

US SOY.ORG



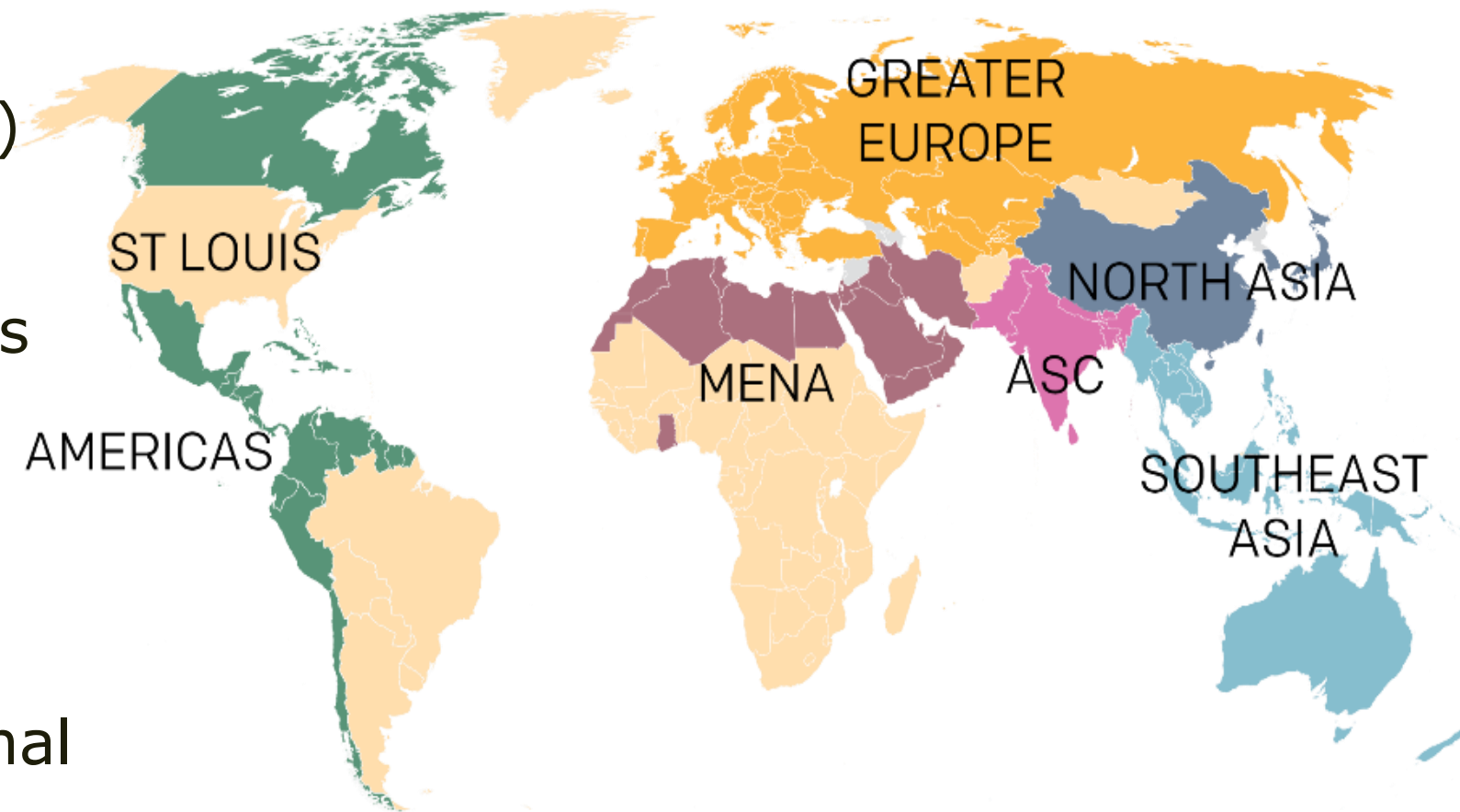
U.S. Soy: Sustainability & Trade

Brent Babb, U.S. Soybean Export Council
Regional Director, Europe and Middle East/North Africa

U.S. SOY FOR A GROWING WORLD

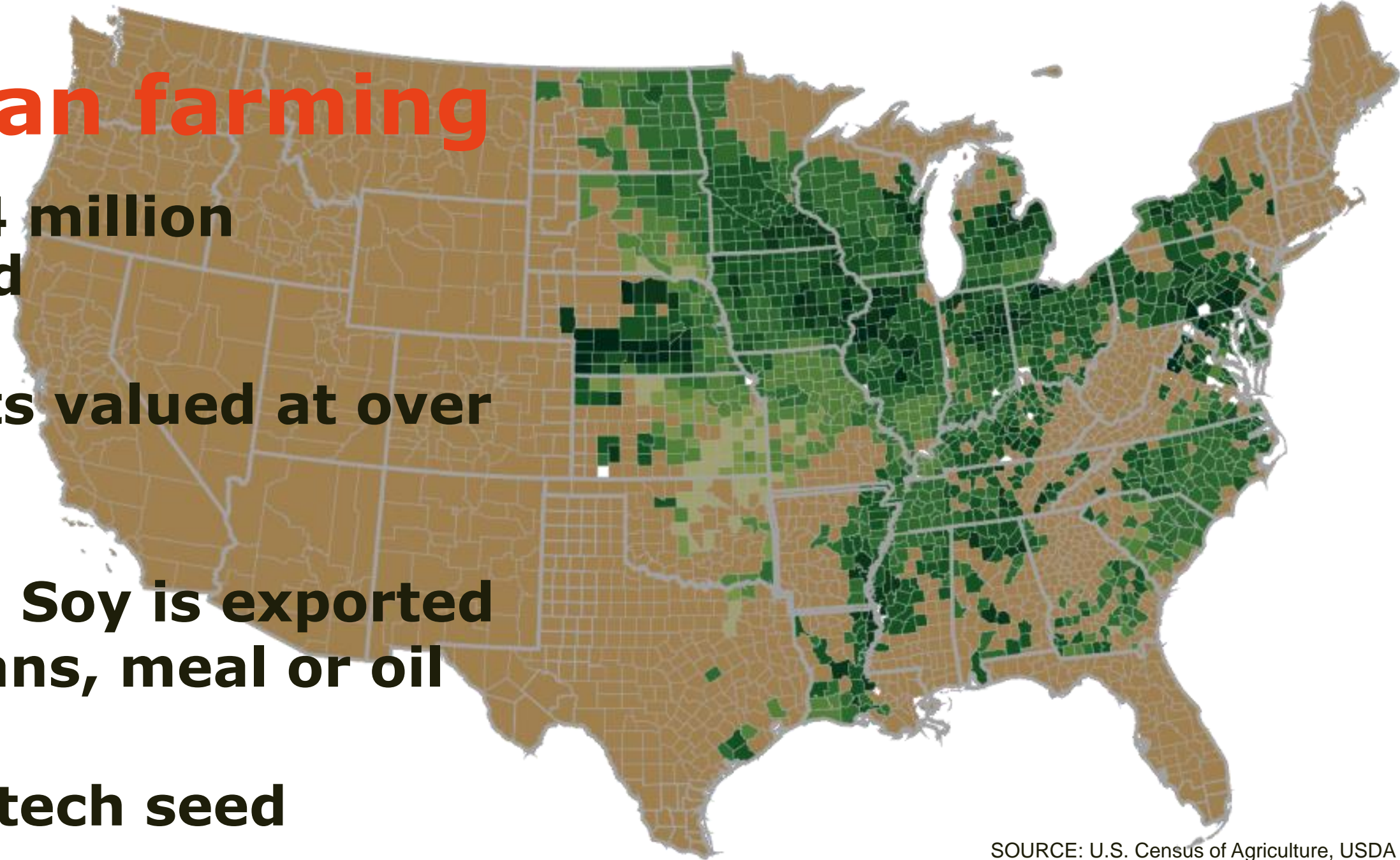
U.S. Soybean Export Council

- Funded by the soybean farmers checkoff and U.S. Department of Agriculture – Foreign Agriculture Service (USDA-FAS)
- Operating in 70 countries with approximately 125 staff and contractors
- Non-profit trade association with 100 member companies
- Founded in 2005 building on 50 years on U.S. soy farmer international Investments thru American Soybean Association (ASA)



U.S. Soybean farming

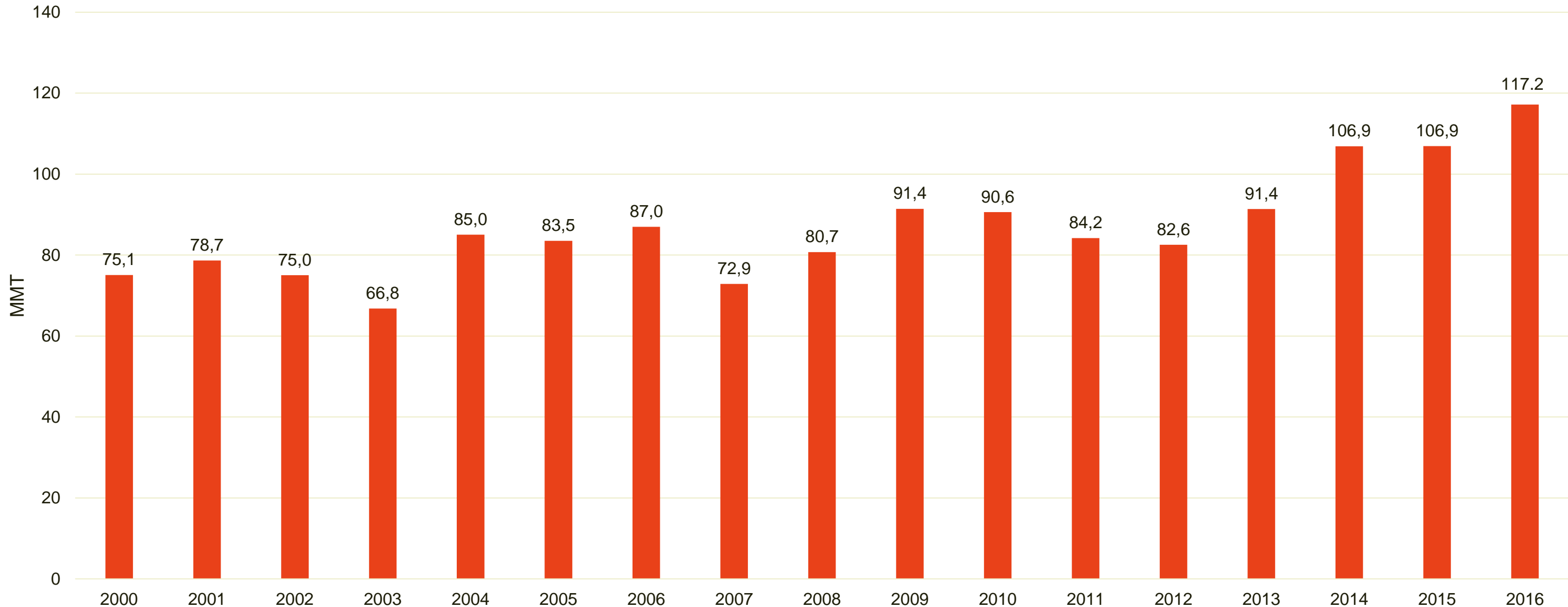
- **Grow soy on 34 million hectares of land**
- **U.S. Soy exports valued at over \$25 billion**
- **55-60% of U.S. Soy is exported annually as beans, meal or oil**
- **90% is GM/biotech seed**

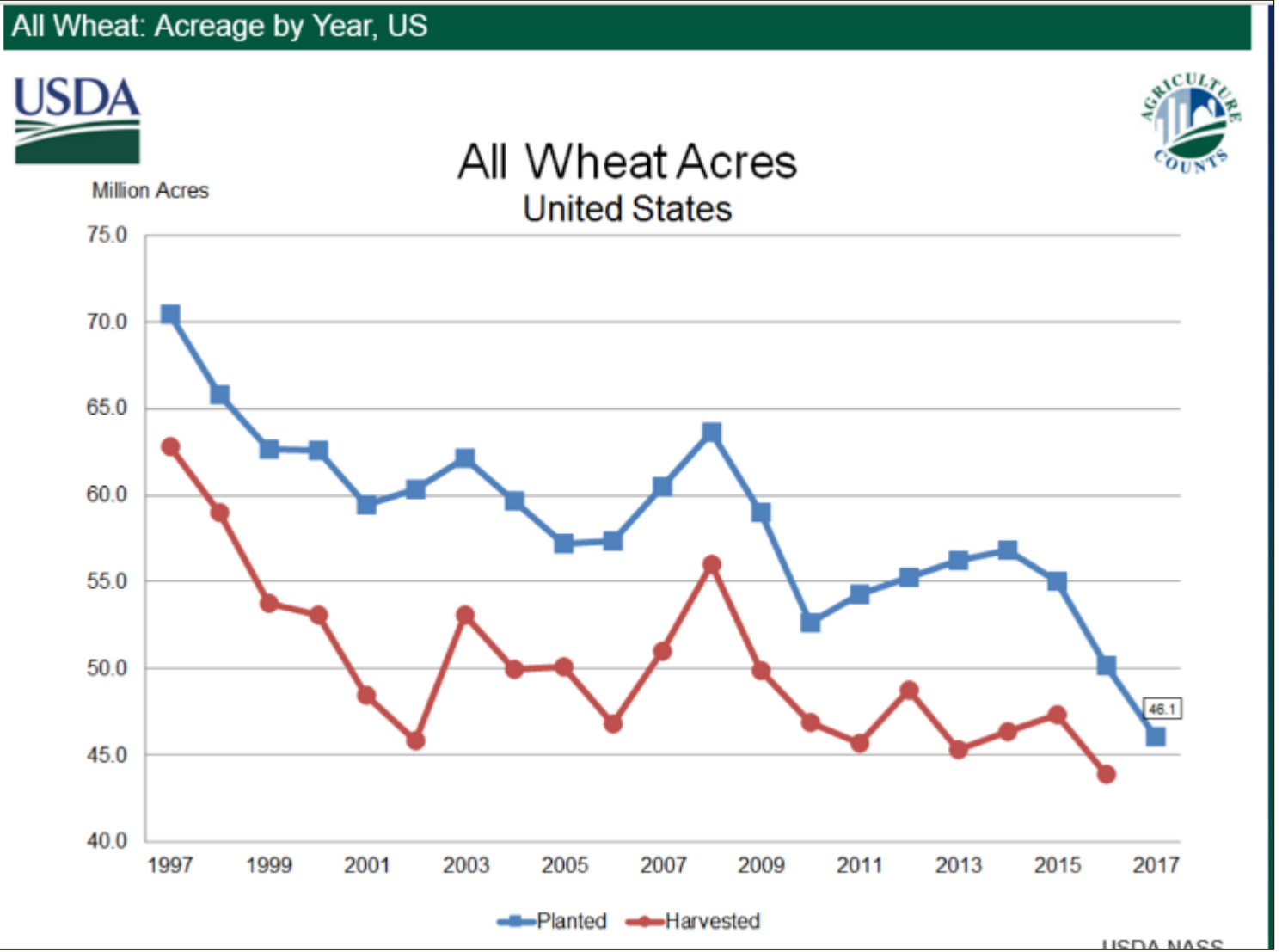
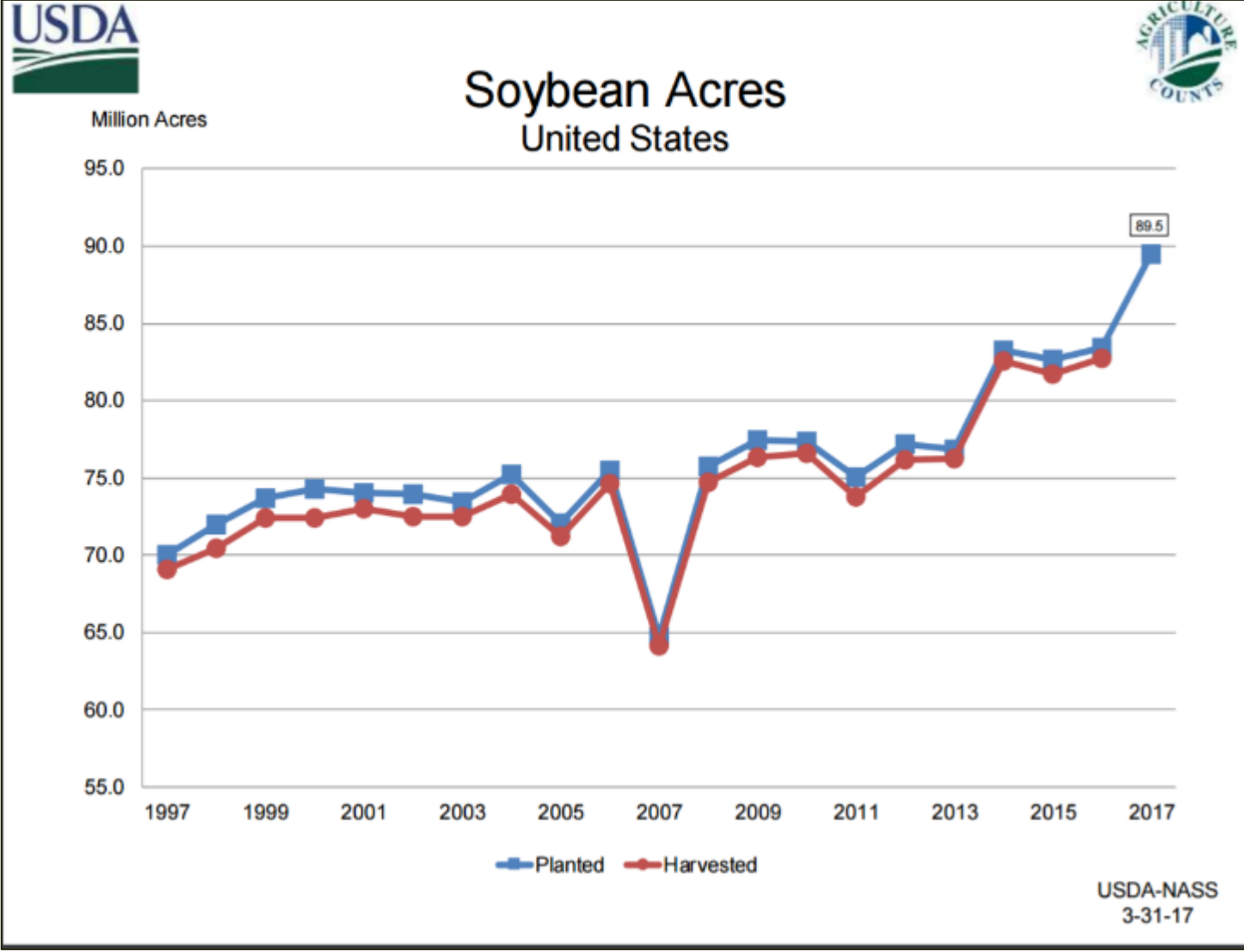


SOURCE: U.S. Census of Agriculture, USDA

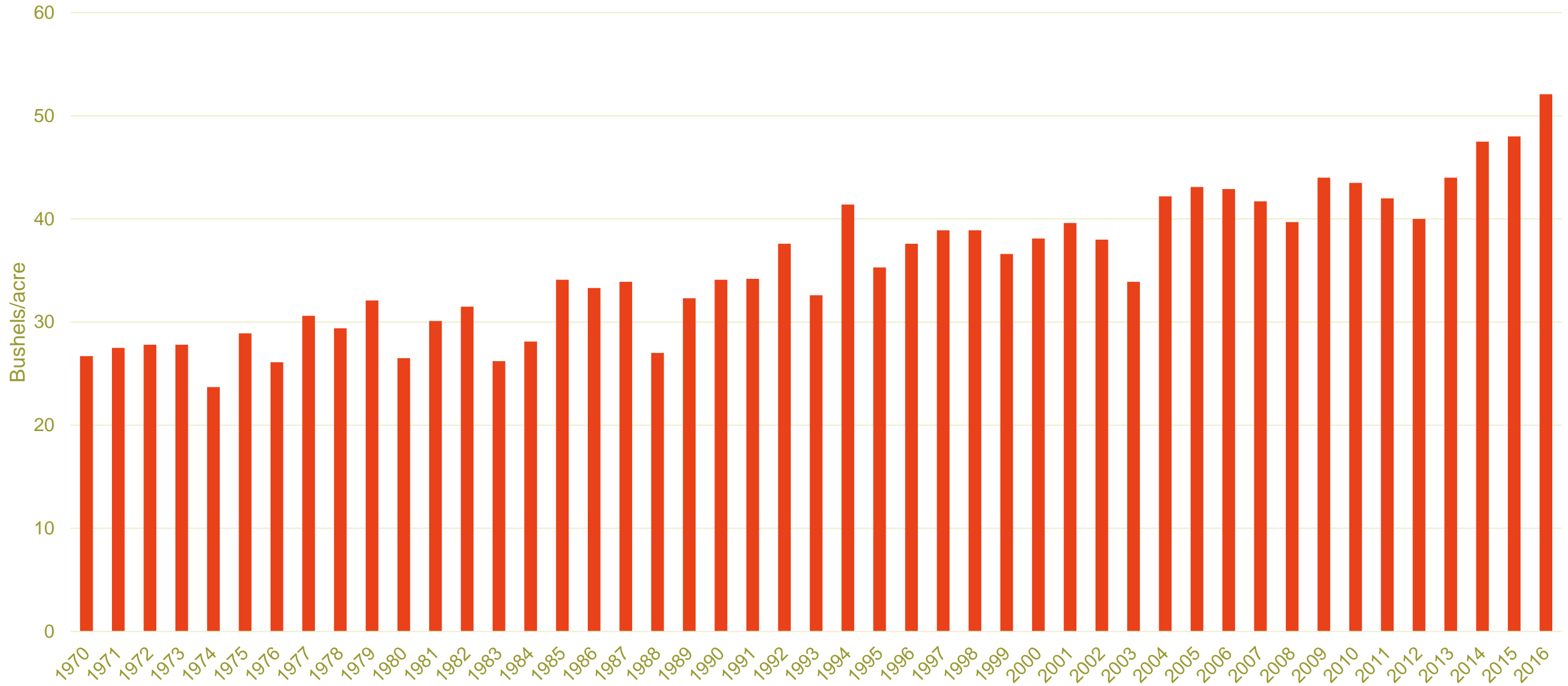
U.S. soybean production

2000-2016





Average U.S. Soybean Yields 1970 - 2016

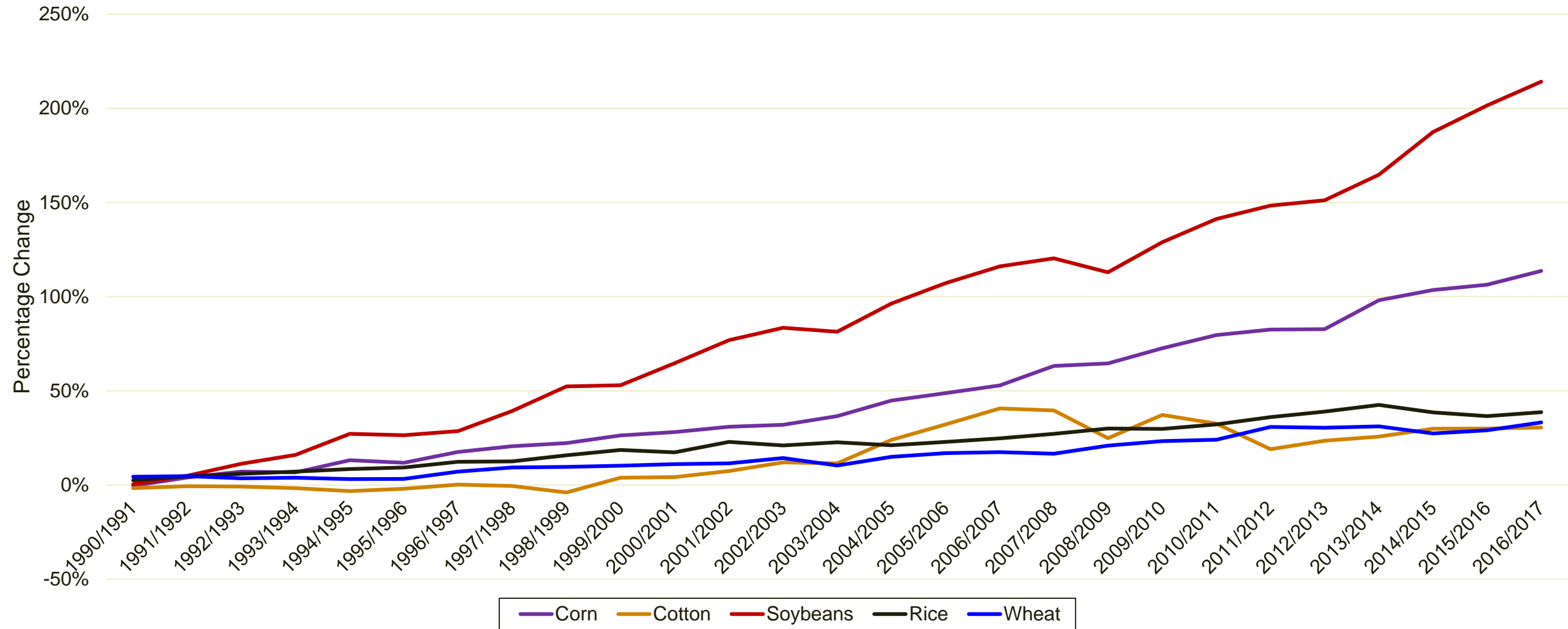


~1.5% annual yield improvement

Source: USDA

Global Demand Growth for Corn, Cotton, Soybeans, Rice and Wheat 2000/01 – 2015/16 and USDA Forecast for 2016/17

Soybeans Demand Up 214%, Corn Up By 114%, Wheat Up Only by 33%



1955 Conservation Plan for Edmonds farm



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE
LAND CAPABILITY MAP (3)
 For EVERETT EDMONDS FARM No. 109-L-433
 DATE 3/4/55 PHOTO SHEET NOS. 4G-162 (4-8)

I Bottomland. Can be cultivated yearly if organic matter maintained. Divert hill water, sod waterways:
 -2M5X/B/. Sloping, well drained bottom.
 -2M4d3/A/. Wet bottomland. Improve drainage. May be tiled.

II Land best kept in grasses and legumes 3 yrs out of L_1 . Farm on contour, terrace if cultivated. Sod waterways:
 -2M4n2/C2. Limestone soils. Slopes 2 to 10 ft. per 100. Half or more topsoil gone.

V Land best used for hay or pasture. Farm contour, sod waterways. If cultivated at terrace. Build and maintain fertility:
 -2M4n2/D2. Well drained soils on steep slopes.

VI Meadow and pasture land. Not suited to vation. Requires careful management:
 -2FLN2/E3(7). Sloping or steep, severe eroded soils.

UNITED STATES DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE

Dear Mr. Edmonds

Enclosed is a land capability map of your farm and a guide for the use and treatment of each kind of land. These are prepared according to your approach with your soil conservation district and were developed by the Soil Conservation Service of the U. S. Department of Agriculture.

The map and guide show the land which may be safely used for cultivation, that which is suitable for permanent pasture or meadow and the land which should be kept in woods or wildlife areas. The guide shows the conservation practices which are necessary to keep the soil from washing and to conserve and increase its fertility.

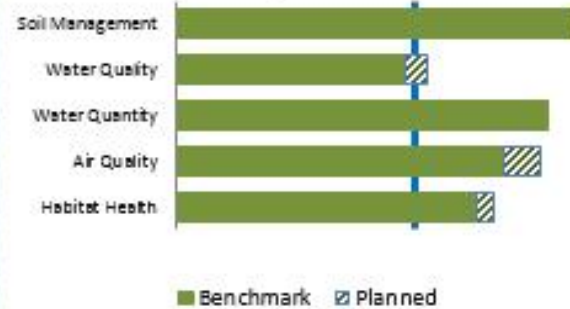
The map and guide will be a help to you and me in developing conservation plans for your farm.

Very truly yours,
Robert E. Smith
 Soil Conservationist

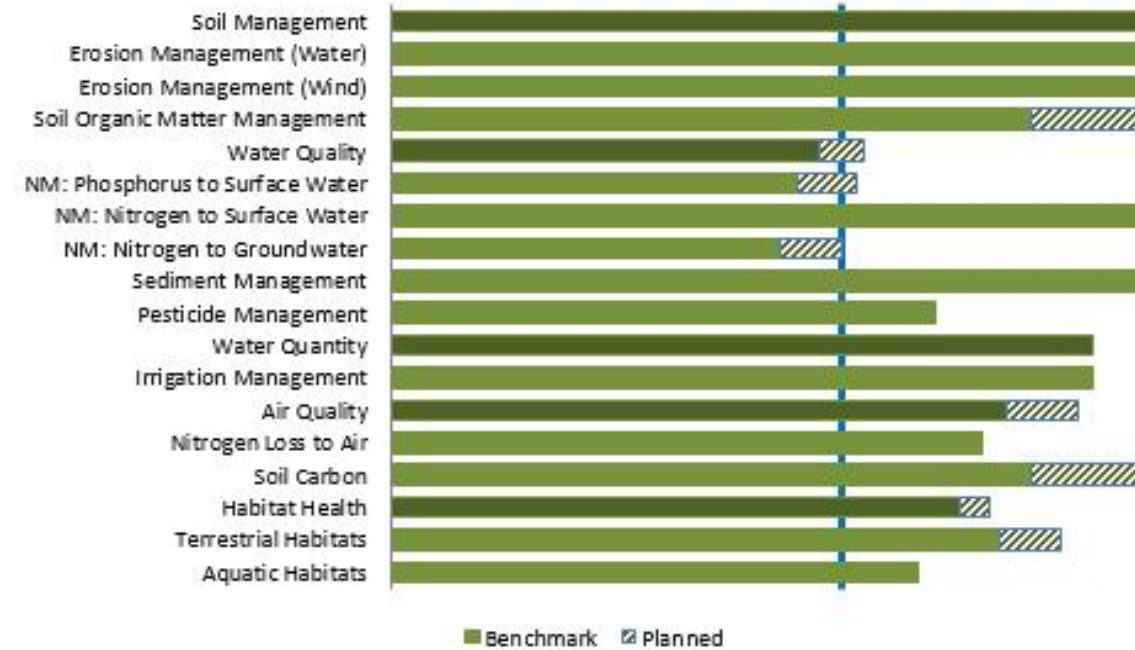
Operation: Brown **State:** Delaware **Date:** 9/11/2015
Operator: **County:** Kent County **Site ID:** Field 3
Assessor: Lauster **Land Use:** Cropland **Farm #**
Tract #



Cropland Stewardship Objectives



Cropland Stewardship Achievement



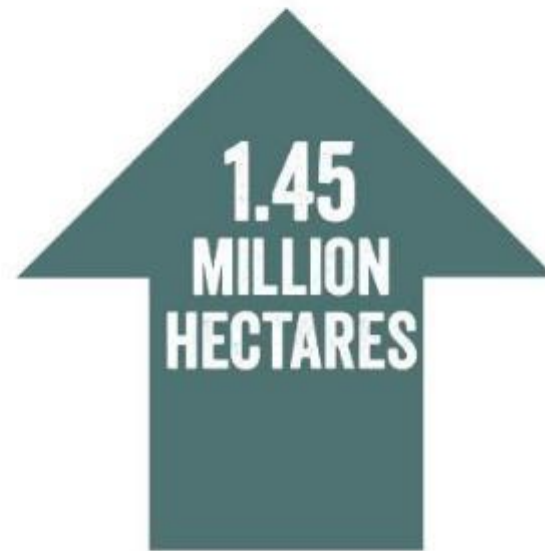
Conservation Practices and Management Techniques

Benchmark	Planned
Residue and Tillage Management, No-Till Crop residue (328) >=1 and < 2 Crop Residue	Residue and Tillage Management, No-Till Crop residue (328) >=1 and < 2 Crop Residue
Nutrient Application Rate - Adjust based on Pre-sidedress Nitrogen Test (PSNT) or Late Spring Soil Nitrate Test	Nutrient Application Rate - Adjust based on Pre-sidedress Nitrogen Test (PSNT) or Late Spring Soil Nitrate Test
Nutrient Application Rate - Adjust based on Cover Crop - Mid Season Establishment	Nutrient Application Rate - Adjust based on Cover Crop - Mid Season Establishment

U.S. Cropland Decreased While Forest Land Increased

CROPLAND CHANGE 1980-2011

**NON-TROPICAL
SOY
PRODUCTION**



**NET INCREASE IN
FOREST LAND**



**NET DECREASE
IN CROPLAND**

SOURCE: National Resource Inventory, USDA

Ag Conservation Improvement for Over 80 years

USDA invests over \$5.5 billion annually in conservation programs with over 12,000 employees in conservation and compliance

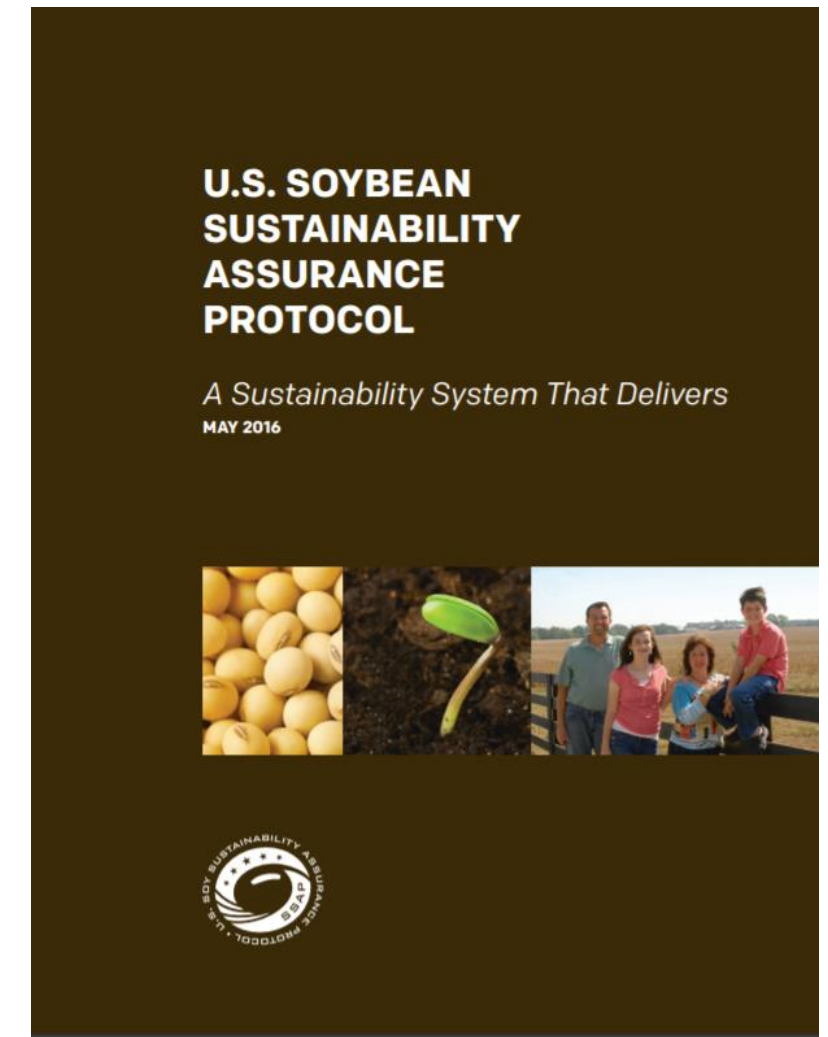


USDA has conservation offices in over 2,200 locations including almost every county in the U.S.

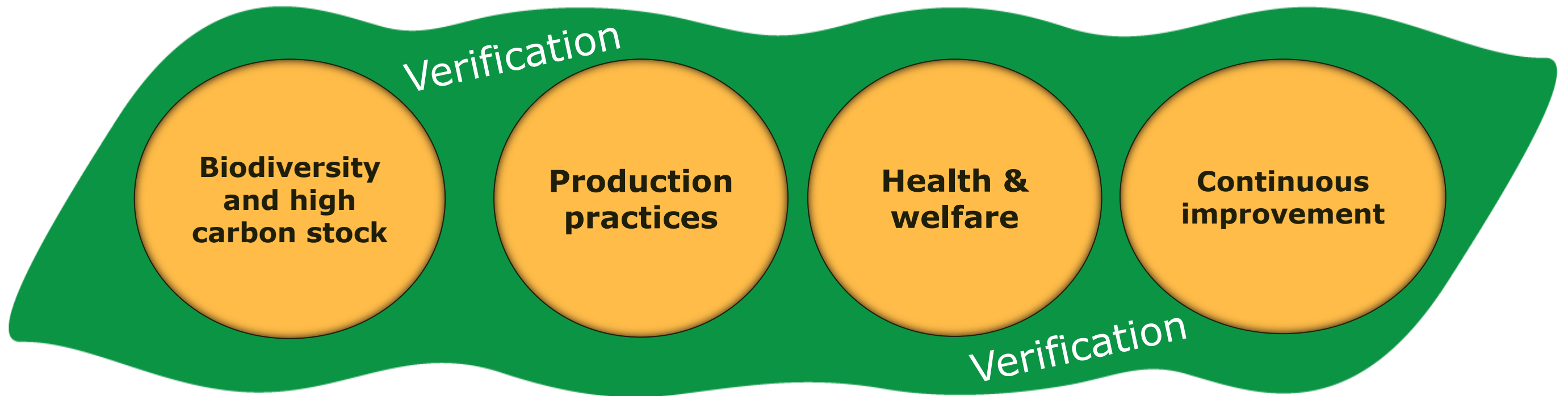


U.S. Soybean Sustainability Assurance Protocol (SSAP)

- Based on U.S. national system of conservation laws
- Participation determined annually
 - 95%+
- Quantifiable metric based results
- Third party audit
 - ~ 20,000 annually
- Certification available
- Aggregate/mass balance approach



The four pillars of the SSAP



U.S. Soybean Sustainability Assurance Protocol (SSAP)

- Positive benchmark against the FEFAC Soy Sourcing Guidelines
- Meets Consumer Goods Forum soy verification guidelines
- U.S. soy approved by Global Aquaculture Alliance BAP
- Aquaculture program in China targeted to Carrefour customers
- Approved for use by Unilever (USA) in mayonnaise
- SSAP provided to the industry without cost



Continuous Improvement



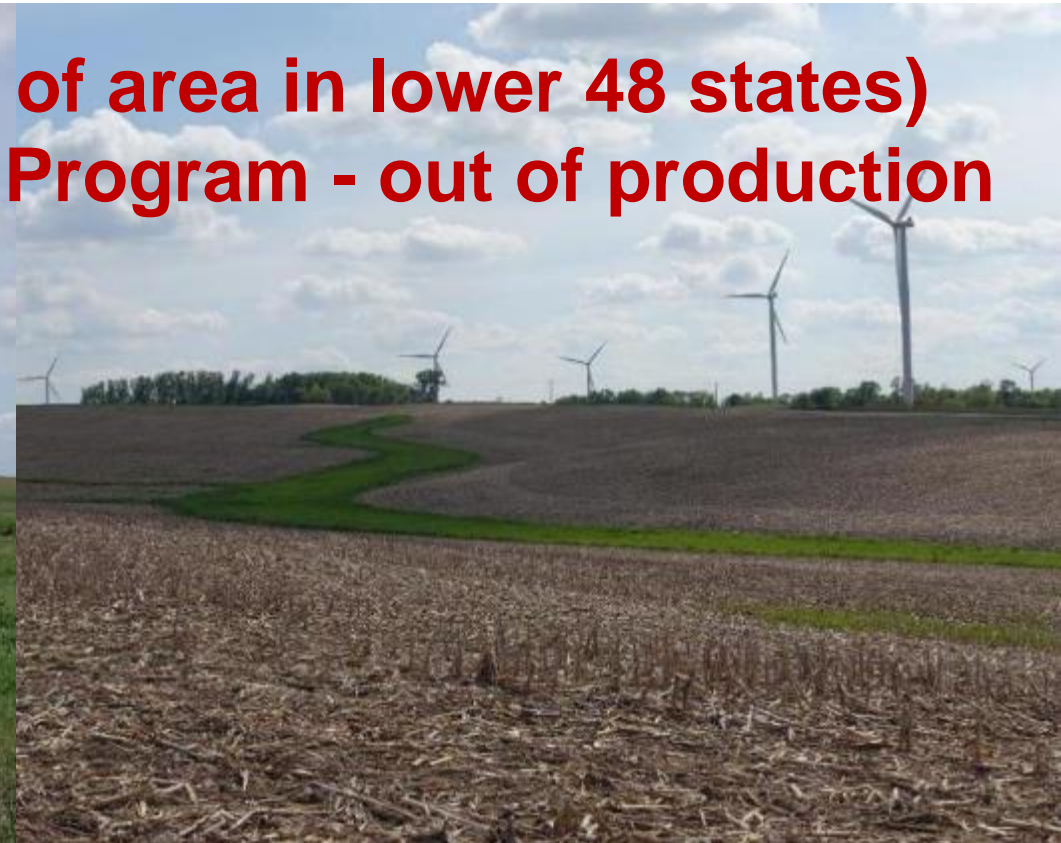
Conservation examples



Cover crops



Take land out of production for federal payment

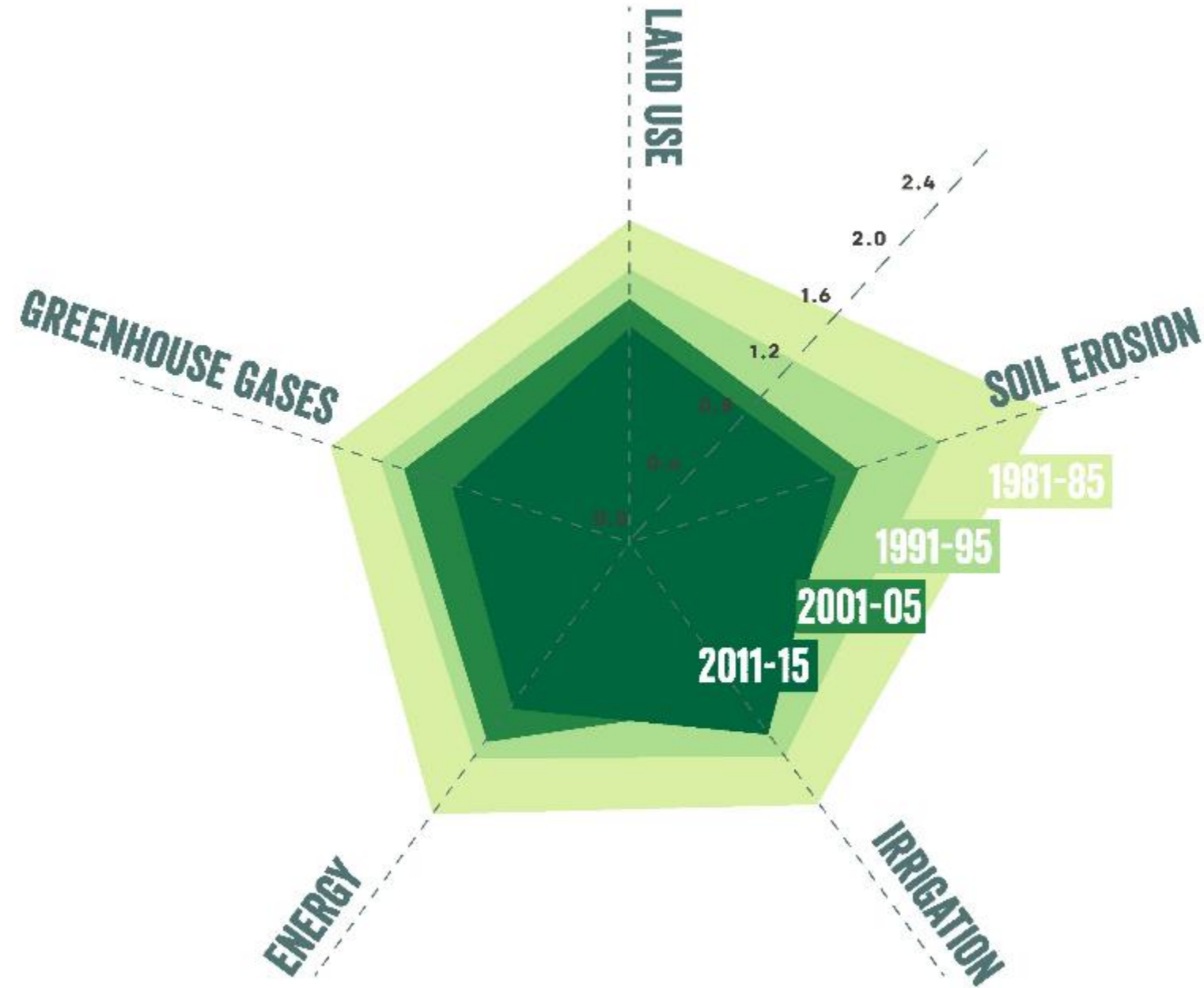


No-till with waterways

10 million hectares (1.3% of area in lower 48 states) in Conservation Reserve Program - out of production

The Shrinking Footprint Of U.S. Soy Production

For the past 35 years, U.S. farmers have increased crop yields while decreasing negative environmental impacts

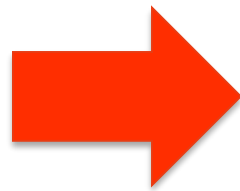
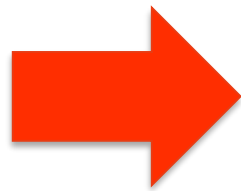
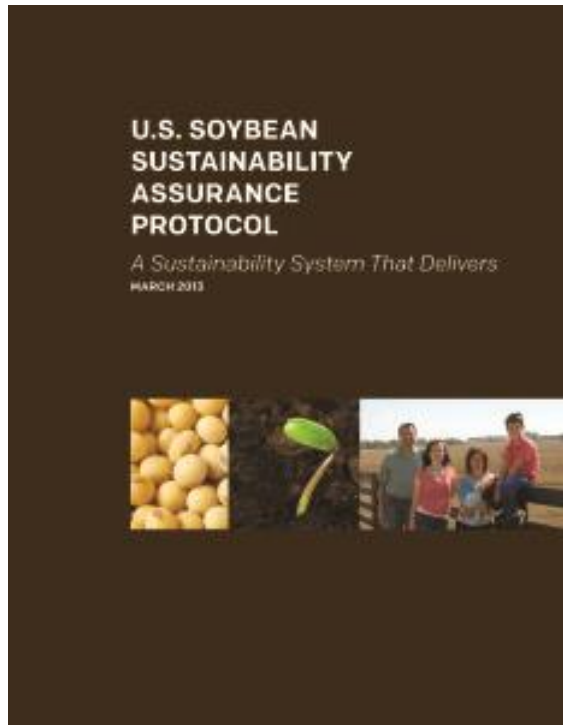


Source: Field to Market

U.S. soybean farmer sustainability goals by 2025

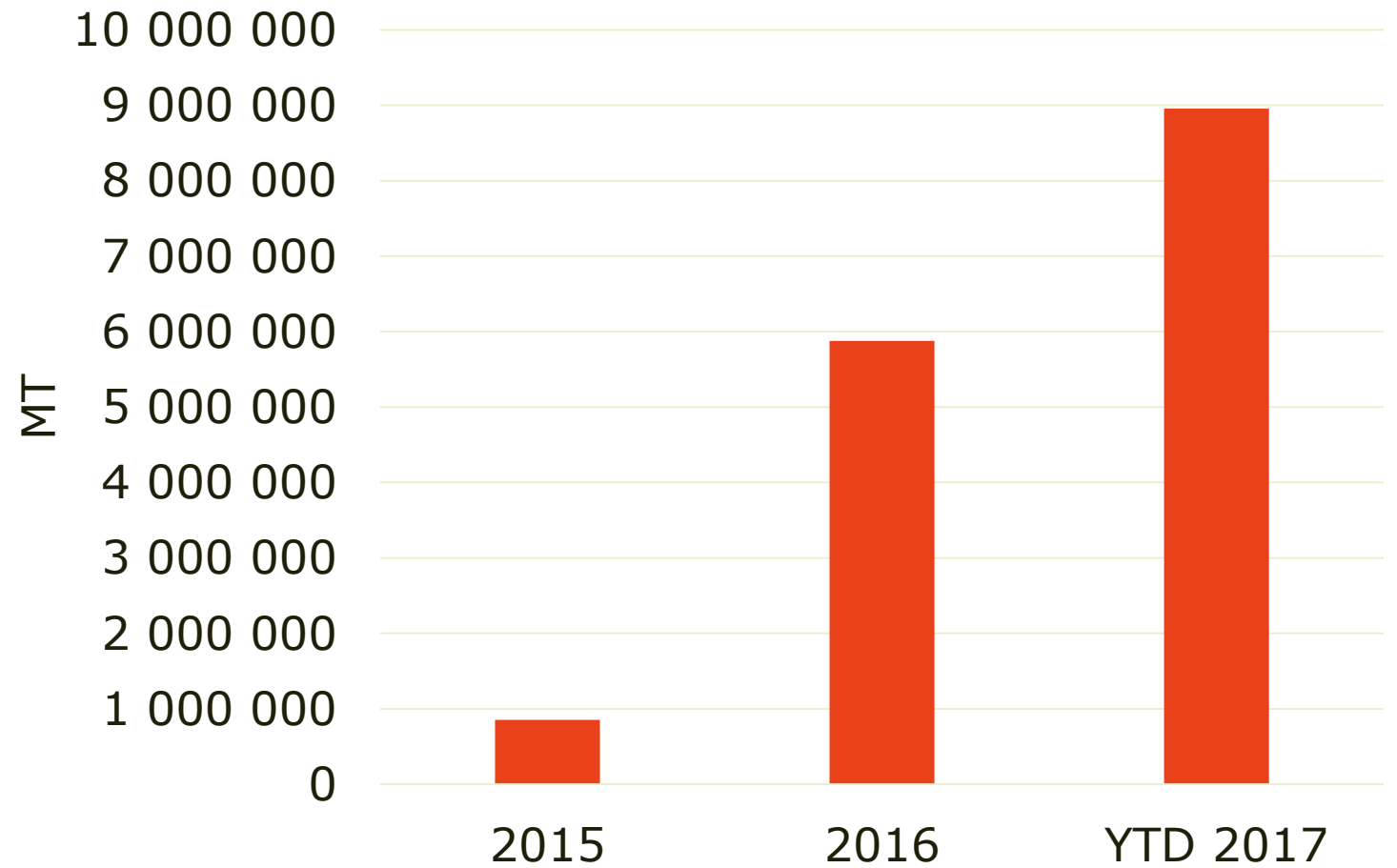
Key Performance Indicators	Unit of Measure	Total Potential Reduction
Land Use	Planted acres per bushel	10%
Soil Erosion	Tons per bushel	25%
Energy Use	BTUs per year	10%
GHG Emissions	Pounds CO2e per year	10%

9 million tons of SSAP certified U.S. soy exported to buyers around the world this year

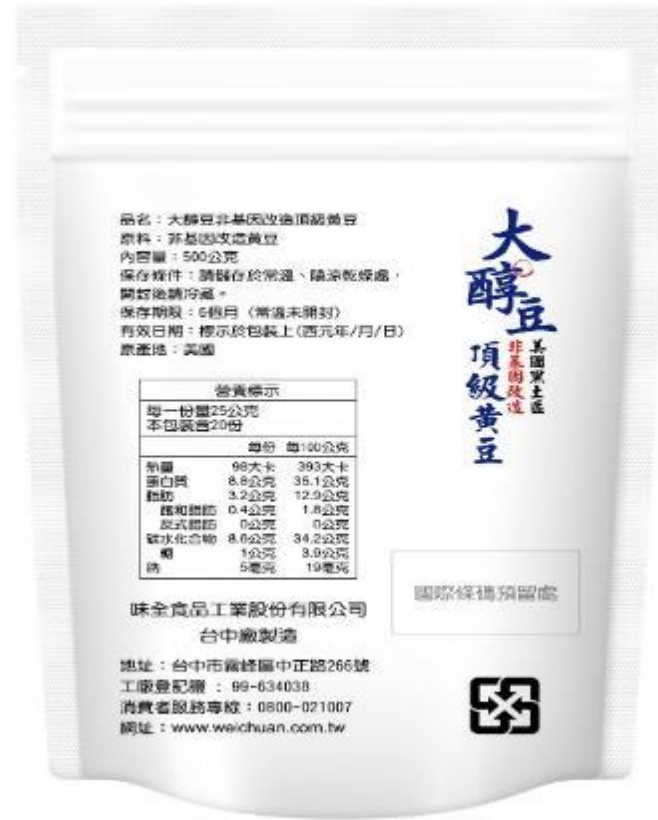


Certified-sustainable U.S. Soy gaining momentum

- Over 15 Million tons certified in 3 years
- Over 50 U.S. soy exporters requesting SSAP Certificates
- 2,000+ certified shipments since Sept 2016
- Includes soybeans, meal, oil, hulls, isolates



Sustainable U.S. Soy Logo



Pilot program being rolled out in North Asia (Taiwan, Korea, Japan, China) and in the Philippines.



INNOVATION



- Precision farming (GPS technology) can be accurate to the centimeter
- Reduces use of inputs
 - Seeds
 - Fertilizer
 - Herbicides
 - Pesticides

Sprint 10:19 PM 82%

Fields C1

Yield

Harvest

51 bu/ac Avg Yield	11.2% Moisture	116.4 ac Harvested
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[View More](#)

Planted on May 27, 2016

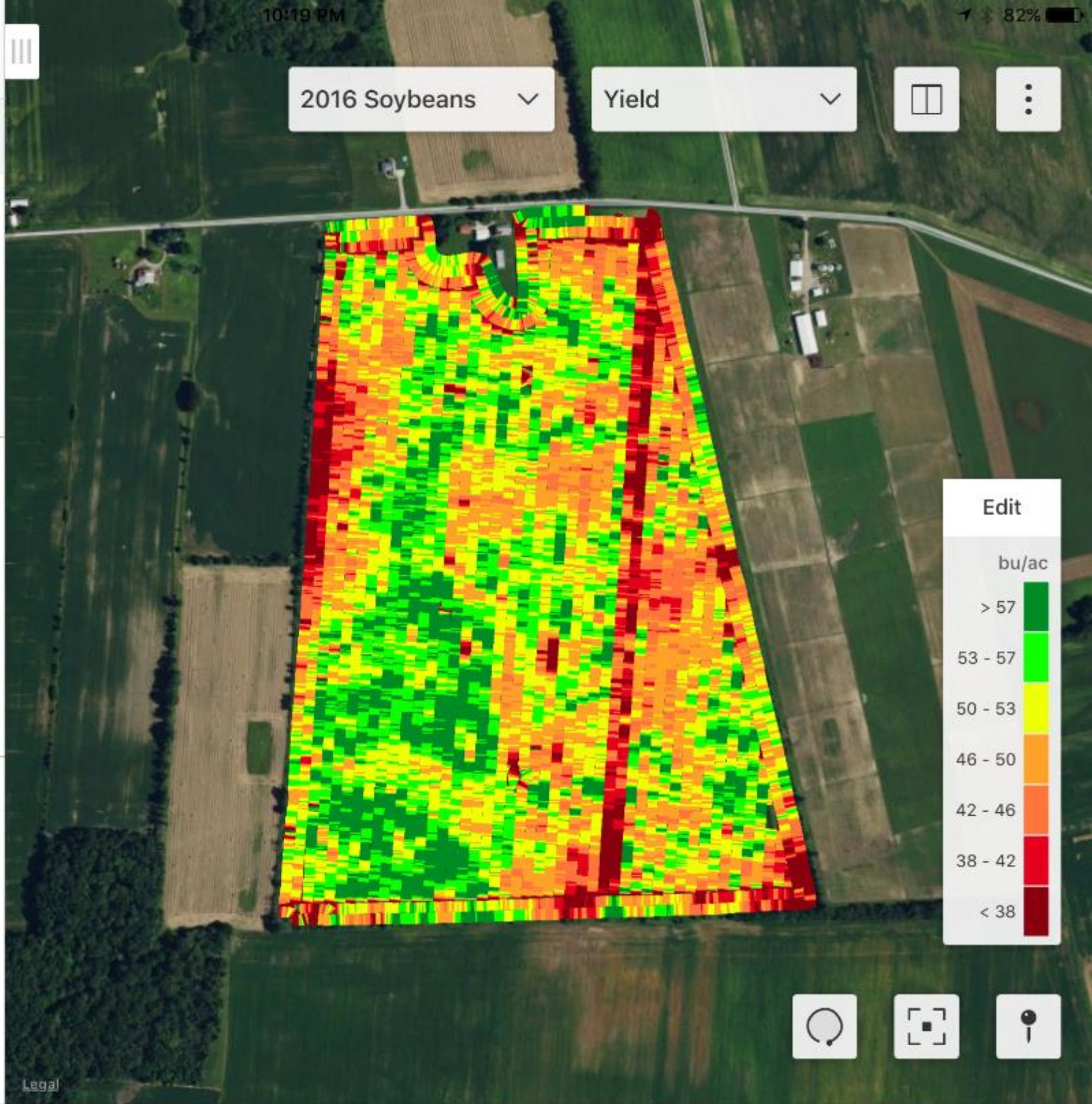
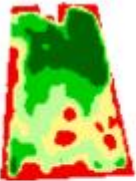

78.7 ac Planted	157,660 seeds/ac Avg Population
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Variety

2324RR2

Field Health

Aug 25, 2016
Latest Image



Biotechnology enhances sustainability

- Biotech soybeans improve weed control
- Allows increased use of no-till and direct drilling into crop stubble
- Crop residue creates a mulch layer for earthworm populations and soil microbes and improves soil structure
- Reduce fuel use and GHG emissions
- Reduce soil erosion



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U.S. SOY FOR A GROWING WORLD

USSEC.ORG | USSOY.ORG



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