Farm fires cost lives and many dollars each year. Most fire victims die from smoke inhalation before the flames reach them. Preventing fire is your first line of defense against heavy losses.

Fires need three things to burn: fuel (something to burn), air (oxygen) and heat (something to set it off). Preventing this combination reduces the risk of fire.

**Housekeeping**

Shops, garages, machine sheds and barns often are cluttered with unnecessary accumulations of items that could add fuel to a fire. Often, these items are located near sources of ignition. Large amounts of unneeded items that will burn, such as papers, clothing and straw, should be reduced and kept away from heat. Arrange shops and barns so that flammables are safely away from ignition sources. A little rearranging could reduce fire risk considerably.

**Smoking**

Cigarette or cigar smoking causes many fires in the United States each year. If you smoke, keep plenty of large, deep ashtrays or receptacles handy. Obey “No Smoking” signs. Avoid smoking in places with flammable materials. Never smoke while refueling. Do not lay lighted cigarettes on
Kerosene or oil-burning heaters need to be protected so that they will not tip over or come near flammable materials. Also watch for carbon monoxide poisoning.

Portable electric, LP gas or oil heaters are commonly used in outbuildings, animal quarters, shops and unheated or inadequately heated rooms in houses. Fire hazards include flammables located too near the flame or heating element, a heater tipping or being knocked over and equipment defects. Dispose of electric heaters without thermostats and tip-over protection.

Farm Machinery

Common causes of tractor and machinery fires include defects in the fuel or ignition system, improper method of refueling, smoking and matches, over-heated engines, sparks from exhaust and friction.

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

Flammable Liquids and Gases

Gasoline, diesel fuel, LP gas, degreasing solvents, paint solvents and certain paints are among flammable materials found on most farms. Keep these liquids away from open flames.
Many materials—vegetable and animal oils, soft coal, vegetable and animal fibers, such as flax, jute, wool and hay—can, under certain conditions, heat spontaneously. Hay and grass silage often have been implicated in many high-loss farm fires. Store vegetable and animal oils and paint or linseed-soaked rags in sealed containers in cool, well-ventilated places away from other combustibles.

Harvest loose or chopped hay at low enough moisture content to prevent molding, a key factor in heat generation. Avoid storing wet hay. 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.

With grass silage, the problem is too little moisture content. 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. Failure to do so has resulted in disastrous fires and even explosions while trying to put out the fires. Watch for silage danger signs—heat, release of moisture vapor or steaming, smoke, a charred tobacco smell. If they appear, call your fire department and silo dealer for instructions.

Hot Work

Never do cutting or welding work alone. Always have someone on hand to put out a fire before it can get out of control. Watch for molten metal. 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 areas. Keep flammables at least 35 feet from a hot work area. Be sure tanks and other containers that have held flammable liquids are completely neutralized and purged before you do any hot work on them.

Spontaneous Combustion

Fire caused by spontaneous combustion can occur any time, day or night. Many such fires are beyond control at the time of detection.