Anhydrous ammonia – handle with care!

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While fertilizers share a common purpose, there's no 'one-size-fits-all' instruction manual. Learning about the unique properties and precautions for each fertilizer used on your operation, could save time, money, and prevent serious injury.

Anhydrous ammonia, or NH_3, is one of the most commonly used fertilizers. It's low-cost, highly effective and contains one of the most concentrated forms of nitrogen with levels at 82%. However, it can also be highly hazardous.

Anhydrous means without water, and anhydrous ammonia can rapidly cause dehydration and severe burns if it combines with water in the body. Symptoms can include difficulty breathing, irritation to the eyes, nose or throat, burns or blisters. Exposure to high concentrations can lead to death. One deep breath of the gas can be fatal or cause severe damage to the throat and lungs. Needless to say, the handling and storage of NH_3 requires special care.

One of the first 'safety stops' farmers would have to consider is the storage of the fertilizer. If it's being stored on your property, the proper handling practices and treatment in the case of an incident should be detailed in your Emergency Response Plan. The local fire department should also be made aware of where the fertilizer is being stored.

When handling the fertilizer, we recommend that you not work alone. It's also important that anyone handling or applying NH_3 wear proper Personal Protective Equipment. This includes a face shield AND safety eyewear, gloves, and appropriate respiratory protection where appropriate.

Weather is an ever-present factor in farming, and the application of fertilizer is no exception. It's important to pay special attention to the direction of the wind. If there's an uncontrolled release of NH_3, quickly move upwind to avoid exposure and shut down all ignition sources if safe to do so. In the event of an exposure, follow the first aid measures indicated on the Safety Data Sheet.

Special precautions should also be taken to prevent NH_3 runoff from contaminating the surrounding environment.

If you're the farm owner or employer, it's you're responsibility to provide training, develop procedures, and review the Safety Data Sheet with your employees. Associations such as the Canadian Association of Agri-Retailers and Fertilizer Canada are helpful sources of information, and they also provide training courses.

Equipping yourself and your workers with the appropriate tools and knowledge could prevent a host of unwanted consequences when handling Anhydrous ammonia. We invite you to explore the resources available and encourage you to incorporate the handling and treatment of anhydrous ammonia into your Emergency Response Plan.

For more information on Anhydrous Ammonia, visit fertilizercanada.ca.

This safety advice article is a part of Canadian Agricultural Safety Week. Canadian Agricultural Safety Week (CASW) is an annual campaign held the third week of March of each year. In 2020, Grow an AgSafe Canada, takes place March 15 to 21. CASW is presented by Farm Credit Canada. For more information visit agsafetyweek.ca