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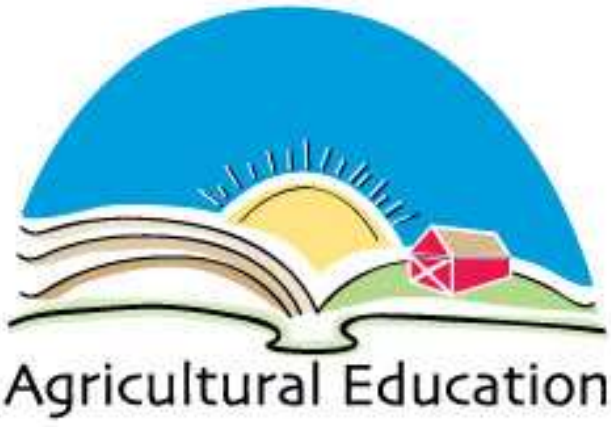


# Agriculture and the Government

**Subjects: American History, Economics, Civics, Current Events, Mathematics**

## Brief Description

Misconceptions about the government's involvement in our food production system will be addressed in this lesson. Students will examine the history, current data, current agricultural programs, and make comparisons to what they believe they understand about farm programs.

## Objectives

At the end of this unit, the students will be able to:

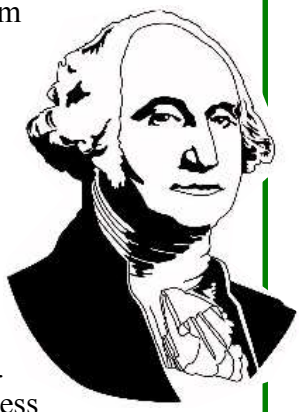
1. describe how much of the United States Department of Agriculture's budget is allocated to social welfare programs, food safety, conservation programs, and farm subsidies;
2. read a selection for content and research governmental support for agriculture;
3. analyze graphic depictions of information;
4. depict information graphically;
5. calculate percentages from data provided; and
6. describe trends in federal spending.

**Vocabulary**: Niche, infrastructure, heifer

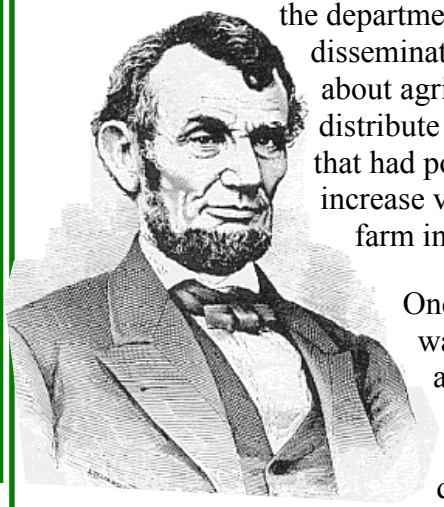
**Skills:** Analyzing, applying, calculating, collaborating, collecting data, communicating, comparing similarities and differences, comprehending, concluding, creating graphs, creative thinking, debating, discussing, evaluating, identifying, inferring, interpreting, listening, reading, recording, researching, sequencing, synthesizing, writing

## Supporting Information

Much has been written, reported and criticized about farm programs. As with other subjects that are foreign to those no longer involved in production agriculture, farm programs are not easily understood. However, since the abundance of food is essential to any civilization, there has long been public support to ensure a stable and affordable food supply.



Government support for agriculture began early in our nation's history. Presidents Washington and Jefferson experimented with new plants and growing techniques as farmers. George Washington first suggested that Congress create an agriculture department in 1799. Several actions occurred before the creation of a Department of Agriculture. First, the United States Patent Office and agriculture committee in the House of Representatives followed by an agriculture committee in the Senate were formed. The Department of Agriculture was actually started by Abraham Lincoln. He signed the bill into law authorizing the formation of the department on May 15, 1862, and called it the "people's department." Initially, the objectives of the department were to collect, analyze and disseminate information and statistics about agriculture, and collect and distribute new plants and plant materials that had potential to improve production, increase variety of foods, and improve farm income.

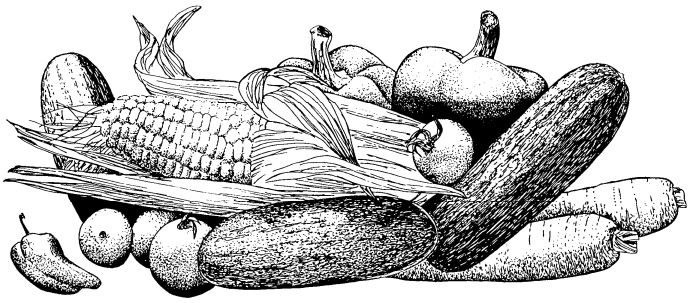


Once the Department of Agriculture was formed, other acts benefiting agriculture followed. On July 2, 1862, Lincoln signed into law the Morrill Act authorizing the development of Land Grant Colleges to teach agriculture and mechanical arts. The 1862 Homestead Act opened land for settlement. The Hatch Act created Experiment Stations for agricultural research in 1887. In 1890, the Land Grant College base was broadened. A second Morrill Act established more institutions and created the historically black colleges. These colleges and universities (including Cornell, Massachusetts Institute of Technology, and 65 other institutions) along with experiment stations have grown to be the leading

institutions in the world for research and education in agriculture and engineering. The Smith-Lever Act took the research of the Land Grant Colleges and Experiment Stations a step further by creating the Cooperative Extension system in 1914. During the Great Depression, the focus changed to controlling farm surpluses then eventually increasing farm revenue, feeding and nutrition programs, and conservation of soil. This information is provided in much greater detail in the first student activity ***Investing in Agriculture***. Many of these functions continue today as the students will learn in this lesson. As you can see, government's role in agriculture is much more than support payments for some farm commodities.

## Materials

- *Farm Facts* Booklets and/or *Farm Facts CD ROM – Educator's Version*
- One copy of ***Investing in Agriculture*** per student
- Reference materials and Internet access
- Copies of the student handout pages



## Activity One - Investing in Agriculture

1. Show the *America's Heartland* segment #101 - *Homesteading* and have the students read ***Investing in Agriculture*** and complete Student Handout 5. Discuss the information.
2. Have the students read ***Investing in Agriculture*** and complete Student Handout 6. Discuss the information.
3. Have the students access and read the information found in ***Investing in Agriculture***, ***Significant Events in Agricultural History*** found on pages 28 and 29 in the *Farm Facts* booklet and ***The History of American Agriculture*** in the time line found at *Growing a Nation* www.agclassroom.org/gan/index.htm.
4. Have the students select data to graphically depict changes over time that have impacted the economy of the United States and/or necessitated government intervention. For example, they could depict price of wheat before World War I, during World War I, and after World War I in 1929, and in 1931.
5. Divide the class into teams of twos or threes. Have each group research and report on one of the acts and or advances listed. Have the groups report on the acts in sequential order to gain an understanding of the governmental activity from 1950 through 2007 and current issues involving public support and investment in agriculture.

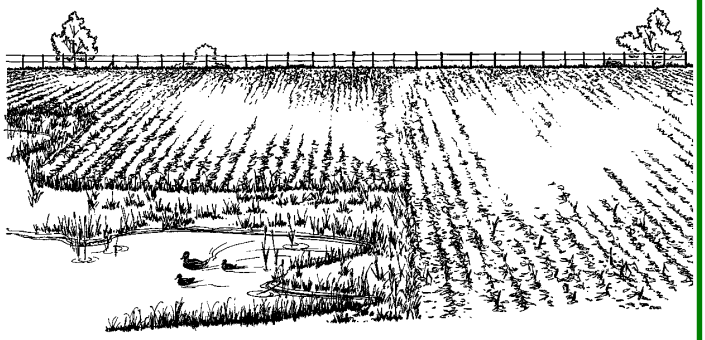
| | |
|---|---|
| 1954 | Agriculture Act |
| 1956 | Soil Bank Program |
| 1965 | Child Nutrition Act |
| 1970 | Environmental Quality Act |
| 1983 | Payment-In-Kind Act |
| 1985 | Food Security Act, Food for Progress Act |
| 1990 | Food, Agriculture, Conservation and Trade Act |
| 1996 | Federal Agriculture Improvement and Reform Act |
| 2002 | Farm Security and Rural Investment Act |
| | |
| Today | Biotechnology |
| | Certified Organic Program |
| | Homeland Security |
| | Bio-based Fuels |

## Activity Two – What is ag's share of federal spending?

1. Have the students complete Student Handout 7 ***- Slicing Up the USDA Budget*** using pages 12 and 13 in the *Farm Facts* booklet or the PowerPoint slides.
2. Discuss the information. In particular, focus on the fact that most of the USDA budget has nothing to do with farmers or subsidizing farm production. In fact, the social programs of the department far outweigh the other programs. Almost half of the USDA budget is spent on food, feeding and nutrition programs. Ask: "What nutrition programs does the USDA support?" *(School Lunch Program; School Breakfast Program; Food Stamp Program;*

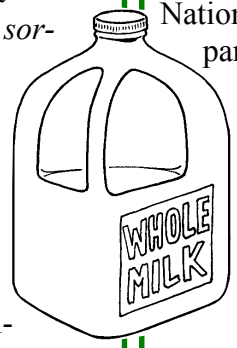
*Women, Infant and Children Program [WIC]; Food and Consumer Education Programs, etc.)*

"What other programs could be considered social programs that benefit the consumers rather than the producers?" *(Food Safety and Inspection. Conservation programs improve the environment and help keep the water clean. Forest Service manages national forests. Rural development supports rural infrastructure, but most of the rural residents today are not farmers. The education component of Research, Education and Economics benefits mainly non-farm citizens, although it benefits farmers as well. The same is true for the research component. Foreign Agricultural Service funding includes food aid and international nutrition and education programs.)*



3. Have the students discuss whether they knew this information or if they thought that the USDA only helped farmers.
4. Ask the students if all commodities are supported by governmental programs in the Farm Bill. *(No)* Ask:
   "Which commodities have direct support payment programs?" *(Wheat, rice, corn, sorghum, barley, oats, cotton, peanuts, soybeans, wool, and mohair. Other commodities have other types of government programs such as sugar, which has production quotas, a loan program and tariffs on imports.)*

   "Does this surprise you that most agricultural commodities do not have direct payment programs?"




5. Explain that in the *Farm Facts* booklet it states that "less than one half of one percent of the federal budget is spent on farm programs." They have added the farm programs and conservation program budgets together because they are direct payments to farmers. More information is available at the Economic Research Service Briefing Room at www.ers.usda.gov/Briefing/FarmPolicy/.

## Evaluation Options

1. Assess the accuracy of student work on the student handout pages and small group projects.
2. Have the students write an essay titled: "Investing in Agriculture Benefits America" or "USDA, More than Farm Programs." It can focus on the past, present, or future.

## Credits

*Agriculture Fact Book*. United States Department of the Agriculture. www.usda.gov/factbook

*Centennial Edition of USDA.* May 9, 1962. Page 2. U.S. History Collection. National Agriculture Library. www.nal.usda.gov.

*Farm and Commodity Policy*, Briefing Room, Economic Research Service, United States Department of Agriculture. www.ers.usda.gov/Briefing/FarmPolicy/.

*First U.S. Patent Issued Today in 1790.* United States Patent and Trademark Office. July 31, 2002. www.uspto.gov.

*A History of American Agriculture*. Growing A Nation. Ag in the Classroom, United States Department of Agriculture. www.agclassroom.org/gan/timeline/ag_ed.htm.

*Morrill Act*. Primary Documents in American History, Collections & Bibliographies, National Archives. www.loc.gov/rr/program s/bib/ourdocs/Morrill.html

Photos courtesy of the United States Department of Agriculture Image and Photo Archive. Historical Images. www.usda.gov.

*Readings in the History of the Soil Conservation Service*. Historical Notes Number 1. Economics and Social Sciences Division, Soil Conservation Service, United States Department of Agriculture. September 1992.

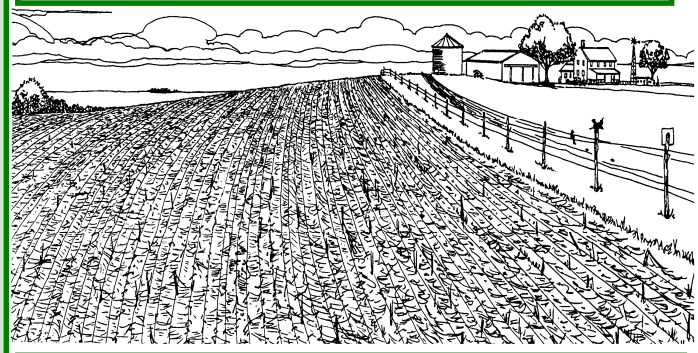
*100 Years of Soil and Water Conservation.* 100 Years Fact Sheet. Soil and Water Conservation Society. www.swcs.org/t_resources_100yrs_fact.htm.

**Answer Key Handout 5 - *Investing in Agriculture: Our Early History***

1. Formation of The Patent Office or The Patent Office issuing patents that advance agriculture, or Congress directing the allocation of Patent Office funds to benefit agriculture or creation of House and Senate agriculture committees.
2. May 15, 1862 Abraham Lincoln
3. To collect, analyze and disseminate information about agriculture and to collect and distribute new plants and plant materials (seeds)
4. July 2, 1982 Morrill Act: Land Grant Colleges;
   1862: Homestead Act opened land for settlement;
   1887: Hatch Act created Experimental Stations;
   1914: Smith Lever Act created the Cooperative Extension System; and
   1917: Smith Hughes Act put agriculture classes in high schools.
5. Prior to World War I: $0.91 per bushel
   During World War I: $2.00 per bushel
   1929: $0.99 per bushel
   1931: $0.34 per bushel
6. The price fluctuations would have been devastating. High prices during the war encouraged high production and the adoption of new technology, which led to even greater production. As surprising as it may seem, the low prices after the war also would have encouraged high production to maintain farm income at the high level seen during the war. The oversupply caused the bottom to fall out leading to the low price in 1931 of 34 cents. At that level, farmers would have been unable to purchase seed, fertilizer and fuel.
7. Everything came directly from the farm; there were no plastics. Food production across the world needed to be supplied because of the farmland being used as battlefields.
8. New labor-saving technologies were adopted.
9. Demand dropped, supply stayed high, prices fell.
10. They were vetoed by the President and then declared unconstitutional.

**Answer Key Handout 6 - *Investing in Agriculture: First Farm Programs***

1. Quotas expired, penalties to cultivate farmland that had been retired were lifted, and price supports were set above market prices
2. That the same overproduction and depression would hit
3. That the war-time programs should remain in place to continue to encourage overproduction for a two-year period.
4. They had seen starvation and want in Europe and Japan
5. Age of farmers, large capital outlays needed by starting farmers, people recruitment for agriculture, dependence on foreign oil, farm profitability, food safety, acceptance of new technologies, imports from third world countries, and lack of understanding by the American public



**Answer Key**
**Handout 7 - *Slicing Up the USDA Budget***

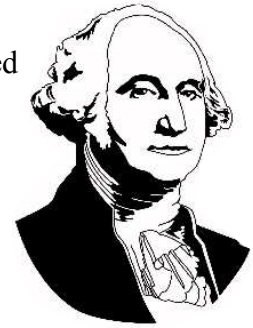
| | | |
|---|---|---|
| 1. | $51.4 billion | 57.9% |
| 2. | $2.5 billion | 2.8% |
| 3. | $5.1 billion | 5.7% |
| 4. | $4.0 billion | 4.5% |
| 5. | $5.4 billion | 6% |
| 6. | $3.0 billion | 3.3% |
| 7. | $2.4 billion | 2.7% |
| 8. | $2.6 billion | 2.9% |
| 9. | $12.4 billion | 13.9% |

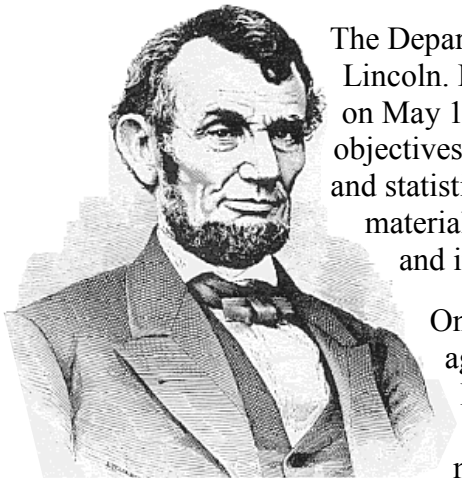
10. Decreasing
11. 3.2%
12. less than 14%, 0.44%

# Investing In Agriculture

**Earliest Ventures**

Many assume that government support for agriculture began during the Great Depression or just prior to it during the Dust Bowl era. But government support for agriculture began early in our nation's history when most Americans were farming. Both George Washington and Thomas Jefferson experimented with new plants and growing techniques. They imported unusual plant species and experimented with them on their farms. Washington dredged mud from the bottom of the Potomac and spread it on his fields to fertilize them. Of course, these were their own individual actions, not that of the government. But Washington first suggested that Congress create an agriculture department in 1799. Long before the Department of Agriculture was established, government was involved in agriculture. It started when the U.S. Patent Office was established on April 10, 1790. Washington signed the first United States patent issued on July 31, 1790, for an agricultural invention, which was a method to produce potash used for crop fertilizer. In 1839, Congress authorized $1,000 of Patent Office funds to distribute seeds, and collect and compile agricultural statistics.





The Department of Agriculture was actually started by President Abraham Lincoln. He signed the bill into law authorizing the formation of the department on May 15, 1862, and called it the "people's department." Initially, the objectives of the department were to collect, analyze and disseminate information and statistics about agriculture and collect and distribute new plants and plant materials that had potential to improve production, increase variety of foods, and improve farm income.

Once the Department of Agriculture was formed, other acts benefiting agriculture followed. On July 2, 1862, Lincoln signed into law the Morrill Act passed by Congress authorizing the development of Land Grant Colleges to teach agriculture, mechanical arts (engineering), and military science. Passed after the South had seceded from the Union, every state remaining in the Union was given a grant of 30,000 acres of land for every Congressional delegate (even the smallest state received 90,000 acres). Part of the land was to be used to build a college and most of it sold to fund the building and operation. The 1862 Homestead Act opened land for settlement. The Hatch Act created experimental stations for agricultural research in 1887. In 1890, the Land Grant college base was broadened to include 16 more states -- the southern states and new states that had joined the Union. The second Morrill Act established more institutions and set up the historically black colleges. These colleges and universities (including Cornell, Clemson, Washington State University, Mississippi State University, Massachusetts Institute of Technology and 67 other institutions) have grown to be the leading institutions in the world for research and education in agriculture. The Smith Lever Act took the research of the Land Grant colleges and experimental stations a step further by creating the Cooperative Extension system in 1914 to transmit research information to farmers and homemakers. The Smith-Hughes Act of 1917 created vocational agricultural classes in high schools. As one can see, public investments in agriculture started long before the Great Depression. Government's role in agriculture is much more than support payments for some farm commodities.

**Impact of World War I on Agriculture**

Prior to the Great Depression, which began in 1929, there was an agricultural depression caused by the changes brought by World War I. At the beginning of World War I, more than half of the American population was farming. Wheat was bringing 91 cents per bushel. When the boys went off to war this meant "farm boys." During "The War to End All Wars" there was a shortage of farm labor. The literal loss of manpower on American farms occurred at the same time that the demand for agricultural products was greatest. Horses and mules were needed for the war. Plastics, synthetic rubber, nylon and synthetic fabrics were not yet available. Wool, cotton, linen, silk, leather, and wood were needed to manufacture uniforms, airplanes, industrial goods, and war materials. Animal fats were needed to manufacture soap, candles, lubricants, and other products. Food production had to increase, not only to ship to the soldiers, but to replace the food production shortages caused by the land in Europe being a war zone. Europe's farmland was riddled with trenches, barbed wire fences, and bomb craters where crops and pastures should have been.

To meet the need, new technologies were adopted to replace farm labor. New machines were purchased with the profits from higher prices due to the increased demand and short supply. Wheat was selling for $2.00 per bushel in 1917. Tractors, combines, grain drills, engines (to shell and grind grain, pump water, move feed and manure, etc.), and even a few machines for inside the home were put to work to maximize the time of all members of the farm family. When the boys were at war, the girls and women had to make up for their absence.

The end of the war meant the boys came home, European land went back into production, and exports from American ports declined. Domestic need returned to pre-war levels, but the production of the newly mechanized agriculture continued to produce at war levels. Reduced demand met high production and surplus U.S. farm goods began to literally pile up. The bottom fell out of the market and during the summer of 1920, a great price

American farmers. The economy was raging in the city. It was the Roaring '20s. Prices for purchased goods increased (inflation) due to the urban demand. This situation continued for almost a decade. Before the "Great Depression" there was a farm depression. Farm organizations and journals advised creating programs to reduce production, which would cause supply to drop to levels in demand. Voluntary efforts to control supply were tried and failed. Farmers and others began to campaign for governmental assistance to solve their problems.


**First Farm Relief Bills**

During the 1920s, farm relief bills passed in Congress several times, but President Herbert Hoover vetoed them. The pain felt by the farm population was just not experienced by urban dwellers. The stock market crash of 1929 was the spark that set off the "Great Depression," but farm foreclosures, rural bank failures, and the coinciding Dust bowl in the Plains states laid the kindling for the fire to rage and led to the nation's deepest depression. Wheat prices dropped from $0.99 per bushel in 1929 to $0.34 per bushel in 1931. Nature compounded problems: a widespread drought started in 1931 and lasted seven years. By 1933, farm foreclosures were commonplace. Real farm income (net, not gross) in 1932 was less than a third of what it had been in 1929. Finally, farmers caught the public's attention, but they were almost in revolt when the first bill for farmers - the Agricultural Adjustment Act - became law in 1933. The act's goal was to return agriculture to the prosperity it enjoyed during the years of 1909 to 1914. The time period selected was a time when incomes were relatively equal between farmers and industrial workers. Urban and rural incomes were about the same. The act controlled supply by paying farmers to reduce acreage in crops, regulated marketers and processors, and still made a ready, healthy supply of inexpensive food and fiber. America's "Cheap Food Policy" was born. Farm programs were created to exchange farm income for reductions in production, and conservation programs to reduce soil erosion were established. Although successful (farm income was 50 percent higher than before the act), in 1936, the Supreme Court declared the act unconstitutional.

Realizing that these programs had been successful, Congress knew it needed to take effective action. The timing of the Supreme Court decision was just a couple of months short of spring planting. Knowing they would receive lower prices, farmers over planted. Soil erosion became such a problem that the general public generated significant concern. These were the years of the Great Dust Bowl of the Southern Plains states. Dark clouds of suffocating dust rolled all the way from the southwestern plains of the Oklahoma and Texas panhandles to Washington, D.C., and dust even landed on ships hundreds of miles out to sea. Farmers who could not feed their families or pay their mortgages did not have money to invest in soil conservation measures. Combining the two problems

into one solution, Congress passed the Soil Conservation and Domestication Allotment Act. Farmers were offered soil conservation payments to shift from soil-depleting crops to soil-conserving crops and to implement soil-retention practices.

Also beginning in 1933, the United States Department of Agriculture (USDA) developed programs to distribute surplus foods and raise the nutritional level of low-income consumers. The School Lunch program, Low-Cost Milk Program, and the Food Stamp Program followed.

**Expanding Production for World War II**

Large surplus stocks of wheat, cotton and corn became a crucial military reserve after the United States entered World War II. Of course, once again American boys left their schools, farms, and factories to head to war. Farmlands in Europe, Japan and Africa were put out of production as they became battlefields. Demands for increased production once again drove agriculture to produce to its maximum. This time, government programs created to decrease production were reversed and/or used to spur production. Quotas and penalties imposed on farming acreage retired from production were lifted, and price supports were set above market prices to promote overproduction of commodities. Governmental programs were covering 100 commodities by the mid-1940s. After World War II, concerns were that the same scenario following the first World War would be repeated. It was first decided that the United States should continue its wartime production for two years to help feed and rebuild war-torn areas of the world until their agriculture could be rebuilt and resume previous production. Observing the hunger, starvation, and want in Europe and Japan helped the returning American soldiers impress upon the United States population that an adequate food and fiber supply was an absolute necessity. American citizens supported governmental programs.

**Years of Prosperity and Technology**


The decades following World War II saw a post-war economic boom and expansion across the United States. Despite farm programs, the number of farms and those actively engaged in farming full time continued to decline. Also, the ability to produce in abundance continued and the commodities produced helped to feed the world. Trade of agricultural commodities became important to both American farmers and the U.S. economy. These programs designed to ensure the stability and productivity of our agriculture have survived for half a century. This abundance provides the basis for our building an unequaled industrial society and now an information society.

Issues facing American agriculture today are complex. The average age of those farming is 55. Starting a farm requires large financial investments that are beyond the ability of many who wish to farm. Large farms are getting larger and many new farms are small farms meeting a niche market. America is losing its mid-sized farms. With less than 2 percent of United States citizens involved in farming, there is no longer a ready pool of those who understand agriculture to recruit for the increasingly complex careers in other agricultural sectors.

America needs trained scientists to continue to research and solve issues in the food and fiber sector as well as for the environment. Dependence on foreign oil has major impacts on farm production, food processing, and transportation. It also negatively impacts farm profitability. New renewable energy supplies are being found in ethanol and biodiesel which rely on agricultural commodities. Since the terrorist attacks of September 11, 2001, ensuring the safety of the food supply has been a focus of our governmental and individual efforts. Imports of food from Third World countries are increasing. Are inspections also increasing?

These countries have cheap labor with few (if any) labor laws, few controls on pesticides being used, and often no water treatment facilities to ensure the safety of water used on crops. How sure are we whether these foods are safe? As the complexity of these issues escalates, the public is further removed from the challenges of producing food and no longer understands the food and fiber system. Our abundance is taken for granted. Should it be?

The challenges of surplus production still exist. It is almost impossible for agricultural producers to quickly increase or decrease the supply to meet demand. In other types of production, managers can increase or decrease supply within days or weeks. This is not so in agriculture and can currently be felt with the turn to renewable fuels. Grain crops take a growing season - months. But the seed production to increase crop production dramatically can take several years to develop. It may even take infrastructure changes to supply the huge increases in seed corn and soybeans now needed for bio-fuels. As a result, if the perceived or real demand for corn exceeds the supply, a price increase will ripple across the food supply in all foods that contain corn or corn products. Crops like strawberries do not produce fruit the first year planted. It will take two growing seasons to produce strawberries. Cattle take nine months to produce a calf from breeding and that new calf (if a heifer) will take at least two years before she can have a calf. An apple orchard or orange grove takes five years from planting until it is producing a full crop.

To decrease production, crop acreage needs to be reduced, orchards pulled out, and animals sent to market.

Crops are very weather dependent. A drought, too much water, late freeze in the spring, or early freeze in the fall, wind storm, or hail can destroy a crop or damage it so that consumers won't buy it. Diseases, invasive weeds, and insect pests also take their toll on production levels. The new soybean rust, invading from South America, can reduce yields by one-third. If not identified early and treated, that reduction is inevitable. Some insects or diseases can only be effectively treated at a certain point in their life cycle. Each of these reasons makes the supply of agricultural commodities relatively inelastic and is one reason that farm programs still exist. Ensuring a stable food supply is the foundation of a secure nation.

Name:_____

# Investing in Agriculture: Our Early History

1. Describe an important action by the United States government, taken to benefit agriculture, long before the Department of Agriculture was formed.

_____

_____

_____

2. When was the Department of Agriculture formed and who was responsible for starting it?

_____

_____

_____

3. What was one original objective of the department?_____

_____

_____

4. List and describe six Acts of Congress that closely followed the formation of the Department of Agriculture that have had far-reaching impacts on American society.

_____

_____

_____

_____

_____

_____

_____

_____

5. Why was the output of American farms so important during the years of World War I?

_____

_____

_____

6. To meet the need created by World War I, what change occurred on American farms?

_____

_____

7. a. What was the price of wheat just prior to the beginning of World War I? _____

   b. What was the price of wheat during World War I? _____

   c. What was the price of wheat in 1929? _____

   d. What was the price of wheat in 1931? _____

8. What impact did the sharp changes to the price of wheat have on the agricultural economy either as they were going up or as they were coming down?

_____

_____

_____

9. What happened when the soldiers came back to the states after World War I and returned to their farms?

_____

_____

_____

10. What happened to the first farm relief bills passed by Congress?

_____

_____

Name:_____

# Investing in Agriculture: First Farm Programs

1. Describe actions taken by the United States Department of Agriculture to ensure that abundant supplies of foods and fibers were produced on American farms in spite of labor shortages during World War II.

2. What was the fear following World War II relating to farm production and the economy?

3. What did the United States government decide the agriculture policy should be immediately following World War II and how long was this policy in place?

4. Why did the returning soldiers support this program?

5. What current issues face the farmers and the American food supply?

Name:_____

Farm Facts
Student Handout 7

# Slicing Up the USDA Budget

Identify the amount of the USDA budget which is spent in each of these areas then calculate what percent of the USDA budget this is:

1. Food and Nutrition Programs: $_____ _____%
2. Food Safety and Marketing Inspection: $_____ _____%
3. Conservation Programs: $_____ _____%
4. Risk Management: $_____ _____%
5. Forest Service: $_____ _____%
6. Rural Development: $_____ _____%
7. Foreign Ag Service: $_____ _____%
8. Research, Education, and Economics: $_____ _____%
9. Farm Programs: $_____ _____%
10. What is the trend in United States government spending on agriculture? _____
11. What percentage of the <u>total</u> federal budget is currently being spent on agriculture? _____
12. Knowing that _____ percent of the USDA budget is spent on farm programs, how much of the <u>total</u> United States budget is spent on farm programs? _____

***"I know of no pursuit in which more real and important services can be rendered to any country than by improving its agriculture."***

***George Washington***
***July 20, 1794***