AGRIEYE

from space to smallholder farmers

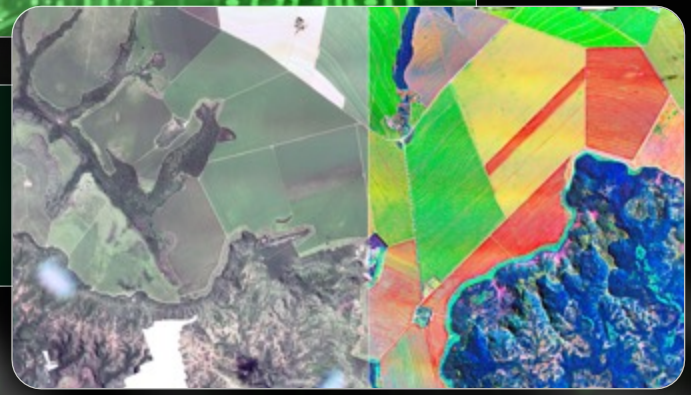
- Deep understanding of farmer's demands and customer's needs
- Usage of satellite technology and AI for our solutions
- Many years of experience in agriculture, data processing & data mining

Data sources & technologies

Remote Sensing Data from:
Copernicus / Sentinel 2 / SMAP / NOAA

Artificial Intelligence &
Machine Learning & Network

Crop & Soil Moisture Monitoring &
Farming Consulting & Market Access



Solutions Portfolio

Biomass & Soil Moisture Monitoring

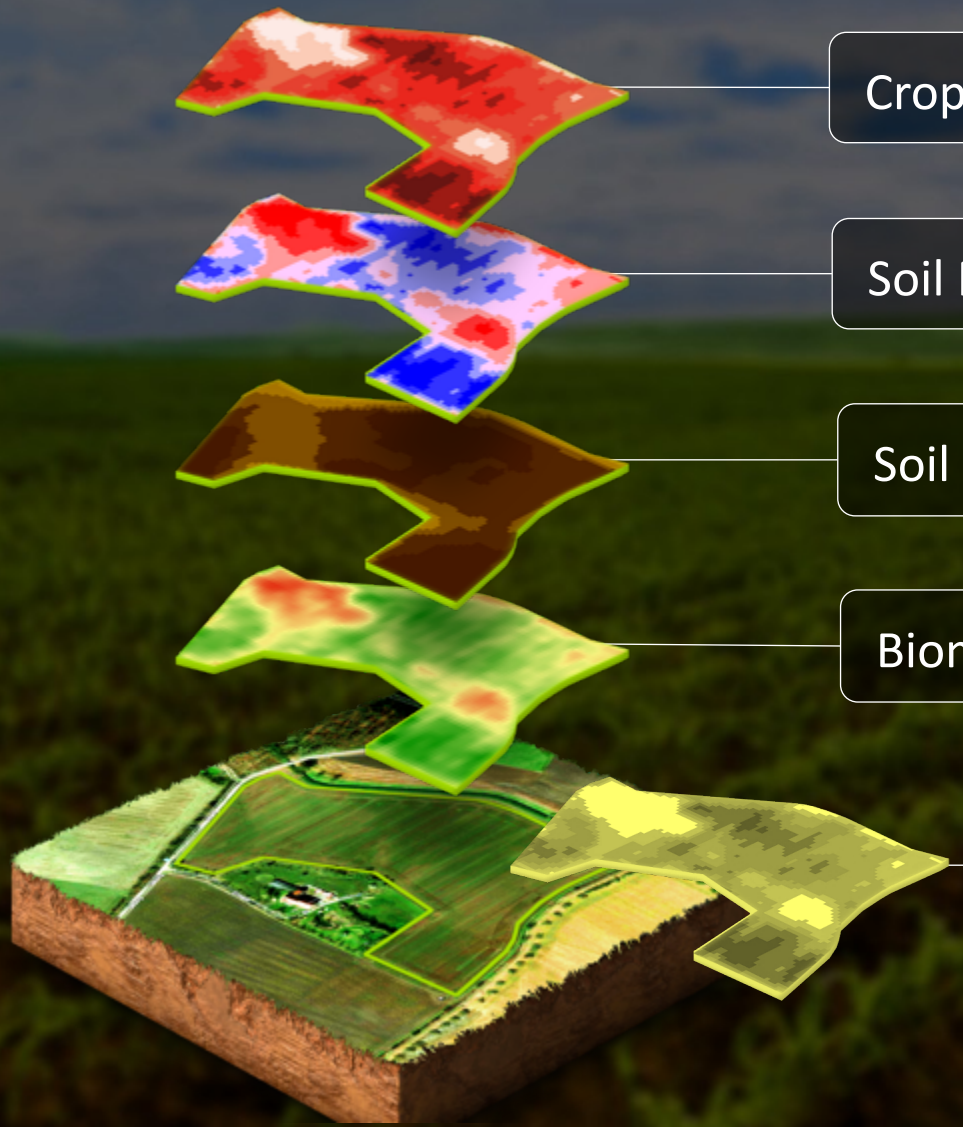
Soil Biodiversity

Harvest & Risk Prediction

Rain Making / Ionization

Desert Greening

Application maps



Crop Analysis

Soil Moisture Index

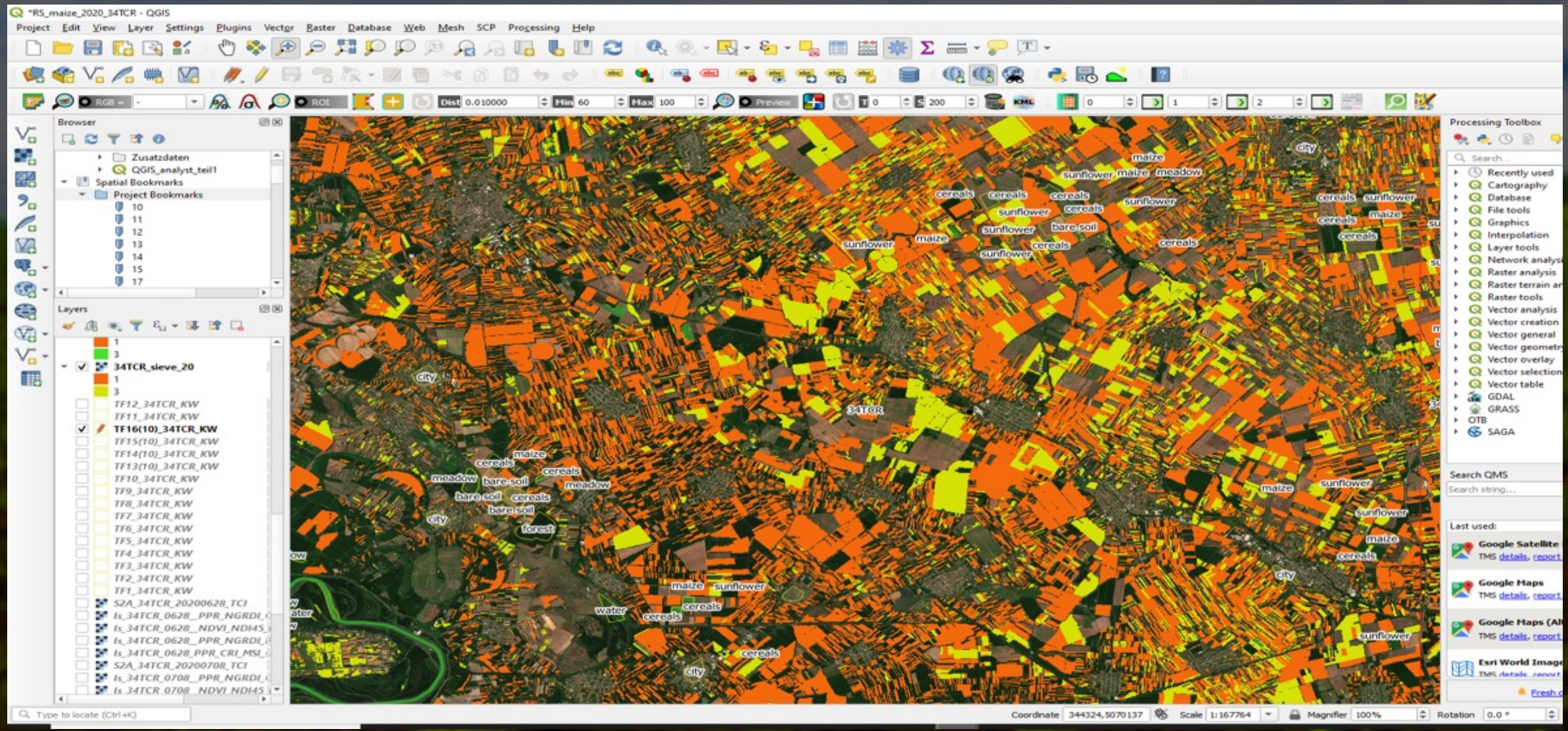
Soil and Seed Plan

Biomass Index

Harvest & Risk Prediction

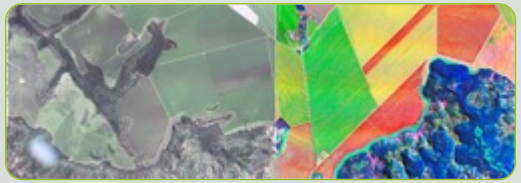
Remote Sensing works with analysis of satellite images. Food production resources must be efficiently utilised with modern digital tools to collect, store, and analyse farming data. This will have major prospects for resource use efficiency, environmental sustainability, and farmers' economic situation.

Application maps, example



AGRIEYE - One process, 4 solutions!

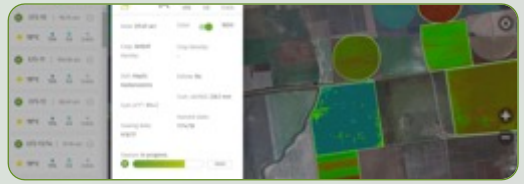
Remote Sensing



Data Management

Soil Science

Farming Consulting



Algorithms

Tailored solutions for smallholder farmers, low costs at from one source service !

Satellite Data

Analysis

Remote Sensing

Machine Learning

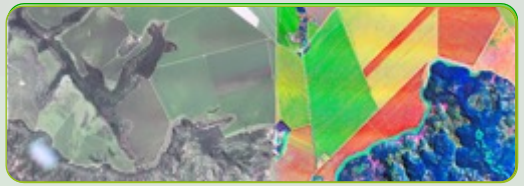
Data Management & Analysis

Profound ag experience

International network

AGRIEYE - everything from one source!

Remote Sensing



Remote Sensing-
Precision Farming

Copernicus / Sentinel-2
Proven data source for vegetation, soil moisture monitoring and yield prediction

Resolution
5x5 meters,
updated every 5 days

Global Coverage
up to 5 years back

Own drones for cloudy areas, mapping and classification of Africa in 1 year (satellite)

Data Management

Crop & Water Mapping
Data Platforms

Scope
Crop type and soil moisture mapping, area measurement from country to ZIP-code-level

Reliability
AI-processed satellite data / objective and highly accurate

Registration Platform
value chain platform

Validation: calibration points by registration, GPS position of fields, crop and seeding time information.

Soil Science

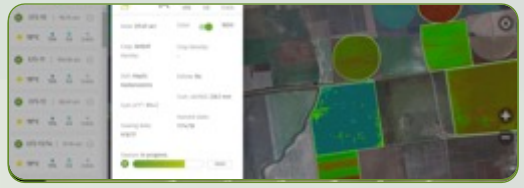
Soil Biodiversity Science
Interface Implementation

Own Research about
Fungus & Microbiotics / Mineral soil compound modification / regenerative agriculture

Customization
Individual / local adaptations and developments / organic farming solutions

Value Proposition
Cost efficient innovative solutions, high data protection standards

Agricultural Consulting



From Seed to Market
Crop and Soil Management

Empowering
Tailored consulting for smallholder farmers,

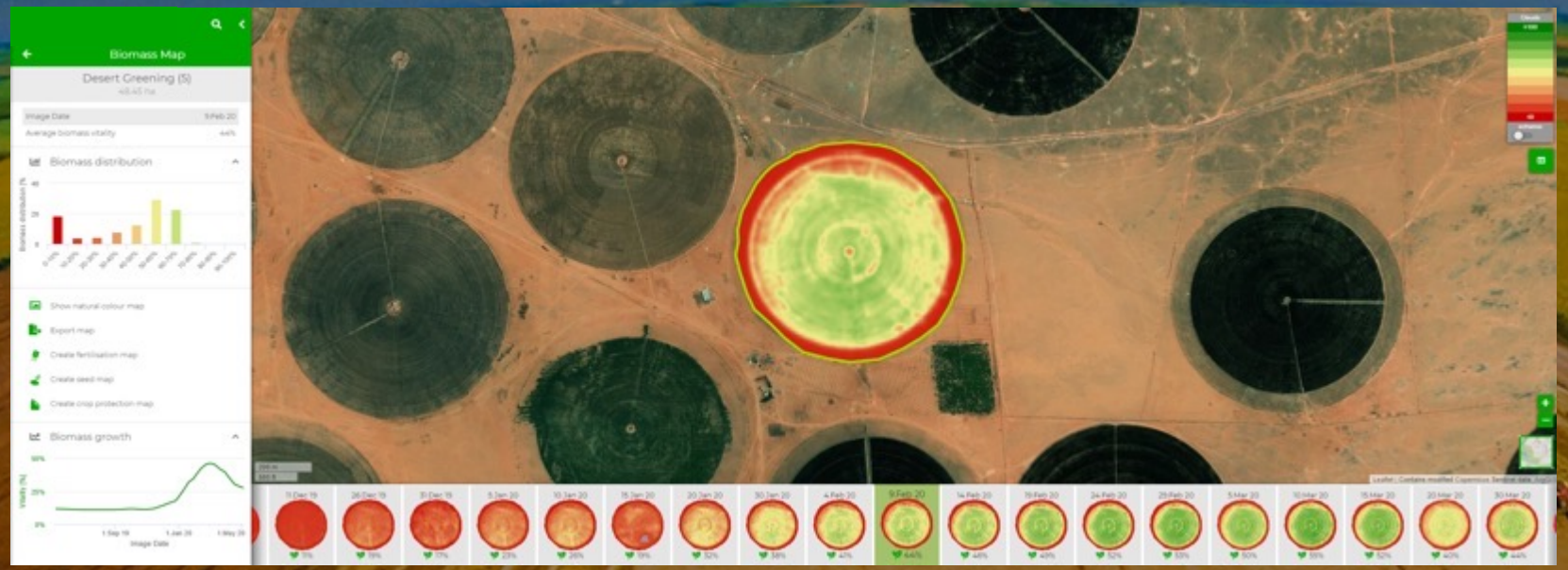
Reliability
Multiple source database for deep knowledge decision making

Action targeting
AgTech and software solutions / go-to-market-strategies

Levels from operational up to management consultancy

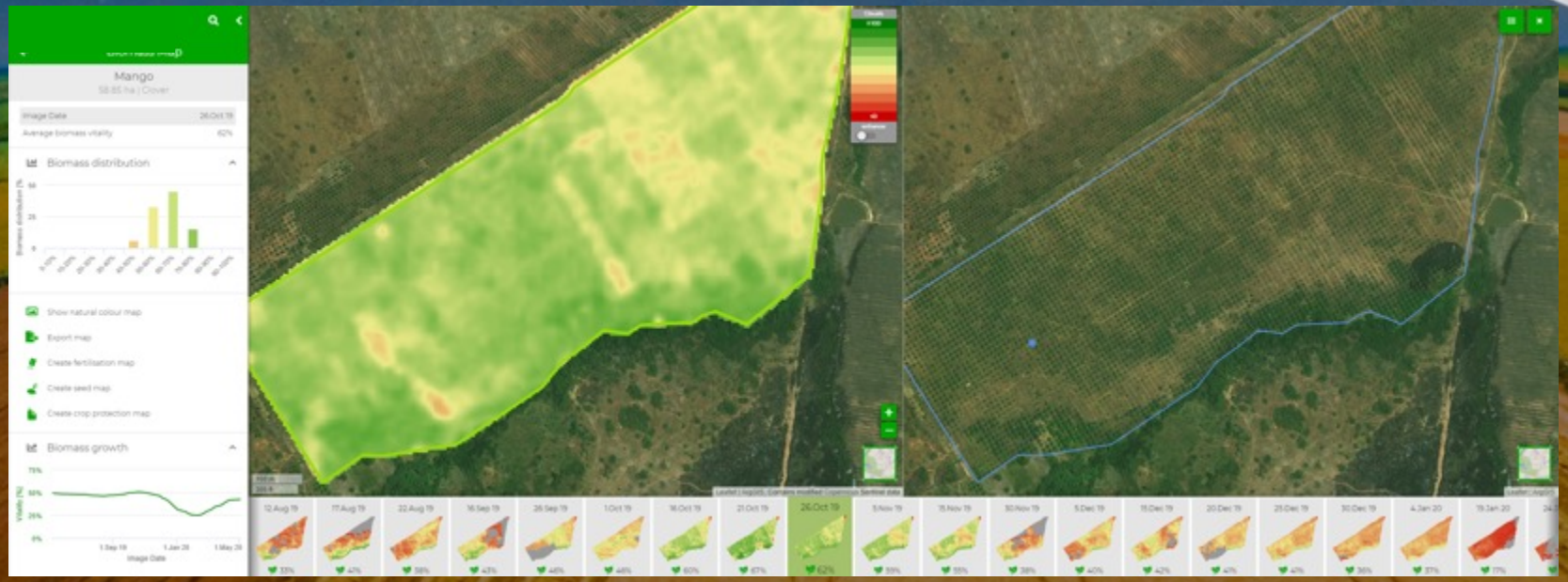
Desert Greening

- Deep insights into crop development
- Optimization of irrigation practices
- Regular monitoring from the office
- Time series analysis reveal longterm impacts



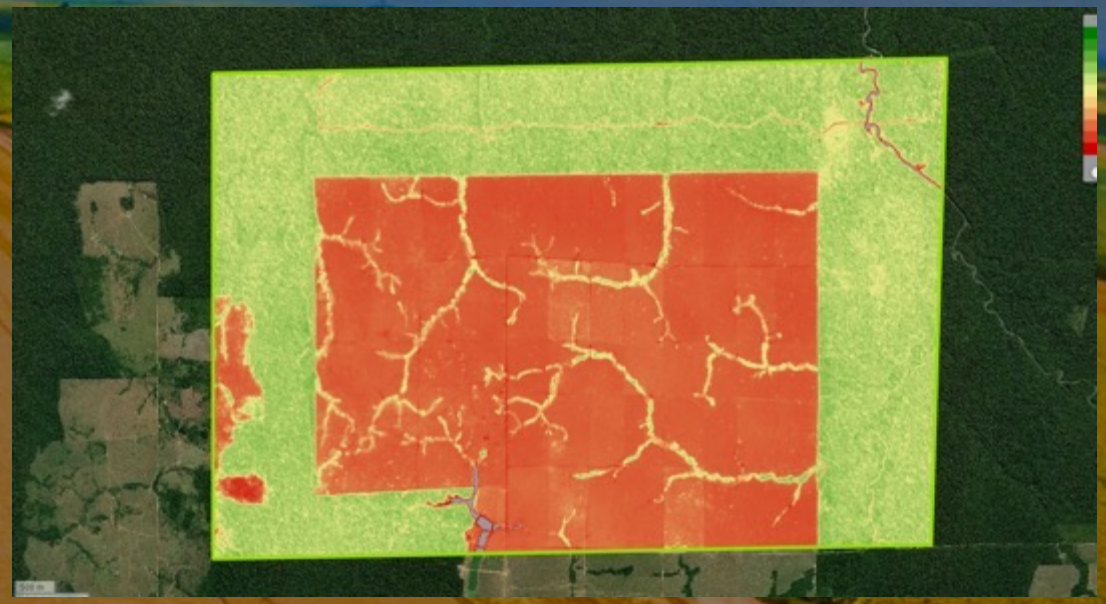
Orchard Plantations

- Monitoring of field conditions
- Location of critcial areas and trees
- Early detection of plant stress and deseases
- Time series analysis reveal longterm impacts



Deforestation

- Detect changes in vegetation
- Measure the extend of man-made forest changes
- Updates up to daily basis
- Analyse impacts on water balances

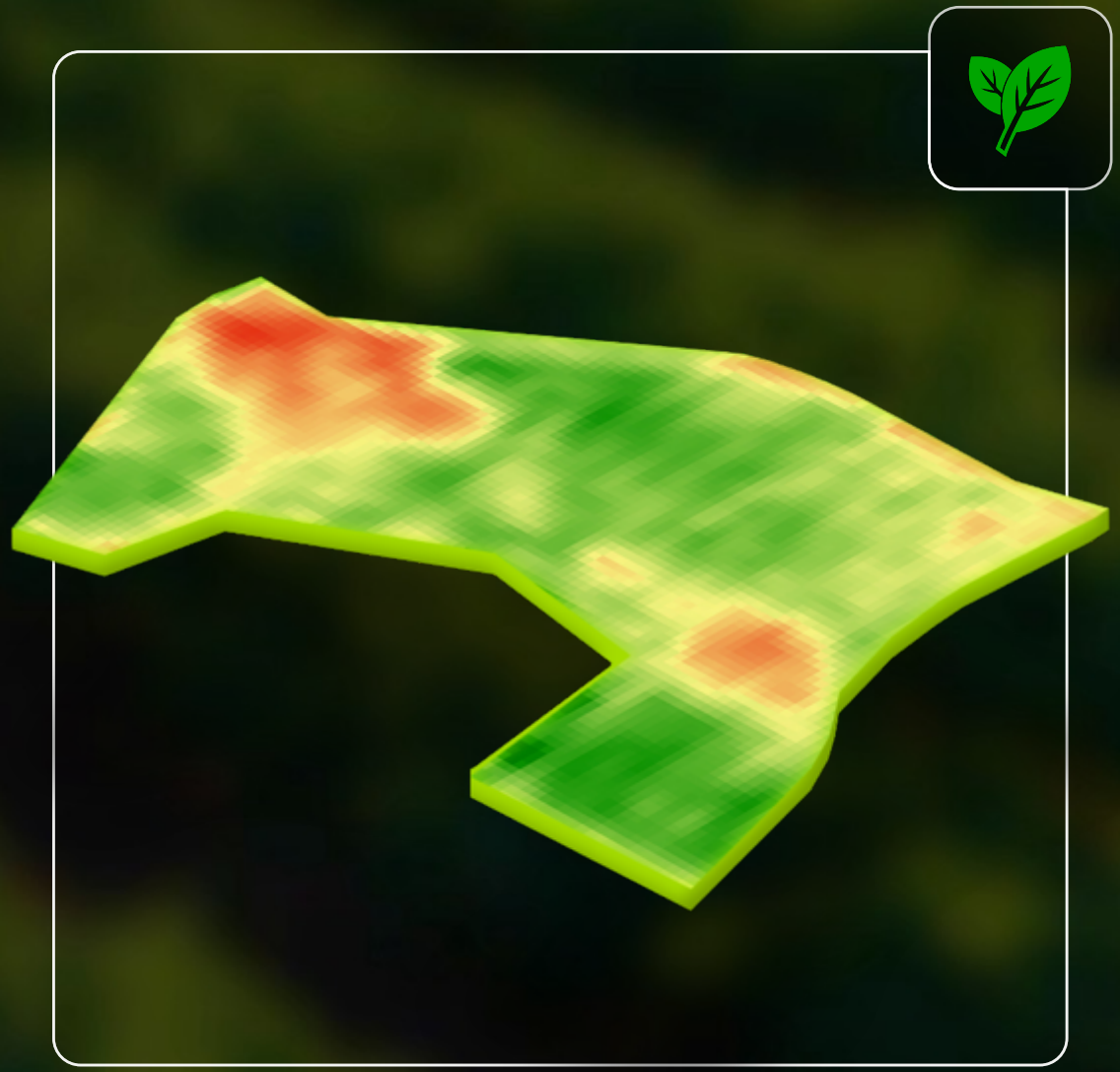


Scouting App

- Easy access to latest technology with a common mobile or tablet
- GPS-function allows navigation on the map
- Link between satellite image and specific plants
- Now available for smallholder farmers with 1-2 hectar

Biomass maps

- Biomass maps show crop differences within the fields:
  - Green zones mark a strong crop
  - Reddish areas indicate weaker growth
- Identification of high and low yield zones, measured by the current status of the crop.
- Showing dry damage or oroversupply of water
- Analysis of the consequences of soil compaction, leaching and shadow



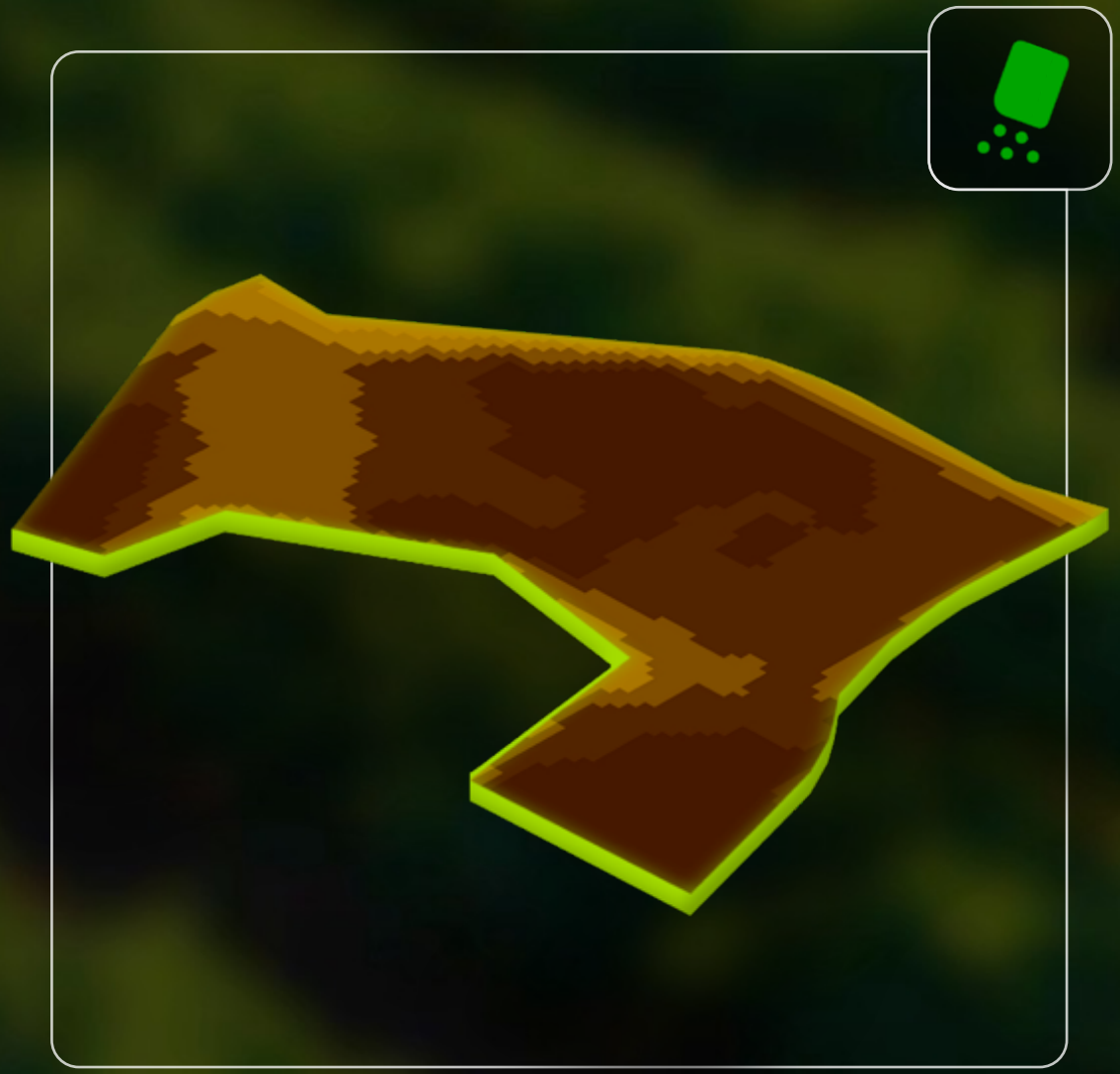
Seed & Soil maps

- The seed maps can be used to adapt the amount of seed to local soil differences.

- Soil zones based on different soil characteristics:
  - e.g. Soil type, structure, nFK, soil compaction

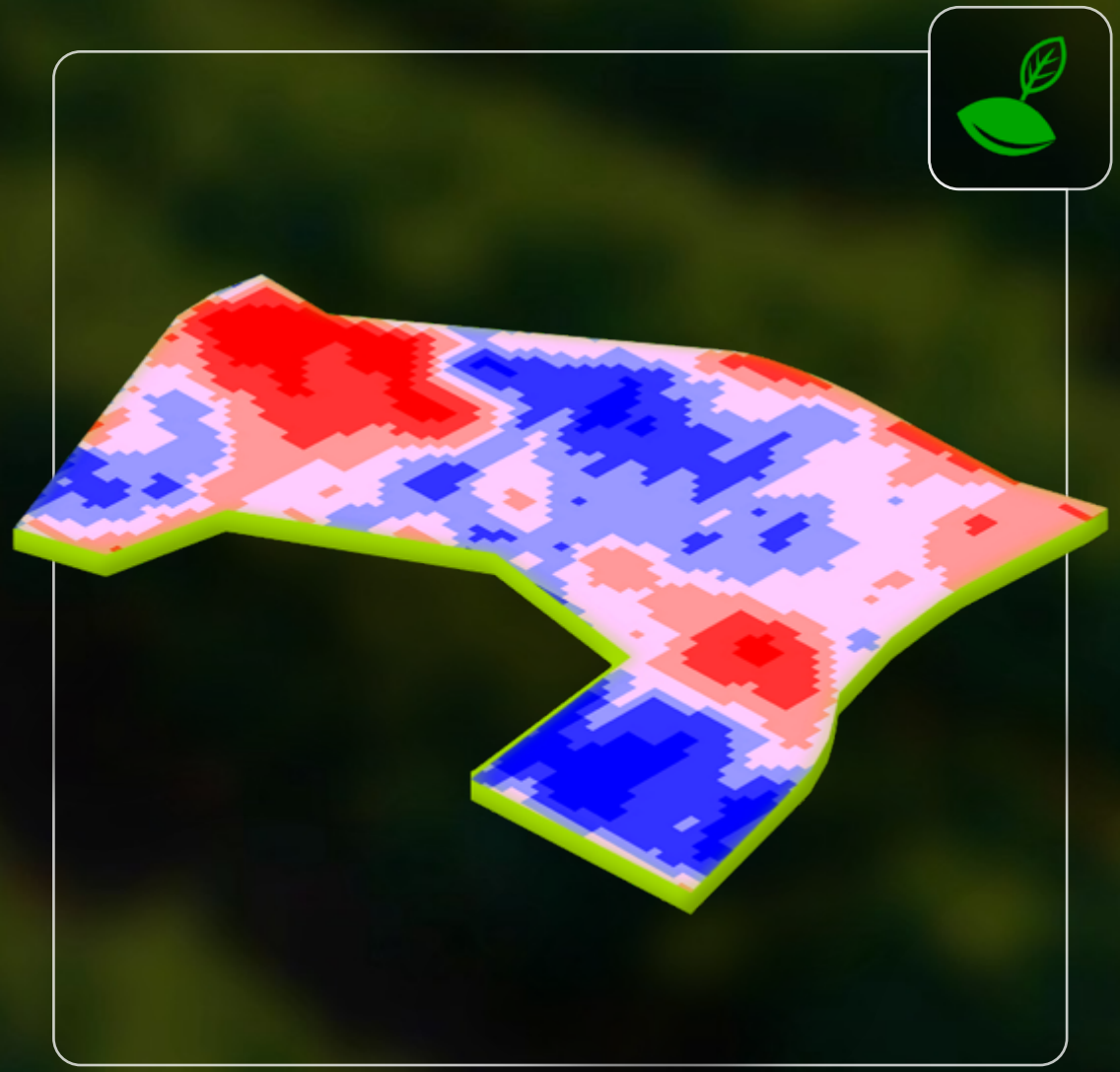
- → The yield potential is optimised – on every square metre of the field!

- → Increased yield



Crop & Soil moisture maps

- The Crop maps give recommendations in which zones of the field efforts can be saved and in which is needed more. Crop protection maps allow the optimization of seeding, irrigation and biological crop protection use to the different needs of the plants.
- This is measured by the current status of the crop and soil.
- Improvement of the Nutrition Balance
- Increased yield, reduction of after harvest loss
- Increase in harvest quality



Benefits of Agrieye Solutions

Biomass maps

- Crop monitoring and development
- Agricultural plan on local and country level
- Time of harvest

Seed & Soil maps

- 3 - 10 % saving of seeds
- 7 - 20 % more yield
- Soil health improvement

Crop & Soil Moisture maps

- Homogeneous and higher quality crops
- Advanced irrigation plan
- Compliance with organic fertiliser solutions
- 10 – 15 % saving of fertiliser
- Complete documentation

Harvest & Risk Management

- 10 - 50 % saving of water
- 5 - 40% % Increased yield
- 10 - 40% less after harvest loss
- Informations for insurance services
- Adapted transportation solutions
- Adapted storage solutions
- Own drones for monitoring in cloudy regions
- Own drones for biological pest control
- Improved food security

Harvest & Risk Management

- Yield forecast
- Harvest times
- Weather
- Risk and damage analysis
- Complete documentation

Agrieye – Key facts

- 150.000 Users
- 2 Mio. hectars in the portal
- Global coverage with biomass maps
- International cooperation with different organizations and governments
- All from one cource: data mining & management & consulting

- Independent provider of satellite data and consulting
- Easy creation of application maps for all treatments
- Pilot projects in Egypt, Emirates, Malysia, Oman, Sudan, Ukraine
- Own R&D and own patents filed