



Operation Center Interface

Connected **Hard-** and **Software**



Mario Hoefler

Product Management

TURNING INFORMATION INTO PROFITS.

Company History

Pessl Instruments offers tools for informed decision-making.

METOS®

wireless, real-time weather monitoring systems

FieldClimate

online services, connected clouds

Founded:

1984 = **35 years in agriculture**

Headquarter in:

Austria, **installations worldwide**

Number of employees:

125



Weather Stations & Sensors

Value proposition: Efficient Management

Features:

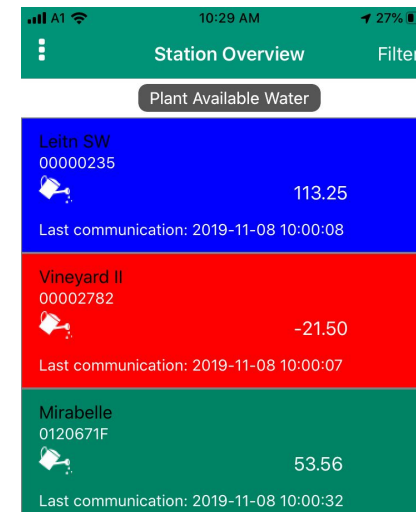
Field specific actionable data for **work planning**.

Know the conditions at each location:

- Is it too windy for **spraying**?
- Is it too wet for **field access**?
- Should I send my staff to a different field?
- Soil moisture low ☐ irrigation required

Set actionable SMS **alerts**

- Wind speed above a threshold
- Soil moisture levels in the rooting zone approaching refill point
- Frost
- Heat



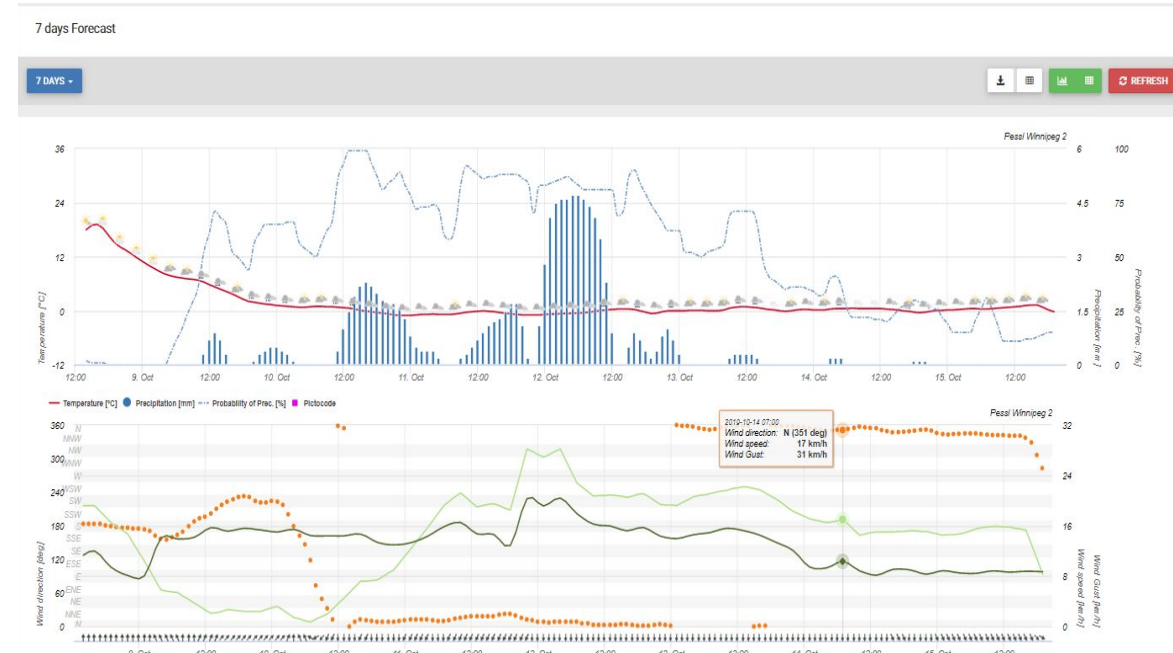
Site Specific Weather Forecast

Value proposition: Lower Risk, Efficient Management

Features:

Hourly updated, location specific forecasts for work planning:

- **Know when to spray** based on forecasted rain amounts and timing, wind speed and direction and potential wash off periods
- **Optimally fertilize** based on forecasted rain amounts – each amount of additional moisture increases yield potential.
- Know **when fields are accessible** based on forecasted rain amounts
- Know when forecasted lows may impact **spray efficacy**
- Know the **window for harvesting** – no rain and low humidity



Work Planning Actionable Tools

Value proposition: Lower Risk, Efficient Management

Features:

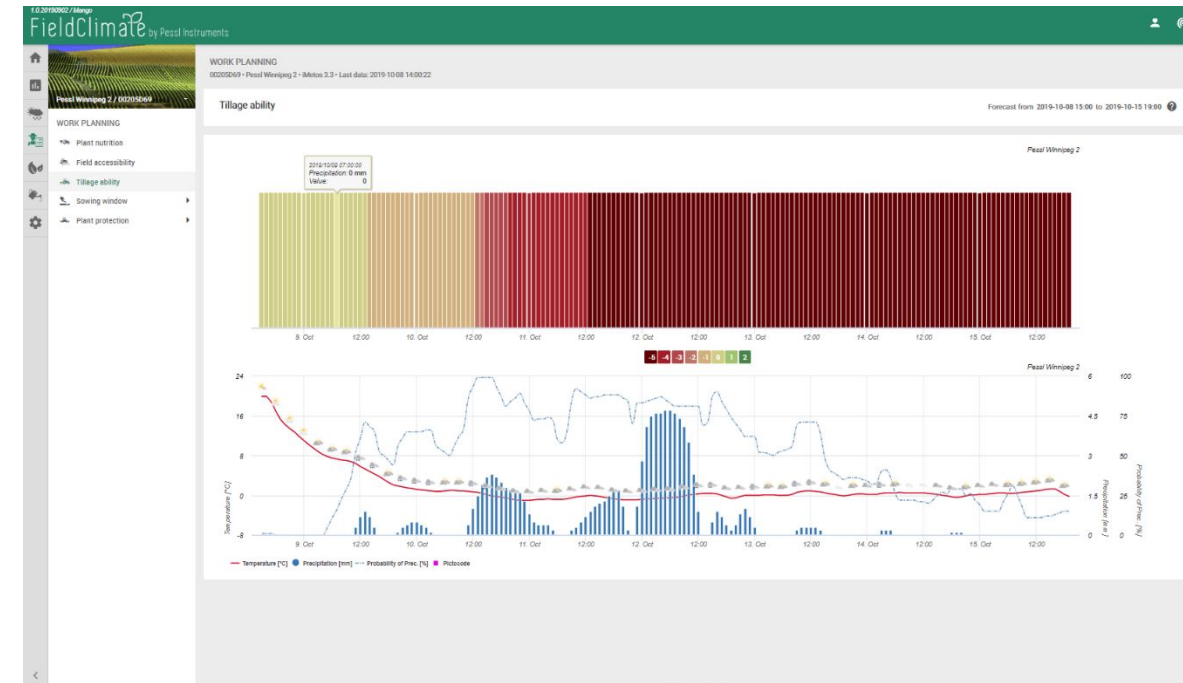
Weather Forecast license is required:

- Fertilize efficacy
- Field Accessibility
- Tillage Ability

Additional Crop specific license required :

- Sowing window
- Harvesting window
- Plant Projection window

All windows are on a hourly basis for the next 7 days and are based on a combination field specific forecasts and site specific weather data



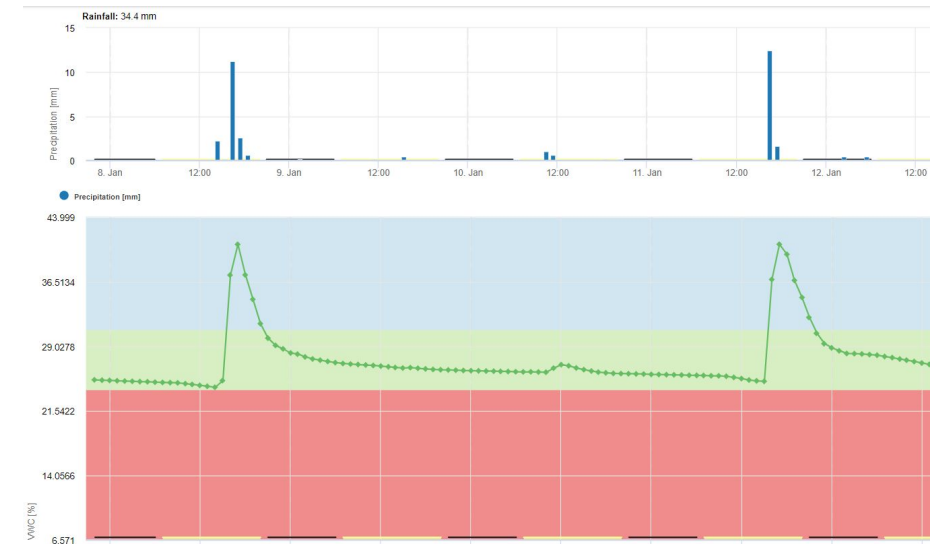
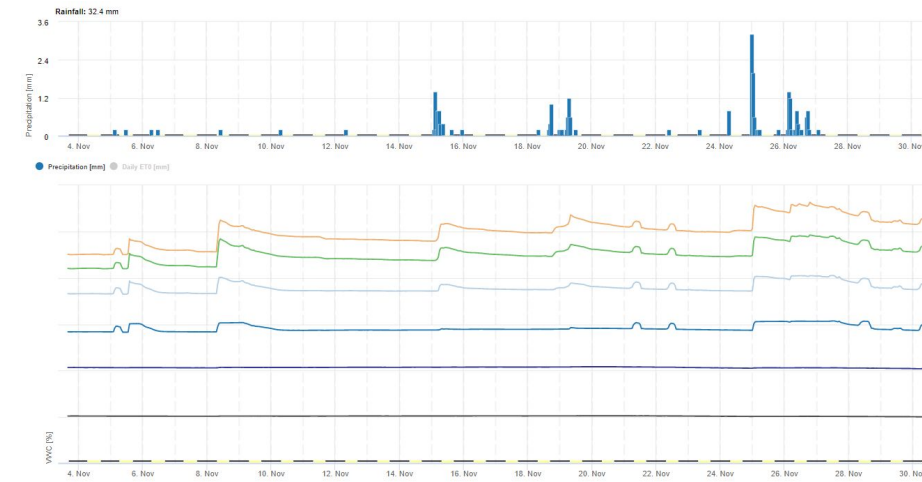
Soil Moisture Monitoring Tools

Value proposition: Efficient Management, Higher Yield

Features:

Field specific, soil specific soil moisture monitoring:

- Effectively place soil moisture sensors where required in the field – soil types
- Monitor your soil moisture levels at various sensor levels
- Monitor root zone soil moisture withdrawal
- Apply water based on water-use and root zone withdrawal – stage of development
- Effectively control the timing and right amount of water to maximize yield potential

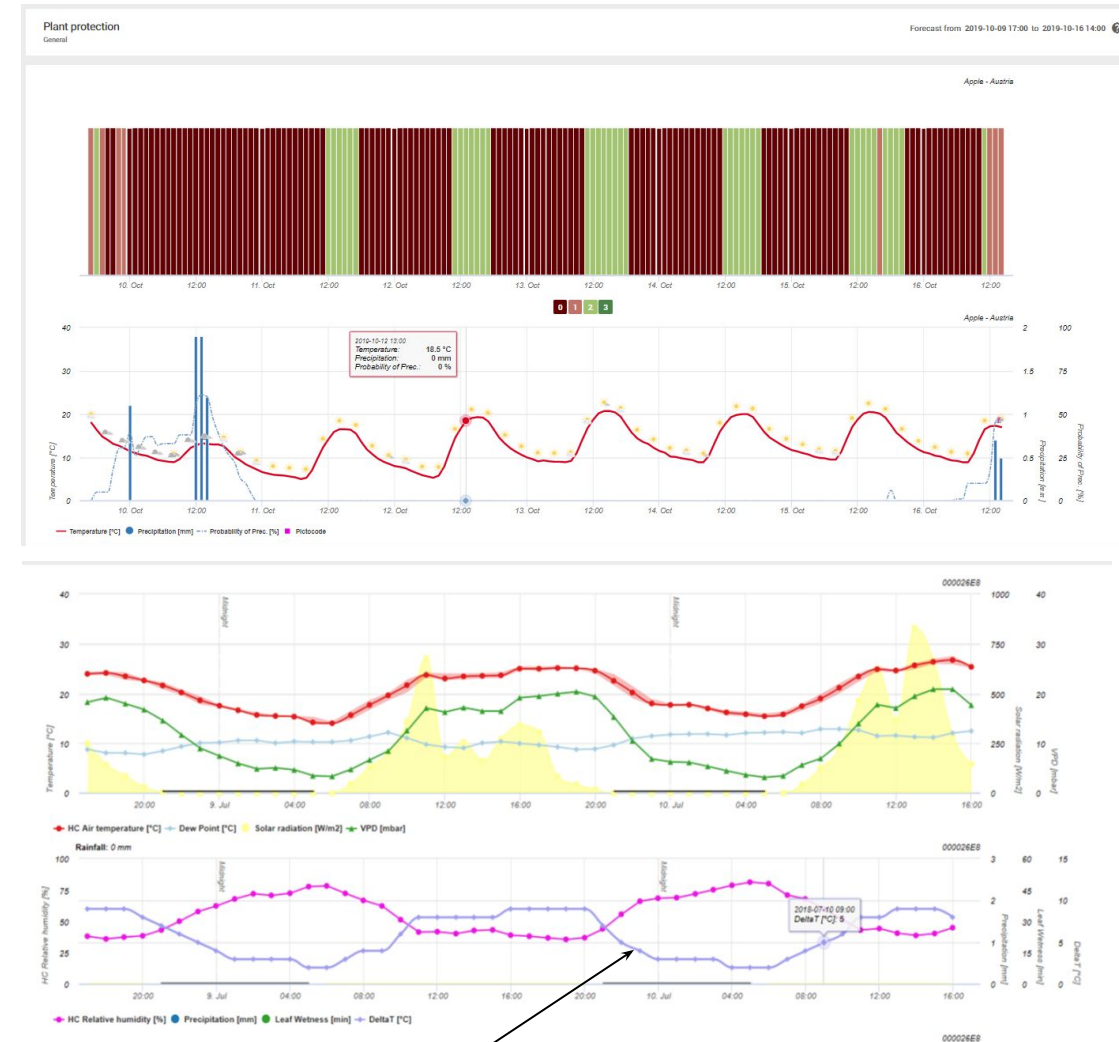


Spray Scheduling Tools

Value proposition: Efficient Management, Higher Yield

Features:

- Know before you go to the field – save time and money
- Verify field weather conditions
- Verify forecast conditions
- Verify site specific, real-time and forecast Delta T values
- **Record of past spraying conditions**



Field specific Delta T

Spray Scheduling Tools

Value proposition: Efficient Management, Higher Yield

Features:

Sensors:

Temperature & Relative Humidity

Calculated value:

Delta T

Communication:

LoRa WAN

NB-IoT/CAT M1

iMETOS LoRaTH can be mounted on any machine/sprayer within minutes, does not need any power from the asset. It will monitor field weather during spray work and in combination with iMETOS Active tracker and an iMETOS station in the field, spray weather is under control.



Spray Scheduling Tools

Value proposition: Efficient Management,
Higher Yield

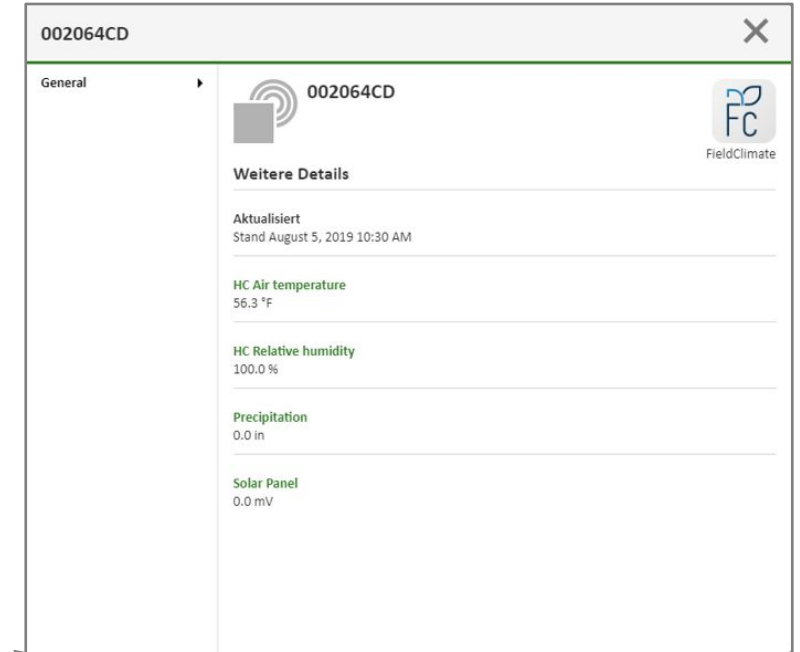
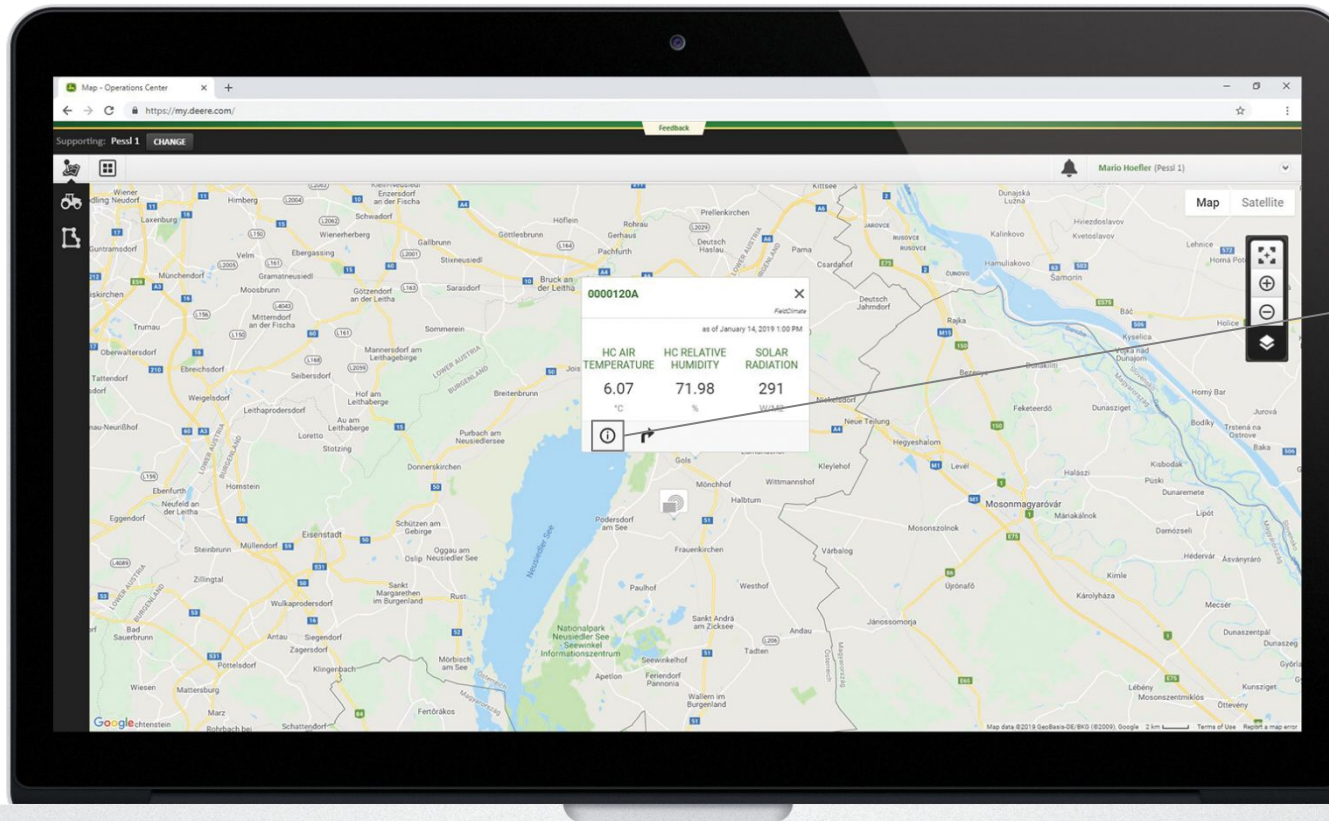
Features:

iMETOS® LoRain is a complete new generation of low cost high quality weather stations that measures Rain, Temperature and Relative Humidity which operates on any LORA network. Mounting in the field is done in minutes. All the data is synchronized and shown on FieldClimate.com and on the APPS. With innovative AI solutions other parameters like **Disease, Irrigation, Work force planning, weather forecast** and many other functions are provided. The new ultra low power concept is a mile stone in the operation costs a reliability.



Interface in the John Deere Operations Center

- FieldClimate user can register into the John Deere Operations Center account with shared credentials
- By clicking on the icon you will be brought back to FieldClimate and all its functions and actionable tools



Data loggers and IoT sensors



iMETOS® 3.3



iMETOS® ECO D3



iMETOS iSCOUT®



iMETOS CropVIEW®

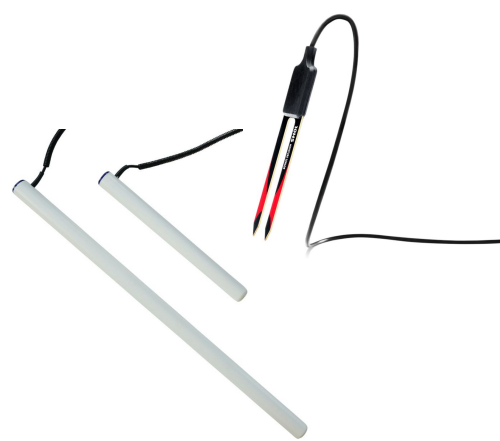


Co-financed by the European Union
Connecting Europe Facility

iMETOS® MobiLab



iMETOS Object Tracker®



Soil Moisture



Tank & Silo Levels

Customer Value

METOS + FieldClimate + OpCenter

- Weather Monitoring and Forecast Modelling from own fields
- Spraying Management & Quality Assurance
- Machine connection for smart decisions
- Hyper Localized Plant Disease Risk Modelling
- Work Planning & Task Force Management
- Real-time Warnings and actions
- Cost saving & Yield increase

