



Agranimo

Climate intelligence for agribusiness

Agranimo offers technological tools and agronomic support to growers, exporters, and fruit marketing companies to increase profitability, sustainability and forecasting of their businesses.

Our core focus is crop-specific phenological monitoring and data integrations to forecast yield, increase quality and volume of harvest through more efficient farm management, assess risks associated with changing micro-climate, and automate sustainability reporting.

Explore our list of services and we will be happy to get in touch to discuss and identify the best tools which fit your organisation's requirements.

Enterprise solutions:

- Yield forecasting
- Sensor data management platform
- Crop-specific monitoring blueprint
- Custom data integration and analysis
- Sustainability reporting automation

Farm Management solutions:

- Irrigation management
- Frost forecasting
- Integrated Pest Management (IPM) support



Agranimo and SAP

Agranimo has partnered with SAP to bring field management, crop phenology and crop-relevant data analysis expertise directly into SAP Analytics Cloud, or connect with HANA. This integration is designed to help agribusinesses leverage enterprise data and climate intelligence to improve production, distribution efficiency, and forecast their business.

Agranimo and SAP integration is focused on the following organisational challenges

- Gap between potential yield and farm yield
- Uncertainty of yield volume and quality
- Optimal water usage
- Optimal fungicide, pesticide and fertiliser usage
- Unstructured data collection and non-comparable data from different sensor manufacturers

Why SAP and Agranimo today

- Agranimo's expertise helps to consolidate data from different sensors and devices directly through the SAP Cloud Platform and makes it available for better decision making and analytics
- Real-time frost and disease alerts
- Crop specific benchmarking of operational efficiency between plots in the field (irrigation, fungicide/pesticide application, plant development)

Agranimo roadmap potential/ideas

- Ability to perform advanced analysis also based on packaging, logistics and sales data
- Suppliers and partner portals for real-time field management data sharing
- Parametric crop insurance with personalised field-level premiums
- SAP Spatial Services allows to combine various sources of spatial data available to create new plant indices and provide higher management precision

We are happy to provide support for your organisation in managing sensor and farm data within your SAP services.

Contact us for more details and the assessment of the project scope.



Enterprise Solutions

Yield forecasting

Agranimo has developed a new method of forecasting orchard yield using biomass sampling data. We have been running field trials in cherries, blueberries, apples and avocados which have shown over 90% accuracy with samples taken right before harvest.

We have validated that the accuracy variation is low when applied to different varieties and crops, which is why we are happy to be able to build a personalised yield forecasting model for your crops.

During our current field trials, we are evaluating the accuracy of the forecast for samples taken after flowering and fruit drop stages.

Contact us for more information - we will be happy to provide a custom yield forecasting tool for your crops.

Sensor management platform

Consultants, exporters and distributors provide support to growers in order to create a reliable and profitable supply chain. This process typically involves frequent farm visits and collection of different types of data to create actionable recommendations. Data collection and sensor management can be tedious and challenging tasks to guarantee reliable and comparable data from different growers.

While working with many fields, installed sensors, soils and crop types, we have developed a management platform for all of the connected devices. It allowed us to open the sensor management platform to installation partners, agricultural consultants and IT departments of large fresh produce organisations so that they can leverage it to provide support to field managers.

If you have challenges related to the calibrations and technical management of different sensors in the field, contact us to explore how Agranimo sensor management platform and suite of integrations can help.

Crop-specific phenological monitoring blueprint

At Agranimo we recognise the importance of crop-specific phenological monitoring to be able to optimise field management strategy to produce best results. Phenological monitoring can be done via climate and soil sensors, drone and satellite images, leaf or fruit tissue sampling.



We build customised crop monitoring plans and determine the management thresholds for individual varieties, which can be used throughout your organisation, using a collection of latest scientific research.

We have built customised crop monitoring recommendations for some of our clients and will be happy to produce a specific monitoring plan for your crops. We are happy to support in executing the monitoring and interpreting results in a way that helps optimise field management and achieve higher profitability. Contact us for examples of executed projects.

Custom data integration and analysis

Agricultural industry is categorised by a lot of data, which can be leveraged to improve profitability, traceability and sustainability of the operations. However, connecting data sources, processing, storing and analysing data in real-time is often a difficult task. We have built a number of data integrations and data pipelines and are happy to execute custom data aggregation and analysis projects.

We use our field management, crop phenology and data analysis expertise, as well as supply chain partners to extract value from farm data for the entire fresh produce supply chain. If you have specific data streams which can be integrated to create a holistic view of your crop management - contact us to see how we can technologically support your projects!

Sustainability reporting

Sustainability reporting is fast becoming a requirement for all of the fresh produce companies, and farm data plays an important role in estimating environmental impact and identifying ways to reduce it. Our expertise in climate analysis can assist your organisation in reporting sustainability from the following areas:

- Water usage
- Fertiliser usage
- Soil management and carbon sequestration
- Ecosystem services

While it is important to calculate your impact it is even more important to create a plan to minimise it. We would be delighted to help your organisation determine the activities aimed at minimising environmental impact.



Farm Management Solutions

Irrigation management

Irrigation scheduling is crucial to effectively manage water resources and optimize profitability of an irrigated orchard. Tools that can be customized to the field's characteristics can greatly facilitate irrigation scheduling decisions. Soil moisture sensors and the evapotranspiration (ET) based water balance is the most precise and cost-effective method to schedule irrigation.

The importance of moisture sensors being installed as early as possible in a representative location with good soil-sensor contact can not be understated. This is why at Agranimo we focus particular attention on installation, calibration and determination of management thresholds when it comes to soil sensors.

Agranimo irrigation management tools include:

- Satellite based ET calculation (weekly)
- Sensors and analytics platform
 - Patented Agranimo manufactured FDR soil moisture sensors (completely wireless, see technical description in the annex)
 - Weather stations
 - Third party sensor integrations
- Installation and calibration to individual soil types
- Software platform and mobile application
 - Evapotranspiration
 - Automatic field capacity recalibration
 - Irrigation efficiency indicators
 - Temperature stress
 - Irrigation detection and record per management sector

Frost forecasting

Agranimo's FrostRisk model allows us to provide a frost prediction 10 hours before the frost event. Such notice time helps better prepare to use prevention methods, such as irrigation or wind generators. This model has been developed using advanced statistics and machine-learning methods, and is trained on millions of data points from various locations where we operate.

Additionally, we provide tools to receive frost alerts, post frost reports, as well as a simulator of temperature and dewpoint changes during the night.



Integrated Pest Management (IPM) support

Phenology is an important part of monitoring the development of pests and fungi. By monitoring temperature, humidity and leaf wetness, we can help monitor pest cycles and determine the best time for protection applications to prevent damages. As a result you can be sure to get the most protection for your money.

Currently implemented models:

- Apple scab
- Strawberry mildew

We are working on additional disease models, and will be happy to prioritise developments based on your individual requirements.

