

Mixing Tips and Instructions

Our product line is a unique selection of natural minerals and nutrients.

Mixing of these products for use in a sprayer requires specific steps and considerations.

Please review the following mixing instructions prior to the start of mixing. It is VERY important to be prepared and have a system setup BEFORE you are ready to mix.

Review MSDS for safe handling considerations.

Choose a clean water source that has a low EC reading and a low TDS. Adjust pH of the mixing water to PH under 7. If you continue to have problems, lower the PH a little more.

Use 10 US gallons of water per acre when spraying out the products unless otherwise stated.

20 US gallons of water if applying 90 grams of calcium

Use of a mix tank/chem handler or a nurse tank will eliminate many problems with mixing of the products. **Often lack of preparation or understanding of how the products need to mix can cause unneeded frustration.** The BTYR mixing tanks are a low cost system that can increase productivity. Batch/nurse tanks can be added on so that while one tank is being sprayed out, someone can be mixing up the next tank. We recommend not using filters within the mixing system, and the only filter is in the hose that goes to the sprayer. Always use 50 mesh screens. Clean the batch tank so that it's ready for the next use.

Ensure that mixing tank/chem handler and sprayer have **adequate agitation**. The products you are using suspend in water, not dissolve. If you don't see the water "boil" in the tank, you may find that product will settle to the bottom.

Jar test all your products with your water source before starting. This will eliminate many complications before you start spraying.

Please contact our sales team for other mixing tips and set up. Mixing is not hard or complicated, but when prepared it ensures a smooth operation.

Ensure use of Personal Protective Equipment where indicated for safe handling of products.

Agitation Types – There are two types of agitation systems in sprayers, Jet style and Sparge tube. The sparge tube type is better as it gives the least chance for dead spots where product can settle out during agitation. A centrifugal pump is best to supply the capacity to move product for spraying and agitation. There should not be any filters in the agitation loop of the sprayer. 50 mesh filters (only) should be in the line that goes to the boom. Use of screens at the nozzle tips is not recommended unless the sprayer has grit in the lines from rust or corrosion. In this scenario it may be advisable to replace the boom lines. You will need to flush out your booms at the end of each day. Adding boom end valves will make it more convenient to flush out. Flush each section separately with a high capacity of water. Simply running clean water through the nozzles is not sufficient to flush the booms. Your screens or filters will need to be cleaned periodically. How often will depend on how well the product was mixed and whether mixing order was followed. At times water quality will affect how often your screens need to be cleaned. Your capacity to apply your desired rate at the speed you want to travel decreases as your filters plug up.

Mixing Guidelines:

Start to fill sprayer tank with clean water—**water must be first before product.** Dissolve each product as indicated below or as described on the product label. Add each dry product to the sprayer only once completely dissolved or suspended.

Mix in the following order:

Zumzil – Add to sprayer tank before all other products. Dilute to 50 parts water to 1 part product and mix well.

GSR Calcium – Sprinkle slowly into a mix tank/chem handler until all product is suspended. Continue to agitate well until sprayed out. Add ½ to 1 pound of granular sugar per acre after calcium is dissolved. This will prevent chemical interaction with minerals already in the water. When applying the calcium, please ensure that it is applied with a minimum of 10 gallons of water per acre per 45 grams of product, *20 gallons water for 90 grams calcium.

Essential Phosphate, Seed and Fruit - Dissolve in water in mix tank/chem handler. Add to sprayer tank after the calcium and sugar have been dissolved. Ensure mixture remains agitated. If product is slow to dissolve, decreasing the PH of the water with citric acid can be helpful.

Micronized Soft Rock Phosphate – Best suspended in water with a pH under 7.0 or lower. **Add to water and agitate (or you will become agitated!)** until all of the product is suspended. Use of a nurse tank is suggested until product can be added to the sprayer. Keep product agitated until sprayed out.

Liquid Fish – Ensure the fish is well mixed before adding to the sprayer. Ensure it is run through a 50 mesh screen to prevent plugging

Microbial Tea – Ensure the tea is mixed well before adding to the sprayer.

Humic acid – DO NOT MIX IN TANK WITH GSR CALCIUM! Can be added to the sprayer tank after ensuring it is well mixed in the jug.

Fulvic Acid Concentrate – Dilute 150 parts water to 1 part product. Add directly to the sprayer once diluted.