#### Royal Oak Farm Pest Management Practices

Organic pesticides are often promoted as more environmentally friendly than synthetic pesticides. In fact, some organics can be quite toxic to mammals or harmful to beneficial organisms. At Royal Oak Farm we use an entirely new approach of pest management called Bio-intensive Integrated Pest management (Bio-IPM) to minimize the insect and disease damage to our fruit. Biointensive IPM utilizes a systems approach to pest management based on an understanding of pest ecology. It begins with steps to accurately diagnose the nature and source of pest problems, and then relies on a range of preventive tactics and biological controls to keep pest populations within acceptable limits. Our preventative tactics include a combination of ecological, biological, natural, and cultural controls to keep applications of chemical controls to a minimum.



Ladybugs are one of our many beneficial insects.

Often there are enough beneficials (predators and parasites of pest species) to control the pest(s) in the orchard without spraying. On other occasions we can use traps to catch pest species as they enter the orchard, or determine from the traps that there are too few of the pest to cause serious damage to the trees or fruit. In 2007 we made use of a new product called Virosoft that is a 100% ecological solution. Virosoft is a biological, natural baculovirus which specifically and exclusively attacks the target pest. Virosoft is absolutely harmless to all other members of the ecosystem, including humans. Because of the success of this product we have not had to apply any sprays in the month of August when growers would normally apply at least one timed spray. As a last resort, reducedrisk pesticides are used if other tactics have not been adequately effective, and with care to minimize risks.

# Royal Oak Farm IPM Specialist



Traps with lures are used to monitor insects.

We have an in-house IPM specialist to monitor a number of species of insects and mites in our orchard, including beneficial species (predators and parasites of pest species). Each week of the growing season, we also consult with the Wisconsin Eco-Apple Project network of professional growers via weekly conference calls directed by a professional entomologist. Two weather stations in the orchard track temperature, rainfall, humidity, leaf wetness, wind speed and direction 24 hours a day. The weather stations transmit this data to our weather computer and we then use this information to monitor pest biology and the progress and severity of various diseases that can attack our fruit.

#### Wisconsin's Lake Superior Eco-Apple Network MANAGING PESTS IN OUR ORCHARD



### Royal Oak Farm Farm, Food & Nature

The benefits of implementing bio-intensive IPM include reduced chemical input costs, reduced on-farm and off-farm environmental impacts, and more effective and sustainable pest management. An ecology-based IPM has the potential of decreasing inputs of fuel, machinery, and synthetic chemicals - all of which are energy intensive and increasingly costly in terms of financial and environmental impact. All these efforts make it possible for us to apply chemical controls only a few times each season when they are truly required. And we have made it a policy to always use the most environmentally friendly materials available. The good health of our bees located all around the orchard is a testament to our insect and disease management strategy.



At Royal Oak Farm we are proud of the quality of the fruit we grow, and equally proud that through our monitoring efforts and the use of Bio-intensive Integrated Pest Management procedures we need apply so few sprays to grow excellent products. I hope this answers any questions you may have.



#### Eco Apples are earth friendly!

Eco Apple farmers use a combination of old agricultural methods and leading edge technologies to minimize spraying and other environmentally disruptive practices. They're pioneers in what is known as IPM, which stands for integrated pest management.

IPM means preventing pest infestations before they happen, monitoring crops closely, and treating pests only as needed. Eco Apple growers encourage and rely on naturally-occurring controls such as ladybugs, spiders, wasps, bacteria, and predatory mites. Eco Apple farmers must have a deep knowledge of apple ecology to succeed. Their methods are more expensive and more labor-intensive than standard practices such as routine spraying. But Eco Apple farmers know it's worth the extra effort. One taste, and we think you'll agree.



For more info on our IPM Program contact:

#### Royal Oak Farm Bio-Intensive IPM

15908 Hebron Road Harvard, IL 60033 (815)648-4467 Fax: (609) 228-2174 Cell: (815)-228-2174 www.royaloakfarmorchard.com dmnorton@royaloakfarmorchard.com 5908 Hebron Rd larvard, IL 60033 /ww.royaloakfarmorchard.com



SEE.

"He who abides in Me, and I in Him, bears much fruit." John 15:;5a



## Established 1992 FOR GOD'S GLORY



Bio-Intensive Integrated Pest Management Program

SEE

COME... TASTE...