Pessl INSTRUMENTS **METOS®**

TURNING INFORMATION INTO PROFITS

A STUDY CASE IN BRASIL
SOYBEANS AND FARMVIEW

Global soybeans market is forecasted to grow at a CAGR of around 5.8% from 2020-2025. Consumers awareness and demand has increased regarding the advantages of soya goods, likewise, growers preparation for better yields and product delivery.


MEET ITABERÁ FARM (ITABERÁ / SP, BRAZIL):

Itaberá / SP, Fazenda Cachoeira has been active in cattle farming since 1961. From 2001 onwards, the farm has invested in irrigation for pasture and crops. Today it has 8 smaller central Pivots (average of 20 hectares) with 4 being used for pasture of beef cattle (breeding) and 4 Pivots for Agriculture integrated with livestock.

• Farm size: 3.000 hectares divided into 1.000 ha of natural rain forest, 1.200 ha pasture, 70 ha of irrigated pasture, 500 ha of dry farming and 100 ha of irrigated farming.

• Types of crops: Dry land crops are soybeans and oats in the winter, followed by irrigated land soya in early summer, then corn and oats before planting soybeans again.

• Sensor types: Metos 3.3 and ECO D3

• Main applications: Irrimet module to support irrigation decisions + Weather forecasting for all farm activities + Disease Models

• Other applications: Annual analysis of soil nutrients + Weather forecast + soil data for planning crop rotation; usually following soya, corn, oat, edible beans, wheat or other green mass to support soil quality such as brachiaria grass.

CHALLENGES OF GROWING SOYBEANS

"*The main challenges would definitely be weed control and weather variations that can change from year to year and from farm to farm. That is why they need to be constantly monitored*" - says Bernhard Kiep (on the picture right).

"We have used Irrimet since 2018 and, compared to other irrigation managing systems, Irrimet is more flexible towards farm reality and actual needs in the field" Kiep adds: "Cropzone style gives more independence to the customer, where he/she has more power to adjust the system to their own data, without having to add other inputs along the way. Farmview becomes more than an indicative tool, but a supportive decision-making software."
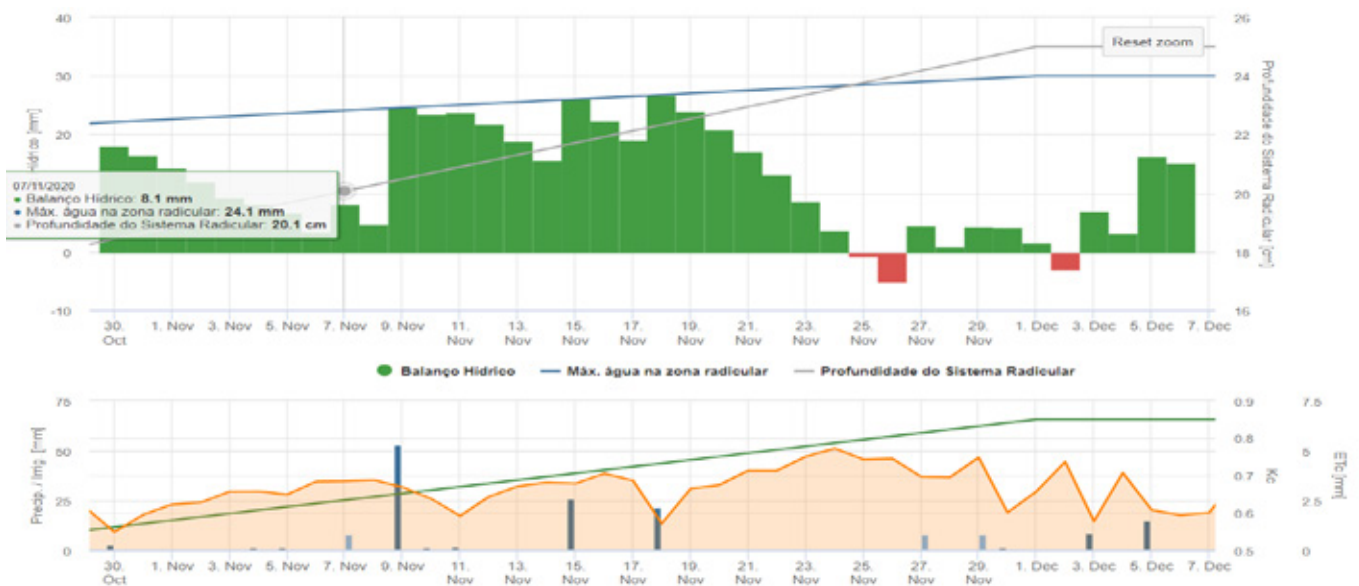
"We use Farmview Irrimet module to support our irrigation decisions on when and how much to irrigate as well as to store our irrigation scheduled dates."

- Soybeans crop has been kept under rainfed conditions since mid-January.
- When Available water levels (green) stays right below Max Water in root depth (top blue line), that is an indication of active root zones receiving the correct amount of water.
- On the contrary, available water decreasing to close to 0 level signalizes that it is time to check the Weather Forecast or to plan next irrigation.

FarmView - Enhanced Remote Field Monitoring for a Modern Day Farmer

Farmview Satellite supports your decisions by providing estimates of biomass in time and space for any field in the world:

- *Soybean biomass* was estimated for the cultivation period mid-November to early February using the known Leaf Area Index (LAI).

- LAI reached 5.5 during soja maturity

- *Farmview Satellite* distinguishes areas with below average (northeast) and above average (southwest) biomass development.

- *Daily biomass product* is ideal for monitoring quality and length of the vegetative phase (see graphic) and compare this within multiple fields.
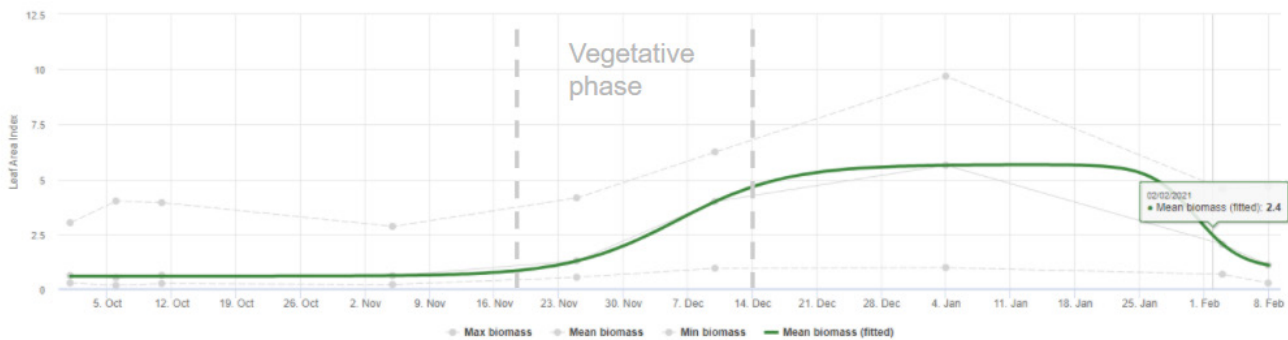
"This year we managed to reduce one round of rust-fungicide application (around € 10.000), with the use of Farmview software. To monitor crop development - within multiple cropzones - via integrated data, allows me to save money, workload and comply with chemicals legislation in Brazil." (Bernhard Kiep - Managing Director at BERMAD).