

Each of the answers in this escape box corresponds with a different aspect of the soybean industry: production, processing, food production, and advocacy

- Production
 - The first answer in the lockbox activity relates to the production side of the soybean industry. There will be a multitude of clues relating to soybean production and its history. However, the answer will be a lot simpler than the students will think. To solve this clue, there is a timeline of events starting with when soybeans were first introduced into American in 1765. Another means of solving this clue is that there will be a picture of the United States Stamp act, which was announced in 1765. Also, there will be other years circled and highlighted. Just make sure 1765 is not highlighted on the soybean timeline. This lock will be on the mini box and inside of the box will be the key for one lock and the directional clue
 - **Answer-1765**
- Processing
 - The next step in the soybean industry after production is processing. For this clue, there will be a sheet of paper that explains ADM's process for taking soybeans and grinding them into soybean meal. The clue will be a directional lock and the directions on the sheet will correspond to the lock. However, to make this more challenging, the directions will not be bolded, the only thing bolded will be the word backward. That means the answer will be the reverse of what the letter says.
 - **Answer- left, down, up, left, right**
- Advocation
 - The next aspect of the soybean industry is advocacy. The clue to this answer will be a paper describing the American Soybean Administration or ASA. Also, circle and highlight any of the clues that mention ASA with a black light marker. The answer will be ASA converted into number form.
 - **Answer- 464**
- Food Production
 - The final process in the soybean industry is food production. One processing has been completed the final step is the food/meal that is sent to the consumer. There is a huge consumer market for soybean meal and oil. The clues for this lock will be pictures of a multitude of chips brands that purchase soybean oil from ADM: these include Kellogs brands, General Mills, and Heintz. To confuse the participants they will try and put in the brand in the box, but in reality, it's much simpler.
 - **Answer- Chips**

Once they finish the box, there will be the secret recipe for making soybean oil for ADM and the company is saved!

The transition of fall into winter brings a great change to all involved in agriculture in Illinois. Farmers from across this great state have just finished harvesting their soybeans and are ready to take them to market. One of the largest companies that produce these Soybeans is called ADM. Based out of Decatur, Illinois, they take the soybeans and turn them into oil for baking cookies, delicious margarine, and other tasty treats. However, there is a problem afoot at the ADM factory. They left the secret recipe for oil inside of this lockbox. No one can remember the combinations to the codes. Without this recipe, they will have to cease production. You will have twenty minutes to solve this lockbox before the farmers come to the plant with their soybeans.

Soybean Oil Secret Formula



Dear ADM customers,

I first would like to thank you for all the support and loyalty to have shown our company since 1902, we are on the right track towards success because of your business. The purpose of this letter is to explain how we convert the soybeans that we buy from you, into the soybean oil and meal used all over the world. The obvious first step is that we purchase the soybean as it is taken to a local elevator. After this deal, it is left to us to utilize the soybean into anything from soybean meal to oil. Once the soybeans have entered the facility they run through a conveyer belt that moves the beans around ensuring that any trash left does not follow the soybean. Once that has been done, the beans enter a roller mill where they are crushed down into flakes. These flakes are further diluted and worked with to create soybean oil. Or they can be left as flakes to be used in animal feed. This extremely detailed process ensures that we maintain a quality product for our customers. Everything has to be done in this order, nothing can be **backward** or the system fails. Once again thank you for your loyalty to ADM and the soybean industry.

Sincerely,

Juan R. Luciano

Chairman of the Board of Directors, President and Chief Executive Officer

Archer Daniels Midland Company



ADIM



SOYBEANS WERE
FIRST INTRODUCED
TO AMERICA IN

1765

BY SAMUEL BOWEN,
A SAILOR WHO BROUGHT
THEM BACK FROM CHINA.

SOYBEANS

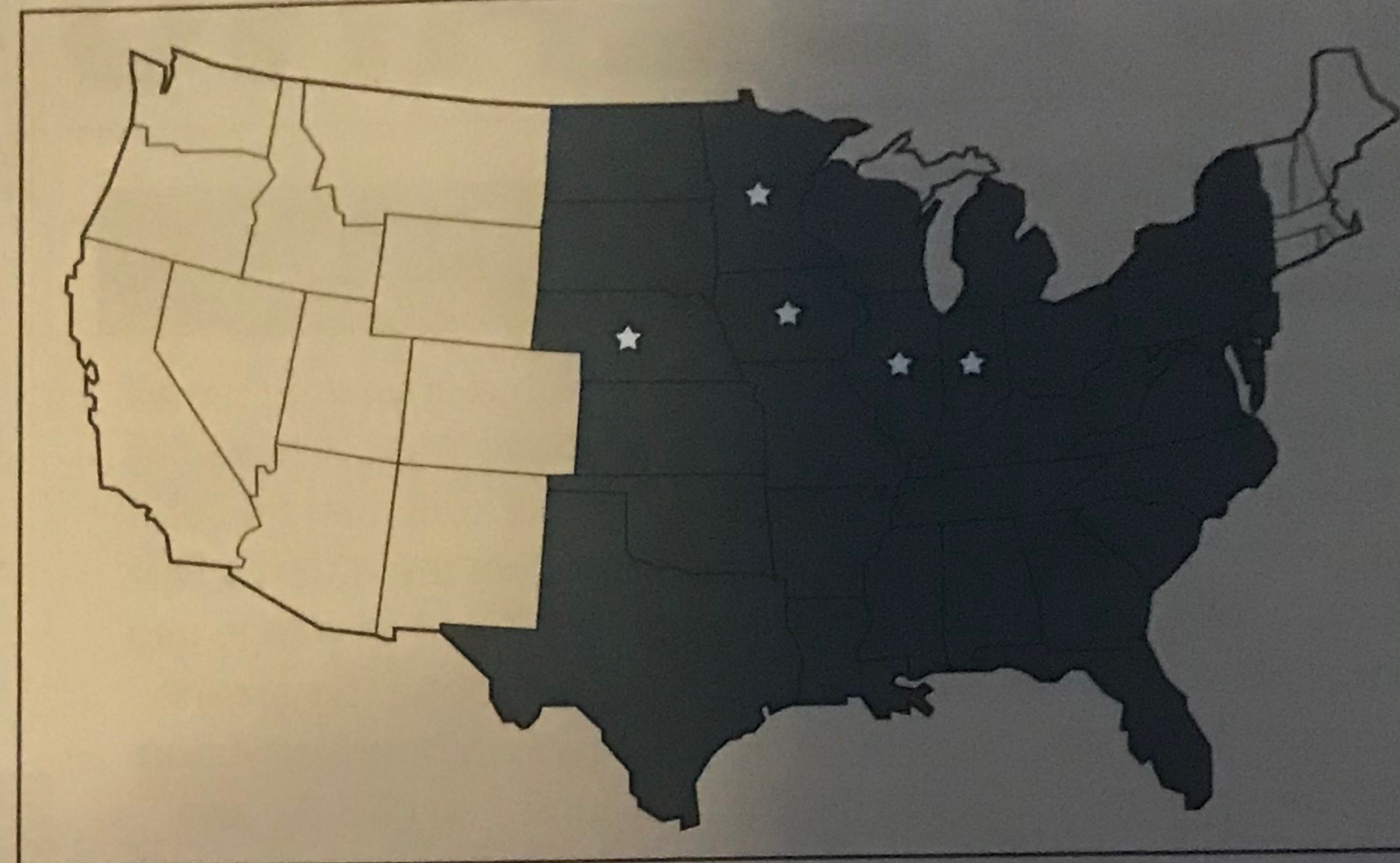
UNITED STATES SOYBEAN PRODUCTION

■ Soybean producing states

Alabama, Arkansas, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Jersey, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Virginia, West Virginia and Wisconsin

☆ Top 5 soybean producing states

Iowa, Illinois, Minnesota, Nebraska and Indiana



SOYBEAN TIMELINE

Farmers in China began growing soybeans **MORE THAN 5,000 YEARS AGO.**

1765 — Soybeans, or “Chinese vetches” as they were known, were introduced to North America.

1804 — James Mease, a physician and amateur horticulturalist, reported that soybeans had adapted to Pennsylvania's growing climate.

1861-1865 — Soybeans were used to brew a hot drink for soldiers during the Civil War.

1898 — The United States Department of Agriculture (USDA) introduced several varieties of soybeans from Asian countries and set up a system to keep track of the different kinds of seeds.

1904 — George Washington Carver began studying soybeans at the Tuskegee Institute in Alabama. Carver discovered a method of extracting soybean oil and also invented a process

for making paints and stains from soybeans. Farmers in the South were encouraged to plant soybeans to keep the soil fertile for their cotton crop.

1907 — William J. “Bill” Morse joined the USDA and devoted his life to studying soybeans. He was also the founder of the American Soybean Association and wrote more than 80 publications about soybeans.

1920s — Palemon Howard (P.H.) Dorsett and William Morse traveled to China and Korea collecting varieties of soybeans. Over 10,000 varieties were sent back to the United States from their excursions.

1940 — Henry Ford took an ax to a car trunk made with soybean plastic to demonstrate its durability. This increased the popularity of soybeans and the United States began to export soybeans and soybean products.

1950s — Soybean meal became available to use as a livestock feed ingredient. It was high in protein and low-cost. This prompted a large increase in livestock and poultry production in the United States.

1994s — Soybean-based crayons win the first Indiana Soybean Development Council/Purdue University Soybean Utilization Contest.

2002 — USDA's Agricultural Research Service begins heating its buildings in Beltsville, Maryland, and fueling all its diesel vehicles, generators and equipment sterilizers with B20 made from soybeans.

TODAY — Farmers throughout the United States produce 3,329.3 million bushels of soybeans each year. Iowa produces 466 million bushels yearly making them 1st in soybean production.

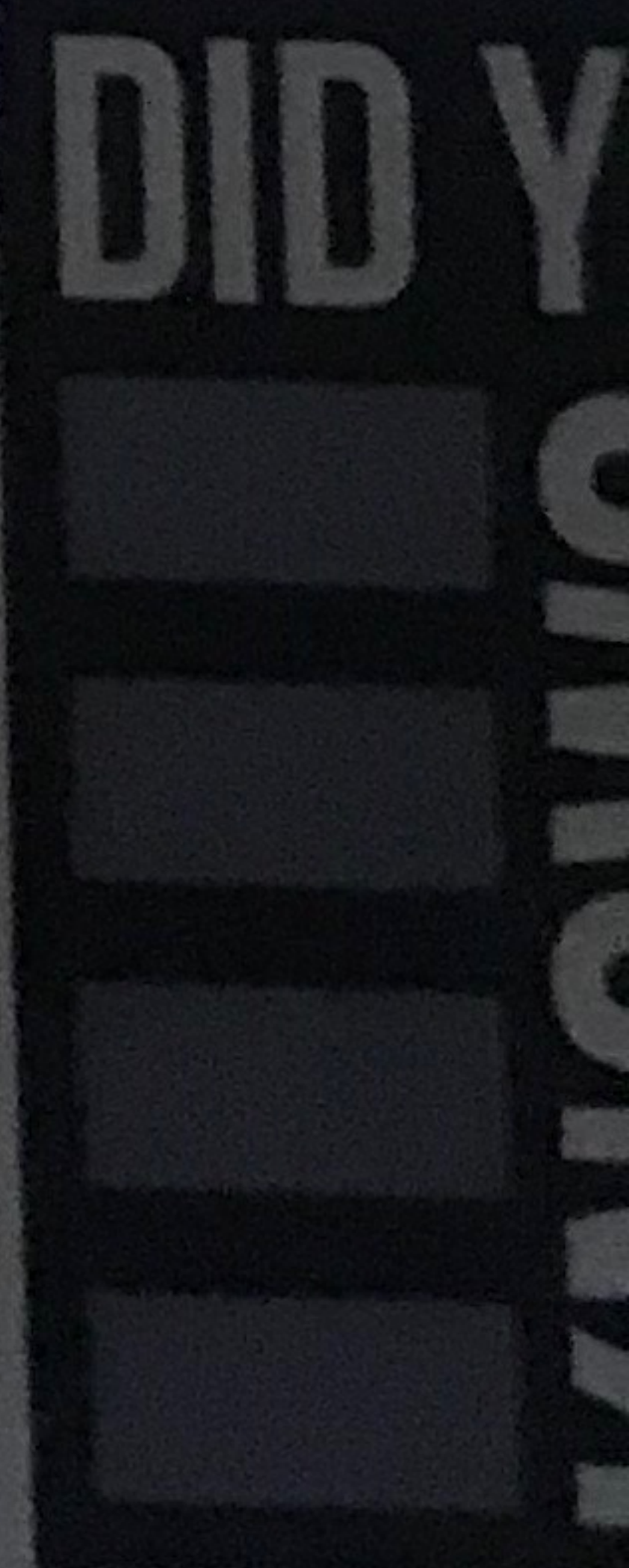
One acre of soybeans can produce 82,368 crayons.

Soy ink is used in over 95 percent of America's daily newspapers that circulate more than fifteen hundred copies per run.

Livestock are the largest consumers of soy meal.

A bushel of soybeans weighs about 60 pounds.

One and a half gallons of biodiesel and 48 pounds of soybean meal can be produced from one bushel of soybeans.



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Overview

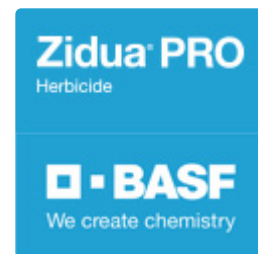
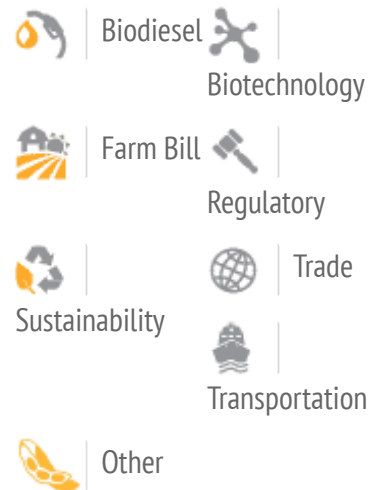
For the past 98 years, the American Soybean Association has met the demands of a growing world. The American soybean farmer has a tremendous opportunity to answer the call of agricultural needs throughout the world. ASA has 26 affiliated state soybean associations representing 30 soybean producing states and more than 300,000 U.S. soybean farmers.

A primary focus of the American Soybean Association is policy development and implementation. Policy development starts with the farmer/members and culminates at an annual meeting of voting delegates.

ASA is tasked with accomplishing the policy goals established by the farmers/members/delegates. ASA does this by testifying before Congress, lobbying Congress and the Administration, contacting members, and meeting with the media. This legislative process cannot happen without member input and support.



ISSUES



REGISTRATION FOR
ASA VOTING DELEGATES - 2019

TOP STATES *for* PRODUCTION of Farm Products

U.S. FARM PRODUCTS

U.S. FARM PRODUCTS	MILLION	TOP 3 STATES BY VALUE OF CASH RECEIPTS (MILLION \$)		
1 CATTLE & CALVES	\$78,229	Nebraska \$12,552	Texas \$11,364	Kansas \$8,839
2 CORN	\$47,204	Iowa \$8,085	Illinois \$7,610	Nebraska \$5,763
3 DAIRY PRODUCTS	\$35,739	California \$6,293	Wisconsin \$5,121	New York \$2,558
4 SOYBEANS	\$33,184	Illinois \$4,761	Iowa \$4,334	Minnesota \$2,767
5 CHICKENS (Broilers)	\$28,710	Georgia \$4,252	North Carolina \$3,452	Alabama \$3,321
6 HOGS	\$21,032	Iowa \$7,512	Minnesota \$2,528	North Carolina \$2,284
7 CHICKEN EGGS	\$13,500	Iowa \$1,534	Ohio \$1,212	Indiana \$1,066
8 WHEAT	\$9,473	North Dakota \$1,655	Kansas \$1,416	Montana \$919
9 HAY	\$6,955	California \$958	Idaho \$440	Washington \$410
10 TURKEYS	\$5,708	North Carolina \$885	Minnesota \$801	Indiana \$610

ONE ACRE

OF SOYBEANS CAN BE USED TO MAKE

=



2,500
GALLONS OF
SOY MILK



MORE THAN
40,000
8 oz. SERVINGS
OF TOFU



OVER
82,000
CRAYONS

An illustration depicting a historical scene, likely related to the Stamp Act of 1765. In the foreground, a man in a blue coat and brown breeches stands on the right, looking towards the left. He is holding a large, dark object, possibly a hat or a piece of clothing, aloft. To his left, a group of men are gathered, some holding torches that are lit, creating a dramatic, fiery atmosphere. The background shows a wooden structure, possibly a building or a fence, and a cobblestone ground. The overall style is that of a historical illustration or a book cover design.

TURNING POINTS IN U.S. HISTORY

The
Stamp Act
of 1765

Dennis Brindell Fradin



ILLINOIS WAS THE TOP SOYBEAN-PRODUCING STATE IN 2017,
GROWING NEARLY 612 MILLION BUSHELS OF SOYBEANS.



THE SOYBEAN VALUE CHAIN EMPLOYS NEARLY 115,000 ILLINOISANS
THAT GENERATE \$849 MILLION IN STATE AND LOCAL TAX REVENUE.



HOGS EAT 74% OF THE SOYBEAN MEAL FED IN ILLINOIS.



THE BIODIESEL INDUSTRY SUPPORTS APPROXIMATELY 2,000
ILLINOIS JOBS. A RENEWABLE FUEL, BIODIESEL IS MADE IN PART
FROM SOYBEANS.



58% OF ILLINOIS SOYBEAN ACRES ARE FARMED WITH SOME FORM OF CONSERVATION TILLAGE, WHICH LEAVES STALKS AND PLANT MATTER FROM THE PREVIOUS YEAR'S HARVEST ON THE GROUND TO PREVENT SOIL EROSION AND PROTECT WATER QUALITY.



THERE ARE 43,000 ILLINOIS SOYBEAN FARMERS AND 10.5 MILLION SOYBEAN ACRES COVERING ABOUT 1/4 OF ILLINOIS.



ABOUT 40% OF OUR WHOLE SOYBEANS ARE CRUSHED IN ILLINOIS, AND THE MEAL FEEDS LIVESTOCK AND POULTRY. THE REST ARE EXPORTED AND CRUSHED OVERSEAS.



THE ILLINOIS SOYBEAN CROP ADDS NEARLY \$7.48 BILLION IN ECONOMIC IMPACT TO OUR STATE.



WITH 48 TOTAL RAILROAD COMPANIES, ILLINOIS IS THE THE ONLY STATE IN WHICH ALL SEVEN CLASS I FREIGHT LINES OPERATE AND HAS MORE THAN 7,000 MILES OF TRACK TO MOVE COMMODITIES LIKE SOYBEANS.



ILLINOIS USES MORE BIODIESEL THAN ANY OTHER STATE. BIODIESEL REDUCES PARTICULATE MATTER BY 47%, MEANING LESS SMOG AND CLEANER AIR ACROSS ILLINOIS.



ANIMAL AG IS THE NO. 1 CUSTOMER FOR SOYBEANS. OF THE SOYBEAN MEAL FED IN ILLINOIS, PIGS CONSUME 74%, POULTRY 13%, AND BEEF AND DAIRY CATTLE 12%.



- A=4
- B=3
- C=2
- D=9
- E=3
- F=4
- G=8
- H=0
- I=1
- J=6
- K=7
- L=0
- M=3
- N=1
- O=2
- P=3
- Q=4
- R=3
- S=6
- T=2
- U=1
- V=9
- W=7
- X=8
- Y=7
- Z=4