



**Bee Friendly™**

## **COCOA/CACAO TREE FERTILIZATION: THE BENEFITS OF USING PLAN “B” ORGANICS™**

The recommended average rates of nutrients for cocoa/cacao trees, and how Foliar Spraying with **PLAN “B” ORGANICS™** can improve the yield and the cocoa/cacao bean quality.

### **Foliar feeding of cocoa/cacao trees**

Foliar feeding, a tool for improved yield and better quality in open field crops & orchards, is the common name for supplying nutrient to plants, by spraying it on the leaves. The applied fertilizer is a supplement to regular soil fertilizers. Although it is applied in small quantities, it has a surprising effect on the yield and quality of cocoa/cacao trees.

When designing the foliar fertilization program, 3 parameters are taken into account:

1. The ratio of the formula – related to the nutrient uptake by the crop.
2. Timing of application.
3. The amount of nutrients per Hectare in total and per each treatment.

Alitura Organics™ recommendations are based on the above-mentioned parameters.

While preparing our proposed program, we have considered the specific needs of the cocoa/cacao trees: “Young fruits (called cherelles when young and pods when mature) grow slowly during first 40 days after pollination and are prone to wilting (average loss about 50%); subsequent growth is more rapid up to 75 days; full maturity is reached in 150-180 days depending on climate. (IFA Paper Cacao (Theobroma cacao L.) French: Cacao; Spanish: Cacao; Italian: Cacao; German: Kakao )”

### **PLAN “B” Organics™ recommendation (foliar treatment):**

Time of application from flowering date	Product	Dosage Kg/Ha/Spray	Spray Volume	Sprays Interval
1-40 (3-4 applications)	High Phos Bat Guano 3-6-1 MPP: Mineralized Phosphorus Powder 0-9-0 Seabird Guano 0-13-0 High Nitro Bat Guano 8-3-1 Nitro Bat Guano 5-1-1 TLB: Teak Leaf Blend™	2.5	150 L/Ha*	14 days
41-75 (2-3 applications)	High Phos Bat Guano 3-6-1 MPP: Mineralized Phosphorus Powder 0-9-0 Seabird Guano 0-13-0 High Nitro Bat Guano 8-3-1 Nitro Bat Guano 5-1-1 TLB: Teak Leaf Blend™	2.5	150 L/Ha*	14 days
76- 150 (4-5 applications)	High Phos Bat Guano 3-6-1 MPP: Mineralized Phosphorus Powder 0-9-0 Seabird Guano 0-13-0 High Nitro Bat Guano 8-3-1 Nitro Bat Guano 5-1-1 TLB: Teak Leaf Blend™	2.5	150 L/Ha*	21 days
Total 10-12 applications		33-40 Kg / Ha		

\*350 gr/ 15 Litter sprayer/ not loose in solution, Use Plan “B” Honey Pot Bag

\*\*Fe 1000ppm, Mn 500ppm, Zn 2000ppm, Cu 110ppm, B 1000ppm, Mo 70ppm/

\*Use Volcanic Rock dust, Volcanic Ore Concentrate, MPP 0-10-0 and or Bat guano 0-10-0

Complete Recipe	Cuttings Transplanting	Vegetative Growth			Fruiting/Flowering Period							
		Week 1	Week 2	Week 3	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8
<b>Mix with Water</b>		(All measurements per gallon of water)			1Tsp=5ml / 1Tbsp=15ml		Always use unchlorinated water!		Rates of application may vary / *crop specific			
<b>A.C.E Spray™</b>		5ml	10ml	15ml	20ml	30ml	30ml					
<b>Soluble Seaweed Extract</b>	2ml		5ml		5ml			5ml	5ml	5ml		
<b>Tea Applications</b>		All measurements per gallon of water. Aerate and agitate water for 12-24 hours with ingredients in <b>HONEY POT™</b> EXTRACTOR BAG. Stir vigorously and water immediately. Use 2-3 tea applications per week as a substitute for the nutrients mixed with water.										
<b>High Phos Bat Guano 3-6-1</b>				15ml	15ml	15ml	15ml		30ml			
<b>Mineralized Phosphorus Powder 0-9-0</b>				15ml	15ml	15ml	15ml		30ml			
<b>Seabird Guano 0-13-0</b>				15ml	15ml	15ml	15ml		30ml			
<b>High Nitro Bat Guano 8-3-1</b>			5ml	5ml	7ml	7ml	7ml	7ml				
<b>Nitro Bat Guano 5-1-1</b>			15ml	15ml	15ml		15ml					
<b>TLB: Teak Leaf Blend™</b>			5ml	5ml	7ml	7ml	7ml		30ml			
<b>Crab Powder</b>		5ml		5ml	5ml		5ml					
<b>Soluble Seaweed Extract 0-0-17</b>		5ml	5ml	5ml	5ml	15ml	15ml					
<b>Bulk Mixing Guide</b>		Amount used depends on size of plants being fed. When combining more than one type of guano, be sure not to exceed more than a combined total of 1-2 Tsp. per gallon of soil.										
<b>High Phos Bat Guano 3-6-1</b>	4-8 lbs / yd			<b>VOC: Volcanic Ore Concentrate™</b>				4-12 lbs / yd				
<b>Mineralized Phosphorus Powder 0-9-0</b>	4-8 lbs / yd			<b>VRD: Volcanic Rock Dust™</b>				4-12 lbs / yd				
<b>Seabird Guano 0-13-0</b>	4-8 lbs / yd			<b>TLB: Teak Leaf Blend™</b>				2-12% total volume				
<b>High Nitro Bat Guano 8-3-1</b>	4-8 lbs / yd			<b>Glacial Rock Dust</b>				4-12 lbs / yd				
<b>Nitro Bat Guano 5-1-1</b>	4-8 lbs / yd			<b>Crab Powder</b>				4-8 lbs / yd				
				<b>Soluble Seaweed Extract 0-0-17</b>				4-8 lbs / yd				

### Phytotoxicity check:

Before starting the trial a Phytotoxicity check should be made by scanning range of concentrations 100 gr/ sprayer, 165 gr/ sprayer, 300 gr/ sprayer. The application should be on a small scale (few trees) and tissue scorches judgment should be made 2 days and one week after application.

To enable the parties to assess the best possible economical results, it is suggested to evaluate more than 1 dosage during the trial.



Check out [www.planborganics.com](http://www.planborganics.com) for more information or contact us at: [info@planborganics.com](mailto:info@planborganics.com)