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PRESS RELEASE

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FOR IMMEDIATE RELEASE

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AGRICULTURAL CHEMICAL SAFETY
Don't let minor issues become major safety hazards.

Workers in an agricultural operation are exposed to chemical hazards every day in the form of fuel, pesticides, wet and dry fertilizers, waste oil, etc.

Safe handling of these products is key to protecting workers and the environment.

Sammy Sadaka, University of Arkansas Associate Professor – Extension Engineer, says keeping chemical products well organized and properly stored is a key practice in chemical safety in agriculture.

"During busy times of the operation, there may not be time to get everything done," Sadaka says. "However, we need to remind ourselves to do the best we can to prevent minor issues from becoming major safety hazards."

Good practices that can help avoid fuel or chemical spills include regularly checking tanks for cracks, leaks, sludge and rust. Any type of fuel or chemical spill should be immediately cleaned up. Storing a spill cleanup kit near tanks and mixing and loading areas can make cleanup more efficient and effective.

“Have a spill plan before such an even occurs,” Sadaka says. “Preparing for this kind of emergency helps everyone when something goes wrong. A spill may occur early in the morning, when you’re fresh and well able to deal with it. Or it could occur at the end of a long day when you’ve exhausted your energy. No one can be certain when or where a spill could take place.”

If oil or fuel is discharged into water, the regional Environmental Protection Agency (EPA) office must be notified. Take time to review oil and fuel spill regulations to avoid spill issues. Workers should have access to the EPA Material Safety Data Sheets (MSDS) for all hazardous materials stored in a facility or on site.

“Everyone working on the site should have access to the spill cleanup and mitigation plan,” Sadaka says. “Make sure there are ‘No Smoking’ signs posted near the storage areas. Maintain all the appropriate measures and documents according to state and federal laws.”

When not in use, keep all chemical containers closed. Rinsing container caps and the outside of chemical containers after using them can reduce the likelihood of unintentional contamination or exposure. Empty chemical containers should be rinsed three times and stored in a dry, protected area prior to appropriate disposal.

Small volume containers (up to 5 gallons) may be contained inside a rubber tub to assist with organization. Liquid chemicals should not be stored

above dry products. Corrosion-proof metal shelving, featuring a retainer lip, can help keep chemicals safely organized.

Proper warning and hazard signs should be posted in chemical storage areas and the facility should be well ventilated. Use of explosion-proof electrical control wiring and fan motors with at least six air exchanges per hour helps reduce potential for accidents.

It is important to inspect your inventory on a regular basis. Maintaining an on-site inventory document listing all chemicals stored in an area can be helpful to authorities in the event of an emergency.

“Always label products so anyone coming in to assist with an incident knows exactly what product they’re dealing with and the volume that’s on the site,” Sadaka says.

Improper handling of gasoline or diesel fuel can result in explosions, fires, and injuries. Taking proper safety precautions when storing and using fuel is key to avoiding this kind of incident.

Fuel containers should be located safe distances from buildings and other structures on the farm. Fuel should only be stored in appropriate containers which are regularly inspected and maintained. Don’t allow children to be near fuel storage areas.

Other combustible and flammable liquids found in agricultural settings include motor oil and paint solvents. Any product that produces ignitable vapors at normal ambient temperatures poses an explosion hazard and should be properly stored and/or disposed of.

All these types of products should be stored in containers that are in good condition, closed and properly labeled. Avoid placing ignitable products

in the general vicinity of hot materials, flames or sparking equipment. Ground any nearby equipment that is likely to product a static spark.

Commercially available domestic refrigerators contain built-in ignition sources and should not be used to store these kinds of flammable materials. Ignition sources in refrigerators include light bulbs, switches, temperature controls, standard plugs, motor-starting relays, thermal-overload devices and heater strips (for frost control).

Flammable and combustible liquids (such as fuel) should be stored in UL or FM listed safety cans. Safety cans must be constructed from metal and designed with a flame arrestor and spring-loaded caps on both the filling and pouring spouts. This feature prevents spillage if the can is dropped. These cans are available for both dispensing products and collecting waste. They should not be modified.

The Environmental Protection Agency (EPA) regulates aboveground fuel tanks when the storage total exceeds 1,320 gallons. These regulations apply in situations such as a site with two 55-gallon drums of oil in the shop, a 500-gallon diesel fuel tank, a 500-gallon gasoline tank and an empty 500-gallon tank for storing off-road diesel during planting and harvest. Since total capacity is 1,610 gallons, this farmer must comply with the Federal Spill Prevention, Control and Countermeasures (SPCC) plan. The farmer is required to prepare, implement and maintain an SPCC Plan, which must be certified by a professional engineer.

Additional steps to safeguarding hazardous products in a storage area include use of adequate lighting in storage and handling areas, protecting valves on bulk product tanks with locks, and installation of a security fence as necessary to help prevent public access to storage areas. Lock all gates and doors when the facility is unattended.

Security cameras and systems can also be used to deter unintentional use of chemicals.

To enhance personal safety when hazardous materials are handled, provide easy access to shower and eye flush fountains. These should only be used for emergencies and have an alarm system which triggers when used. Maintain a list of emergency phone numbers near the area.

To help prevent water contamination, determine the location of all private and public water supply close to the facility (within at least 1 mile). Sample on-site water wells each year and analyze for the types of chemicals handled at the site. Mix and load any chemicals at least 50 feet away from water wells. Raise wellheads to prevent spills or surface runoff from entering the wells. Upgrade all water sources to avoid potential spillage contamination.

“Be aware of safe storage and handling of fuels and chemicals,” Sadaka says. “Identify areas of existing facilities that require updating and improving or determine if a new facility is necessary. Maintain good documentation when handling hazardous products to demonstrate safe storage and handling practices.”

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