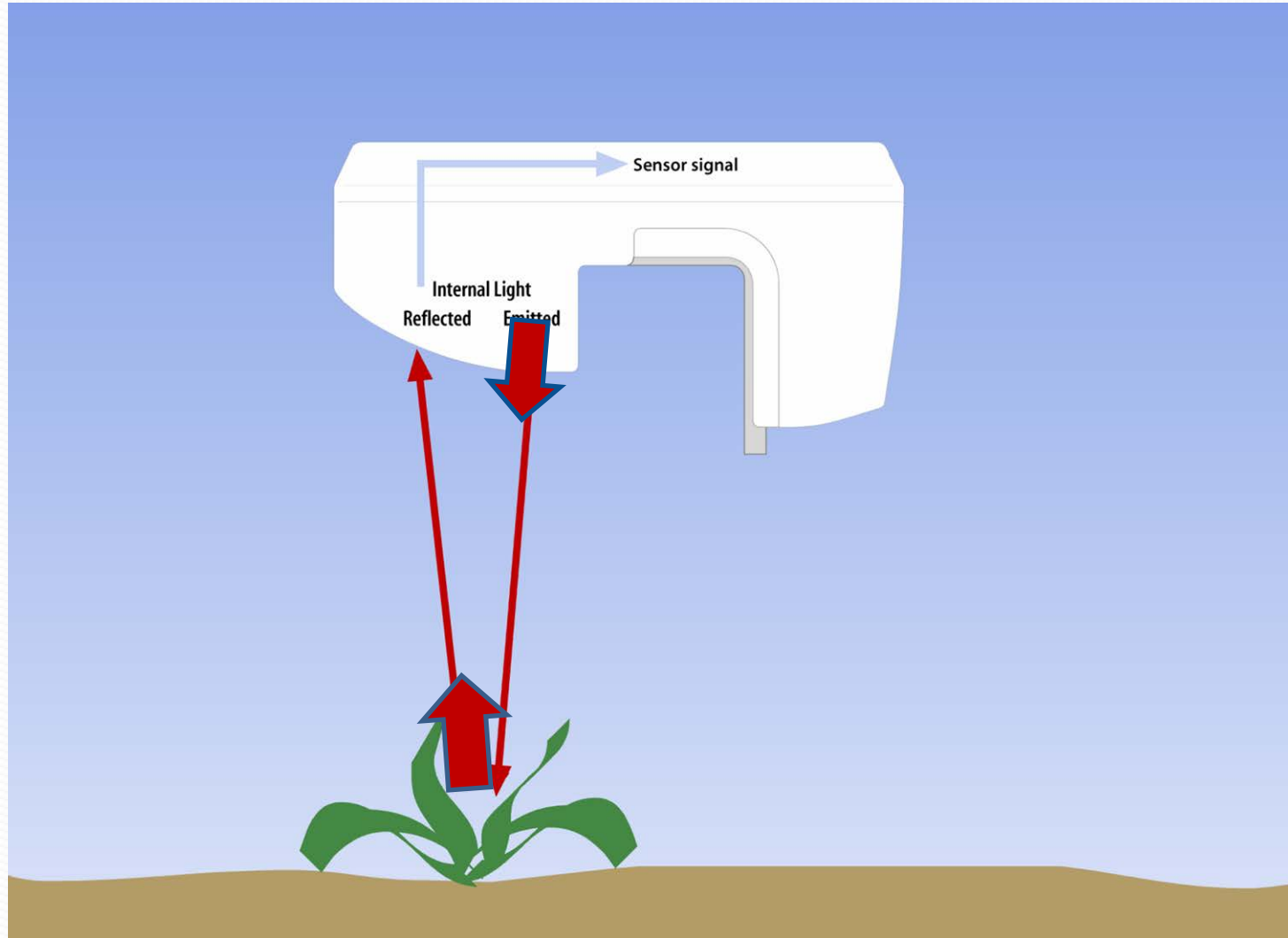


**Russ Linhart**  
**Trimble Navigation**

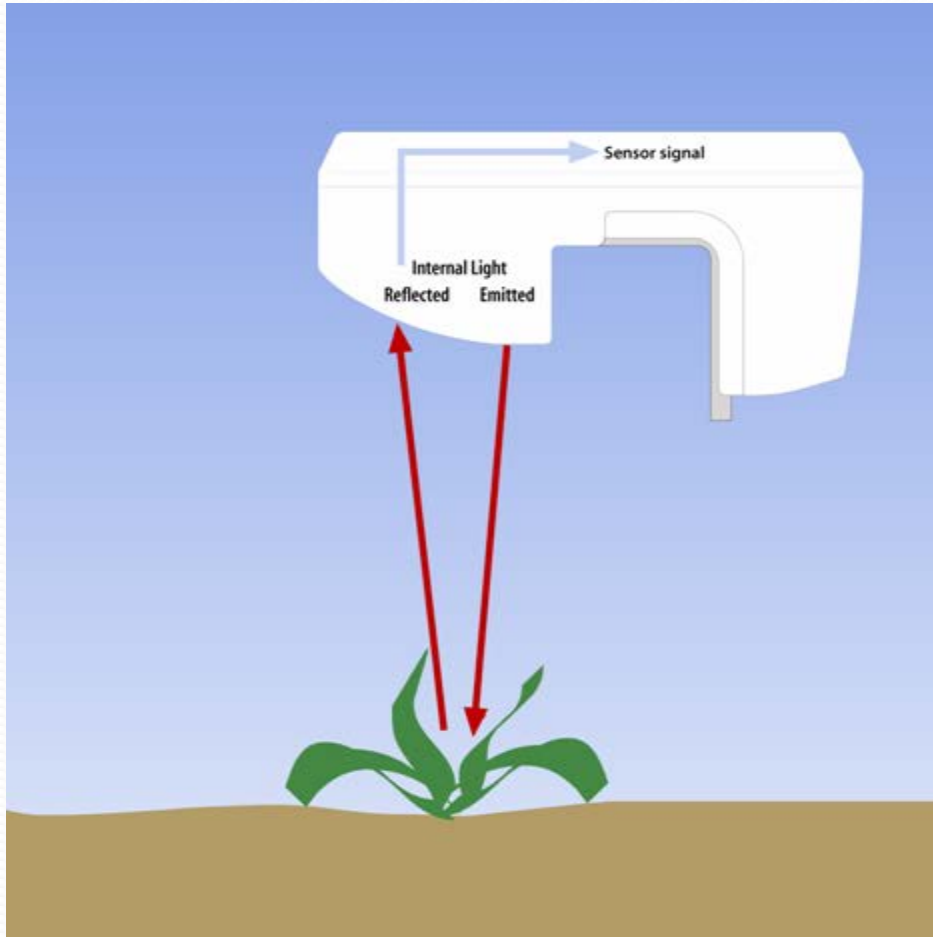
# Basics of GreenSeeker Sensor



## **GreenSeeker is:**

- *An electronic system to identify variation in the field.*
- *A system that enables the grower to manage in season variability -- in real time.*

# GreenSeeker Sensor Operation



- 2 Bands of Light: Red/NIR
- Red absorbed by plant tissue
- NIR reflected by plant tissue
- Sensor Output: NDVI (Range: 0-1.0)
- $NDVI = (NIR - Red) / (NIR + Red)$
- Operate Day or Night



NDVI = Normalized Difference Vegetative Index



**This is not new technology!**

**First employed in July 23, 1972 with  
NASA's LandSat<sub>1</sub> Satellite.**

**Used to approximate world crop  
production by United States and  
foreign governments.**



**Trimble has taken NDVI technology  
from this**

# To this!



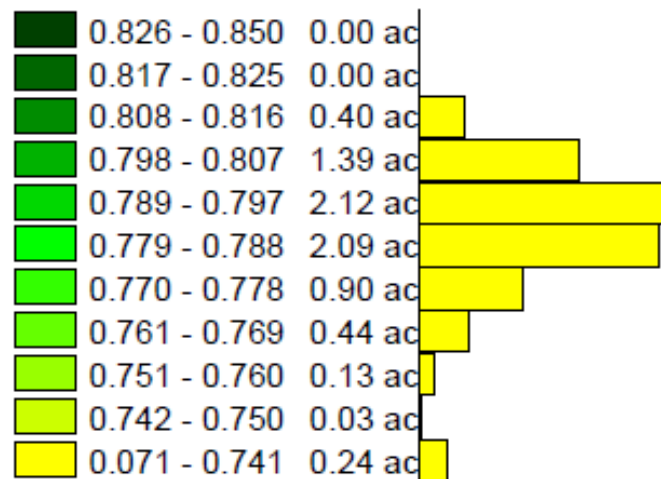
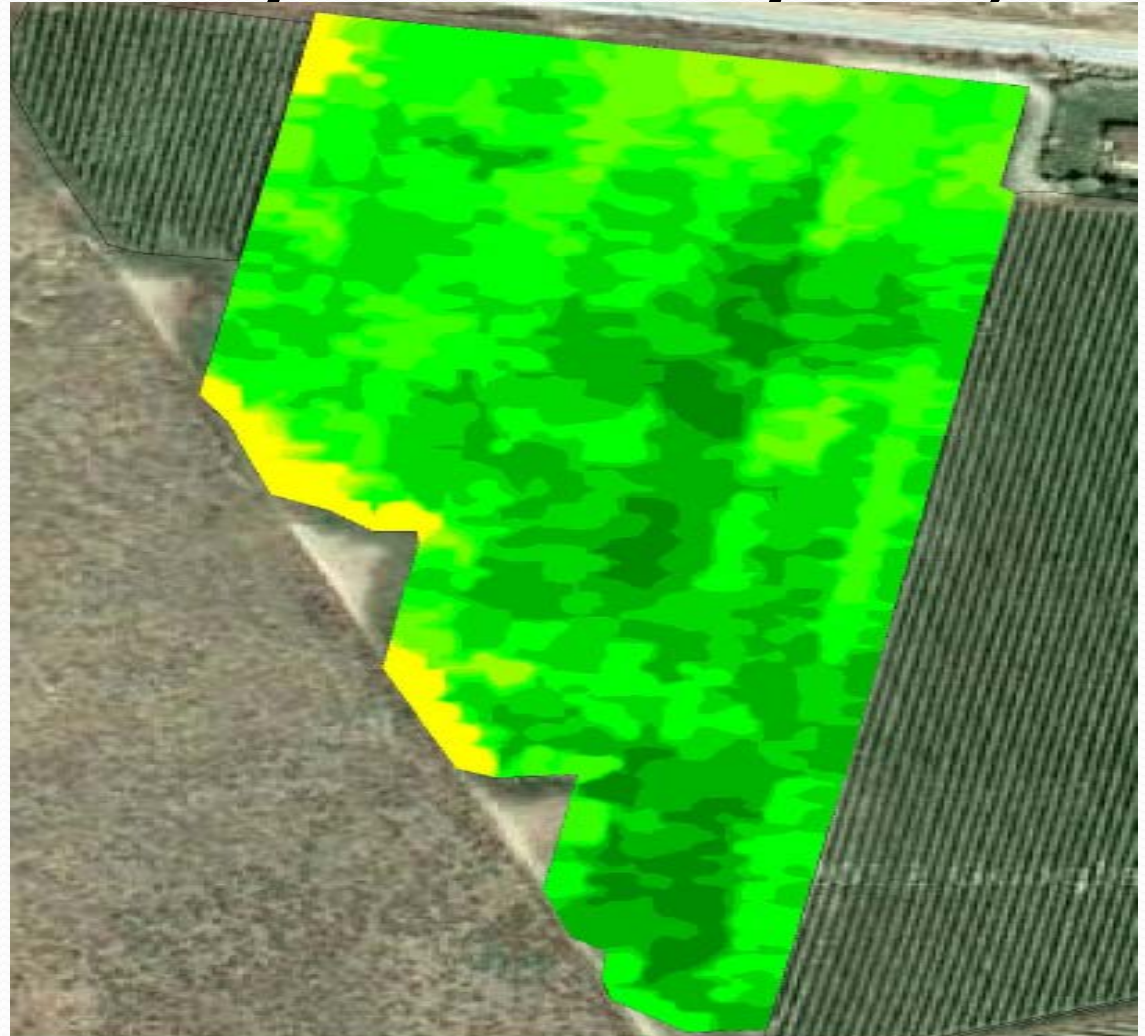
From this view of your vineyard,





# To this view of your vineyard,

**Farm:** Grape Farm  
**Field:** Panel K  
**Name:** panel k  
**Date:** 1/26/2013  
**Min:** 0.071  
**Max:** 0.850  
**Avg:** 0.784



# *How are growers using GreenSeeker NDVI Data?*

- *Problem Identification*

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- *Harvest Planning*

# *How are growers using GreenSeeker NDVI Data?*

- *Problem Identification*





**Does your current consultants  
crop reports give you this much  
definition of the current  
condition of your crop?**

**Farm:** Grape Farm  
**Field:** PANEL C  
**Name:** feding 3\_pts  
**Min:** 0.051  
**Max:** 0.854  
**Avg:** 0.738

