



# ROCKS TO ROBOTS: AG TECH TIMELINE GAME

Test and improve your knowledge of Illinois and agriculture history with this fun and educational game based on another popular timeline game. Wow your peers with your trivia and memory skills!

## Objective of the Game:

Be the first player to get rid of all your cards by placing them in chronological order based on significant historical events in Illinois agriculture, ag inventions, ag statistics, and innovations in farming practices.

## Directions:

### Game Setup:

1. Number of Cards: The game consists of 50 double-sided cards, each depicting an event or invention on one side and the date on the other.
2. Dealing Cards: Shuffle the cards and deal a certain number of cards to each player according to the chart below. If younger students are playing you may choose to deal fewer cards to each player. Be sure each player keeps their cards date side down! Place the remaining cards in a pile at the center of the gameplay area also with the date side down.

Number of players	2-3	4-5	6-8
Number of cards	6	5	4

3. Starting Card: Draw one card from the top of the pile and place it date side up at the center of the playing area. This card will serve as the starting place for the timeline.

### Gameplay: The youngest player goes first, and play continues clockwise.

4. Placing Cards: On their turn, a player selects one of their cards and places it next to the starting card based on their belief of its chronological position:
  - o If they think their event is **earlier**, they place their card to the **left**.
  - o If they think it is **later**, they place it to the **right**.
  - o Players can also place their cards **between** two existing cards if they believe it fits chronologically there.
5. Revealing Dates: After placing a card, the player flips it over to reveal the date.
  - o If the card is correctly placed, it remains on the table with the date side up and the game proceeds to the next player
  - o If the card is incorrectly placed, it is discarded, and the player must draw a new card from the pile.
6. Continuing Play: The next player then takes their turn, following the same rules.
  - o If a player has to place a card with the same date as another, both cards can be placed next to each other.



Science



Social  
Studies

# ROCKS TO ROBOTS: AG TECH TIMELINE GAME

## Winning the Game:

The first player to successfully place all their cards in chronological order wins the game. If multiple players finish in the same round, they all win, and the game can continue with additional rounds if desired.

These rules provide a fun and educational way to learn about historical events while challenging players' knowledge and memory. Enjoy playing Rocks to Robots!

# TEACHER RESOURCES

## Prior to Game Play:

- Learn about Illinois history and Illinois agriculture by reading through the Illinois History Ag Mag and the Illinois Agriculture Reader.
- Go to [il.aghistory.org](http://il.aghistory.org) and explore the interactive timeline where you can read, listen, and view images from different eras related to Illinois agriculture innovations and inventions.
- Go to [growinganation.org](http://growinganation.org) and explore the interactive timeline related to the history of agriculture in the United States.
- Check out any of these lessons from our website to become more familiar with significant events and inventions related to Illinois agriculture.
  - [Changes in Farming](#)
  - [Inventors John Deere and Cyrus McCormick](#)
  - [Investigate Illinois](#)
  - [Timeline of Farm Machinery & Technology](#)

## Game Play Alternatives:

- For younger students, deal fewer cards to start.
  - You may also choose to play with only one category of cards. Ex. only use the blue Illinois History cards or only the green Ag Invention cards.
- For older students, make sure each player successfully places at least one card in each category in order to win. Ex. each player must play a blue Illinois History, green Ag Invention, yellow Ag Statistic, and purple Farming Practice card in order to win the game.

## Extension Ideas:

- Go to [agintheclassroom.org](http://agintheclassroom.org) to contact your County Ag Literacy Coordinator for free classroom sets of our Ag Mags!
- Have students complete the “Ag-Venture” worksheet with the Illinois History Ag Mag to strengthen their non-fiction reading skills.
- Have students create their own version of the game but focus on one of Illinois’ top five agricultural commodities; corn, soybeans, hogs, beef, pumpkins.

## Game Development:

- This game was inspired by the original [Timeline](#) card game by Zygomatic and all of its expansions.

# TEACHER RESOURCES

## Print Playing Cards Yourself!

If you would like to print the playing cards for this game yourself, follow the instructions below.

**Disclaimer: when you print double-sided, you may encounter a slight mis-alignment between the front and back sides on most printers. Therefore, the cards may not be perfectly aligned front-to-back. This is merely an aesthetic problem... the game will play the same even if the cards aren't perfect!**

## Printing Recommendations:

- Print the following pages double sided, flip on short edge.
- For most durable cards, print on white cardstock.
- Print in full color ink, if possible!

Once printed, cut the cards out.

- The card dimension will be 2.5" x 3.5"
- There should be 52 front-and-back playing cards in total.

## Rocks to Robots: Ag Tech Timeline INSTRUCTIONS

### Game Setup:

Shuffle and deal the cards according to the chart. Keep cards with the date side down! Place remaining cards in a pile at the center of the gameplay area, also with the date side down.

### Deal:

Number of players	2-3	4-5	6-8
Number of cards	6	5	4

**Starting Card:** Draw one card from the top of the pile and place it date side up at the center of the playing area. This card will serve as the starting place for the timeline.

**Objective:** Be the first player to get rid of all your cards by placing them in chronological order.

1



## Ag

### Invention



Cyrus McCormick invents the mechanical reaper, a grain harvesting machine.

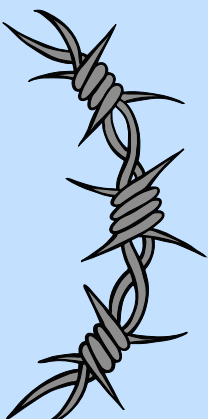


## Illinois

### History



Joseph Glidden invents barbed wire.



## Illinois

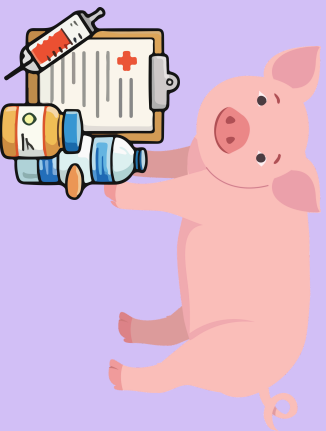
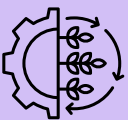
### History



Elgin Butter is released, changing how consumers buy butter.



## Farming Practice



Pig insulin is first used to treat diabetes.



## Ag

### Statistic

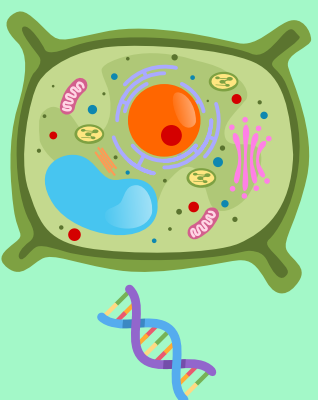


One U.S. farmer produces enough food to feed approximately 15.5 people.



## Ag

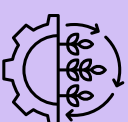
### Invention



Scientists at the Monsanto Company are the first to genetically modify a plant cell.



## Farming Practice



Drone technology becomes widely used by farmers.

**Illinois**  
History



**1906**

Elgin Butter is released, changing how consumers buy butter.

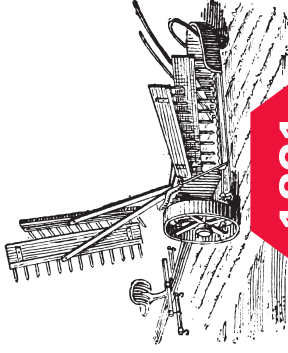
**Illinois**  
History



**1874**

Joseph Glidden invents barbed wire.

**Ag**  
Invention



**1831**

Cyrus McCormick invents the mechanical reaper, a grain harvesting machine.

**Rocks to Robots: Ag Tech Timeline**  
INSTRUCTIONS

**Game Play:**

- The youngest player goes first, and play continues clockwise.
- Placing Cards:** On their turn, a player selects one of their cards and places it next to the starting card based on their belief of its chronological position:
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2

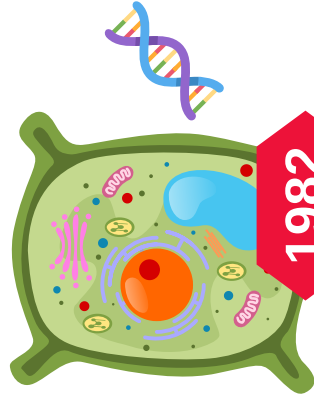
**Farming**  
Practice



**2016**

Drone technology becomes widely used by farmers.

**Ag**  
Invention



**1982**

Scientists at the Monsanto Company are the first to genetically modify a plant cell.

**Ag**  
Statistic



**1950**

One U.S. farmer produces enough food to feed approximately 15.5 people.

**Farming**  
Practice



**1930**

Pig insulin is first used to treat diabetes.

## Rocks to Robots: Ag Tech Timeline INSTRUCTIONS



### Game Play Continued:

- Continuing Play: The next player then takes their turn, following the same rules.
  - If a player has to place a card with the same date as another, both cards can be placed next to each other.

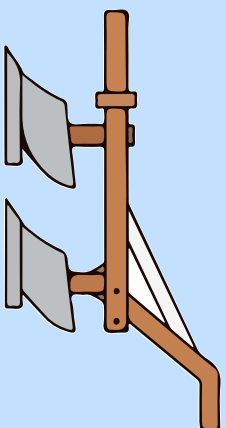
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The first player to successfully place all their cards in chronological order wins the game. If multiple players finish in the same round, they all win, and the game can continue with additional rounds if desired. These rules provide a fun and educational way to learn about historical events while challenging players' knowledge and memory. Enjoy playing Rocks to Robots!

3



## Illinois History



John Deere invents the steel plow, which is sharper, stronger, and more efficient than iron or wood plows of the time.



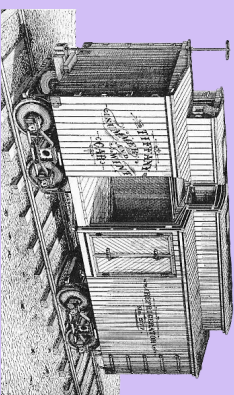
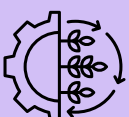
## Farming Practice



The number of tractors on farms exceeds the number of horses and mules for the first time.



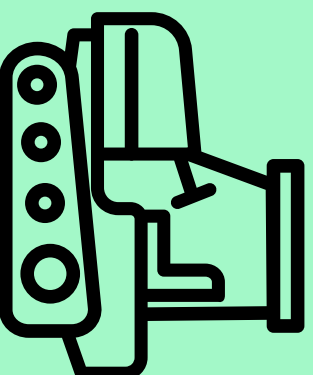
## Farming Practice



Mechanical refrigeration is first used in beef production, changing how fresh food could be transported.



## Ag Invention



Caterpillar releases the first tractor to use rubber tracks.



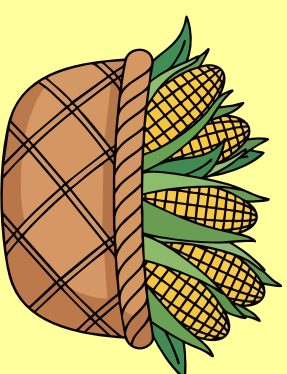
## Ag Invention



Henry Ford invents the Model T automobile.



## Ag Statistic



It takes less than 2 hours of labor to produce 100 bushels of corn.



## Ag Statistic



One U.S. farmer produces enough food to feed approximately 9.8 people.

**Ag Invention**



**1908**

Henry Ford invents the Model T automobile.

**Ag Statistic**



**2020**

It takes less than 2 hours of labor to produce 100 bushels of corn.

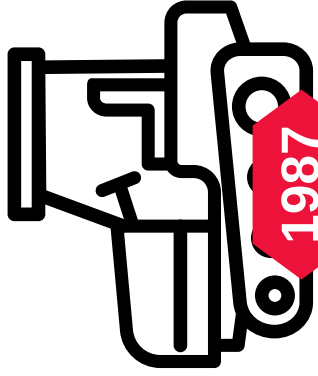
**Farming Practice**



**1880**

Mechanical refrigeration is first used in beef production, changing how fresh food could be transported.

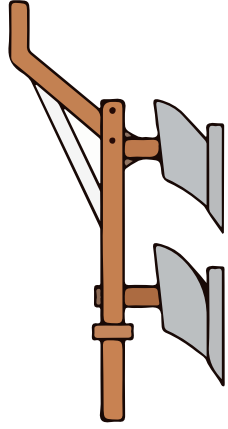
**Ag Invention**



**1987**

Caterpillar releases the first tractor to use rubber tracks.

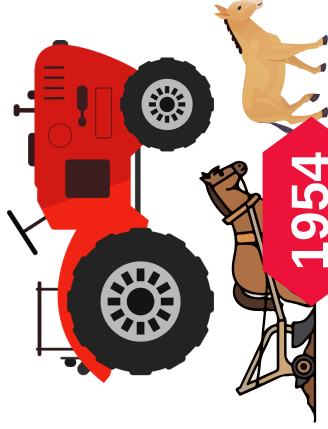
**Illinois History**



**1837**

John Deere invents the steel plow, which is sharper, stronger, and more efficient than iron or wood plows of the time.

**Farming Practice**



**1954**

The number of tractors on farms exceeds the number of horses and mules for the first time.

**Rocks to Robots: Ag Tech Timeline INSTRUCTIONS**

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**Ag Statistic**

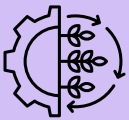


**1932**

One U.S. farmer produces enough food to feed approximately 9.8 people.



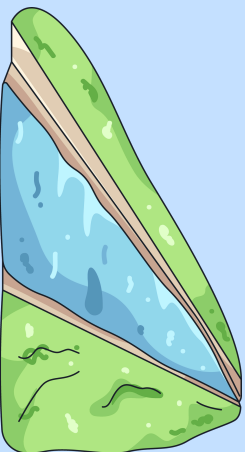
# Farming Practice



The first plows were forked sticks used by Sumerian farmers.



# Illinois History



The I & M Canal is completed in Northern Il., vastly changing water transportation for the Midwest.



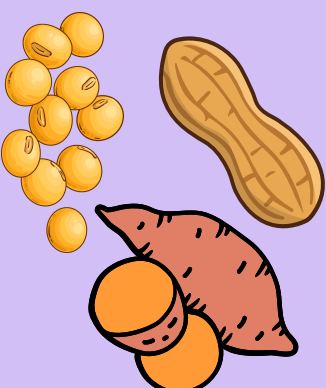
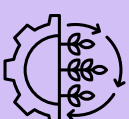
# Illinois History



Josephine Garris Cochran invents the dishwasher.



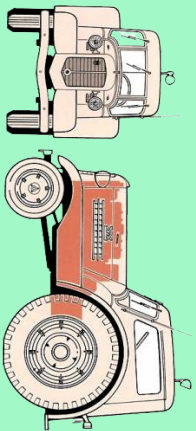
# Farming Practice



George Washington Carver changes ag in the southern U.S. when he finds new uses for peanuts, sweet potatoes, and soybeans.



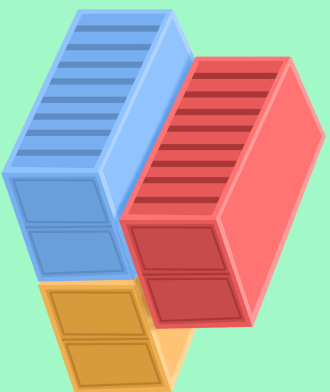
# Ag Invention



Minneapolis-Moline releases the first tractor with an enclosed cab.



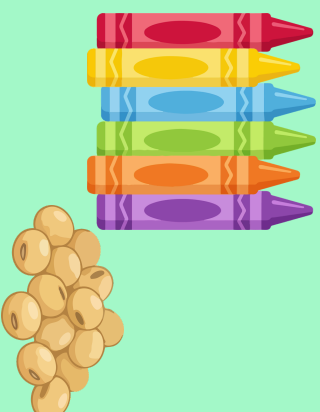
# Ag Invention



Malcom McLean invents the first standard shipping container, which changes the worldwide shipping industry.



# Ag Invention



Soybean oil crayons are first sold.




# Ag Statistic



One U.S. farmer produces enough food to feed approximately 165 people.

 Farming Practice

 Illinois History

 Illinois History

 Farming Practice



1910

George Washington Carver changes ag in the southern U.S. when he finds new uses for peanuts, sweet potatoes, and soybeans.



1886

Josephine Garris Cochrane invents the dishwasher.



1848

The I & M Canal is completed in Northern IL, vastly changing water transportation for the Midwest.



5500 BC

The first plows were forked sticks used by Sumerian farmers.

 Ag Statistic

 Ag Invention

 Ag Invention

 Ag Invention

 Ag Invention



2026

One U.S. farmer produces enough food to feed approximately 165 people.



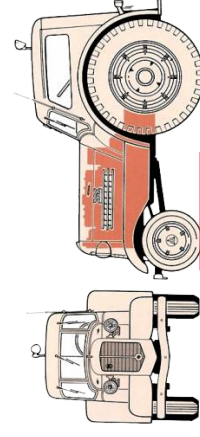
1990

Soybean oil crayons are first sold.



1956

Malcom McLean invents the first standard shipping container, which changes the worldwide shipping industry.



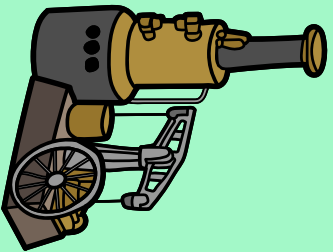
1938

Minneapolis-Moline releases the first tractor with an enclosed cab.



Ag

Invention

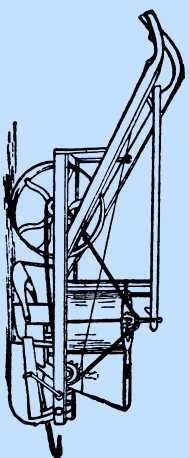


Thomas Savery invents the first steam engine.



Illinois

History

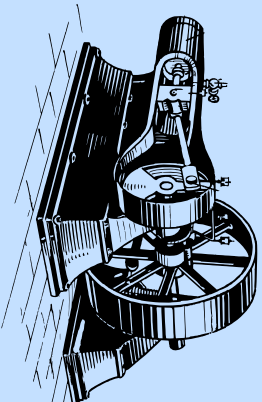


George Brown receives a patent for the first "practical corn planter".



Illinois

History

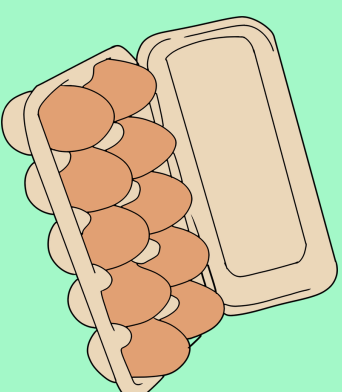


Charter Gasoline Engine Co. creates a gasoline-fueled engine, which later leads to early gas-powered tractors.



Ag

Invention

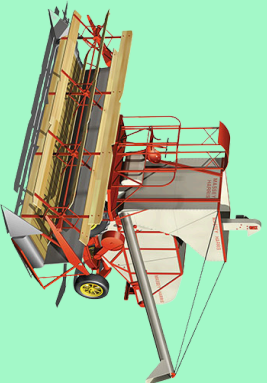


Joseph Coyle invents the modern egg carton.



Ag

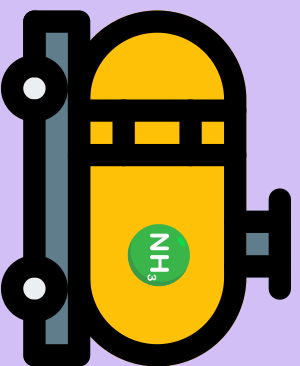
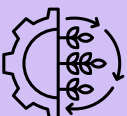
Invention



Massey Ferguson produces the first self-propelled combine.



Farming Practice



Anhydrous ammonia is widely used as a cheap source of nitrogen on farm fields.



Ag

Statistic

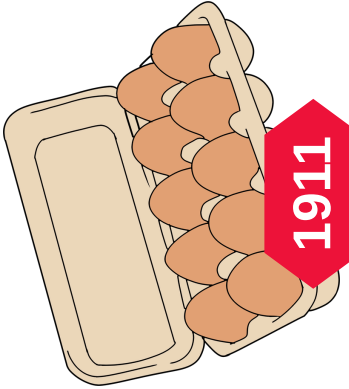


One U.S. farmer produces enough food to feed approximately 100 people.



Ag

Invention



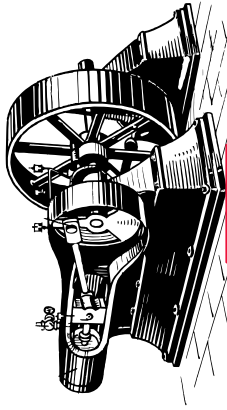
1911

Joseph Coyle invents the modern egg carton.



Illinois

History



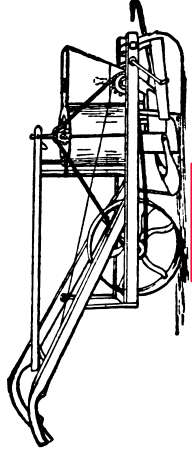
1887

Charter Gasoline Engine Co. creates a gasoline-fueled engine, which later leads to early gas-powered tractors.



Illinois

History



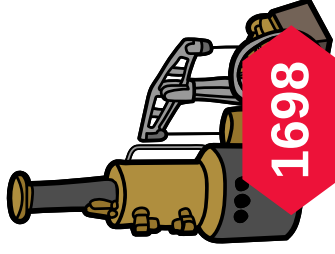
1853

George Brown receives a patent for the first "practical corn planter".



Ag

Invention



1698

Thomas Savery invents the first steam engine.



Ag

Statistic



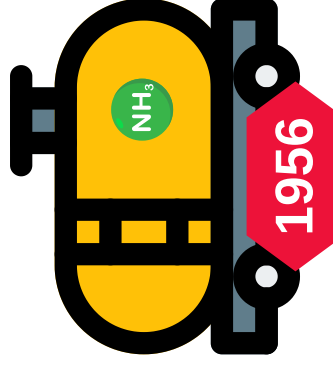
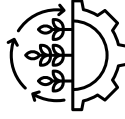
1991

One U.S. farmer produces enough food to feed approximately 100 people.



Farming

Practice



1956

Anhydrous ammonia is widely used as a cheap source of nitrogen on farm fields.



Ag

Invention



1942

Massey Ferguson produces the first self-propelled combine.



Ag

Invention

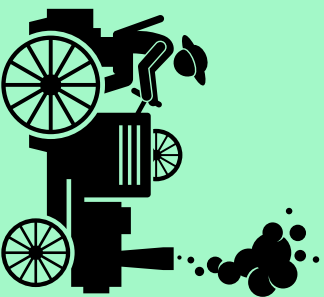


Jethro Tull invents the seed drill, a new mechanical planter.



Ag

Invention

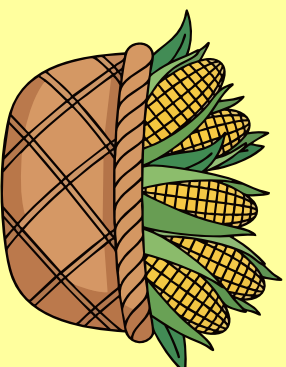
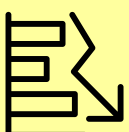


Obed Hussey invents the first self-propelled steam-powered tractor in the U.S.



Ag

Statistic

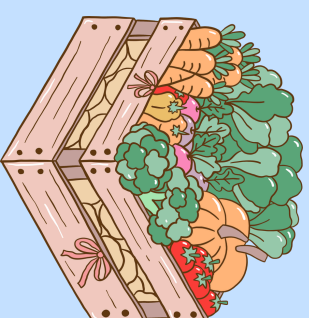


It takes 35-40 hours of labor to produce 100 bushels of corn.



Illinois

History

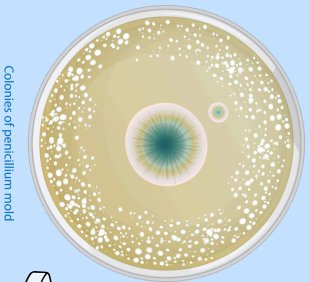


The first farmers market in Illinois begins in the town of Aurora.



Illinois

History



Colonies of penicillium mold



Important advancements are made in penicillin research at the USDA lab in Peoria.



Ag

Invention

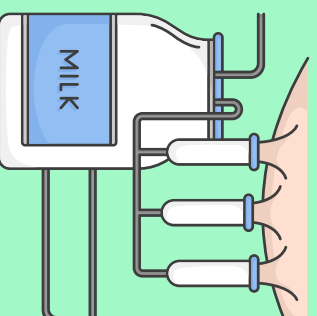


Versatile becomes the first company to produce a four-wheel-drive tractor.




Ag

Invention



Lely creates the first milking robot.

 Illinois  
History



1912

The first farmers market in Illinois begins in the town of Aurora.

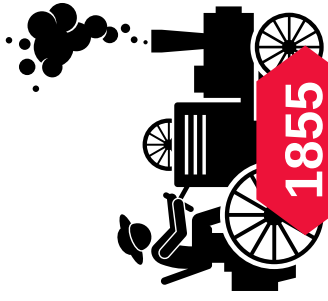
 Ag  
Statistic



1890

It takes 35-40 hours of labor to produce 100 bushels of corn.

 Ag  
Invention



1855

Obed Hussey invents the first self-propelled steam-powered tractor in the U.S.

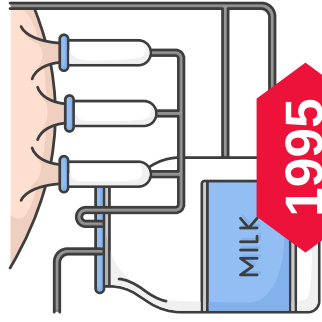
 Ag  
Invention



1702

Jethro Tull invents the seed drill, a new mechanical planter.

 Ag  
Invention



1995


Lely creates the first milking robot.

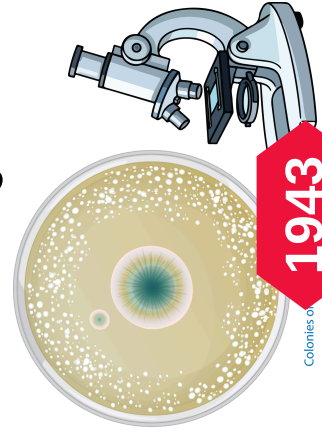
 Ag  
Invention



1966

Versatile becomes the first company to produce a four-wheel-drive tractor.

 Illinois  
History



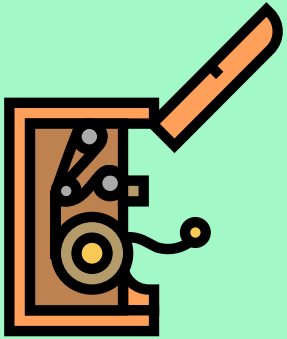
1943

Important advancements are made in penicillin research at the USDA lab in Peoria.



Ag

Invention



Eli Whitney invents the cotton gin, a machine that separates seeds from fiber.



Ag

Invention

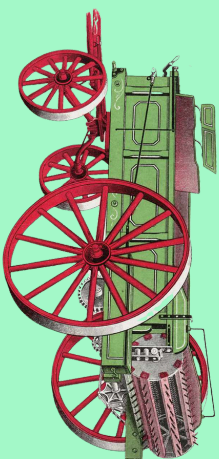


Louis Pasteur invents pasteurization, which eventually leads to huge changes in the dairy industry.



Ag

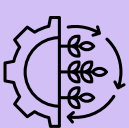
Invention



The first mechanical manure spreader is developed in Ohio.



Farming Practice

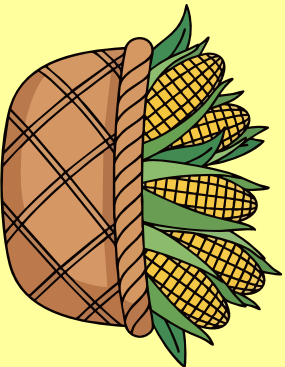


Route 66 is finished and later becomes one of the most famous roads in the world.



Ag

Statistic

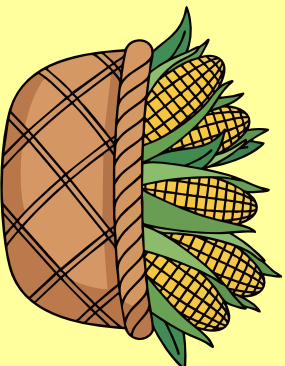


It takes 10-14 hours of labor to produce 100 bushels of corn.



Ag

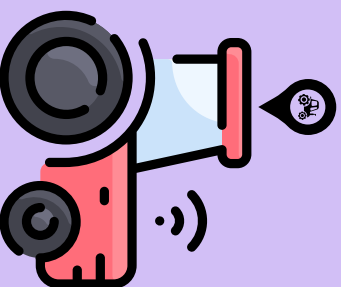
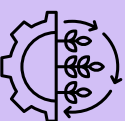
Statistic




It takes about 3 hours of labor to produce 100 bushels of corn.



Farming Practice



Farm equipment manufacturers install GPS systems in tractors.

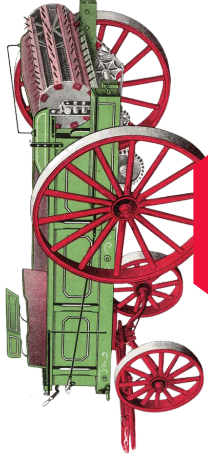
 Farming Practice



1926

Route 66 is finished and later becomes one of the most famous roads in the world.

 Ag Invention



1891

The first mechanical manure spreader is developed in Ohio.

 Ag Invention



1862


Louis Pasteur invents pasteurization, which eventually leads to huge changes in the dairy industry.

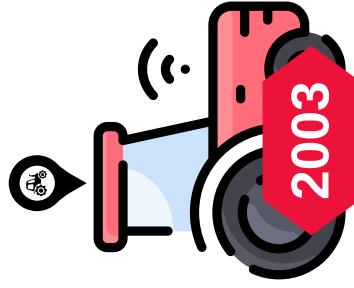
 Ag Invention



1793

Eli Whitney invents the cotton gin, a machine that separates seeds from fiber.

 Farming Practice



2003

Farm equipment manufacturers install GPS systems in tractors.

 Ag Statistic



1975

It takes about 3 hours of labor to produce 100 bushels of corn.

 Ag Statistic



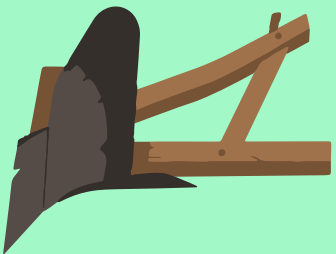
1945

It takes 10-14 hours of labor to produce 100 bushels of corn.



Ag

Invention

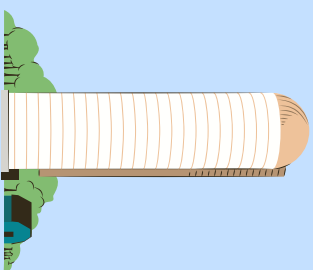


Charles Newbold patents the first cast iron plow in America.



Illinois

History

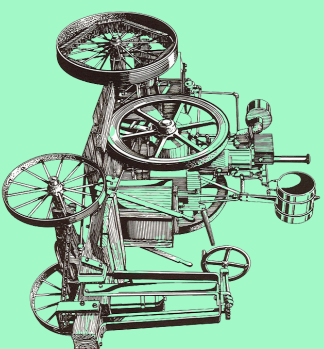


Fred Lewis Hatch builds the first ever tower silo on his farm.



Ag

Invention

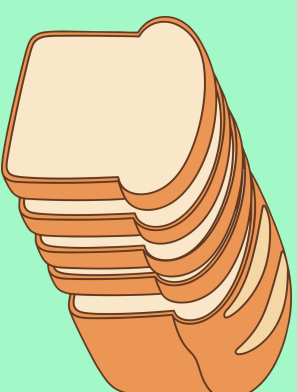


John Froelich invents the first gas-powered engine that can drive both forwards and backwards.



Ag

Invention

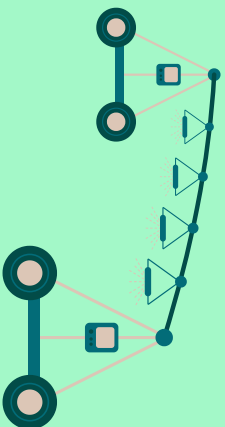


The first commercially sliced loaf of bread is sold.



Ag

Invention



Frank Zybach invents the center pivot irrigation machine.



Ag

Statistic

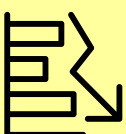


One U.S. farmer produces enough food to feed approximately 75.7 people.

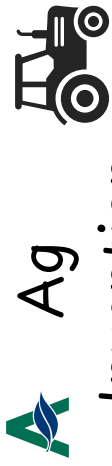


Ag

Statistic



Extreme weather events across the U.S. cause over \$24 billion in crops and property damage.

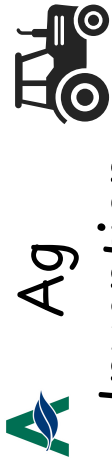


Invention

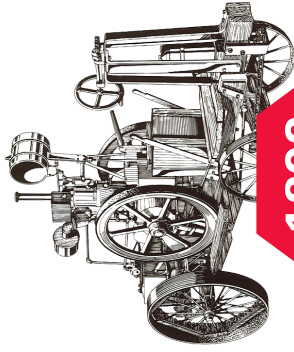


1928

The first commercially sliced loaf of bread is sold.

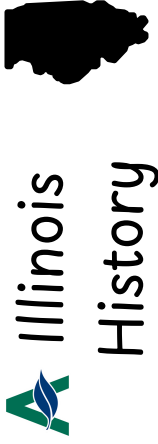


Invention

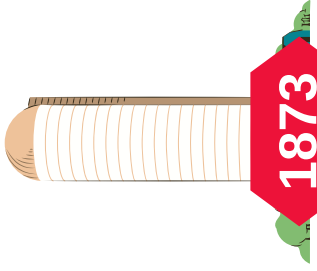


1892

John Froelich invents the first gas-powered engine that can drive both forwards and backwards.

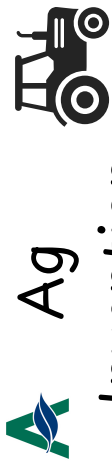


History



1873

Fred Lewis Hatch builds the first ever tower silo on his farm.



Invention



1797

Charles Newbold patents the first cast iron plow in America.

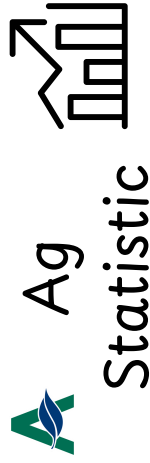


Statistic



2011

Extreme weather events across the U.S. cause over \$24 billion in crops and property damage.



Statistic

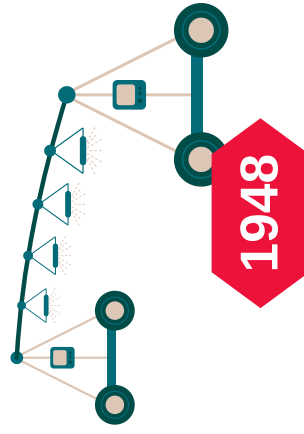


1980

One U.S. farmer produces enough food to feed approximately 75.7 people.



Invention



1948

Frank Zybach invents the center pivot irrigation machine.