Safety considerations to prevent combine fires

Equipment and field fires are always a concern for farmers during the harvest season. The combination of dry plant material, windy conditions and equipment with heated bearings, belts and chains creates a potential fire hazard.

During harvest, farmers do not want to lose a half-million-dollar combine, burn fields or woodlots, or risk human life to fire. They take many precautions to prevent fires and have a response plan in place in case of fire.

As we approach the harvest season, Dr. Dee Jepson, Ohio State University Extension Agriculture safety leader, recommends the following safety points to prevent combine fires during harvest:

1. Have an emergency plan in place and be sure all employees know the plan. Combine fires happen fast - be sure all employees know what to do if smoke or fire appears.

2. Park a hot combine away from outbuildings. Keeping a combine out of barns and sheds and away from other flammables is a prevention strategy in case a hot spot ignites. Insurance claims can double when equipment fires are responsible for loss of farm structures.

3. Regular maintenance is priority. Check the machine daily for any overheated bearings or damage in the exhaust system. Keep the fittings greased. Maintain proper coolant and oil levels. Repair fuel or oil hoses, including fittings and metal lines, if they appear to leak.

4. Keep dried plant material from accumulating on the equipment. Frequently blow off accumulated chaff and plant materials on the equipment with a portable leaf blower or air compressor. Inspect the engine compartment and other areas where chaff accumulates around bearings, belts and other moving parts.

5. Maintain the electrical system. Pay attention to machine components that draw a heavy electrical load, such as starter motors and heating/cooling systems. Monitor circuits for any overloading, especially if fuses blow regularly. Keep wiring in good condition and replace frayed wiring or worn-out connectors.

6. Refuel a cool engine whenever possible. Never refuel a combine with the engine running. It is recommended to turn off the engine and wait 15 minutes: This helps to reduce the risk of a spill volatilizing and igniting.

7. Prevent static electricity while operating in a dry field. To prevent static electrical charge from building up, a ground chain should be attached to the combine frame while allowing the other end to drag on the ground during field operation. Sparks from a static charge can ignite dry chaff.

8. Have two fully charged fire extinguishers on the combine. ABC fire extinguishers are recommended on farm machinery. In a combine, keep a 10-pound unit in the cab and a 20-pound unit mounted at ground level.

9. “ABC” designates the type of fire that an extinguisher may put out. “A” is for wood, trash, and paper fires; “B” for liquid and gas fires; and “C” is for electrical fires.

10. Have one fully charged fire extinguisher in the tractor, grain cart and truck. ABC fire extinguishers are recommended for farm machinery. These extinguishers are good for fires at incipient phases — meaning at the first sign of smoke or a small flame.

11. Turn off the engine. If a fire occurs while in the combine cab, turn off the engine and exit the machine.

12. Call 911 before using the fire extinguishers. If the fire is in the cab, only use the 10-pound fire extinguisher from the outside of the cab — on the exterior platform.

If the fire is on the ground, use caution when opening the engine compartment or other hatch, as small fires can flare with extra air. Stay a safe distance away from the fire.

13. Use a shovel on small field debris fires. Throwing dirt over burning field residue can stop a fire from spreading. However, stay back if the fire takes off.

Fires may happen during harvest even while following the best prevention and safety measures. It is important to put worker safety before saving equipment. Additional information on preventing combine fires, types of fire extinguishers and other safety information may be found at https://ohioline.osu.edu/tags/safety

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