

# Closed-system handling of chlorothalonil products

Important changes are coming to how all products containing chlorothalonil (including Bravo® ZN and other brands) can be applied. Specifically, the Pest Management Regulatory Agency (PMRA) will require the use of closed transfer and application systems under certain circumstances, effective May 11, 2020.

After this date, applications to all potato acres by ground or air, any aerial application on all labelled crops, or applications when more than 340 kg a.i. are handled in one day will be subject to these closed system requirements.

This closed-system transfer guide focuses on the requirements for mixing and loading of chlorothalonil after May 11, 2020. For detailed information about other changes affecting how chlorothalonil products can be used under the new PMRA requirements, please visit [Syngenta.ca/re-evaluation](https://www.syngenta.ca/re-evaluation).

## What's staying the same?

When used as directed, the existing dry poppet valve on 450 L totes of Bravo® ZN Agricultural Fungicide (Pest Control Product No. 28900) from Syngenta is compliant with the requirement for closed-system transfer.

## What's changing?

Direct transfer from the tote to the chemical handler and/or sprayer tank will require dry poppet connections. Equipping your spray operation with dry poppet connections from the tote to the tank meets the closed-system transfer requirement.

Utilizing dry poppet adapters preserves the flexibility to use transfer hoses for multiple products.

Dry poppet valves are known by many names and are produced by multiple manufacturers. Different makes and models intended for pesticide use are available.

The Syngenta logo, featuring the word "syngenta" in a white, lowercase, sans-serif font, with a registered trademark symbol (®) to the upper right. A stylized leaf icon is positioned above the letter 'g'.

## Closed-system transfer of Bravo ZN from tote to sprayer

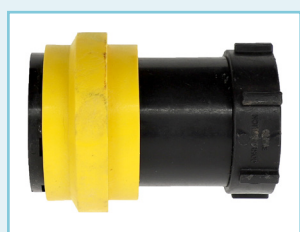
Every tote of Bravo ZN is to be discharged through the factory-equipped male dry poppet valve (Figure 1).

**Figure 1.** Current male dry poppet valve found on the bottom discharge of the Bravo ZN 450 L totes.



The tote end of your transfer hose must be equipped with a female dry poppet valve as in Figure 2. Syngenta currently supplies a female dry poppet to male cam lever adapter (two components) with each tote of Bravo ZN, in the event you wish to retrofit an existing transfer hose.

**Figure 2.** Current female dry poppet to cam lever adapter supplied by Syngenta.



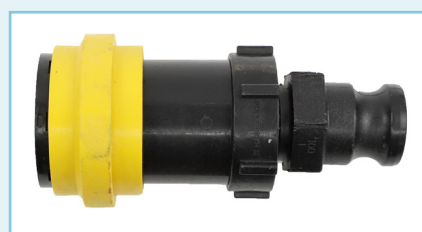
Female dry poppet valve

+



Male end of a cam lever

=



Female dry poppet to male cam lever adapter

The outlet end of your transfer hose should be equipped with a female dry poppet valve (Figure 2).

Many chemical handling systems and sprayers are factory fitted with cam lever connections. In this case, a dry poppet to cam lever adapter is required if you wish to pump Bravo ZN into the sprayer through a cam lever connection. A female cam lever adapter is shown in Figure 3.

The intake port of your chemical tank can alternatively be fitted directly with a male dry poppet valve.

If your chemical tank does not have an intake port, it must be fitted with one. A flanged and gasketed bulkhead fitting with a male dry poppet valve inlet (Figure 4) is acceptable.

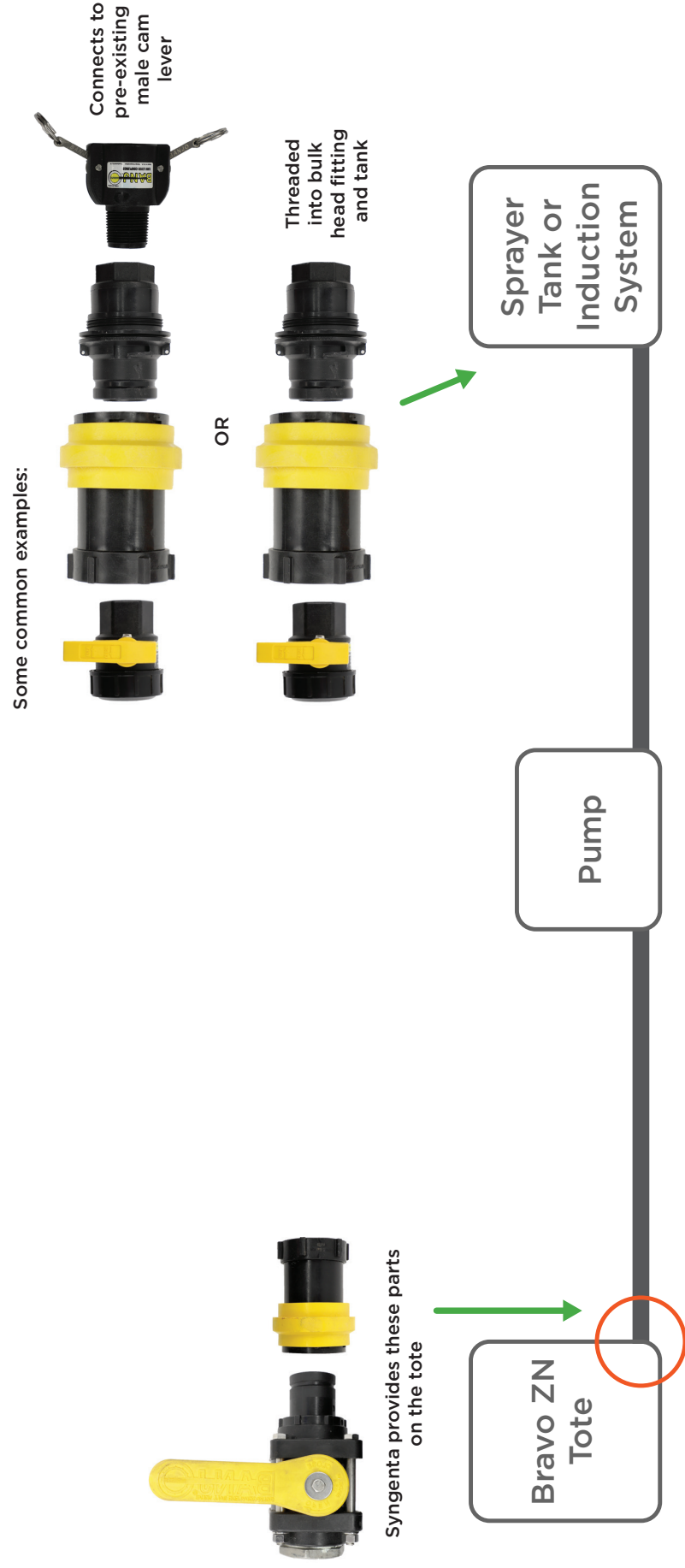


**Figure 3.** A male dry poppet valve to female cam lever adapter



**Figure 4.** Male dry poppet valve

Here's an example of a closed system from the Bravo ZN tote to the sprayer tank.



Please note, connections will vary depending on your individual set up.