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neem coagulation

Posted by [Elliot Dembner](#)

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[Elliot Dembner](#)

[neem coagulation](#)

February 14, 2016 11:23PM

Registered: 9 years ago

Posts: 11

RE: NEEM COAGULATION IN MY 16 GALLON SPRAYER

FOLLOWING Michaels four sprays of spring regime, I find that even tho I mix soap with the NEEM and warm water, when i finish spraying the 16 gallons I find the NEEM/soap mixture coagulated on the sprayer bottom instead of being sprayed with the mixture on the trees. Pls advise how I can overcome this problem. Should I add more soap to the NEEM warm water in the pail prior to adding to the water already in the sprayer? Should I warm all 16 gallons, if so to what temperature? Should I add some agitator to the inside of the sprayer, if so any suggestions what I need and where to get it. Many thanks for setting me straight.

I am using a NORTHERN STAR sprayer powered by a stand alone battery.

scotts valley, ca

zone 9b

Edited 1 time(s). Last edit at 02/15/2016 01:14AM by Michael Phillips.

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[Michael Phillips](#)

[Re: neem coagulation](#)

February 15, 2016 06:33PM

Moderator

Registered: 11 years ago

Posts: 621

Someone else can help Elliot with the specifics of emulsifying neem as maybe that will lead to words better than mine in getting the basics across. Hard water can be problematic (and maybe Nick Segner can chime in here with his experience in that regard). The other consideration that jumps at me is the capacity of a sprayer to keep spray mix recirculating and agitated. The [Rears Pak-Tank](#) does this well on both counts. Cutting corners in this regard means that a sprayer costs less . . . but are growers really served by that in the end? That's the sort of detail that posts in our [Sensible Equipment](#) category need to bring out.

[Lost Nation Orchard](#)

Zone 4b in New Hampshire

Edited 1 time(s). Last edit at 02/16/2016 02:15AM by Michael Phillips.

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[Paul Weir](#)

[Re: neem coagulation](#)

February 16, 2016 07:36PM

Registered: 11 years ago

Posts: 187

Hi Elliot,

A couple quick thoughts to share.

Agitation and Filtration

Agitation is key. If you can add it to your type of sprayer, it will definitely help you with almost everything you would spray on your trees, year round.

I dont think more soap is going to help with the particles you are ending up with in your mixture. If after adding liquid soap, you see oil still floating on the top, then go ahead an add another splash of liquid soap and mix again. Still see oil coming to the surface? add a little more soap and repeat. You need only add enough soap to emulsify the neem and more is not going to magically help the particles that are not soluble to dissolve. According to Usha at Neem Resource the solids that are "thrown" from the neem oil are **stearin** . . . Stearin needs to be filtered out before adding it to your tank. Stearin is a wax like fatty acid substance that has a high melting point of greater than 130 degrees Fahrenheit - which you are not going to achieve without practically cooking your neem oil . . . and you don't want to do that for numerous reasons.

I am careful to always strain my Neem mixture (after emulsifying it) as I pour it into the tank. Even with an excellent emulsion, there are always a few bits and pieces that do not dissolve completely - any of which can easily clog a sprayer. These "bits" may be the coagulation you are talking of, that is, they are actually many hundreds of particles that never emulsified during your mixing and are seemingly falling into a group, at the bottom of your tank, thanks to gravity and then appear like a precipitate coming out of the solution. . . . try straining your mixture more thoroughly before pouring it into your tank, I am confident that will help.

I have been using a Rears Nifty series 50 gallon tank with agitation, over the last 3 seasons, and I have not had Neem cause any clogging in my tank hardware or sprayer since switching to that product.

I also have moderately hard well water that I use for my tank mixing. I test my well water every 2-3 years and a recent lab test result from Sept 2015 was 151mg/L of CaCO₃ and a pH of 7, if that helps with your analysis.

Good luck!

[Gopher Hill Apples](#)

Zone 8 in California

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