The future is already here – it’s just not evenly distributed.

William Gibson quoted in The Economist, December 4 2003
Not Just A Pretty Picture

- Scouting
- Crop Health
- VRT
- Irrigation
- Soil Sampling
- Compaction
- Crop Insurance
- Yield Correlation
- Equipment Failures

Source: Geovantage
Yield Loss Due To Compaction

24-row center fill planter
40k lb. tractor, 30k lb. planter
April 2011 planting
Wet soils

50 bu/ac avg throughout field

Stunted root growth/development

Plant height is a strong indicator of water stress

Source: Geovantage
Anchor Application For UAS

**Anchor**
UAV + Ag

**Capability**
Competence
Deliver Economic Value

- Police
- Search Rescue
- First Responder

- WAA (Geophysical Survey)
- Pipeline
- Others

Large Niche Markets

Event Driven
Outcome Based
Virtuous Cycle – Evolving Ecosystem

1-3 years old

Airware
TerrAvion
PTERYX
VA Robotics
DroneMapper

NEA
khosla venture
ANDREESSEN HOROWITZ

The New York Times

Forbes
WSJ

Monsanto
THE CLIMATE CORPORATION
$930M

Acquisitions

Ag Conferences

Ag Connect 2015 Expo & Summit
InfoAg Conference
Soybean alternative to petroleum based products

Source: Virginia Soybean Association
Now (1.0) = UAV + Ag

Near future (2.0) = UAV + Ag + IT

External Hard Drive Price
- 1 TB $370, 2007
- 4 TB $150, 2014

Individual Genome Sequenced
- $1M, 2007
- $1,000 - 4,000, 2014
- $100 – 2015, 2016
North Carolina growers are open for UAS business
Privacy
Respect privacy of individuals.
Do not allow users to identify individual people, license plates, or model of a vehicle.
Cannot see through houses or through walls.
Only view public spaces

Rights
First Amendment right to survey and photograph spaces that are visible from a public right of way.
The air, above 500 feet in uncongested areas, and above 1,000 feet in congested areas, is a navigable public right of way.
Source: R. Ehsani, University of Florida
Corn using 550/660/810 filters
Red = Humidity

Corn using 470/550/810 filters
Orange = Humidity
1928 World population 1.2B, US 10%, US produced 10% of what the world needed
600M malnourished, underfed
Couldn’t produce sufficient food

1968 3.5b world population, US 6%, 20% of world output
2B people were malnourished, couldn’t produce sufficient food

7B, 2.5%, producing 30% U.S
Women 2250

Men 2700, avg 2400,

Now produce more food to support entire world population
Therefore, we’ll produce to feed 9B people

US spends Less than on 9.5% disposable income to eat, lowest in the world
- U.S. corn plantings of 92 million acres, compared with 95.4 million acres in 2013
- 2014 U.S. soybean plantings of 79.5 million acres, compared with 76.5 million in 2013
- 2014 U.S. wheat sowings of 55.5 million acres, compared with 56.2 million in 2013
- 2014 U.S. plantings for all cotton of 11.5 million acres, compared with 10.4 million in 2013