



GREENSEEKER® – FAST AND PRECISE PLANT HEALTH SENSING:

GreenSeeker® optical sensor technology enables you to measure, in real time, a crop's variability, and variably apply the "prescribed" fertiliser or chemical requirements. GreenSeeker® also predicts yield potential for the crop using the agronomic vegetative index (NDVI).

GreenSeeker® permits you to have better control of input use, allowing you to apply the right amount in the right place at the right time – improving your yields, decreasing your nitrogen cost and increasing your bottom line!

GreenSeeker® enables you to also collect data during existing farming operations such as spraying, cultivation and mowing. These images can be used to:

- Create management zones
- Evaluate drainage system efficiency
- Identify pest and disease problems
- Modify soil sampling strategies
- Determine optimum harvesting dates & make variable rate prescription maps
- Monitor and modify irrigation schedules

Numerous NDVI readings are averaged across each zone and a "prescription" is written. The controller modifies the rate for each ensuing zone.

The GreenSeeker® will work with most variable rate controllers and delivery systems. The sensors can be mounted on booms of various configurations on most sprayers and spreaders.

The GreenSeeker® allows application of any product and the retrofit is quick and easy.



HOW IT WORKS:

The GreenSeeker® allows on-the-go zone management and mapping. The sensor's light emitting diodes (LED) generate red and near infrared (NIR) light. The light generated is reflected off the crop and measured by a photodiode located at the front of the sensor head.

Here's how:

1. Sensor scans the crop using LED lights
2. Optically senses crop's health using vegetative index (NDVI)
3. Predicts yield potential
4. Prescribes optimum zone nitrogen rate
5. Delivers variable rate application
6. Zone size – 0.1ha to 0.2ha (dependent on speed and controller)
7. Utilises existing controller and plumbing

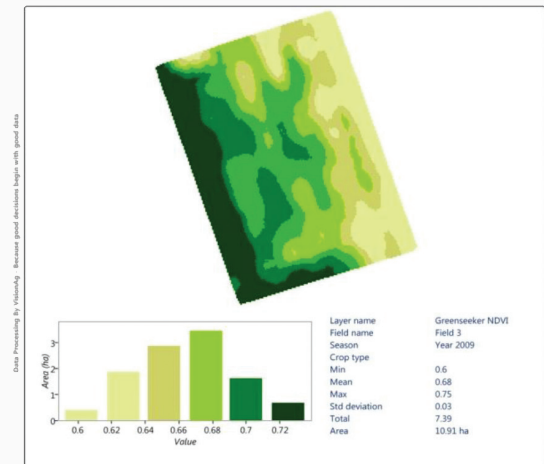
BACKGROUND:

Ground based sensor technology has been in development since the early nineties, and was initially developed for detection and spraying of weeds (WeedSeeker®).

In 2001 NTech Industries and Oklahoma State University (OSU) signed R&D licence agreements to build nutrient applicators (GreenSeeker® systems) for cereal crop production.

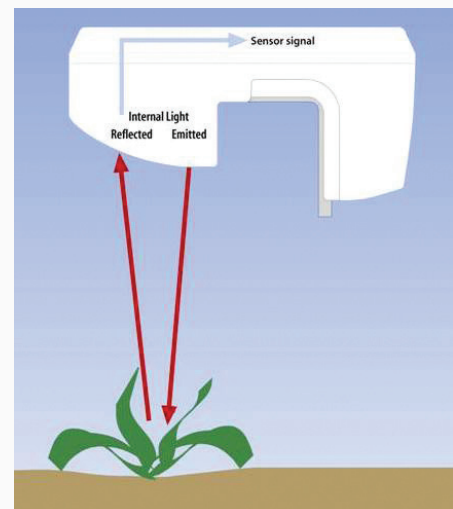
Since then the benefits have been realised and GreenSeeker® is used on dairy pastures, sheep and beef farms, arable crops and viticulture. If it grows, GreenSeeker® can map it!

GreenSeeker - NDVI Sample Map



BENEFITS AND FEATURES:

- Fast and precise optical sensing
- Reduce your in-crop fertiliser costs
- Only apply nitrogen to plants that need it
- Real time variable rate fertiliser application
- Collect data during existing farming operations
- Record NDVI health/vigor data mapping throughout the season
- Powerful remote sensing and agronomic research tool
- Biomass and plant canopy measurement
- Significantly reduce the impact to the environment
- Weatherproof
- Operational both day and night
- Modular system that can be added to
- Plug and play with existing rate controllers
- Capable of speeds up to 25km/hr



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