



Holistic Sprays

What are Holistic Sprays?

Holistic orchard sprays are preventative medicine- using them is like exercise and eating healthy for humans. Holistic sprays help build up the trees immune system and establish a healthy microbiome so that it doesn't get sick in the first place. If you begin with disease resistant varieties and use this method, you can drastically cut down on the amount of organic pesticides and fungicides you will need to use, if any. Below we have our recommended recipes, when to use them, and where to get the ingredients. The foundation for this philosophy comes from Michael Phillip's book, *The Holistic Orchard: Tree Fruits and Berries the Biological Way*.

Main Ingredients

Beneficial Microbes

Builds up the tree microbiome that fights infections. Can also use compost tea. We recommend SCD Bio Ag Probiotic Additive for Farms and Gardens.

Liquid Fish

Provides nutrients to the tree and the healthy microbiome that fights infections. Can also use full fat canned coconut milk.

Whey

Work as natural fungicide. Provides nutrients to the tree that compliment the liquid fish nutrients. Can also use powdered milk.

Neem Oil

Suffocates hibernating pests and nourished the healthy microbiome. It is also absorbed by the tree and acts as a safe organic insecticide for pest insects. Need full fat neem oil (not the neem spray commonly used in gardens). We recommend Cold Pressed Neem Oil from NeemResource.com

Dish Soap

Acts as an emulsion agent for the neem oil so that it can fully incorporate into the mixture. Use a dish soap that is not antibacterial or use insecticidal soap.

Ratios are listed below for each spray. To prepare, begin by first vigorously mixing the neem oil and dish soap together until you have a consistency that will incorporate well. Mix with the liquid fish and beneficial microbes liquid, and pour solution into a sprayer. Add **warm** water until you have the proper dilution, add whey powder to sprayer and shake to mix. If you use cold water the neem will solidify, clog your sprayer, and be ineffective.

When to Spray

Please note: DO NOT SPRAY WHILE FLOWERS ARE BLOOMING. Doing so can cause danger to pollinators, like bees. If the spray is on the pollen, pollinators will die from consuming neem. By only spraying at the below times, you will both keep your tree and the ecosystem healthy.

1% Neem	2% Liquid Fish
1% Soap	2% Whey
1% Effective Microbes	Dilute with water

.5% Neem	2% Liquid Fish
.5% Soap	2% Whey
1% Effective Microbes	Dilute with water

1st

To help prepare for spring, begin spraying in autumn. After all of the leaves have fallen from the tree, apply to the branches, trunk, and leaf litter left on the ground. This helps start the foundation of a good microbiome for the next growing season.

2nd

When the leaves of the tree first start emerging from buds, apply spray to branches and trunk.



3rd

When blossoms start showing color in the buds, but have not opened, apply to flowers, leaf buds, branches, and trunk.



4th

When flowers are done blooming and drop all their petals, spray the leaf canopy and fruitlets.



5th

10 to 14 days after the 4th spray, do an additional spray on the leaf canopy and developing fruit. If there are insect pests present, you can add 2-4 tsps per gallon of Bt. (*Bacillus Thuringiensis*), an organic pesticide.