

**Better Data  
Better Decisions  
Better Farming**

**Worry less.**

Not everyone appreciates how tough producing a top quality tree fruit or nut crop can be but, at Semios, we do. That's why we've developed a system to help tree fruit and nut growers manage many of the challenges faced day in and day out.

We provide you with important information, from the root to the fruit of your tree, to help you make fast, accurate decisions with the limited time you have to respond to insect pests, disease and other obstacles Mother Nature puts between you and a great crop.

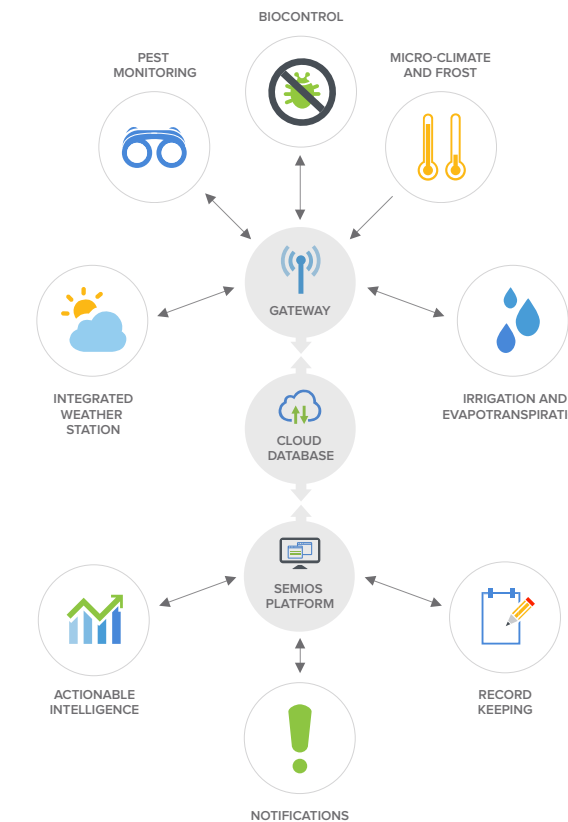


**Every season brings its challenge**

You've told us your mind doesn't stop churning when your goal is to bring a great crop to market and every season counts. We're a partner you can rely on 365 days a year to give you the information you want when you need it most.

**It all starts with our network**

What's truly unique about Semios is our ability to put a cost-effective, reliable communications network throughout your orchard and that's not easy! We're just good at it. Once that's in place, we install a variety of sensors that constantly relay changes in the field to our cloud database and your mobile device instantaneously.



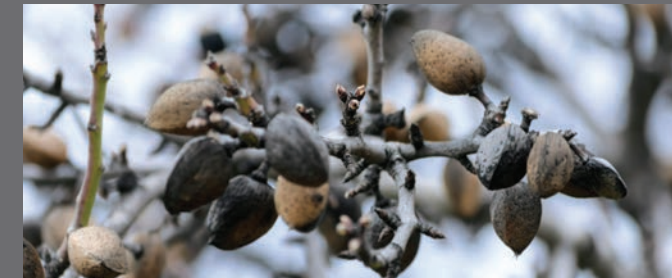
**A Solution for all Seasons—Your experience armed with Semios data**

We understand that you have to be vigilant to get the ideal crop output and we're there to make sure you can react faster, smarter, better with actionable insights direct from your orchard.

**WINTER**

**Insect Pests** Proper insect pest management means accurate degree day prediction of their activity. Our network of sensors and weather stations right in your orchard do it best! We're tracking actual in-field climate data from January first so you'll know when pests are due even before they realize it.

**Chilling Units** We know how important it is to you to understand if particular crops got sufficient chilling portions for harvest planning and we're counting.



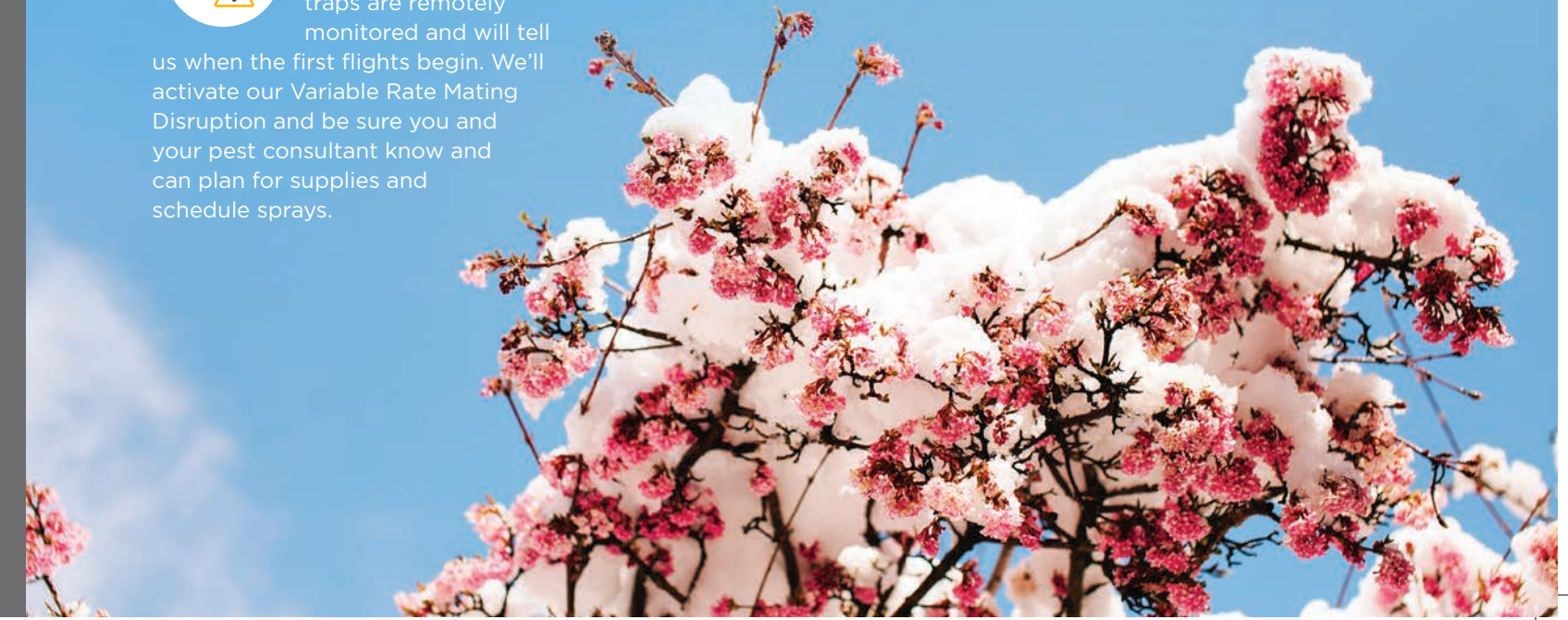
**SPRING**

**Frost Events** Nothing spoils a good night's sleep like waking up to check on frost. We'll do it so you don't have to. Microclimates? We've got you covered. You set the threshold and we'll send the alert to your mobile phone if or when it happens so you don't get caught off guard.

**Insect Pests** We're still counting! Our networked camera traps are remotely monitored and will tell us when the first flights begin. We'll activate our Variable Rate Mating Disruption and be sure you and your pest consultant know and can plan for supplies and schedule sprays.

**Disease Model Conditions and Risk Evaluation** Rain, fog or humidity events can create ideal conditions for certain diseases and we're watching. We'll give you a forecast of specific disease risks based upon in-field conditions, local weather and established models so you can take proactive measures and reduce impact.

**Soil Moisture** No "chasing the water" with Semios. Start the season off right knowing the effectiveness of your irrigation events with updates from our sensors every 10 minutes. No over or under watering when your irrigation specialist gets the results right on their smartphone!



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## SUMMER



**Insect Pests** Those warming days speed development and this is where we really shine! Our automated Variable Rate Mating Disruption tailors the amount of pheromone dispersed in response to growing flight strength. As the pests increase, so does our application of pheromones to help suppress the population and give you coverage for the whole season.



**Disease** As summer progresses, certain disease risks increase. Our predictive modelling instantly calculates (real-time) disease risk values according to on-site environmental conditions and historical disease events and will alert you if you're at risk for diseases like fire blight, alternaria or rust so you can spray in advance to eliminate or reduce impact.



**Soil Moisture** When it's hot, volume and timing of your irrigation events becomes critical; especially with deficit irrigation. Challenging soil types or topography? Our strategically placed sensors provide unparalleled accuracy so your irrigation specialist can be confident in their decisions for optimum results while not wasting limited water resources.



**Overhead Cooling** If your crop requires overhead cooling we'll tell you where, when and for how long. Our network of sensors record temperature, barometric pressure and humidity throughout the orchard so you know if you're getting the desired result. We even send an alert to your phone if temperatures are approaching the risk zone.

## FALL

It's that time when you learn if all your hard work has paid off. But we know you still need to be vigilant.



**Insect Pests** They're still active and can cause damage at the worst time. We're remotely monitoring flights and applying Variable Rate Mating Disruption in response to also limit the strength of any overwintering population.



**Soil Moisture** If post-harvest irrigation is important, we're there to help you manage it to ensure you're setting your trees up right for next season's crop.



**Chilling Units** As the weather cools, we start tracking chilling portions so that you know total accumulations by the end of the winter and understand the impact on the next season's harvest.

## SERVICE

Service before sales is our motto. We know that technology is only as good as the service team that supports it, which is why we have built a team of dedicated professional field technicians who understand the nuances of tree fruit and nut crops. The remote monitoring of our system enables them to anticipate and respond to issues so that you don't have to.

### Our services include:

- Full network installation, testing and performance monitoring
- Camera trap and pheromone dispenser installation, monitoring and support
- Pheromone supply monitoring and replacement
- Automated moth trap catch counts and variable rate pheromone dispersal monitoring

Our goal is to help you increase the productive capacity of your crop while reducing the risk, stress, time and costs required to manage pest, disease and water pressures. By providing you with accurate data from under the canopy, we'll help you better respond to the dynamic, seasonal changes and reduce inputs while achieving increased output. We're proud of our partnership with our grower customers and look forward to helping you maximize the fruits of your labor.

