



why probiotics for fire blight

Posted by [Eliza Greenman](#)

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[Eliza Greenman](#)

[why probiotics for fire blight](#)

April 15, 2014 10:11PM

Registered: 9 years ago

Posts: 23

I'd like to try whey as a bacterial spray. With the thought of probiotics vs antibiotics, I've been thinking about using acid or "sour" whey from yoghurt making as a bacterial combatant because it already contains the probiotics. I've read papers about certain strains of *Lactobacillus plantarum* showing good fireblight control qualities and I'm assuming some strain(s) of *Lactobacillus plantarum* are around in yoghurt. I have access to acid whey and have been granted permission by the owner of the orchard I manage to experiment on the Esopus Spitzenburg trees this year (because they are marked for removal due to being the dirtiest trees in the orchard). It can't hurt to try it out since the trees are going to get axed anyway...

- Is a surfactant necessary for spraying liquid whey? If so- what is recommended?

- % whey- I'm thinking about going with 2% in water with a surfactant just because that's what is listed for fungal spore inhibition. I'm not adding this whey to the "core holistic recipe" just yet because my experimental budget is basically \$0 and the acid whey is free.

-Spray Schedule: It's likely we won't have fruit this year due to tonight's 19 degrees and 35 mph NW wind so we might not even have bloom. Depending on the weather, I've already sprayed copper at green tip and plan to spray the whey at full pink, first open blossom (crossing fingers we have one), and again as new blossoms open (and before the next rain). Not sure what to do about shoot infection, which we get due to extreme vigor. I'll have to think that one out and will probably have some time due to tonight's bud death.

I welcome any thoughts, exclamations, naysaying, etc...

Mid-Atlantic VA, Zone 7a

(And often representing other areas throughout the South)

Edited 1 time(s). Last edit at 04/16/2014 03:32PM by Michael Phillips.

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[Michael Phillips](#)

[Re: why probiotics for fire blight](#)

April 17, 2014 03:37AM

Moderator

Registered: 11 years ago

Posts: 621

I love that you are examining home grown / regional solutions, Eliza. This is sound holistic thinking.

Introduced microbes do one of three things through basic crowding of the plant surface: consume available nutrient resources, get eaten by other microbes (and thus serve as a nutrient resource), or protect their new niche by secreting anti-microbial compounds. That last bit is so relevant if one stops to think where proscribed antibiotics for fire blight came from in the first place. I'm curious to know what these papers looking at *Lactobacillus plantarum* as useful against fire blight suggest in these regards.

My surfactant of choice in the bloom window would be [karanja oil](#). Nutritional fats make the world go round. And here's a tree remedy with no impact on pollinators. Yes, from abroad, but totally zeroed in on the mission at hand. Nutrient resources for the applied microbes are equally important in biological reinforcement.

[Lost Nation Orchard](#)

Zone 4b in New Hampshire

Edited 3 time(s). Last edit at 04/22/2014 03:18PM by Michael Phillips.

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[Paul Weir](#)

[Re: why probiotics for fire blight](#)

July 10, 2014 05:01AM

Registered: 11 years ago

Posts: 187

Hi Eliza,

Great post!

Your whey trial has real promise. I look forward to hearing how you feel it worked out. Keep at it, try variations of your formula, and take both notes and photos of your experiences. They really are priceless as you never know when it will come in handy down the line.

I believe that the pro-biotic approach to Fireblight management is just getting started in the mainstream. I have also read several University and Private funded studies into this important area of enlightened research.

Fireblight and Bacterial Blast both reared their ugly heads all over the Sierra Foothills this year. A substantial freeze at peak bloom along with hail created an unfortunate 1-2 punch of infection for me.

Solutions for Fireblight, beyond copper and antibiotics, are needed now more than ever. The work & trials we do in our own orchards may make the difference far beyond simply getting fruit, in any given year, but rather in whether trees, blocks and entire orchards will continue to even be viable.

Competitive colonization is a hallmark to the Holistic Orchardng approach so many of us embrace and the evolving strategy you are looking to employ seems right on to me

Hats off to you and your approach!

[Gopher Hill Apples](#)

Zone 8 in California

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[Tim Bates](#)

[Re: whey probiotics for fire blight](#)

May 19, 2015 03:59AM

Registered: 11 years ago

Posts: 58

Well, after 29 years of having so little fireblight that I pretty much ignored it...2015 presents a different picture: dozens and dozens of small twig blights in my pears. Out here it is mostly pears that "get it". However, I received two emails saying that fireblight has showed up for the first time ever in apples from two smaller growers---one who has been using copper so he won't get it!! So, Eliza's whey trials are intriguing for me too. We have some goats, but by the time we are milking again the window for control is pretty much over. There is a goat dairy nearby, but local pig growers seem to get their way, err whey. I have some leverage there, I think. I hear it can help with powdery mildew too...which has resurfaced when I pretty much stopped spraying sulfur around here...so I think next season I will try and use my leverage and hopefully join you in whey trials.

[The Apple Farm](#)

Zone 8b in California

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[Robbie Anderman](#)

[Re: whey probiotics for fire blight](#)

May 12, 2016 09:56PM

Registered: 10 years ago

Posts: 56

Any updates from Eliza about how the experiment went?

[Morninglory Farm](#)

Zone 3b* in Ontario

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