



## Whey as orchard spray

Posted by [Josh Karp](#)

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[Josh Karp](#)

[Whey as orchard spray](#)

June 02, 2013 02:14PM

Registered: 10 years ago

Posts: 18

I have the opportunity to spray raw whey in the orchard this year (i.e. not a spray made from powdered whey).

In The Holistic Orchard, Michael P. references experiments done in S. America where whey was sprayed at a 2% concentration with good results. How could whey be beneficial? Michael touches on the possibilities:

1. general nutritional booster (proteins, vitamins, minerals)
2. contributes to leaf nutrition and aboreal mycology
3. "Calcium has been shown to inhibit fungal spore germination"
4. "A protein in whey produces an oxygen radical when exposed to UV light that is directly toxic to fungal conidia".

Some thoughts:

1. Might whey have enough calcium to help varieties that have calcium deficiency issues (i.e bitterpit, honeycrisp zonal chlorosis, etc).
2. I think whey has a pH of approx. 6, a bit acid. Just a sulfur shifts the pH on the leaf, maybe whey could do this also - but at what concentration?? Seems like the concentration is the critical issue here - why was 2% (referenced above) used by these growers??

At the end of his whey section, Michael says fruits sprayed with a 2% concentration of whey (with some other things like kelp, fish, etc) "turned out impeccable...free of blemishes and infestations alike". Well, I don't know about that, seems just a little bit too good to be true?? I'm not thinking of this as a silver bullet, to be sure, but the possibilities are tantalizing.

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[Michael Phillips](#)

[Re: Whey as orchard spray](#)

June 04, 2013 09:09PM

**Moderator**

Registered: 11 years ago

Posts: 621

Many nutritional riffs can be explored in the healthy orchard. Those words from the book were intended to encourage 'young and upcoming farmers' (like Josh!) with access to whey. Local resources rock. Figuring out how to best utilize this cheese by-product in an orchard context is what experimentation with the [core holistic recipe](#) is all about.

Those collective experiences of South American farmers pivots on the encouragement of Jose Lutzenberger, former Minister of the Environment in Brazil, who in turn was taken by the work of Francis Chaboussou, the French soil scientist who focused on soil fertility ratios that made for healthy plants. Lutzenberger convinced farmers to work with nutritional sprays rather than toxic-ides, along with investing in soil balance with respect to mineralization. Whey and rock phosphate were the two constants

Milk/whey trials done in Australia focused primarily on grapes. David Bruer, an owner of one of the vineyards where the research took place, happens to be a chemist. He noted that under the influence of ultraviolet light, a protein in whey (ferroglobulin) produces an oxygen radical that is extraordinarily toxic to fungal spores. These trails showed good effectiveness on powdery mildew. Similarly, summer whey sprays may prove a great means to limit the spread of secondary scab in apple. Disease pathogens that generate on the surface of fruiting plants seem the prime target. I know of a Virginia grower successfully using diluted milk sprays for brown rot on stone fruits. Having multiple mechanisms on the calcium front to ward off disease points to further possibilities.

[Lost Nation Orchard](#)

Zone 4b in New Hampshire

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[Brian Caldwell](#)

[Re: Whey as orchard spray](#)

June 08, 2013 03:36PM

Registered: 10 years ago

Posts: 69

Hi folks,

There is a good web article on milk and whey at:

[\[www.growveg.com\]](http://www.growveg.com)

The first link in the "using milk for plant mildews" section has a recent Connecticut Masters thesis on using milk vs powdery mildew in

pumpkins. Cucurbit powdery mildew is a relatively superficial, easy to control disease. All kinds of oils, soaps, etc. can give good control of PM. Nonetheless, it provides an indicator that milk does indeed have fungicidal properties.

Seems like there are good results on fruit PM from down under.

Josh, I hope you use the whey and leave some control trees to see if it really makes a difference. Is whey easy to mix as a spray?

Brian

[Hemlock Grove Farm](#)

Zone 5 in New York

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