



UNMANNED AERIAL SYSTEMS FOR VITICULTURE

Your vineyard may be a labour of love – or a highly competitive business operation. Either way, our technology can enhance the way you detect disease and damage to your precious vines.

CHALLENGES

- Detecting vine stresses early
- Enhanced planning for applying key inputs like water
- Evaluating your vine management
- Improving grape quality and yields
- Producing the best vintage possible

RISKS

- Overlooking vine and grape damage
- Sub-optimal yields and vintage quality
- Inefficient planning and/or application of inputs
- Excessive use of water, fertilizer and pest control
- Wasted time and wages
- Equipment wear-and-tear
- Lost revenue
- Outdated or in accurate terrain/slope map

SOLUTION

Have Seisland conduct your next viticulture survey using an unmanned aerial system (UAS). We plan and conduct the survey flight, then process the collected data and provide you or your viticulturist with an ortho-mosaic or colour-contrast map indicating the health and physical conditions of your vines and grape crop. Our MicaSense RedEdge 3 multispectral cameras enable early observation of problems invisible to the naked eye. You can enhance the resulting data's functionality by storing it on Seisland's online data management and mapping system, TriliGIS.

EQUIPMENT

We have microdrones md4-1000 multi-rotor and Sense fly eBee Plus RTK fixed-wing UASs. Seisland operates under a Special Flight Operations Certificate (SFOC) covering British Columbia, Alberta, Saskatchewan and Manitoba, allowing our crews to complete jobs quickly, safely and in full compliance.

WHAT WE WILL DO FOR YOU

Seisland's trained UAS operators and digital mapping experts provide safe, accurate, efficient and comprehensive remote sensing viticulture services. These range from gathering aerial data to assess the health of your vines and grapes to accurate digital topographic mapping of your vineyard.

The entire UAS mission is planned to meet your needs. We communicate the mission plan with Transport Canada and Nav Canada for operational compliance. Ground control is established and then the mission is flown with the required sensor.

Available sensor technology includes high-resolution, low-distortion visual cameras and five-channel multispectral sensors. Following each day's survey, we provide the viticulturist with preliminary data, then deliver the complete processed dataset in a timely manner with the option of storing your data on TriliGIS.

APPLICATIONS

- Assessment of vine and grape conditions for timely and efficient irrigation, fertilizing, pest and disease control, pruning and harvesting
- Precise timing of critical events such as planned moisture starvation, harvests and more
- Evaluation of yields
- General observation of land and infrastructure conditions (e.g., downed fencing, building roof conditions, weeds)
- General topographic surveying for planning of new vineyards, irrigation ditches, etc.

BENEFITS

- Quick detection and response to vine and grape-related problems
- Spot-treat problem areas before they spread
- Broadest range of information gathered
- Scalable to any size of vineyard operation
- Safe, efficient and compliant



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SEISLAND'S COMPREHENSIVE SERVICE OFFERING

Unmanned Aerial Systems (UAS)
Preliminary Geophysical Services
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