

GreenSeeker® RT200

Variable Rate Application and Mapping System

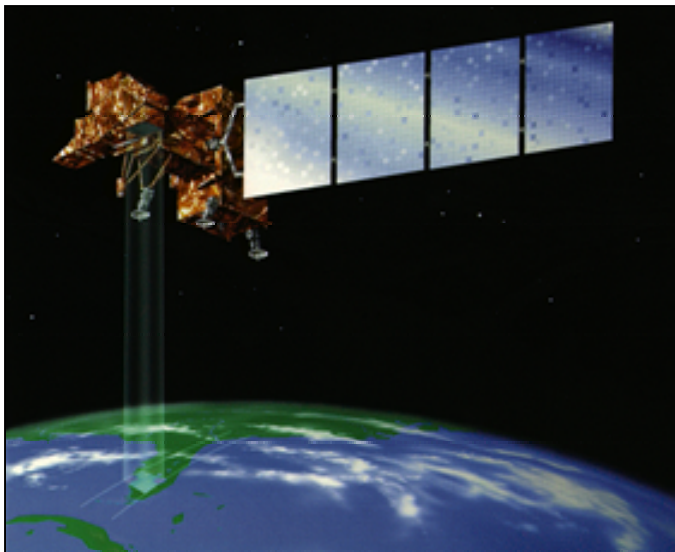


APPLYING INNOVATION

Key Questions

- **What's wrong with my current application and mapping program?**
- **What is the GreenSeeker alternative?**
- **Will GreenSeeker improve my operation?**

What's wrong with my current application and mapping program?

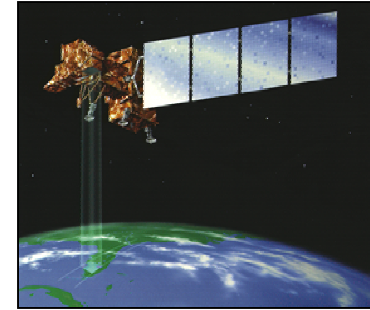


Flat Rate Applications

- Almost always over apply or under apply inputs throughout the field.
- Over Application
 - waste of inputs
 - reduces applicator productivity
- Under Application
 - reduces yield
 - result in unnecessary passes



Reliance on Aerial/Satellite Imagery



- Delayed service from pilots, weather, and order backlogs.
- Poor image quality due to weather and tree lines.
- Each image pass costs more money.
- Delays from ground-truthing, prescription writing, & prescription delivery to the field.
- Expense & process shortcomings force farmers to use old images-- resulting in misapplications.

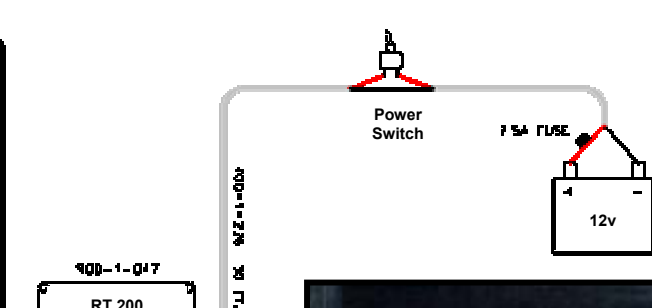
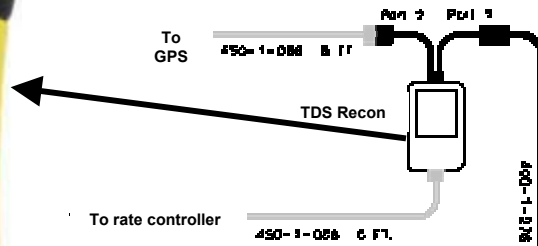
What is the GreenSeeker Alternative?



What is GreenSeeker?

- **Variable rate application & mapping equipment designed for use throughout a growing season.**
 - Instantly measure & map differences in crop health.
 - Turns existing equipment into variable rate applicators.
 - Variable rate Rx's driven by *real time* crop conditions.

GreenSeeker RT200 System



4Y 400-1-705-240 20 FT.



GreenSeeker Sensors (6)

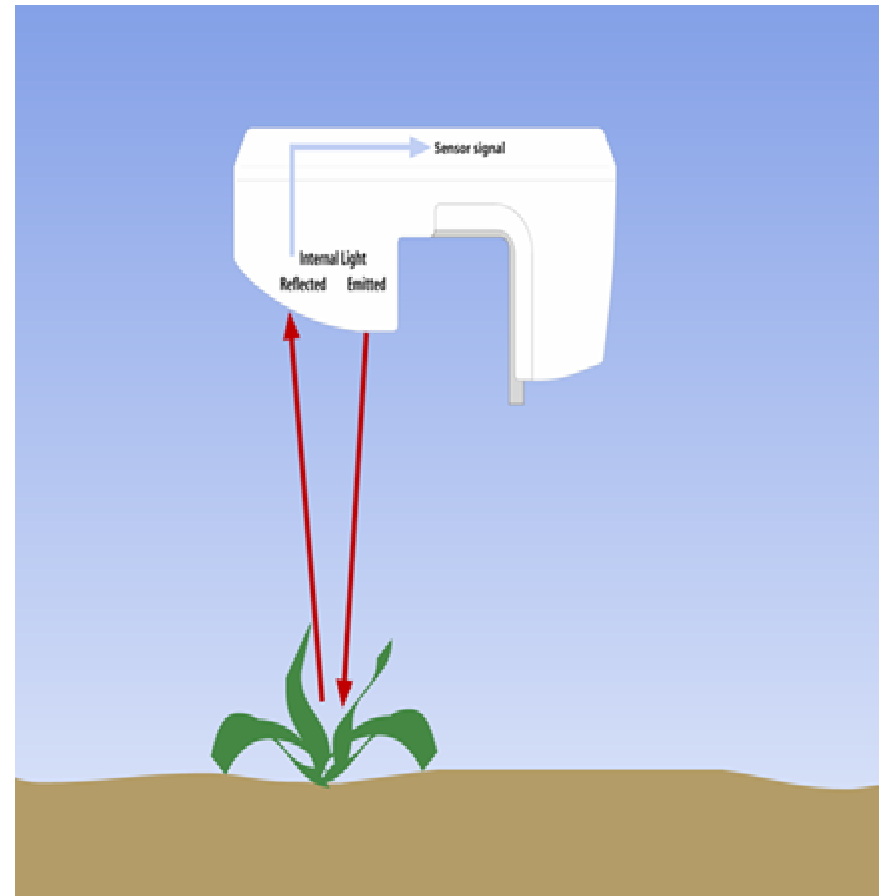


Left Boom

Right Boom

GS RT200 System Features

- High quality NDVI-based vigor and application maps.
- Generate images during any field pass.
- Real time VR application of PGR's, Harvest Aides, and Nitrogen.
- Simple custom prescriptions generation.
- Easy to Use.



How Does GreenSeeker Differ?

- Not a Service.
- You own the equipment.
- Produces instant images.
- No imagery collection costs.
- Works day or night, cloudy or sunny.
- Allows for crop consultant input, without delays.



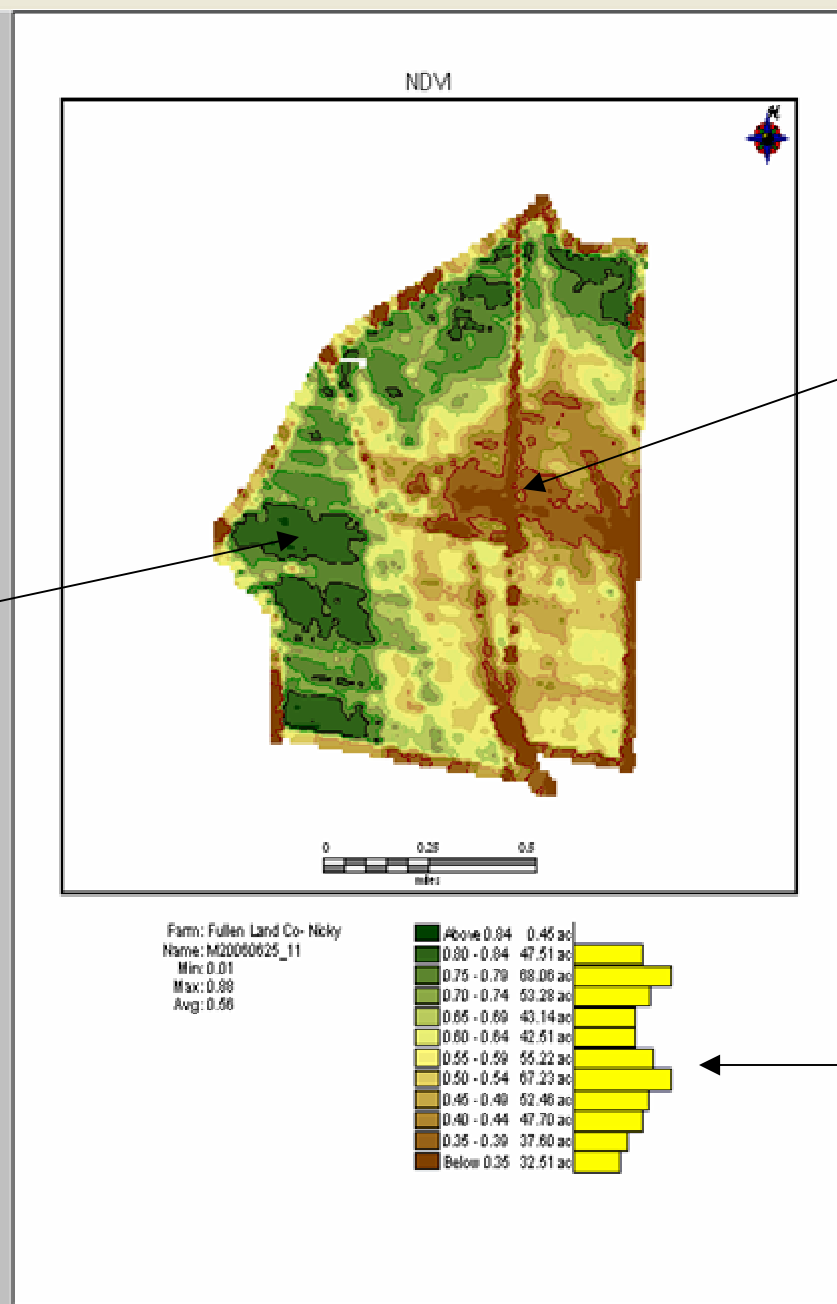
Plant Growth Regulator Application



June 25, 2006

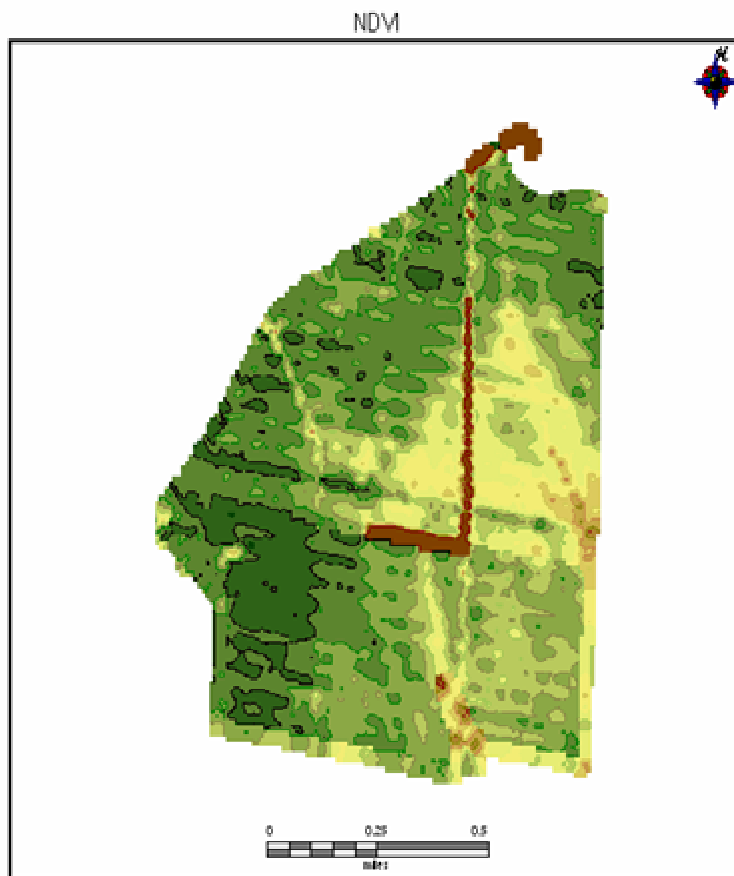
High Vigor
Max PGR

Low Vigor
Low PGR



Broad Range
of Vigor

July 6, 2006

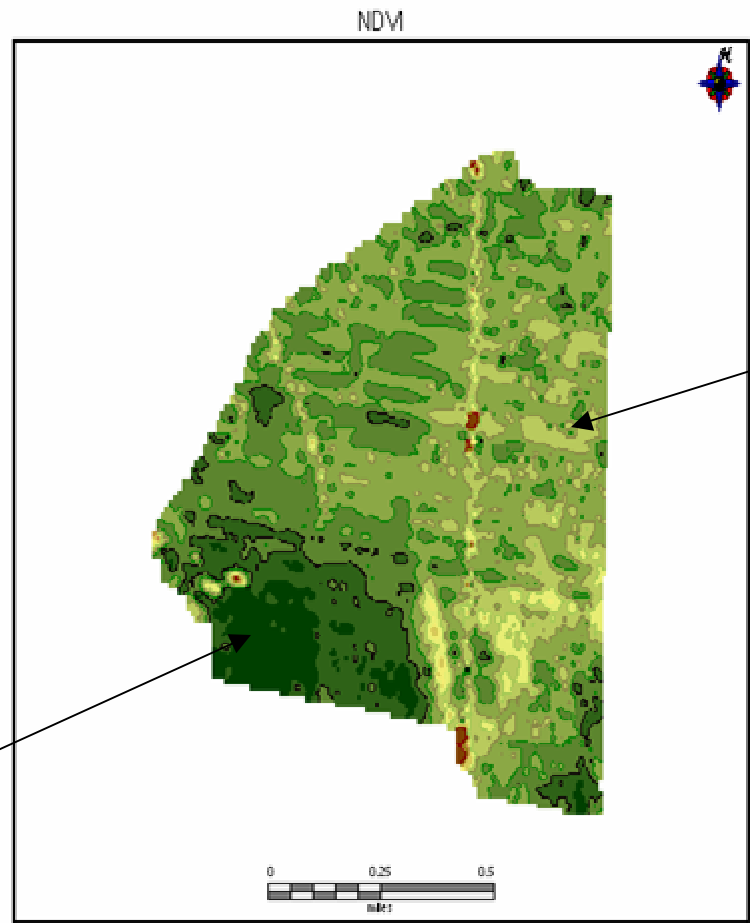


Farm: Fullen Land Co- Nicky
Name: M20060706_11
Min: 0.06
Max: 0.86
Avg: 0.67

NDVI Range	Area (ac)
Above 0.84	0.03 ac
0.80 - 0.84	18.13 ac
0.75 - 0.79	116.67 ac
0.70 - 0.74	68.19 ac
0.65 - 0.69	43.45 ac
0.60 - 0.64	46.75 ac
0.55 - 0.59	33.73 ac
0.50 - 0.54	11.41 ac
0.45 - 0.49	5.05 ac
0.40 - 0.44	2.65 ac
0.35 - 0.39	1.50 ac
Below 0.35	9.32 ac

More Balanced Vigor in 2 weeks

August 2, 2006



Visible response to restricted PGR

Target area for max Harvest Aid rate

Farm: Fullen Land Co- Nicky
Name: M20060802_11_2
Min: 0.14
Max: 0.91
Avg: 0.74

Above 0.84	25.20 ac
0.80 - 0.84	48.80 ac
0.76 - 0.79	77.26 ac
0.70 - 0.74	89.79 ac
0.65 - 0.69	39.00 ac
0.60 - 0.64	10.85 ac
0.55 - 0.59	2.62 ac
0.50 - 0.54	0.71 ac
0.45 - 0.49	0.30 ac
0.40 - 0.44	0.25 ac
0.35 - 0.39	0.22 ac
Below 0.35	0.49 ac

Well Balanced Field Vigor

Harvest Aid Application



Typical Defoliation Prescription

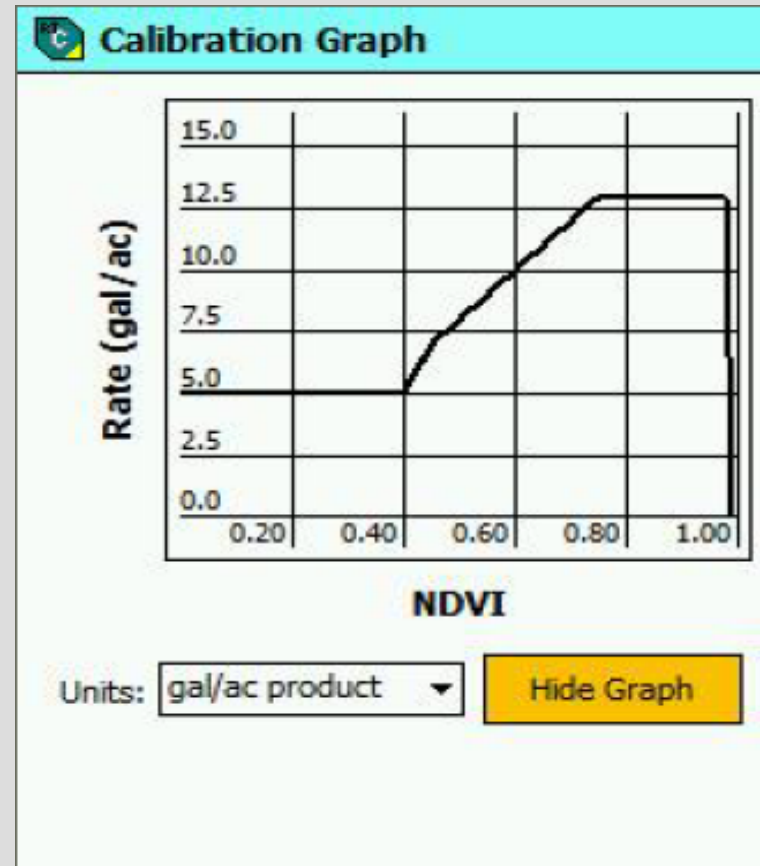
Custom Application Table

Custom Formula: DEFOL 2006

NDVI	Rate	NDVI	Rate
0.20	5.00	0.60	10.00
0.25	5.00	0.65	11.00
0.30	5.00	0.70	12.00
0.35	5.00	0.75	13.00
0.40	5.00	0.80	13.00
0.45	7.00	0.85	13.00
0.50	8.00	0.90	13.00
0.55	9.00	0.95	13.00

Units: gal/ac Product

Stepped
 Interpolated



Will GreenSeeker Improve My Operation?



What The Experts Say...

Dr. Ed Barns, Dir of Research, Cotton Inc.

- “The technology now is getting pretty mature in that we have a good interface between some of the sensors and the controllers.”
- “The low-hanging fruit for on-the-go sensors is applications of PGRs and defoliants.”
- “Beyond economics, the cotton industry’s increasing focus on sustainability is another reason to look at managing nitrogen more effectively.”
- “To get at the [nitrogen] issue, studies are taking place in several states including Missouri, Mississippi, Tennessee, Georgia, North Carolina, South Carolina, Arizona, New Mexico, Oklahoma and Texas.”

GreenSeeker Payback Opportunities

- Reduced Image Collection Cost
- Reduce Input Costs
- Reduced Passes
- Improved Yields
- More Efficient Harvests



GreenSeeker Payback Calculator

Cotton Acres:

Image Collection Savings

Eliminated # Images/Yr	Image Cost \$/ac	Annual Cost
3	\$ 2.00	\$ 12,000

PGR Savings*

# of Passes	PGR Cost/Pass \$/ac	Annual Cost	VR Savings	PGR Savings
0	\$ 2.00	\$ -	40%	\$ -

Harvest Aid Savings*

# of Passes	HA Cost/Pass \$/ac	Annual Cost	VR Savings	HA Savings
0	\$ 15.00	\$ -	33%	\$ -

Application Pass Savings

Eliminated Passes	Cost/Pass \$/ac	Application Savings
0	4	\$ -

Total Potential Savings: \$ 12,000

GreenSeeker Cost: \$ 22,500

Payback Years: 1.9



* Clemson University, Beltwide Cotton Conference, 2007; 40% HA Savings, 33% PGR Savings

Conclusion

Why Invest in GreenSeeker

- Remove costs & frustrations of image collection.
- Extend capabilities of existing application equipment.
- Versatile tool for use in other crops.
- Reduce cost of production-input savings.
- Reduce unnecessary passes.
- Improve harvest efficiency.
- **Make more money!**



Thank You for your attention.

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Agricultural Information Management

