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## NEWS & REPORT:

### Brassica, Almonds and Prunes

By Melina Sempill Watts

In a visually poetic recipe for soil health, farmer Mike Vereschagin has taken a new approach to managing the 1500 acres of almond and prune trees he grows at Vereschagin Farms by using cover crops of brassica between the rows of trees, making for enchanting displays of yellow mustard and canola flowers mixed with white and purple radish flowers in the late spring.

Change started when Mr. Vereschagin was experiencing replant disorder in a new orchard; the nematode counts in the soil went up and the young trees were weakened, getting secondary infections. Mr. Vereschagin decided to forge ahead with putting in brassicas including mustard, radish and canola as cover crops, because fumigation is restrictive and costly, while research shows that these plants' roots create a chemical byproduct that is a powerful natural fumigant, killing nematodes. Mr. Vereschagin states that "Two years after this initial trial, the nematode count in the area he began was close to zero." His practice is to mow down the brassica right before harvest as the plants can get 7 or 8 feet tall, making working around them problematic, and to leave the plant residue on site, adds to the organic material in the soil. Because this happens right before the brassica fully go to seed, he cannot rely upon the brassica to repopulate themselves, but must put down more seed.

A great side effect of growing the brassica is that they go to flower later in the season than do almonds and prunes, which means they provide ongoing key habitat for bees. Because honeybees are facing sudden colony collapse, Project Apis M. is providing brassica seed for free for farmers interested in putting down cover crops to provide bee forage plants. Watching bees thriving amidst his cover crops, Vereschagin says the experience of using brassica as a cover crop "...has made a believer out of him." He says the only wrinkle is that with young trees, the brassica can get as tall or taller than the infant trees, and can increase low-lying humidity, thus being a potential vector for rust. However, over all, he feels this has improved his orchards' health, so much so that he agreed to host an onsite visit for other farmers in partnership with the Glenn County Resource Conservation District. This field day proved so inspiring that the Glenn County Resource Conservation District put him up for the *2016 Conservation Agriculture Systems Innovation (CASI) Center Conservation Tillage Farmer Innovator Award*, which he won.

What's next? Mr. Vereschagin is mulling over the possibility of chipping dead trees and leaving them on site to provide additional soil health benefits. Five years ago, chippers would do the hard work of removing dead trees, chipping them and sending dead tree materials to a cogeneration plant to create electricity as this was a revenue producing venture for them. PG&E has not renewed contracts so the numbers have changed and now it costs about \$200 per acre to have trees chipped and removed, but keeping them on site would cost a lot more as chippers are still subsidizing the real costs for the work as they continue to make some money off of cogeneration. When will it make economic sense to keep chipped trees on site? Mr. Vereschagin is watching the market and thinking about this next step in his ongoing effort to keep his orchards thriving and his soil healthy.

If you are interested in learning more about Soil Health or receiving information about Glenn County Resource Conservation District's (GCRCD) field days, held in partnership with the Natural Resources Conservation Service (NRCS) and UC Cooperative Extension (UCCE), please contact Melina Watts via email at melina@glenncountyrcd.org or by calling the GCRCD office at 530-934-4601 x5.

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