Sex and the Single Moth

By Peter Forté

A sexy recent development in fruit culture is called pheromone confusion. Pheromones are the chemicals produced by animals to communicate with each other. Ants use them to mark their trails so the others can follow. Humans use them to attract sex partners, usually without being aware of it, except in the case where they have bought cologne laced with these true aphrodisiacs. To humans this ancient mating facilitator has been reduced to negligible importance by artificial enhancements like soaps, perfumes and the aromas that waft from new cars and money. The moths that parent many of the fruit-damaging insects rely on pheromones exclusively. The only alternative is blind chance, ships passing in the night.

To clarify, it is the male moth that is chasing the female moth (some things never change). He is not distracted by food since he did all his eating as a young worm. He has no taste for beer or televised sports either. He has only one thing on his little mind. His body is a machine designed to deliver fertilization to a female. His antennae are incredibly efficient receptors for the aerosol enticement, and his wings allow him to cover great distances in his quest.

The technique of pheromone confusion is simple once you have the stuff. Milking the potent molecules from tiny insects is not an option; it has to be synthesized. The manmade chemical is permeated into plastic twist ties that are secured to upper branches of the trees. Once the orchard is full of artificial pheromone, the males cannot find the females. Precise timing is essential because the twist ties have sufficient potency for only ninety days and you need to protect the fruit at least that long. You can't be too early or you may have to reapply, a very expensive option. If you are too late you can forget it. One successfully mated generation of these pests would be enough to inundate your fruit with worms. Proper timing is achieved with the use of sticky traps (think fly paper) baited with (you guessed it!) pheromones.

At Forté Farms we have used this technique against the peach twig borer, the oriental fruit moth and the peach tree borer (our three worst pests) for many years. Because of the success we've had with this program, we can usually deliver peaches, plums and apricots to market that have never had spray applied to them. If this is the case there will be "No Pesticide" signs posted.

I wrote the above article in 2004 and it still works. If you'd like to learn more please proceed at your own risk (sacred cows are headed for slaughter).

I am often asked, “Are you organic?” and I like to reply, “Don’t accuse me of that!” Or if someone says, “Why aren’t you organic?” I’m likely to say, “Because the world already has enough religions.” My son made a tee shirt he’d wear to market which said, “Not Organic and Proud” and that is a good description of my stance.

Because I am not an organic grower I have a better chance of bringing you fruit with no pesticide ever having been applied to it. This is because I can use very effective compounds before the fruit is exposed on the tree. Organic growers typically apply far more pesticide than conventional growers. The faith aspect comes into play with the idea that the compounds used by organic growers are safer because they come directly from nature. This is baloney; Dear Mother Nature is an expert at making toxic chemicals.

Specifically, when tested by the usual “stuff-a-rat” method, half of the organically accepted pesticides were proven to be carcinogenic. This percentage is the same as found for conventional pesticides. This is quite startling news and it is only now coming to light because the powers that be were suffering from the delusion of assumed, inherent safety with natural chemicals. Organic pesticides get a much less rigorous testing procedure than conventional ones and several have been removed from the market because they were later found to be too dangerous.

Ryania, an organic pesticide that I used to use, is one of these. It was discovered because it was used by native peoples to poison ponds and thereby harvest the fish. I bought the stuff one thousand pounds at a time and applied it every seven to ten days to my apples and pears. I was an organic grower, but my orchard was a disgusting, pesticide reeking mess. Eventually I had my epiphany and I haven’t ever looked back. I now use a material called Altacor that is officially classified as having “no known mammalian toxicity” and the application rate is 3 ounces per acre, once every three weeks (you will not see a “no pesticide” sign on our apples and pears). Which would you prefer that I use?

A quick word on what’s good about organics. The notions that you must take care of your soil and that the crops you grow are simply a reflection of the health of your soil and that one of the best ways to insure healthy soil is by adding organic matter to it; are completely correct. It is also true that healthy plants will repel insects and disease better than ones that are not so robust (this is largely due to the stronger plant’s increased ability to manufacture its own pesticides). But no insect will starve to death because he finds himself on a healthy plant, so this is a very limited benefit that will never make insect control methods obsolete.

To me it boils down to whether you make rational decisions or you are more prone to emotional responses that require the blocking of antagonistic information. It is another example of the cultural struggle in this country between religion and science.