result in shock or cause fires. Actually, all the books tell us not to even use extension cords in farming operations. This isn't the real world. From my limited experience, it's hard not to run a farm without extension cords and "baling wire."

There are some precautions that we should take when we use extension cords, either on the outside on the bare ground or in shops or buildings with concrete floors. We all are relatively familiar with all these conditions, but we will review them for the benefit of newer employees and older ones that might need a reminder.

- Avoid their use in wet areas. (Unless you have water resistant types).
- Avoid trying to repair a damaged cord or splicing two cords together. Replace the entire cord.
- Keep the cords away from sharp objects, oil, and solvents that might damage the insulation.
- Before each use, check the cords for cuts or nicks. If you find a damaged or worn area, replace the cord if it is a major cut or worn area. If it is small, you can probably repair it, and it will be safe.
- Use cords that are sufficient to handle the job that you intend to use it for. For example, don't use a "household" type cord for a major farm repair job. Overloading a cord can result in overheating and cause a fire.
- Always use grounded wire (3-prong with a "safety grounding wire") for tools and machines having a grounded plug or use a portable GFCI (ground fault circuit interrupter).
- When purchasing extension cords, make sure that a certified testing laboratory approves them.
- Look on the package to be sure that it tells the maximum current and/or wattage rating of the cord.
- As much as possible, locate the cord when using it so that it won't be a trip hazard for humans and will be out of the way of machinery and animals.
- Avoid connecting one cord to another; obviously it reduces the amperage and increases the risk of a fire.
- A good "rule of thumb" is that if a cord is to be used for weeks instead of a few days, arrangements should be made to get a circuit in the immediate area to avoid extended use of the cords.

If we just remain focused while working with any type of electricity on the farm, the chances of having an incident or accident are greatly reduced.

Ted Gordon-Risk Mgmt. / Loss Control Mgr. 2/2/2007
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Excerpts: www.cdc.gov/nasd