Spill Response on the Farm

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Farmers depend on all sorts of tools to get the job done. Chemicals are just another tool that farmers use to keep farm machinery running, keep livestock and crops healthy, and make sure their farms operate at optimal performance. However, there is a potential for spills or leaks wherever crop protection products, cleaning supplies, fuel, livestock medications or other chemicals are stored and used. Planning, developing, and implementing a spill response will minimize the potential for injury, environmental impact, cleanup and replacement costs.

The first thing to do is plan, including developing an Emergency Response Plan (ERP), acquiring necessary supplies, and developing appropriate safe work procedures for handling and using each kind of chemical. (CASA has developed an ERP template, find it at https://www.casa-acsa.ca/en/canadian-agricultural-safety-week/grow-an-agsafe-canada/)

Developing an Emergency Response Plan includes:

- Assessing job tasks.
- Identifying hazards and risks.
- Planning what to do in case of an emergency.

As a part of an ERP, create and update a chemical inventory, and gather and keep Safety Data Sheets (SDS) current (within three years). An ERP needs to factor in situations that may affect people in the area, such as a fire or other situations that may require evacuation.

Create an inventory list and purchase supplies using the ERP and information found on each chemical's SDS. The inventory list should include items like proper Personal Protective Equipment (PPE), spill kit, and emergency eyewash information. (Also found on the SDS is information on proper storage - following this advice is essential in preventing spills.) Keep in mind that the inventory list should be reviewed and supplies restocked regularly. Ensure everyone on the farm knows where to find these supplies and how to use them.

Develop Safe Work Procedures (SWPs) based on job tasks. These procedures outline how to perform job tasks safely from start to finish and include information including required Personal Protective Equipment (PPE) and its proper use as part of the procedures. (Find details on how to develop SWPs at https://www.casa-acsa.ca/wp-content/uploads/StandardOperatingPractices.pdf.)

Secondary containment should be in place whenever possible for all stored chemicals. Secondary containment mitigates the impact of a spill by containing contents to a defined area. Secondary containment also helps make any necessary cleanup easier. For smaller volumes of chemicals, a drip tray may be all that is needed. For large bulk storage, a berm system or double-walled containers might be used as secondary containment options. Whenever practical, engineering the risk out of the risk of a spill altogether is the preferred method of prevention (e.g., ensuring a fully enclosed system).

Create a preventative maintenance schedule. This schedule will be purposeful and provide the incentive to review and repair equipment, plumbing or secondary containment.

Once these plans have been developed, it is now time to implement them.

Everyone on the farm who handles or uses chemicals needs to be trained in WHMIS 2015/Global Harmonized System (GHS), SWPs and ERPs. This training is a legislated duty of the employer in all provinces. It is strongly recommended that SWPs and ERPs are reviewed and practiced regularly to ensure proficiency when they are needed.

Adequate supervision ensures that job tasks are being performed safely and that SWPs are being followed. The supervisor should lead by example, promote and encourage compliance to the SWPs.

Performing routine and regular inspections and preventative maintenance are essential. Following the preventative maintenance schedule, inspect product containers for proper labels and conditions, and look at plumbing, secondary containment or any equipment. Note any defects, and take corrective action to prevent a spill or leak. Facility inspections should also include a general inspection of chemical storage areas. For example, look for hazardous conditions such as leaking containers or unvented storage for propane.

Unfortunately, spills and leaks occur for a variety of reasons. Prevention is key. If the steps outlined above are followed correctly, any spill or leak would be from unforeseen circumstances or human error. However, by implementing the plan, it is possible to respond quickly and safely to a spill or a leak, protecting people and the environment from any potential harm.

Spill response procedures must be followed for spill cleanup. These are the procedures that are developed and practiced as part of the ERP.

Depending on the type of chemical and the amount released, the manufacturer and the provincial regulatory agency may need to be contacted to report the spill. The manufacturer label and SDS has emergency contact information. These bodies and organizations can provide direction and help. If there are any serious injuries sustained, provincial workplace safety and health authorities and worker's compensation may also need to be notified.

Once the spill or leak has been cleaned up, the contaminated PPE and spill kit contents need to be appropriately disposed of according to the information found in the ERP. Contaminated items must be placed in a bag that is labelled accordingly and handled with caution.

Site cleanup should be performed as soon as possible. Timely site cleanup will help ensure the least amount of environmental impact and allow for a safe work environment after the cleanup.

The “3 Cs” are the most important things to remember in the event of a spill or leak. Controlling the spill or leak will minimize the amount of product released. Containing the spill or leak will help to minimize the spread of product into the environment. Cleaning up the spill or leak as soon as possible allows for work to resume in the area in a safe and timely manner.

Please visit agsafetyweek.ca/resources for more information, including an inflowgraphic describing each step in responding to a spill on the farm.

Canadian Agricultural Safety Week (CASW) is a public campaign held annually during the third week of March that focuses on the importance of safe agriculture. The 2021 campaign, Safe & Strong Farms: Lead an AgSafe Canada, takes place March 14-20. CASW is presented by Farm Credit Canada. For more information, visit agsafetyweek.ca.