



FERTILIZER CANADA
FERTILISANTS CANADA

Anhydrous Ammonia Safety & the Farmer

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Fertilizer Canada's approach to Safety & Security

- Codes of Practice for Anhydrous Ammonia, Ammonium Nitrate, and Calcium Ammonium Nitrate
 - **Manage** the risks of fertilizer products throughout their life-cycle
 - **Promote** responsible use and ensure public safety through standardized product handling procedures and stewardship
 - **Certification** of retailers through third party audits

Efficiency. Safety. Security.

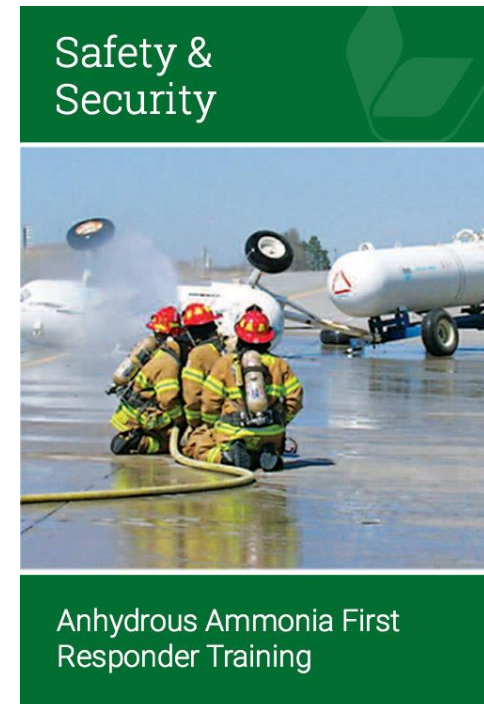
Anhydrous ammonia: Safety is our top priority

- Anhydrous ammonia is an important nitrogen fertilizer used by farmers primarily in Western Canada.
- Anhydrous ammonia is:
 - classified as a dangerous good Class 2.3(8) and is a toxic inhalation hazard (TIH);
 - regulated by Transport Canada under the *Transportation of Dangerous Goods Act and Regulations* (TDGR)
- Under the TDG Regulations, individuals transporting, offering to transport, and handling anhydrous ammonia are required to be adequately trained and hold a valid training certificate.



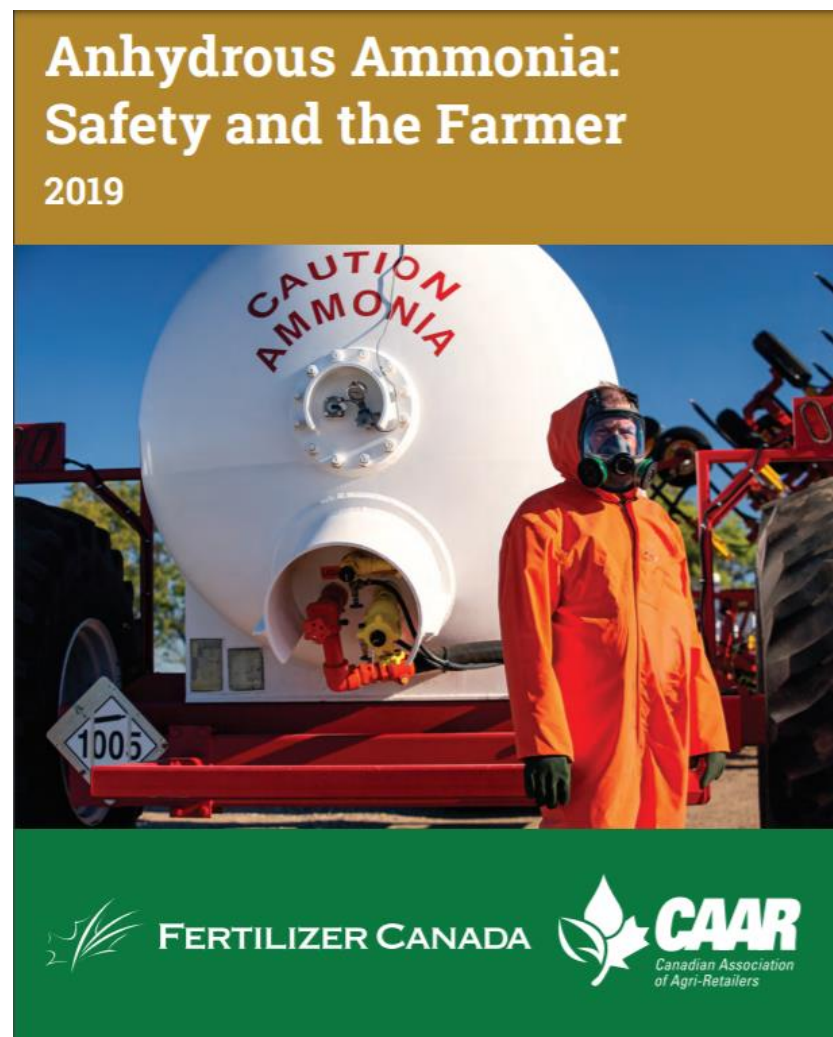
Training for our industry & stakeholders

- Fertilizer Canada offers free, online training on our eLearning platform including three courses on anhydrous ammonia safety



New online training launched in 2019

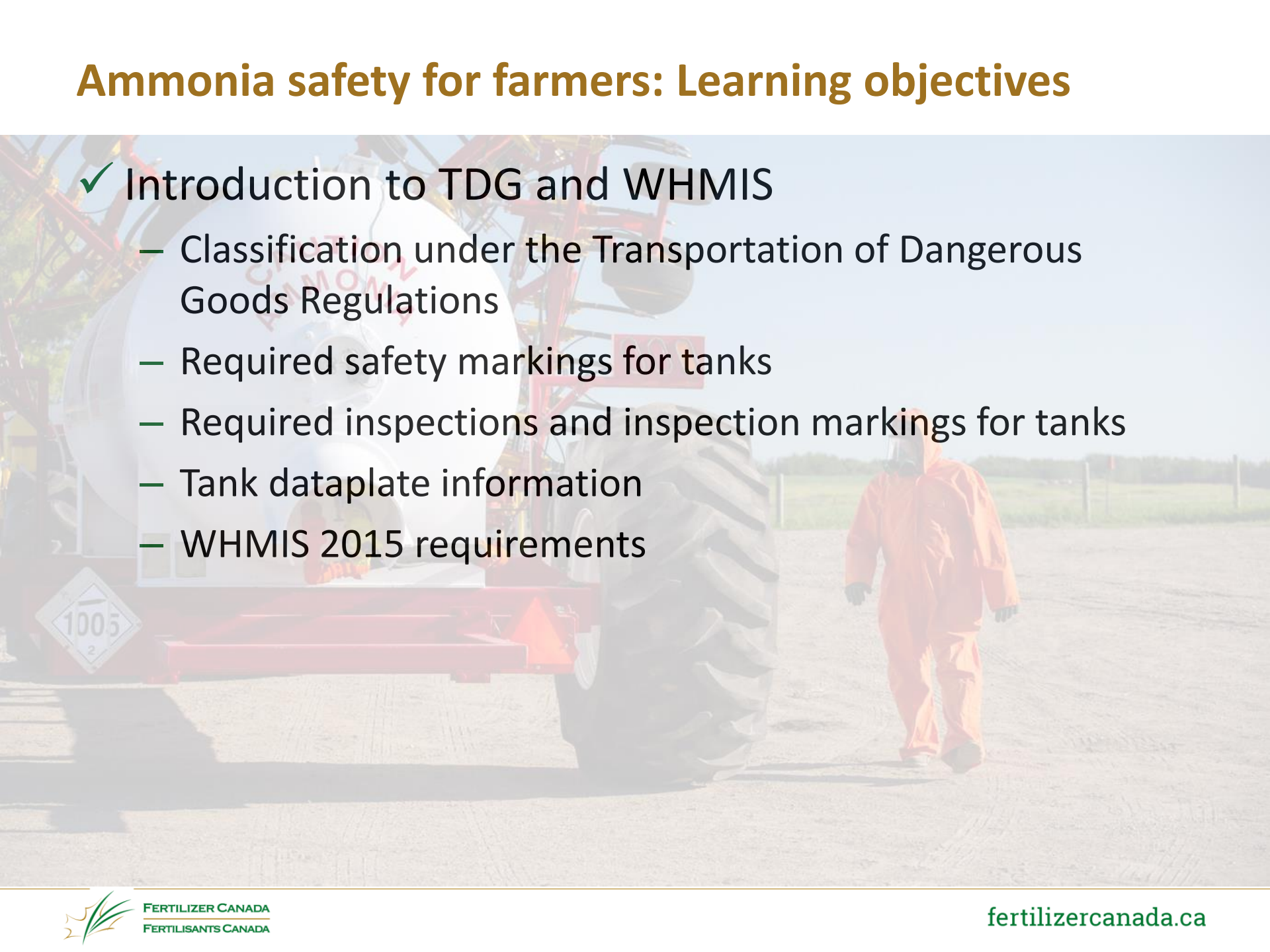
- Fertilizer Canada has recently launched an updated farmer safety training program on anhydrous ammonia.
- The program aims to equip farmers with the knowledge to ensure that anhydrous ammonia fertilizer is handled and transported safely.
- The program is a resource for agri-retailers to incorporate into farmer-customer training, and for farmers to complete independently



Ammonia safety for farmers: Learning objectives

- ✓ Introduction to TDG and WHMIS
- ✓ Characteristics of Anhydrous Ammonia
- ✓ Personal Protective Equipment and First Aid
- ✓ Safe Handling Practices
- ✓ Working with Anhydrous Ammonia Nurse Tanks
- ✓ Equipment Inspection and Maintenance
- ✓ Emergency Response and Incident Reporting

Ammonia safety for farmers: Learning objectives

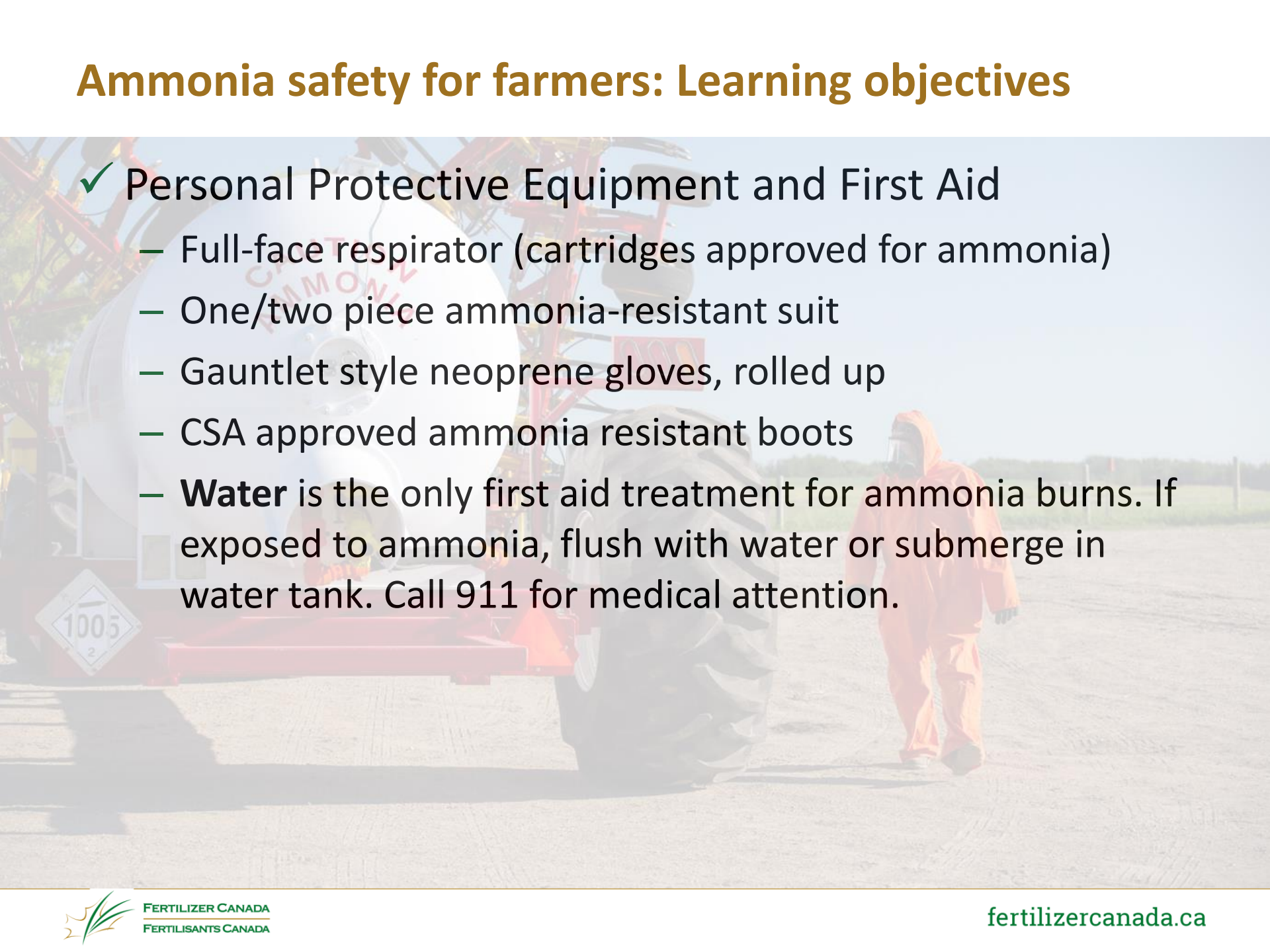
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- The background image shows a white cylindrical ammonia tank mounted on a red tractor. A person wearing a full-body orange hazmat suit and a respirator mask is walking on a gravel surface next to the tractor. The scene is outdoors on a sunny day.
- ✓ Introduction to TDG and WHMIS
 - Classification under the Transportation of Dangerous Goods Regulations
 - Required safety markings for tanks
 - Required inspections and inspection markings for tanks
 - Tank dataplate information
 - WHMIS 2015 requirements

Ammonia safety for farmers: Learning objectives

✓ Characteristics of Anhydrous Ammonia

- Strong, pungent odor
- High affinity for water – even low concentrations will irritate eyes, skin, and mucous membranes
- Liquid when stored under pressure
- Gas when released to the atmosphere – stay upwind in the event of a release
- Corrosive to copper, zinc, brass, galvanized steel

Ammonia safety for farmers: Learning objectives

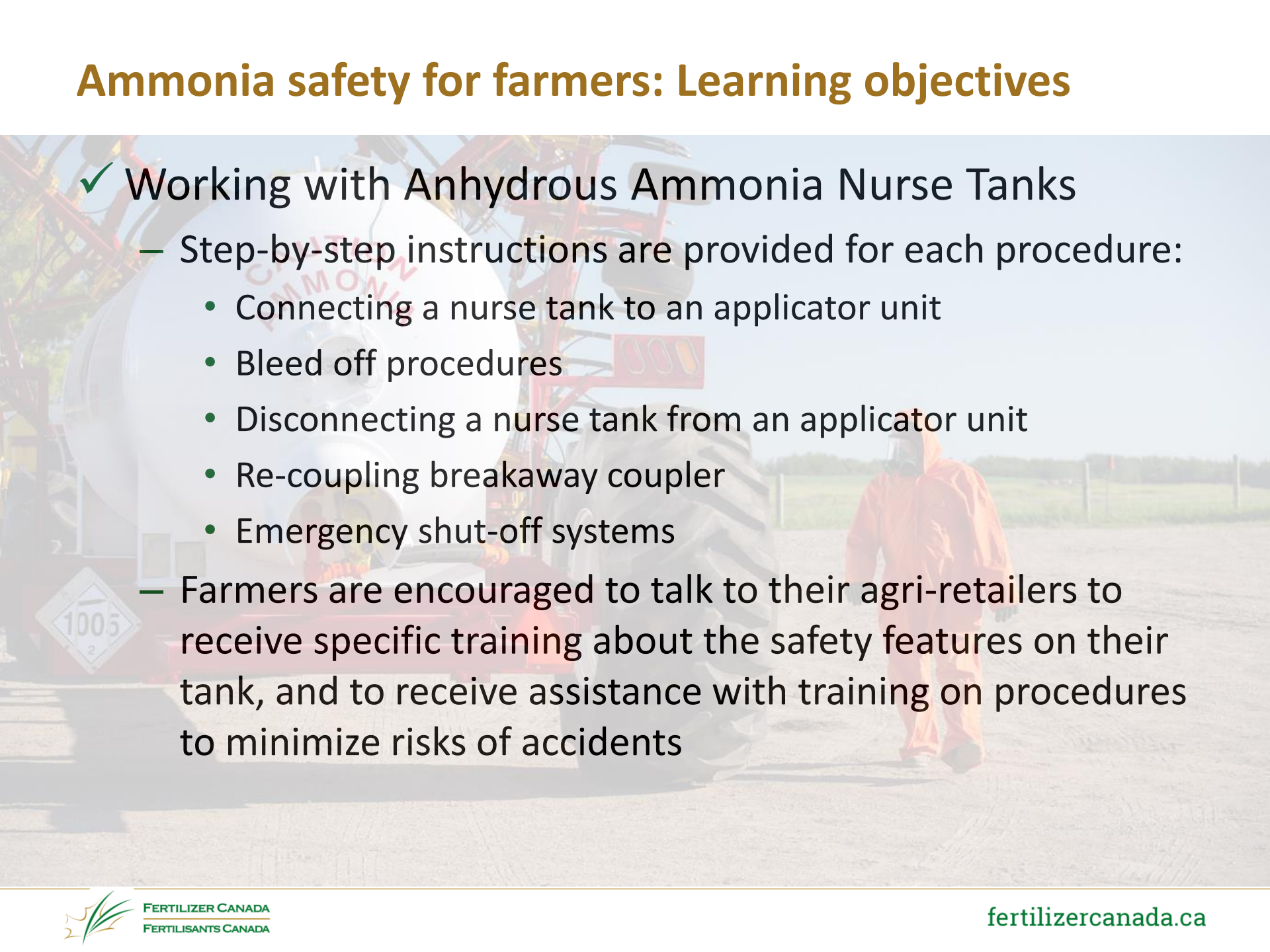
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- ✓ Personal Protective Equipment and First Aid
 - Full-face respirator (cartridges approved for ammonia)
 - One/two piece ammonia-resistant suit
 - Gauntlet style neoprene gloves, rolled up
 - CSA approved ammonia resistant boots
 - **Water** is the only first aid treatment for ammonia burns. If exposed to ammonia, flush with water or submerge in water tank. Call 911 for medical attention.

Ammonia safety for farmers: Learning objectives

✓ Safe Handling Practices

- Work from an upwind position, and use the appropriate personal protective equipment
- Do appropriate inspections of your ammonia tank prior to use, including valves, hoses, fittings, hitch, etc.
- Take extra precautions when leaving ammonia equipment unattended

Ammonia safety for farmers: Learning objectives

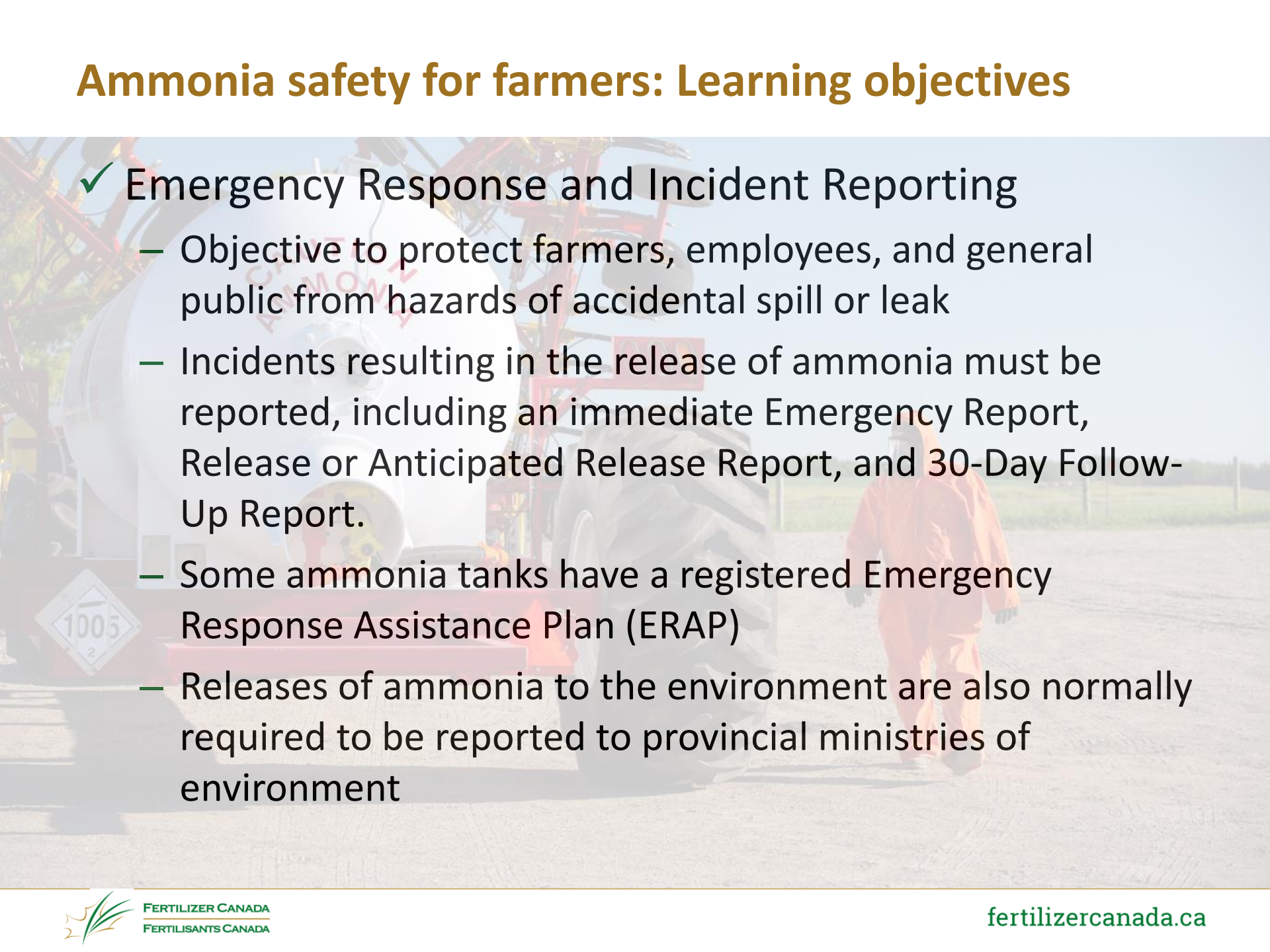
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- ✓ Working with Anhydrous Ammonia Nurse Tanks
 - Step-by-step instructions are provided for each procedure:
 - Connecting a nurse tank to an applicator unit
 - Bleed off procedures
 - Disconnecting a nurse tank from an applicator unit
 - Re-coupling breakaway coupler
 - Emergency shut-off systems
 - Farmers are encouraged to talk to their agri-retailers to receive specific training about the safety features on their tank, and to receive assistance with training on procedures to minimize risks of accidents

Ammonia safety for farmers: Learning objectives

✓ Equipment Inspection and Maintenance

- Regular maintenance is critical, but should only be conducted by a trained individual. Farmers should always contact their agri-retailer for assistance
- Regular maintenance includes inspection of:
 - Breakaway coupler
 - Flow control regulator
 - Knife outlets
 - Nurse wagons

Ammonia safety for farmers: Learning objectives

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- The background image shows a large white ammonia tanker truck with a red stripe and a diamond-shaped hazard label with the number '1005'. A person in a full-body orange hazmat suit is walking away from the truck on a dirt road. The scene is outdoors with a clear sky and some greenery in the distance.
- ✓ **Emergency Response and Incident Reporting**
 - Objective to protect farmers, employees, and general public from hazards of accidental spill or leak
 - Incidents resulting in the release of ammonia must be reported, including an immediate Emergency Report, Release or Anticipated Release Report, and 30-Day Follow-Up Report.
 - Some ammonia tanks have a registered Emergency Response Assistance Plan (ERAP)
 - Releases of ammonia to the environment are also normally required to be reported to provincial ministries of environment

Call to Action:



1. Take the Ammonia Safety and the Farmer training

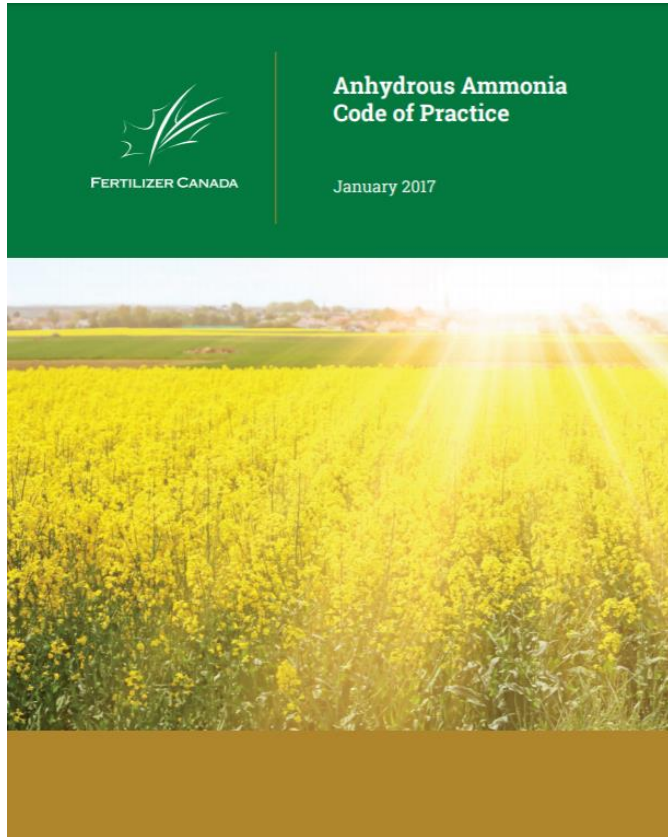
- Join over 1,600 individuals who have completed this training since 2017, both online and in-person



2. Talk to your colleagues about fertilizer safety and security

- Take advantage of the resources that the fertilizer industry is developing to keep you & your colleagues safe
- Spread awareness about the resources available through Fertilizer Canada and our member companies

Want to learn more?





FERTILIZER CANADA

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