



MAFES Dawg Tracks

January 2, 2012



Agriculture Fire Safety  MISSISSIPPI STATE UNIVERSITY

Fires of any sort scare me. I have been a part of a house burning with almost total losses incurred by my family. Obviously, this increases your awareness of fires. I'm sure that other folks that have experienced can share in the same feeling.

Between 1996 and 1998, there were an estimated 20,000 fires each year on U.S. agricultural properties. These fires include those in and around facilities that produce raw agricultural products on the farms.

- ✓ Agricultural fires are responsible for nearly 50 civilian injuries, 25 fatalities, and \$102 million dollars in property losses each year.
- ✓ 20,000 agricultural fires equal \$102 million dollars in direct property losses.
- ✓ Two-thirds of all agriculture fires occur in orchards and crops.
- ✓ Agricultural fires peak in the early spring and again in the summer.
- ✓ Equipment fires usually involve cars, trucks, or tractors.
- ✓ The leading cause of agricultural fires is open flames (candles, matches, bond fires and welding equipment).

Source: NFPSA & NFIRS

How fires burn-

There are three basic elements that create fire; these are fuel, heat and oxygen. These elements constitute the fire triangle, remove or control one of these elements and it will remove or control the fire hazard.

Controlling Fire Hazards-

- Cut down weeds, bushes and remove debris, cobwebs, etc. around buildings, all of which reduces the potential for fire.
- Organize shops & other buildings so that flammable materials are segregated from heat sources.
- Try to have these building areas equipped with approved appliances, proper circuit breakers and/or fuse boxes, enclosed electric motors and any other equipment that periodic cleaning will reduce the potential for a fire hazard.

Minimize on-site hazards-

- Strictly enforce the "no smoking" rule in all areas where flammable & combustible materials are used and stored.
- When transferring flammable liquids in metal containers, make sure that one of the containers is grounded to prevent static electricity from starting.
- Clean oil and/or fuel spills a.s.a.p. and dispose of oil rags in a covered metal container.
- Store flammable liquids in clearly marked containers in well-ventilated areas, away from heat and potential spark areas.
- Compressed gas cylinders should be stored in the upright position and in areas away from heat sources, preferably outside in a dedicated area.

Machinery-

- Take special care when refueling equipment, checking fuel lines, carburetors, pumps, etc. for leaks.

- Keep engines tuned up to avoid backfiring and exhaust systems in good repair to avoid a fire hazard.
- Keep equipment properly lubricated to avoid excess friction.

Hot work-

- Always have a fire extinguisher handy when doing hot work.
- Watch for molten metal that might reach flammables or into floor cracks that might take some time to ignite.
- Work areas should be clean and free of flammable or combustible debris.

Spontaneous Combustion-

- ✓ Many types of materials in certain conditions will heat up spontaneously. Vegetable and animal oils, paints, linseed should be stored in sealed containers and in well-ventilated and cool areas.
- ✓ When storing green hay (warm), make regular checks as ignition can occur with heated conditions.
- ✓ Watch as well when storing silage, some of its danger signs are smoke, odors, vapor or steam, release of moisture and a charred tobacco smell.

Know your Fire extinguishers-

No article on any type of fires, home or agriculture, should be written without a few good statements about fire extinguishers.

- Fire extinguishing equipment come in two classes, portable and fixed. Portable fire extinguishers are better suited for agriculture such as the type ABC, which is designed for A, B, & C fires.

Fire Classes-

- Class A – Used for combustibles such as paper, wood, textiles, where a quenching, cooling effect is required.
- Class B – Used for flammable liquids, gasoline, oils, fats, paint, where oxygen exclusion or flame interruption is essential.
- Class C – Used for electrical wiring, motors, appliances, where non-conductivity of the extinguishing agent is crucial.
- Class D – Used for combustible materials, like magnesium, sodium, and potassium.
- Class K – Used in kitchens and areas where cooking and baking are performed.

Fires may not be 100 percent prohibitive, but if we practice the precautions listed above, we can reduce the potential by 95 percent or better.

Ted Gordon – Risk Mgmt. / Loss Control Mgr.
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Excerpts: Farm Safety Association (Nasd online)
11/29/2011