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## **BORREGRO HA-2 – MIXING AND APPLICATION**

### **MIXING**

The objective of mixing dry BorreGro HA-2 powder with water is to make a solution which is capable of delivering the desired concentration of humic/fulvic acids in a liquid solution., particularly for manufacturing and shipping. The solution will normally be diluted by the user prior to application. Mixing at lower concentrations than those shown below will require proportionately less dilution for application.

### **Mixing**

Mix according to the table below:

1. Use an oversized container
2. Add water
3. Add BorreGro HA-2 under continuous agitation or circulation
4. Stir or agitate until thoroughly mixed, i.e. no clumps or even small bits of solid

Target Min. Percent Humic + Fulvic Acids	Lbs BorreGro HA-2	Gallons of Water	Fl. Ounces of Water	Total Weight/Gal
12.0	1.34	0.92	117.8	8.97
6.0	0.66	0.96	123.4	8.65

**Caution:** Dust hazard. Use eye protection & particulate respirator when handling dry material.

### **Mixing Tips**

BorreGro HA-2 is best mixed under continuous, mild to medium, agitation or circulation. The ideal method for mixing is to dump the dry powder slowly into an inductor, being careful not to plug the opening. If the dry powder is put into the tank on top of the water, it will tend to be hydrophobic. For circulating systems, it is then best to have the circulated liquid discharge onto the top of the tank in order to disturb un-dissolved powder. If this cannot be done, the powder should be disturbed manually to get it wet enough to dissolve. For agitating systems, the ideal is to create a vortex which pulls the powder into the liquid. In all cases, be sure to add powder slowly such that clumping is avoided. When the solution is thoroughly mixed, i.e. 10-15 minutes or more beyond disappearance of dry powder, it is always a good practice to probe the bottom of the vessel for any un-dissolved powder prior to offtake.

**Dilution for spray application:**

Although BorreGro HA-2 can be sprayed at full strength (12% humic + fulvic) we do not recommend it. Most applications will require additional liquid in order to obtain coverage. We recommend that BorreGro HA-2 at full strength be diluted by at least a factor of 10, preferably 15 or higher. Additional circulation or agitation will not be required, even at very high dilution rates.

**Cleanout**

In order to remove traces of BorreGro HA-2 from tank bottoms, lines, nozzles etc. it is recommended that the system be flushed / circulated with clear water for approximately 5-10 minutes after the last application of the day. The thin film of BorreGro HA-2 will not "pack" in the system or plug nozzles or screens but may remain as minute loose particles in areas of low velocity as treatment comes to an end. Flushing will remove these traces and leave tanks clean and ready to use for your next application.

**APPLICATION RATES**

**Foliar application**

See technical data sheet for application rates for various crops.

Foliar application 2 – 3 times per growing season is recommended for row crops and forages. Plants need to be just past the seedling stage - about 25% coverage of the ground before the first application. Second application is usually just before flowering, or just before the onset of the reproductive stage of the crop. The 3rd application would be early in the grain fill or fruit/vegetable sizing stage.

For forages which are cut more than once per year; a foliar treatment in the spring and after each cutting should occur when the plants have grown back to cover 1/4 to 1/3 of the ground (alfalfa, clovers), or when grasses reach about 7 cm in height.

For ornamentals and high cash value vegetable crops, foliar treatment intervals from 2 - 4 weeks are effective.

For lawns, a treatment every 4 - 8 weeks is recommended (3 – 6 ozs. liquid / 1,000 sq. ft.) diluted up to 40 times for coverage.

**Applying with Liquid Fertilizers**

BorreGro HA-2 may be incompatible with some liquid fertilizers, particularly those with neutral to acidic pH. It is recommended that a jar test be carried out to ensure compatibility prior to making a tank mix.