

Precision Agriculture on Any Scale

MicroStrain wireless sensor networks optimize production yield

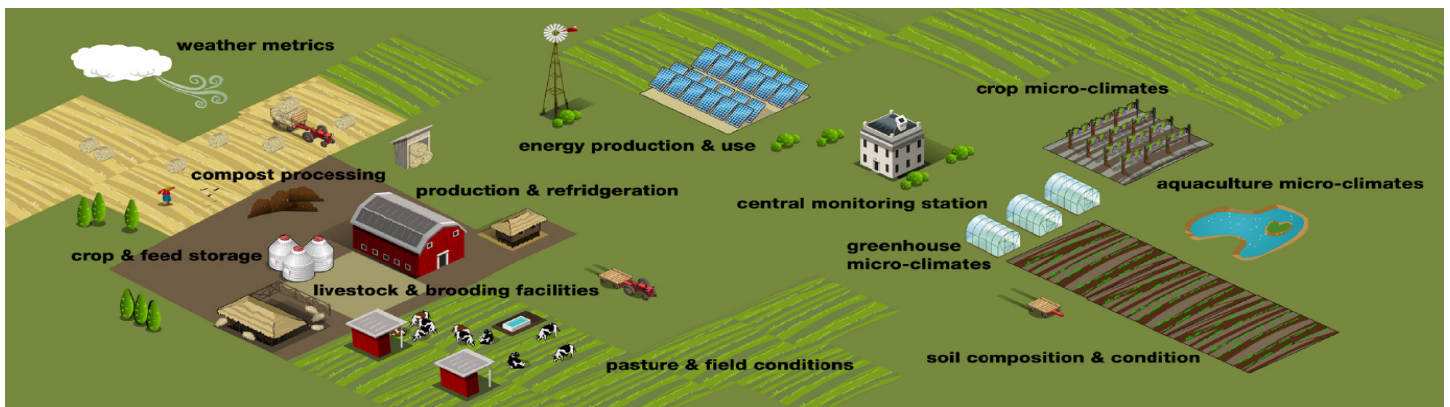
Why invest in precision agriculture?

- **Maximize Yields** for each crop by understanding micro-climates and historical trends.
- **Minimize Irrigation**, and nutrient/pest control with need-based application
- **Reduce Losses** and inform critical harvest timing with real-time environmental condition alerts
- **Multiple Applications:** Crop and livestock monitoring, Aquaculture, Monitor Greenhouses, orchards and vineyards.



MicroStrain Wireless Sensor Networks:

- **Enable Centralized Monitoring** of dispersed crops, livestock facilities, fields, processing and storage sites.
- **Measure Real-Time environmental conditions**, like air/water/soil temperatures, humidity, soil moisture, water level, solar irradiance and wind metrics.
- **Scalable** for any size enterprise
- **Simple integration** with a plug and play system from sensing to data analysis



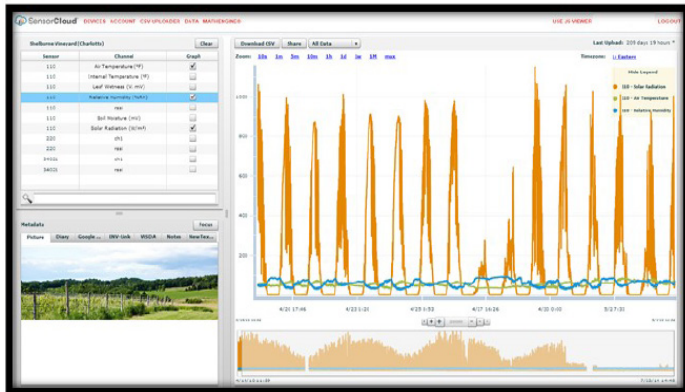
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MicroStrain Real-World Application: Vineyard Health Management

Vineyard health management is a complex science, with individual grape varieties exhibiting preferences and sensitivities to a wide range of environmental conditions. In-situ trends in temperature, humidity, light, precipitation, soil moisture and leaf wetness are all intricately linked in plant health models that inform decisions on usage and timing of irrigation, fertilizer, and pest control.



Crop Productivity monitoring - Precision agriculture requires understanding soil and micro-climate conditions of dispersed sites. Using the Sensor Cloud platform, with a scalable wireless sensor network allowed Shelburne Vineyard to remotely monitor growing conditions and respond accordingly.



Precision wine production - Using SensorCloud with built-in MathEngine analytics provides valuable insight into crop performance over time, and allows producers to achieve consistent quality and output for each variety.

Since 2011, Shelburne Vinyard has relied on MicroStrain - Wireless Sensor Network and SensorCloud data aggregation and analysis platform as part of its arsenal for vineyard health management.

Connect using SensorConnect software. **Collect** via the wireless sensor network. **Synchronize** with SensorCloud via a cellular link. **Monitor** with custom SMS and email alerts to critical environmental conditions. **Analyze** using MathEngine data analytics to collaborate with colleagues and track site conditions over time.



Parker Hannifin Corporation
MicroStrain Sensing
 459 Hurricane Lane suite 102
 Williston, VT 05495
 phone 802 862 6629
 Email: sensing_sales@LORD.com
 www.microstrain.com
 www.parker.com



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