



Liquid Biological Amendment (LBA)

Foliar Spray Recipe

1. Extract the first three ingredients into the water by thoroughly massaging, squeezing, manipulating the BioExtractor Bag™ to ensure maximum extraction.
2. The kelp may clump together. We recommend dissolving it in a separate container with at least 1 Gallon of water by vigorously agitating and adding the kelp solution directly into the extract.
3. Add all other necessary ingredients directly into the water, mix well, and apply immediately.
4. Spray for complete leaf and root coverage every 1 to 2 weeks.

Measure By VOLUME	<u>Vegetative Growth</u>			<u>Flowering & Fruiting</u>		
	1 Gallon	5 Gallon	25 Gallon	1 Gallon	5 Gallon	25 Gallon
Worm Castings	3 TBSP	6 oz	2 Cups	-	-	-
California Humus	1 TBSP	2 oz	1 Cup	-	-	-
Insect Frass	½ TBSP	1 oz	4 oz	-	-	-
Granular Humate	½ TBSP	1 oz	4 oz	-	-	-
Kelp Powder	1 TBSP	2 oz	1 Cup	-	-	-
Fish Hydrolysate	1 oz	4 oz	2 Cups	-	-	-
Serenade Optimum™	½ TBSP	1 oz	4 oz	½ TBSP	1 oz	4 oz
Actinovate AG™	1 TBSP	2 oz	1 Cup	1 TBSP	2 oz	1 Cup
DiPel BT™	1 TBSP	2 oz	4 oz	1 TBSP	2 oz	4 oz

Conversions: 2 TBSP Per Ounce 8 Ounces Per Cup 4 Cups Per Quart 4 Quarts Per Gallon

Instant LBA vs Brewed Compost Tea

What Are Liquid Biological Amendments?

At BioLogic Systems, we prefer to use the term “Liquid Biological Amendment” (LBA) rather than “compost tea.” We no longer recommend that it is necessary to aerate or brew an LBA for an extended period of time. When working with tested inoculum-grade inputs that contain proven beneficial biology, a very potent “Instant LBA” can be achieved by simply liquefying and applying the products to plants *immediately* without allowing for brewing time. After conducting numerous side-by-side trials comparing a brewed LBA versus an Instant LBA, we have concluded that the brewing process is not necessary and that the focus should be on using quality input materials. Instant LBA’s can be made for both root drench and foliar applications. Although some specific contexts still exist for aerobically brewing an LBA in large agricultural contexts, we feel the professional hobby gardener or small-scale farmer can achieve maximum results without this added process.

The Instant LBA approach may have many advantages over “brewed compost teas” including:

- Time Savings – Instant LBA’s can be made in a few minutes anytime on the fly.
- Eliminate the need for expensive air pumps, compost tea brewers, and tanks.
- Increase the odds of growing the “correct microorganisms” for your plant by allowing the reproduction of the organisms to occur in the soil and on plant surfaces rather than in a compost tea brewer. Extended brewing periods will select for organisms that can grow in water, which may or may not be the correct biology for your specific plant.
- The Instant LBA approach allows the grower to mix a highly concentrated LBA with no risk of it culturing anaerobic pathogenic organisms.
- Reduce anaerobic biofilm accumulation in tanks and hosing that is caused by exposure to highly active LBA’s.