

A Green and Safe Solution that reduces disease and insect pests on Fruit Trees on Vashon

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Diane Emerson and I have been researching and educating the public on pesticides and safe alternatives to them for three years. Some of the most toxic pesticides are some of the ones used on fruit trees, including those with the following active ingredients: Captan, Carbaryl, Malathion, and the class of insecticides known as Neonicotinoids. The science has shown that many of these ingredients are unsafe for us, many are harmful to bees, salmon, pets, and more. To learn how safe the products are that you use on your fruit trees, check out the web site Grow Smart Grow Safe, <https://www.growsmartgrowsafe.org/>

The good news is that the book "The Holistic Orchard" by Michael Phillips provides useful details on the ways to grow healthy fruit without the use of toxic pesticides. One of the core elements of the successful approach is a Holistic Organic Spray Mixture. The book details how the use of herbicides can break up the beneficial fungal mycorrhizal network in the soil, whereas the Holistic Organic Spray Mixture provides many benefits. These include feeding the tree, building tree health, inhibiting the molting cycle of various pests, stimulating the tree to produce compounds to fight fungus, prolonging pollen viability, helping fruit set, helping to break down leaves on the forest floor, and protecting the trees from climatic stress.

Dr. Ethan Russo, who lives on Vashon, has had very good success in controlling the fruit insects and diseases on his variety of plants by making regular use of this spray since 2012. He reports spectacular success with Apples, Blueberries, Pears, Apricot, Rose, Raspberry, Strawberries, Mulberry, and persimmon.

We are beginning talks with retailers on Vashon about carrying the ingredients for the Holistic Organic Spray Mixture. If we get a retailer to carry the ingredients, we will be putting the word out.

Orchard Spray Rates

Compiled by Ethan Russo, adapted from Michael Phillips, *The Holistic Orchard*

Basic Holistic Organic Spray Mixture

Spray Capacity --->	100 gallon spray tank	4 gallon (backpack sprayer)	1 gallon	½ gallon	1 quart
Ingredients:					
Pure Neem Oil	½ gallon (64 oz)	5 Tbs (75 ml)	4 tsp (20 ml)	2 tsp (10 ml)	1 tsp (5 ml)
Dr. Bronner's Liquid Soap	4 Tbs (60 ml)	2 tsp (10 ml)	½ tsp (2.5 ml)	¼ tsp (1.25 ml)	1/8 tsp (0.6 ml)
Liquid Fish Extract	2 gallons	10 oz. (300 ml)	2 ½ oz (75 ml)	1 ¼ oz (38 ml)	20 ml
Effective Microbes	1 gallon	5.12 oz (150 ml)	1.28 oz (37.5 ml)	0.65 oz (18.8 ml)	0.33 oz (9.4 ml)
Organic Blackstrap Molasses	38 oz.	3 Tbs (45 ml)	2 tsp (11 ml)	1 tsp (5.5 ml)	½ tsp (3 ml)
Kelp Extract	8 oz. (240 ml)	5 Tbs (75 ml)	4 tsp (20 ml)	2 tsp (10 ml)	1 tsp (5 ml)
Yucca	125 ml	1 tsp (5 ml)	¼ tsp (1.25)	1/8 tsp (0.6)	0.3 ml.

Spreader-Sticker			ml)	ml)	
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Others organic agents:

Monterey Insect Spray (Spinosad)	6 liters	8 oz (240 ml)	2 oz 4 Tbs (60 ml)	1 oz 2 Tbs (30 ml)	1 Tbs (15 ml)
Serenade (organic anti-fungal)	6-12 liters	8-16 oz (240-480 ml)	2-4 oz (60-120 ml)	1-2 oz (30-60 ml)	½-1 oz (15-30 ml)
Safer Soap	7.5 liters	10 oz (300 ml)	2.5 oz 5 Tbs (75 ml)	1.25 oz (38 ml)	4 tsp (19 ml)
Actinovate (antifungal)	1 liter	8 tsp (40 ml)	2 tsp (10 ml)	1 tsp (5 ml)	½ tsp (2.5 ml)
Liqui-Cop	See	Directions	for	Each	Crop