



Agricultural Fire Safety

Instructor: The following script can be used to deliver a 15- minute training session to employees.

POINTS TO EMPHASIZE

- Keep things clean and in good order.
- Minimize fire hazards on site.
- Know your fire extinguishers.

The leading cause of agriculture fires is open flame caused by candles, matches, bonfires, sparks, static electricity, friction, welding and equipment. Other causes of fires may include natural resources such as spontaneous combustion and lightning.



How Fires burn

The elements necessary to create a fire are fuel, heat and oxygen. These elements constitute the fire triangle. Removal or control of one element will remove or control a fire hazard.

Know your fire extinguishers

Fire extinguishing equipment can be classified into two types; portable and fixed. However, a portable, ABC rated fire extinguisher is more practical for agricultural use, capable of extinguishing Class A, B or C fires.

Fire classes



Class A Fire – Combustibles such as wood, paper, textiles, where a quenching, cooling effect is required



Class B- flammable liquids, gasoline, oils, fats, paint, where oxygen exclusion or flame interruption is essential.



Class C – live electrical wiring, motors, appliances, where non-conductivity of the extinguishing agent is crucial.



Class D- combustible materials, magnesium, sodium, and potassium.

Control of fire hazards

Cut down and remove weeds and brush from around buildings. In buildings, check for excessive accumulation of dust, feathers, cobwebs, and other potential combustibles. Reduce and keep away from heat unneeded

items that will burn. Arrange shops and barns so that flammables are safely away from ignition sources. Use approved electrical installations including proper fuses or circuit breakers, waterproof outlets, enclosed electric motors and similar equipment in any buildings which are cleaned periodically with high-pressure equipment.

Inspect all wiring and electric motors and appliances for exposed wires, broken insulation, improper grounding and incorrect installations.

Check the heating system. See that airshafts are clean of dust and debris, motors are cleaned and oiled (if necessary) each season, and pulley belts are in good working order. Check gas and fuel oil system for leaks and unsafe installations.

Minimize hazards on site

Strictly enforce a no smoking rule inside a building or areas where flammable and combustible materials are stored or near storage, shipping or receiving areas where boxes or other containers can easily start a fire.

Keep flammable liquids away from open flames and motors that might spark. Never smoke when refueling.

When transferring flammable liquids from metal containers, bind the containers to each other and ground the one being dispersed from to prevent sparks from static electricity. Clean up spills right away and put oily rags in a tightly covered metal container. Change your clothes immediately if you get oil or solvents on them.

Flammable liquids should be clearly marked and stored in approved containers in well ventilated areas away from heat and sparks. Keep above ground fuel storage tanks at least 40 feet from buildings.

Store compressed gases in a secure upright position, away from heat sources in an outdoor location. Keep different gases separately and full cylinders apart from empty cylinders. When heating with propane, keep 45-kg (100 LB) cylinders at least 4.5 metres (15 feet) away from heaters; keep large tanks at last 7.6 metres (25 feet) away.

Machinery

Re-fuel machinery with care. Watch for and repair leaks in fuel lines, carburetors, pumps and filters. Keep engines properly tuned and timed to avoid back firing and exhaust systems in good condition to avoid sparks. Keep machinery properly lubricated to minimize friction.

Hotwork

Always have a fire extinguisher on hand during hot work. Watch for molten metal as it can ignite flammables or fall into cracks and start a fire that might not erupt until hours after the work is completed. Use portable cutting and welding equipment in clean work areas.

Keep flammables at least 35 feet from a hot work area. Be sure other tanks and other containers that have held flammable liquids are completely naturalized and purged before you do any hot work on them

Spontaneous combustion

Many materials under certain conditions heat spontaneously. Store vegetable and animal oils and paints or linseed – soaked rags in sealed containers in cool, well ventilated places away from other combustibles.

Avoid storing wet hay and check stored hay for warm spots. If hay temperature is noticeably warmer than when it was put in, watch it closely. If the temperature reaches 175 degrees F, get the hay out or divide it into small, shallow stacks.

Watch for silage danger signs – heat, release of moisture, vapor or steam, smoke, a charred tobacco smell. A fine chop permits the material to be packed more firmly in both trench and upright silos. Also a silo designed to be sealed should be kept closed, except for loading or unloading.

Are there any questions?

Finally, lets take a moment to review some of the “Do’s and Don’ts” of preventing fires.

DO:

- Avoid clutter of flammable materials.
- Maintain heating systems.
- Install smoke detectors and fire extinguishers in buildings.
- Watch for leaks or deterioration in fuel storage and delivery equipment.

DON'T:

- Store fuel in food or drink containers.
- Smoke in areas where flammable materials are stored.
- Re-fuel engines inside buildings or when hot or running.
- Store wet hay

The information and recommendations contained in this publication are believed to be reliable and representative of contemporary expert opinion on the subject material. The Farm Safety Association Inc. does not guarantee absolute accuracy or sufficiency of subject material, nor can it accept responsibility for health and safety recommendations that may have been omitted due to particular and exceptional conditions and circumstances.

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