# History of American Agriculture

Georgia Agricultural Education Office
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# Objectives

Students will be able to:

- Outline the food-dollar spending patterns of Americans.
- Explain historical achievements of agriculturists.
- Identify key people in Agriculture's history.
- Describe the percentages of the U.S. population that live on the farm.
- Identify key elements of futuristic agriculture.

# “I believe in the future of agriculture…..”

Source: FFA Creed

# “I believe in…. achievements won by present and past generations of agriculturists…”

Source: FFA Creed

**“I believe in….the ability of progressive agriculturists to serve our own and public interest in producing and marketing the product of our toil.”**



Source: FFA Creed

"The United States as we know it today is largely the result of mechanical inventions, and in particular of agricultural machinery and the railroad."

John Moody, Railroad Magnate
1868 - 1958

# The result of agricultural achievement:

The average American family spends less than 10 percent of its disposable income on food – the lowest in the world.

## Historical achievements of “progressive agriculturists”

- Mechanical inventions
- Scientific discoveries
- Educational improvements
- Wise governance


## Improvements in agriculture have resulted in

- Increased food production
- Increased production efficiency
- Improved food quality & safety
- Improved environmental protection
- Improved quality of life
- Improved education
- New industries
- Alternative employment opportunities

# 1700's
## (Georgia's Early Agricultural History)

General James Oglethorpe

- Implemented an Agriculture Education program for Georgia
- Established 1st experiment station in US – The Trustees Garden, Savannah, Ga

Tomochici

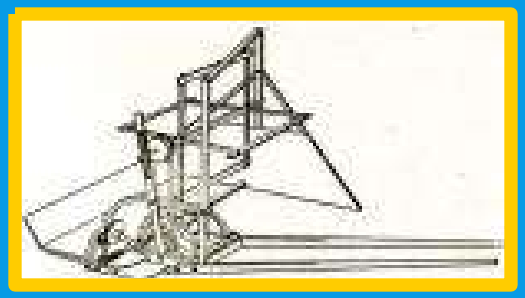
- Held conferences with settlers to teach them Native American Agriculture

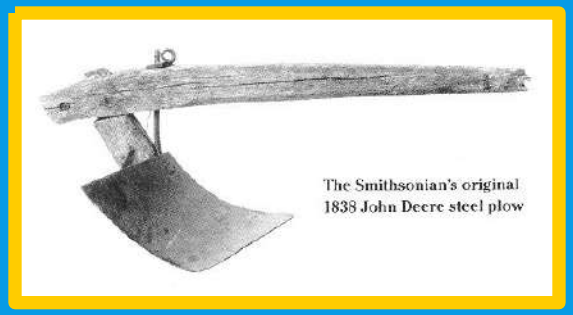
Mary Musgrove

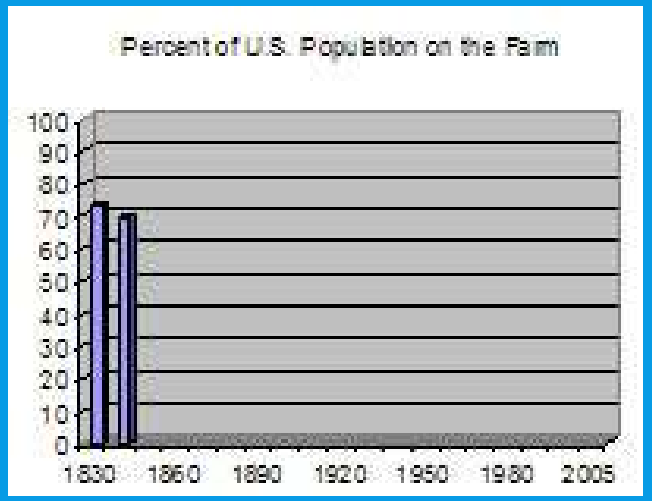
- Employed as an interpreter for the Agriculture Education Program

# 1830's

- Cyrus McCormick patents the reaper (*increased harvest with less labor*)
- John Deere manufactures steel plows (*cultivate larger acreages*)



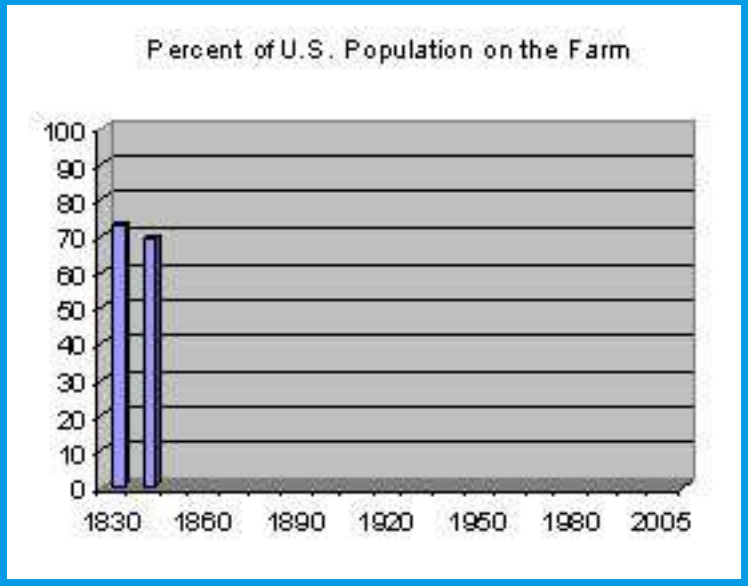


# 1840's

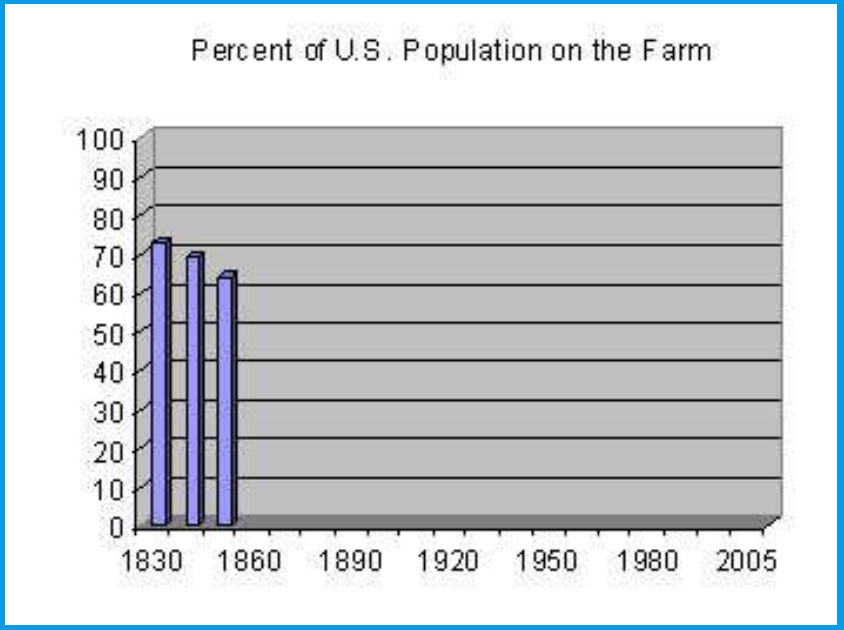
- **Sir John Lawes invents commercial fertilizer (*greatly increased crop yields*)**
- **Grain drill patented (*greatly increased wheat acreage & wheat supply*)**
- **Holstein and Jersey dairy cattle imported (*improved milk production*)**





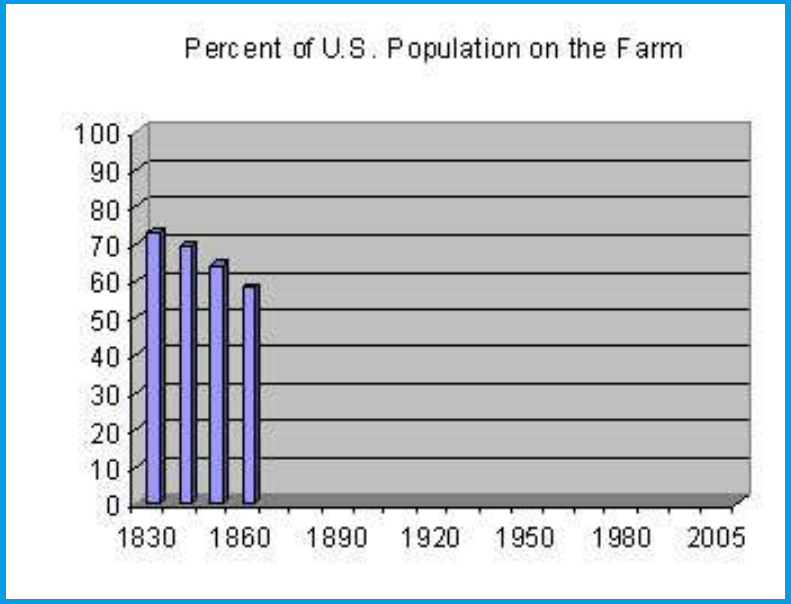
# 1850's

- **Factory-made agricultural machinery readily available (*large scale farming*)**
- **Farmers begin to organize (*improved influence and marketing opportunities*)**



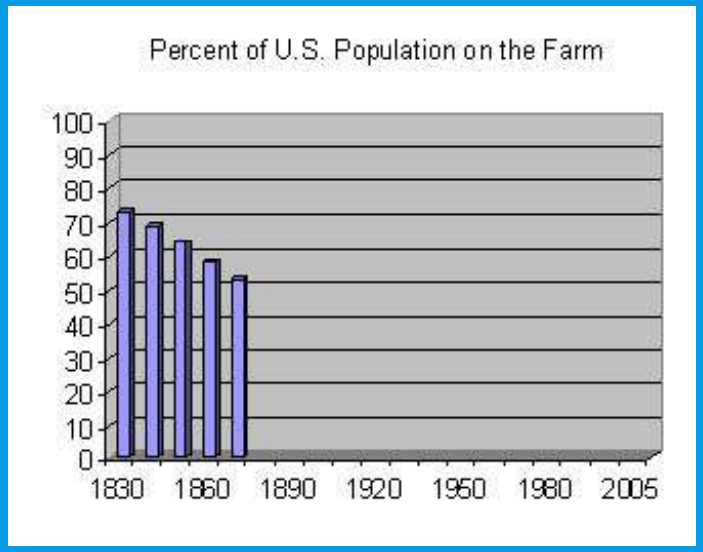
# 1860's

- **Morrill Land Grant Act (*established land grant colleges for agricultural research to improve food production methods*)**
- **U.S. Department of Agriculture established (*government support for & control of agriculture*)**



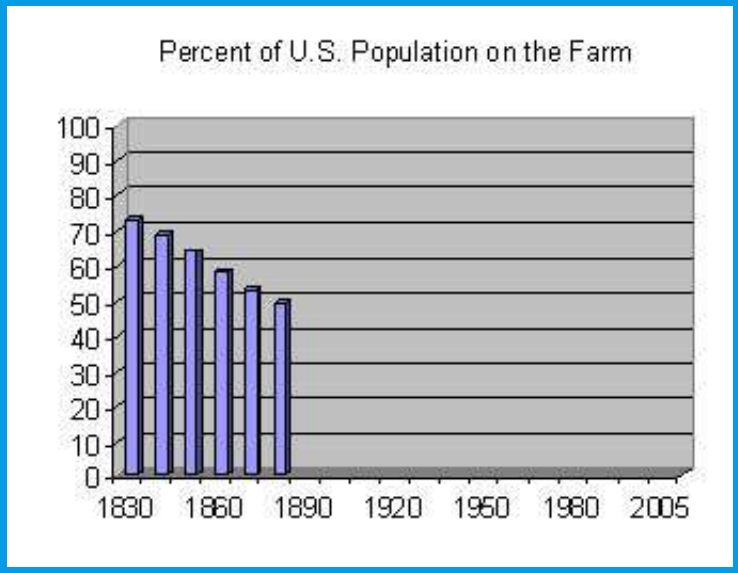
# 1870's

- **Steam powered tractor introduced (*beginning of first agricultural revolution – the shift to mechanized agriculture*)**
- **Refrigerated freight cars introduced (*ship fruit & vegetables long distances and out of season*)**
- **Barbed wire patented (*confined cattle increased beef production & quality*)**



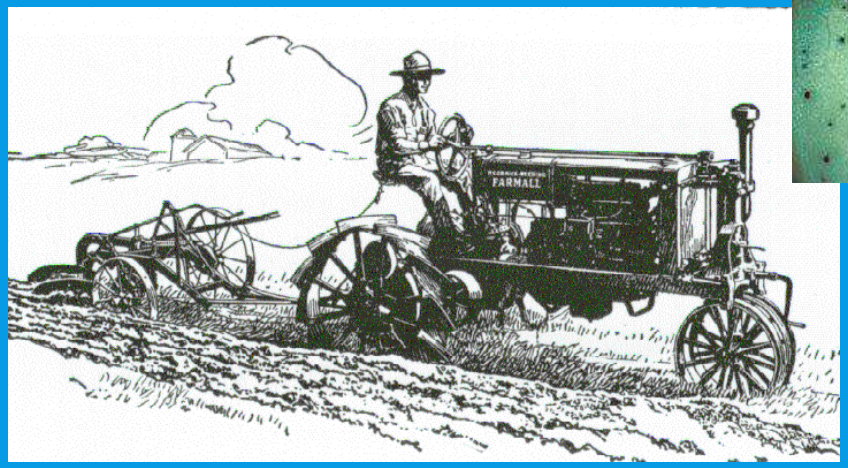
# 1880's

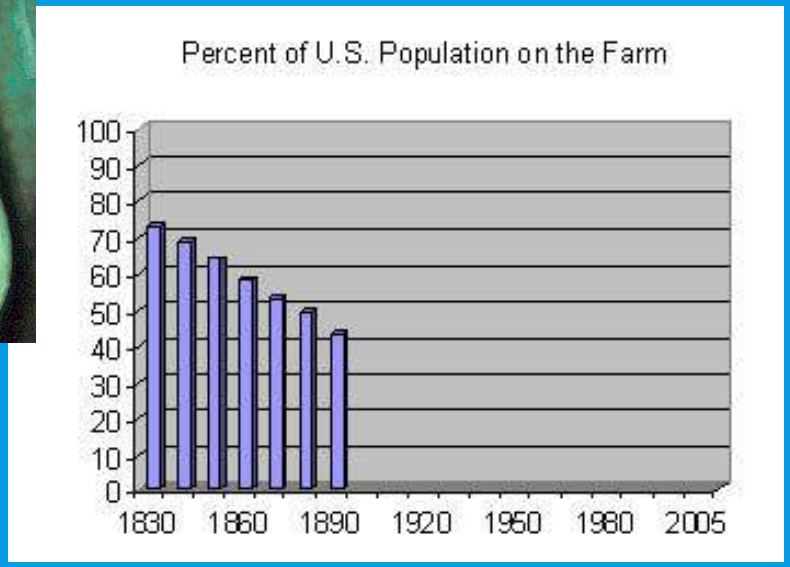
- **First hybrid crop developed – corn (*greatly increased yield and quality*)**
- **First pesticide discovered (*Bordeaux mixture increased crop yield & quality*)**
- **Federal Hatch Act (*established agricultural experiment stations nationwide*)**

# 1890's

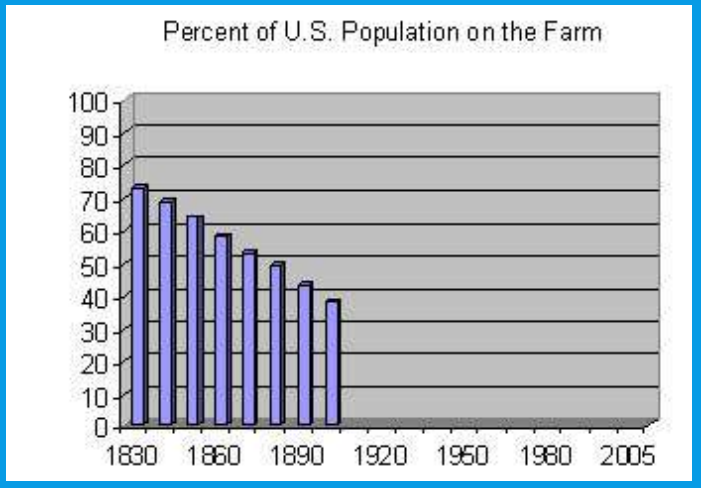
- **First gasoline tractor built (*agriculture's greatest achievement*)**
- **Boll weevil invades U.S. cotton (*forced farmers to diversify & improve land management*)**
- **Rural Free Delivery (*mail service to farmers improved communication*)**



# 1900's

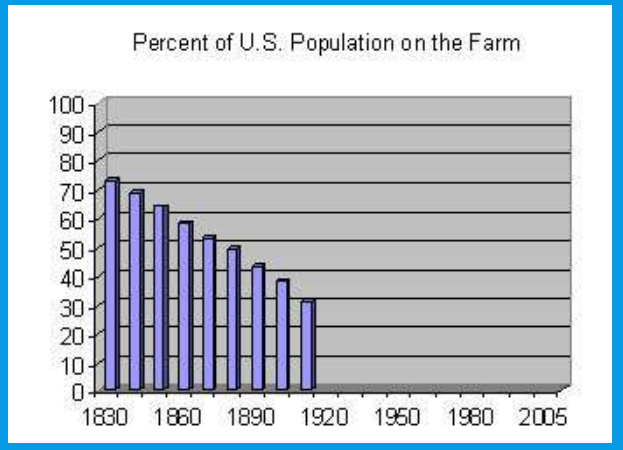
- George Washington Carver found new uses for peanuts (*agricultural expansion and diversification*)
- Hog cholera serum developed (*first commercial animal health product*)
- First agricultural extension agent hired (*dispersed agricultural research*)
- 4-H Clubs established (*first effort to educate rural youth in agriculture*)
- Food & Drug Act/Meat Inspection Act (*forced improved livestock production methods to insure food safety*)



# 1910's

- **Disease resistant plants developed (*improved crop yield and quality*)**
- **Mechanical combine developed (*threshed crops on the move to harvest more acres faster*)**
- **American Farm Bureau organized (*national farmer organization*)**
- **Smith-Lever Act (*formally established cooperative extension service*)**
- **Smith-Hughes Act (*established agricultural education in public schools*)**

AMERICAN FARM BUREAU
THE VOICE OF AGRICULTURE

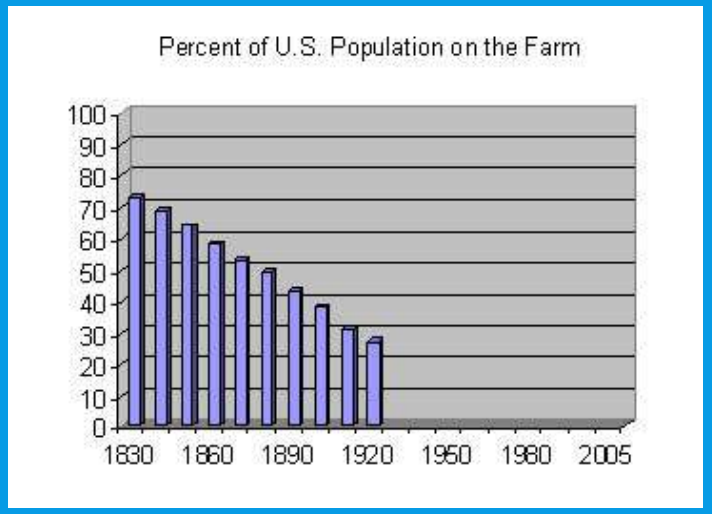





GEORGIA Agriculture Education

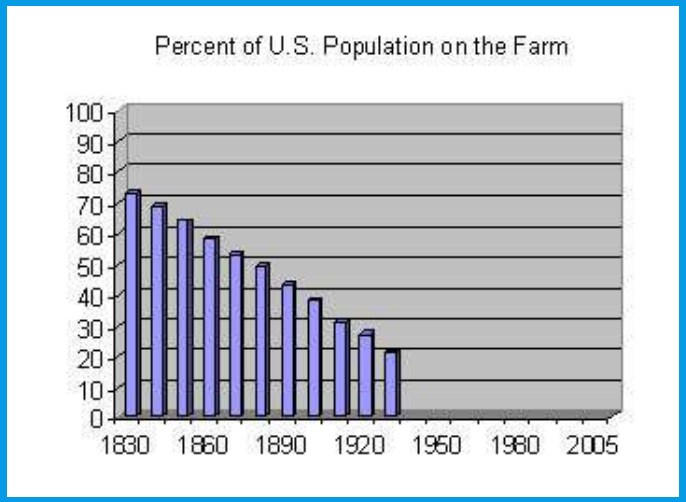
# 1920's

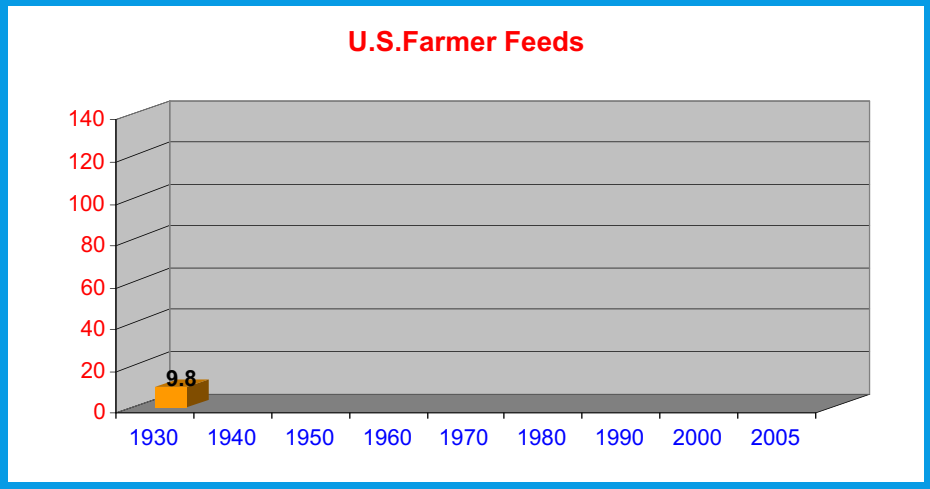
- Small tractors developed (*mechanized agriculture on small acreages*)
- Future Farmers of American founded (*agricultural youth leadership organization*)
- Agricultural research lays groundwork for second agricultural revolution



# 1930's

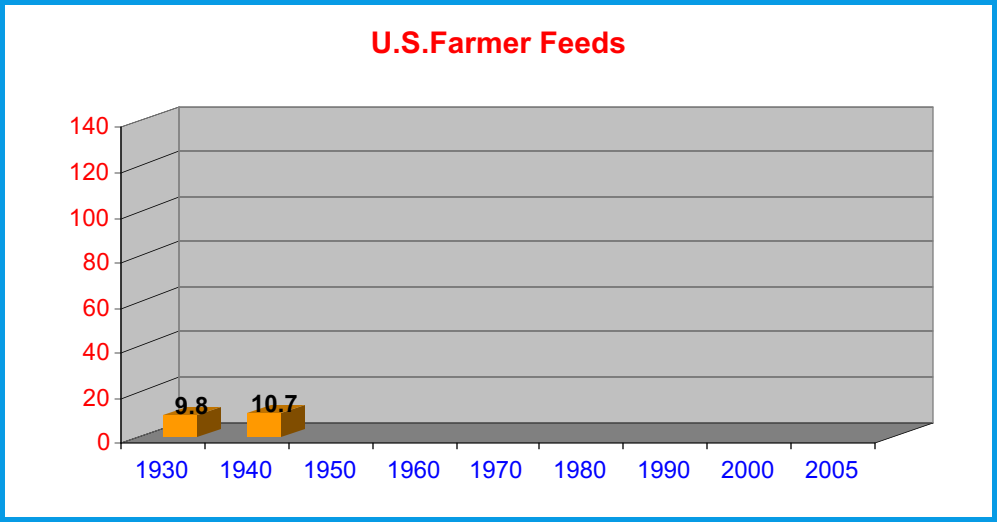
- **Artificial insemination of dairy cattle became commercially feasible due to development of liquid nitrogen (*improved animal genetics*)**
- **Rural Electrification Association founded (*made electricity available to rural America and began the move to electrical equipment*)**
- **Farm Credit Act passed (*provided money for lending to farmers*)**

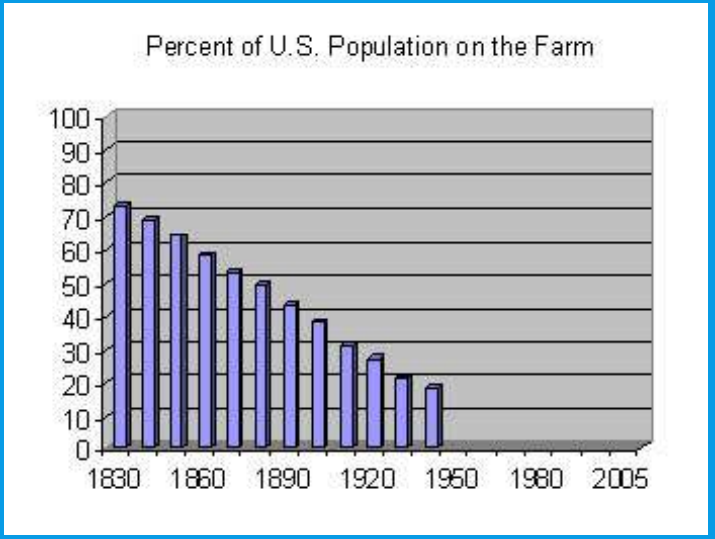


# 1940's

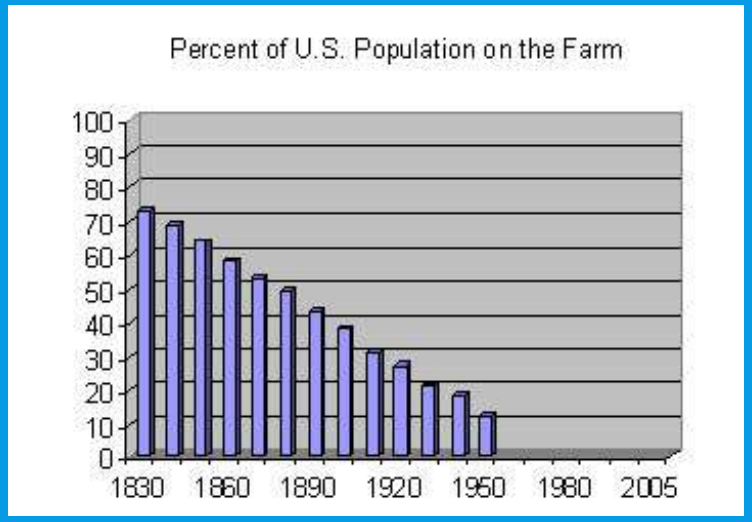
- Agricultural pesticide use becomes commercially feasible (*improves crop production and efficiency*)
- Mechanized cotton picker developed (*reduced need for manual labor*)
- End of the "sharecropper" era – agriculture becomes a business

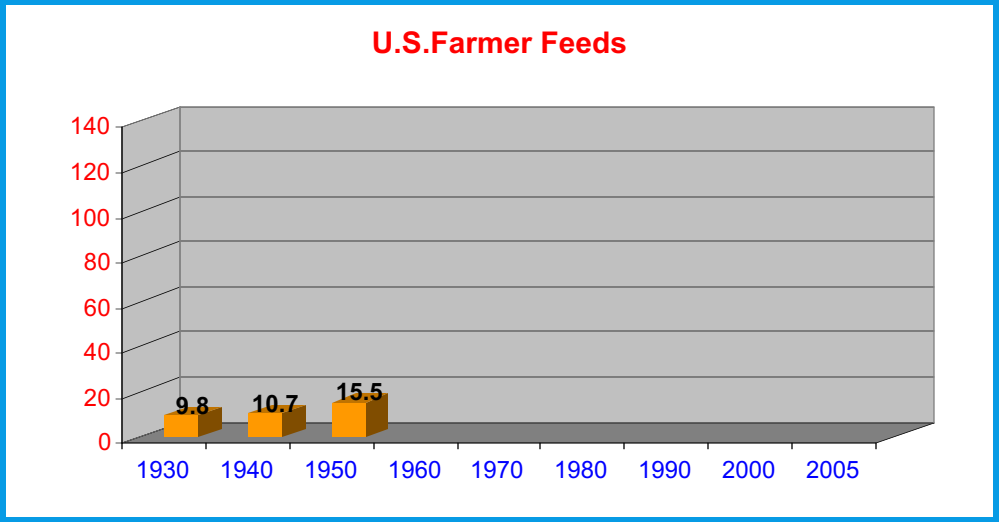


# 1950's

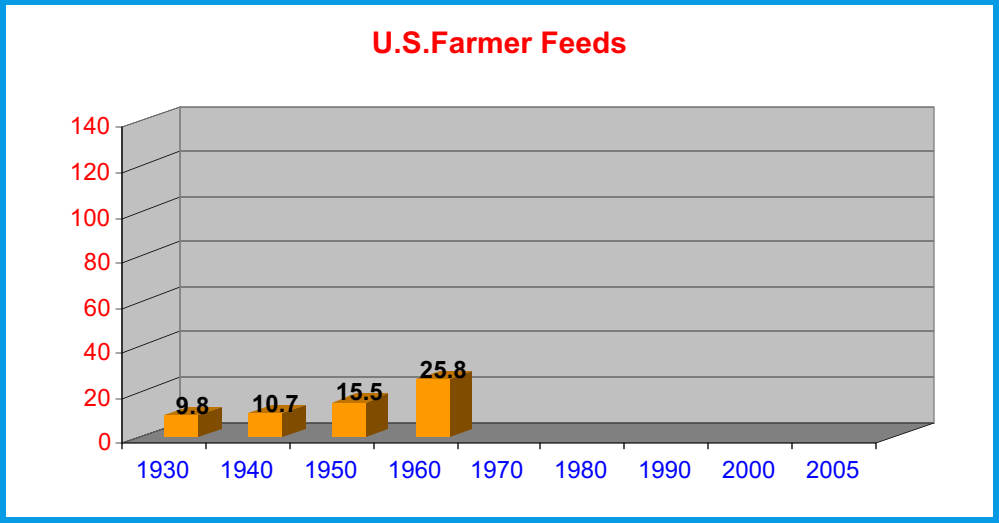
- **Anhydrous ammonia becomes available (*greatly increased crop yields*)**
- **Screw worm eradicated by release of sterile male flies (*first application of biotechnology in agriculture*)**

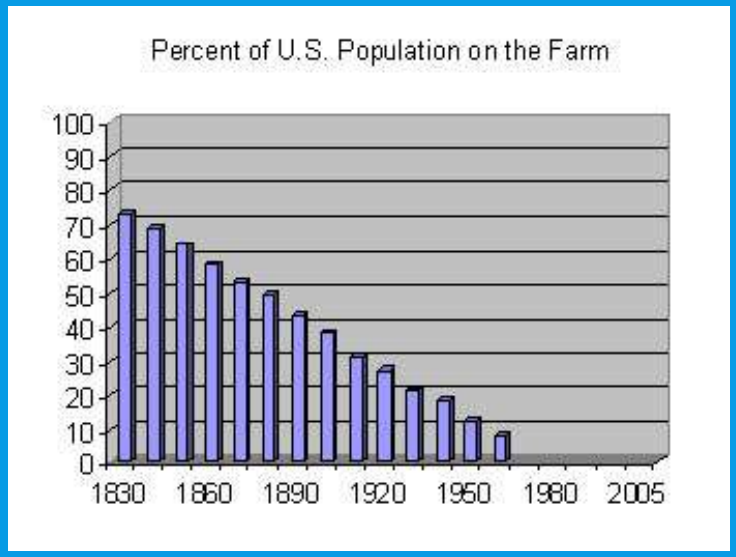


# 1960's

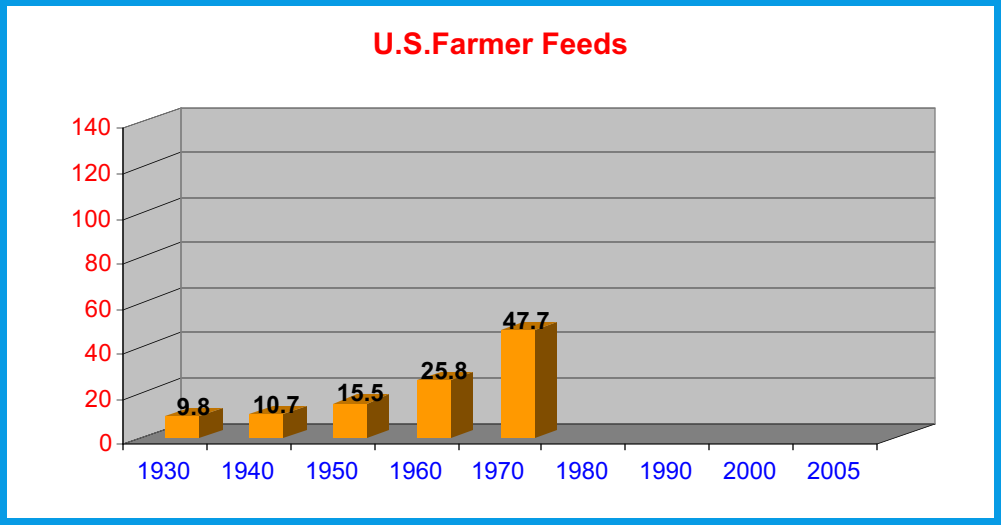
- Improved quality of life for Rural America
  - 83% of farms have telephones
  - 98% of farms have electricity
  - 98% of farms have automobiles
- American farmers experience great prosperity

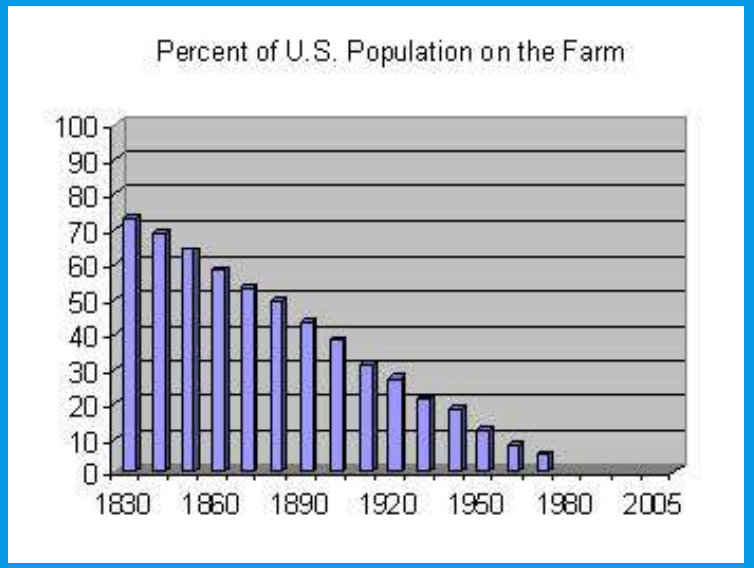


# 1970's

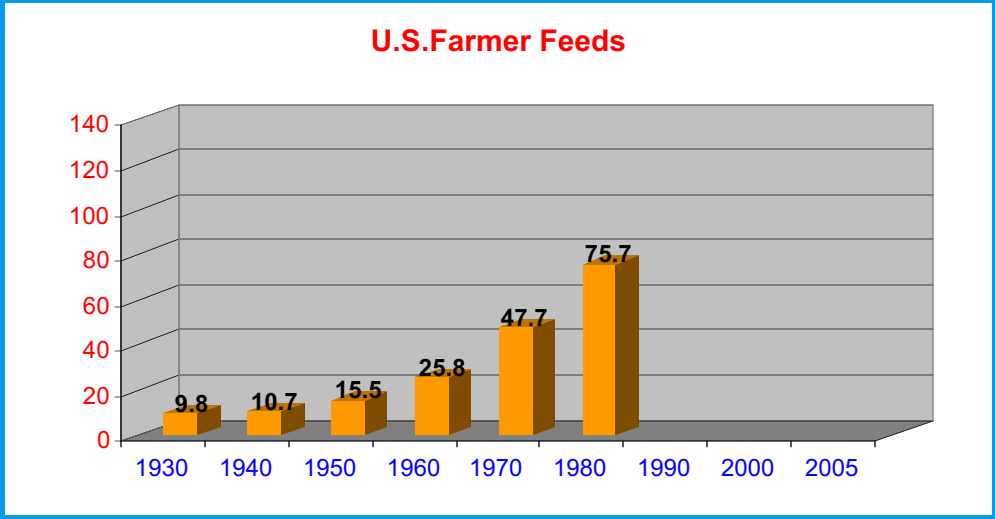
- **High-yielding wheat varieties developed (*increased ag exports & wheat acreage expansion*)**
- **Hog cholera eradicated (*first successful elimination of disease in livestock*)**

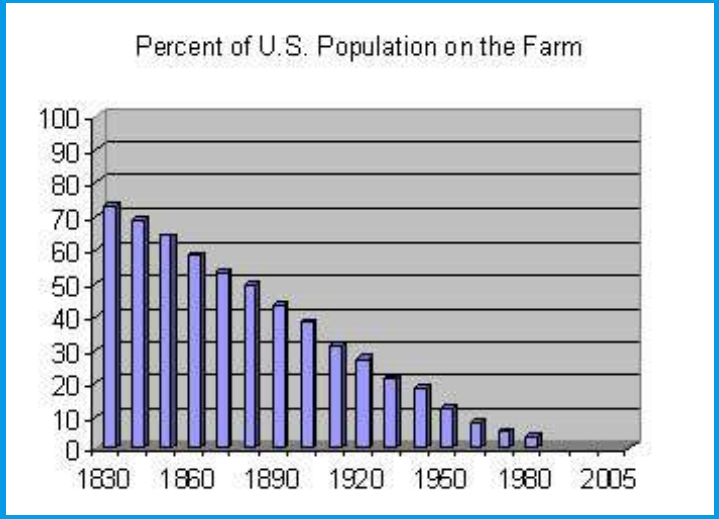


# 1980's

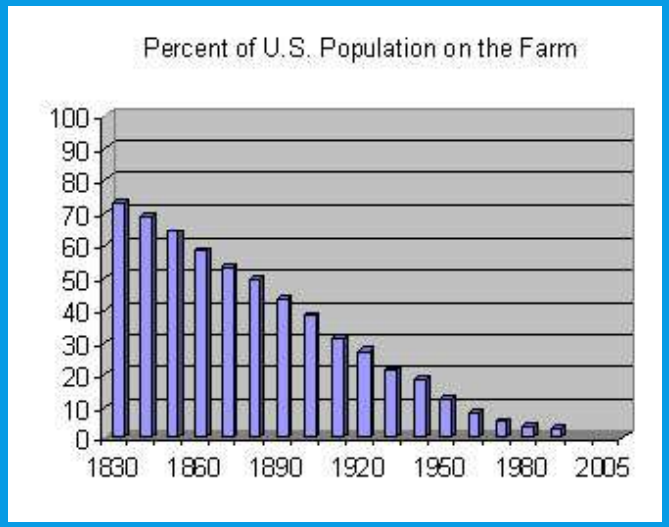
- **Computer use in agriculture (*decision-making, equipment control, marketing, communication*)**
- **Boll weevil eradicated (*first successful use of scientific research and biotechnology to eliminate a crop pest*)**
- **Embryo transfer in cattle perfected (*permitted rapid genetic improvement in livestock*)**

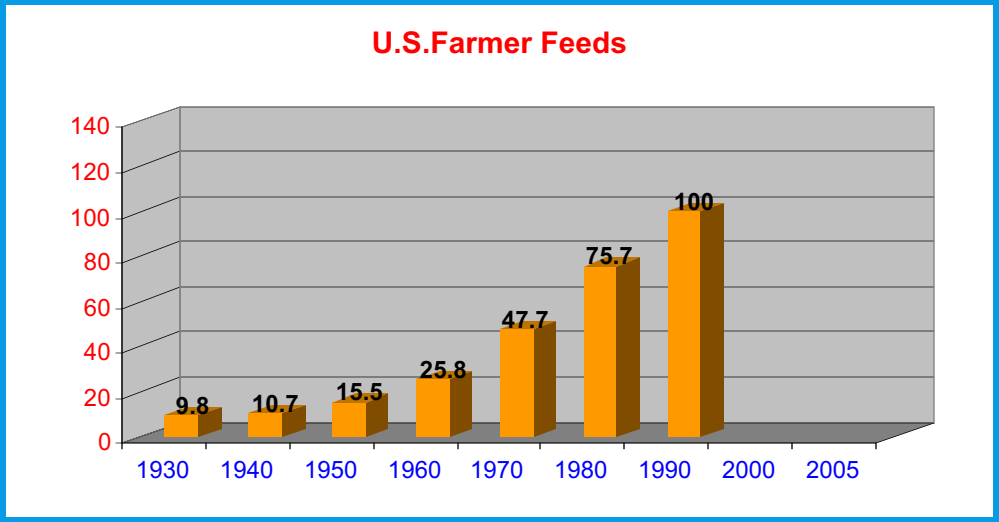


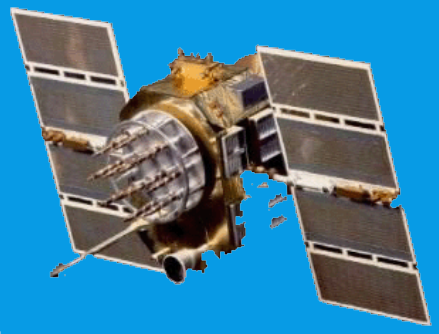



# 1990's

- **Genetic engineering developed (*used in crops in livestock to improve production and decrease pesticide use*)**
- **Precision agriculture using GPS technology (*more efficient use of fertilizer and pesticides to reduce cost and pollution*)**

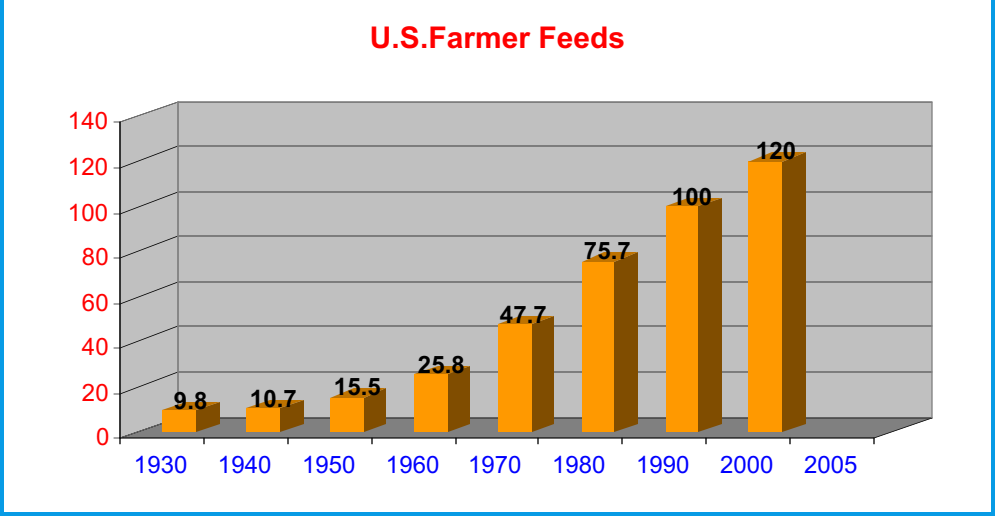


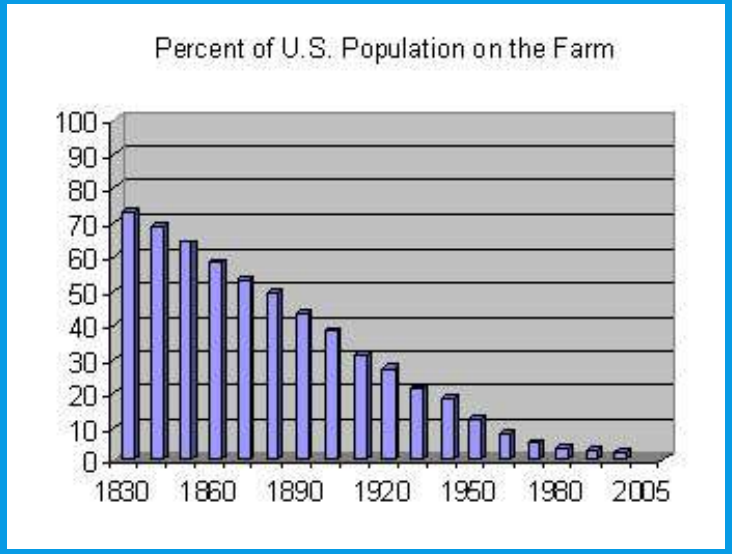



# 2000's

# What's Next?



# 2000+

**More of the same (improvements in current technology)**

**Digital animal identification**

**Biofuel use in farming**

**Intense water management**

**E-Commerce**

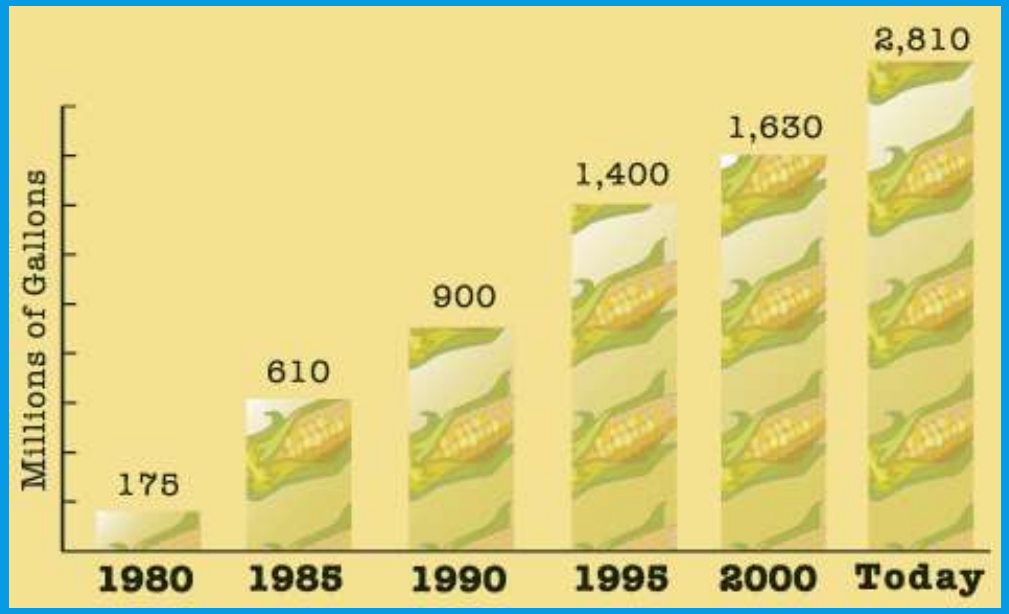
**Food security**

**Organic agriculture**

**Who knows?????**

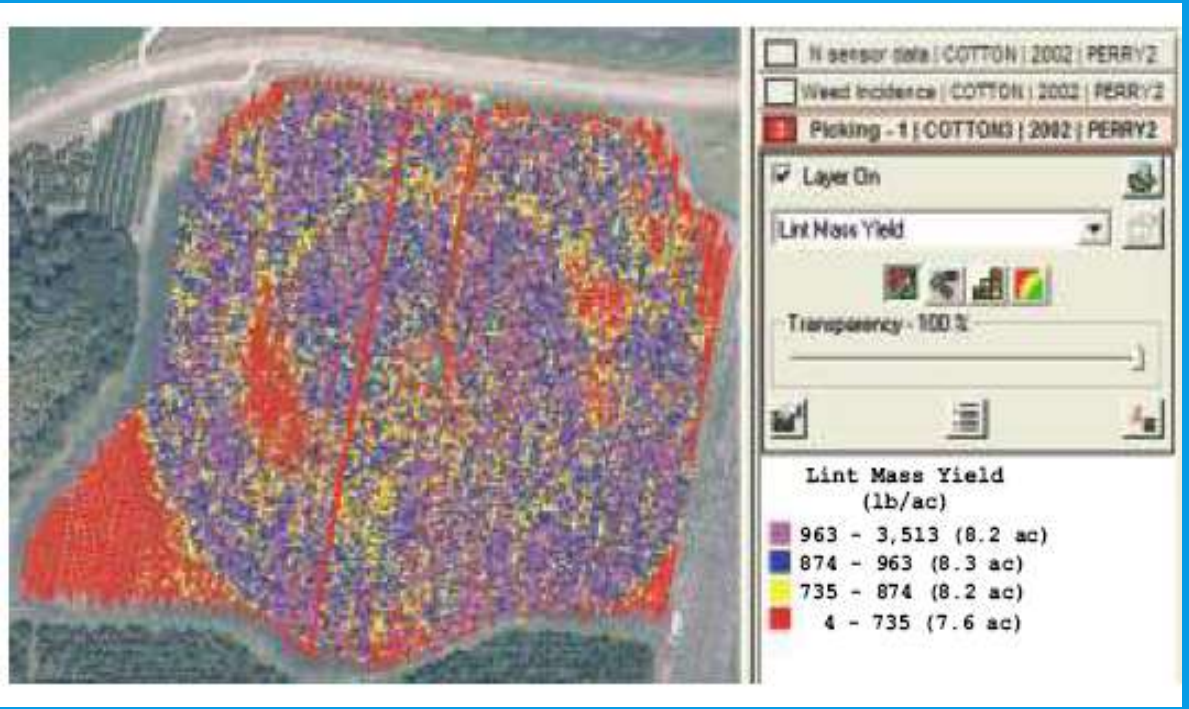
# Ethanol

With a record production of 2.81 billion gallons of ethanol in 2003, 1 billion bushels of corn and 12 percent of the grain sorghum crop were used to produce fuel for our vehicles. In 2003, 73, ethanol plants were in operation in the United States, with 14 new plants under construction.



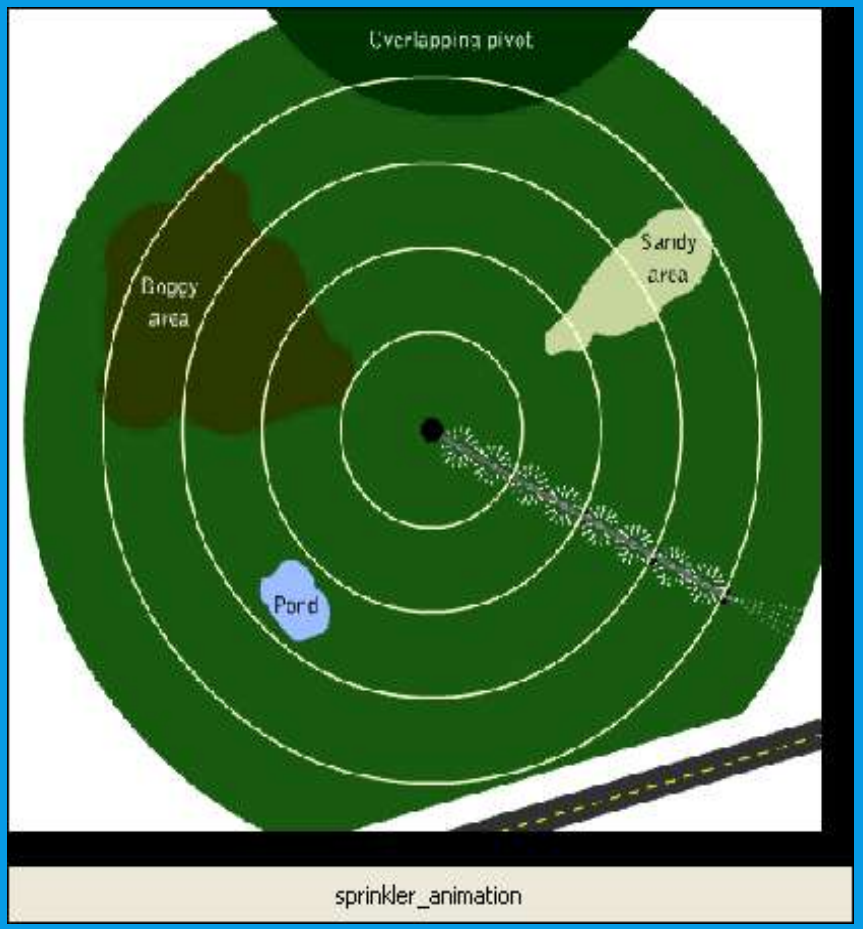
# Introduction of Precision Agriculture

- Yield Monitors
  - Cotton
  - Peanuts
  - Wheat



# Variable Rate Irrigation

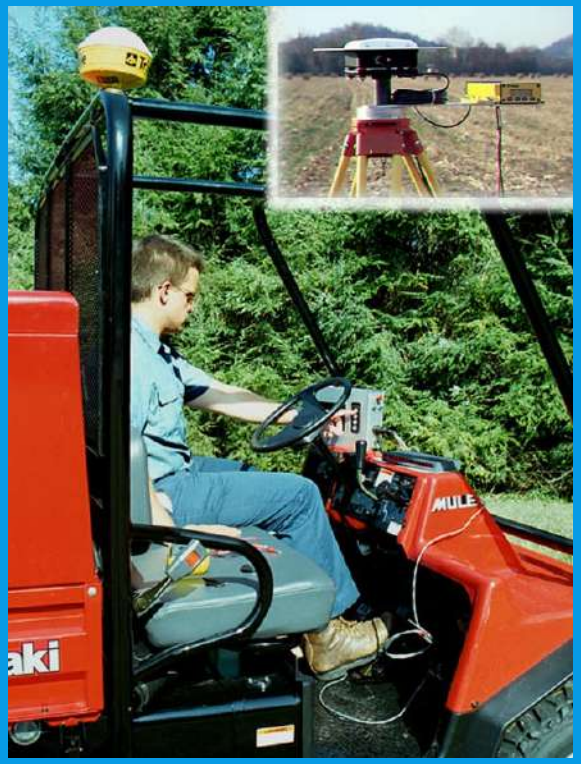
- VRI is a way to control the amount of water that is applied to a field.




http://www.nespal.org/irreff/howitworks.html

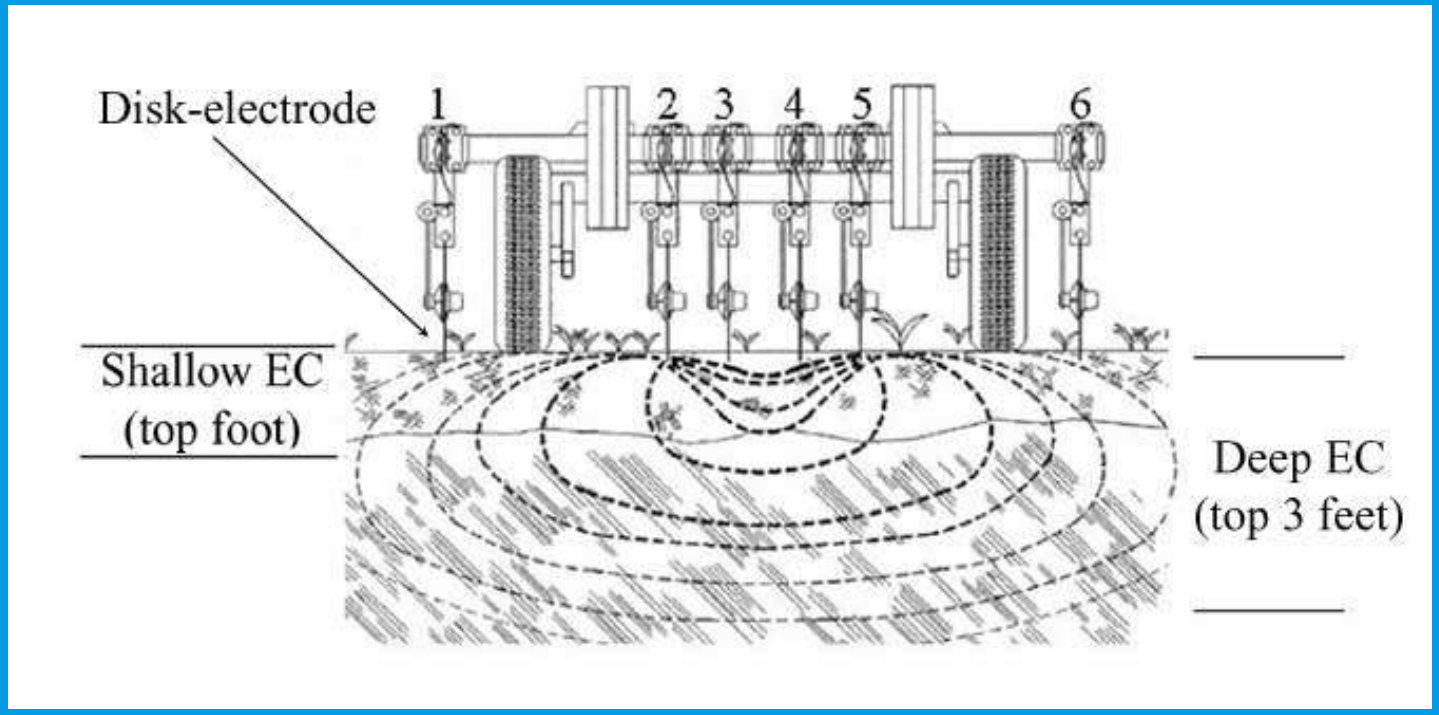
# Precision Agriculture

- Plant Breeders are working hard to create better and higher yielding crops.
- GPS, Global Positioning Systems have become a helpful tool in Agriculture.



# Precision Agriculture

- Soil Electro-conductivity monitors.



Most Americans are two to four generations removed from the farm. The general public has very little idea of what agriculture is about. Food is cheap and plentiful. Everyone takes it for granted.

~Shawn S. Stevenson

# Sources

http://nespal.org/

http://www.fb.org/brochures/farmfacts/

# Fun Facts

- Mature turkeys have more than 3,500 feathers.
- There are 47 different breeds of sheep in the U.S.
- Pork is the most widely eaten meat in the world.
- 160 degrees Fahrenheit is the correct cooking temperature to ensure safe and savory ground beef.
- Elevators in the Statue of Liberty use a soybean-based hydraulic fluid.
- Like snowflakes, no two cows have exactly the same pattern of spots.
- The longest recorded flight of a chicken is 13 seconds.
- Twenty-nine cuts of beef meet government guidelines for lean.
- The average dairy cow produces seven gallons of milk a day, 2,100 pounds of milk a month, and 46,000 glasses of milk a year.
- Turkeys originated in North and Central America, and evidence indicates that they have been around for more than 10 million years.
- Agriculture employs more than 24 million American workers (17% of the total U.S. work force).
- Today's American farmer feeds about 155 people worldwide. In 1960, that number was 25.8.
- Raising beef cattle is the single largest segment of American agriculture.
- One pound of wool can make 10 miles of yarn. There are 150 yards (450 feet) of wool yarn in a baseball.
- Soybeans are an important ingredient for the production of crayons. In fact, one acre of soybeans can produce 82,368 crayons.
- The heaviest turkey ever raised weighed 86 pounds, about the size of an average third-grader.
- Cows have four compartments in their stomach and can detect smells up to six miles away!
- Cows are herbivores, so they only have teeth on the bottom.
- There are 350 squirts in a gallon of milk.
- Cows must give birth to a calf in order to produce milk.

# Quiz

1. Annually, what percentage of their income do Americans spend on food?

A. 50%B. 10%C. 98%D. 22%

2. Who invented the reaper?

A. Cyrus McCormickB. John DeereC. InternationalD. Ford

3. In what time period was 4-H founded, G.W. Carver made new uses for peanuts, and the first Extension agent hired?

A. 1990'sB. 1870'sC. 1740'sD. 1900's

4. What percentage of people live on farms today?

A. 97%B. +50%C. less than 10%D. 88%

5. When was the USDA founded?

A. 1860'sB. 2000'sC. 1990'sD. 1950's

# Quiz Continued

6. In which decade, of those listed, did the highest percentage of people live on the farm?

A. 2000'sB. 1830'sC. 1970'sD. 1850's

7. When was the boll weevil eradicated?

A. 1840'sB. 2000'sC. 1920'sD. 1980's

8. GPS stands for Global _____ System.

A. PlacingB. PlacatedC. Picking D. Positioning

9. When was the Smith-Hughes Act passed?

A. 2000'sB. 1960'sC. 1910'sD. 1890's

10. What is a Precision Agriculture implementation to decrease the amount of water applied to a field?

A. VRIB. VREC. VRGD. VRA

# Answers

1. B
2. A
3. D
4. C
5. A
6. B
7. D
8. D
9. C
10. A