

# Harry Truman and the Grandview Farm

## Background

Working alongside his father, his brother Vivian, and hired farm hands, Truman described his work as including plowing, sowing, reaping, milking cows, feeding hogs, baling hay, and —everything there was to do on a six-hundred acre farm.

His brother, Vivian, married and left the farm in 1911. Three years later, John Truman (his Father) died, at which point Harry took over the management of the farm. Truman developed a reputation as a skilled farmer and a good neighbor. Typical in a rural community, neighbors traded work chores, called on one another in emergencies, and entered into informal business dealings. Through these interactions, Truman became known for his good nature, honesty, and dependability.

The Grandview farm featured rich soil. Truman regarded it as the finest land you'd ever find anywhere. While he was in charge, yields increased. He read literature dealing with scientific agriculture, following their suggestions about crop rotation, soil conservation, hog vaccination, and record keeping.

Harry learned to rotate crops--first wheat, then clover (a soil conservation measure), corn, then oats, and back to wheat. The rotation proved successful; yields for all types of crops increased dramatically during Harry's years on the farm. John Truman insisted on straight rows, careful planting, and thorough harvesting. Harry kept careful records documenting farm expenses and income.

The Trumans planted the wheat and oats using a twelve-disc drill that covered eight feet. They cut the wheat with a horse or mule drawn binder, a machine that replaced the old method of hand cutting with a cradle-scythe, or cradle. The binders in operation in the early 1900s could also tie the cut stalks into shocks.

The thresher, which separates the wheat kernels from the straw stalks, was a big steam-powered machine. A threshing machine or a thresher is a piece of farm equipment that threshes **grain**, that is, it removes the **seeds** from the stalks and husks. It does so by beating the plant to make the seeds fall out. Before such machines were developed, **threshing** was done by hand. Grandview resident Leslie C. Hall owned several threshing machines, moving them from farm to farm where a group of farmers worked together.

Corn harvests were equally tough. In order to make enough room for the mechanical cutter, Harry would pick two rows of corn by hand, using a curved husking knife. A farmer handpicking the corn walked down each row, picking corn from stalks on the right and left, twisting each ear from the stalk and tossing it into a wagon pulled by horses.

Hay had its own challenges. At about 80 pounds per bale, moving a load of some 250 bales was an exhausting job. Perhaps the worst part was loading the bales into a railroad car. The rail lines crossed through the Young's farm with stops located a mile south in Grandview. Managing the weeds, fertilizing, and maximizing the crops kept the Trumans busy, but they also built two new barns, installed an outhouse and improved the hog pen.

They employed new techniques to improve the soil by spreading manure on their fields, and rotating crops. They planted “clover”, a nitrogen-fixing plant that could replace the nutrients depleted by wheat and corn. They followed the clover with corn, then oats, and then wheat. The rotation boosted crop production and the clover provided additional feed for the cattle. Most of the corn crop went toward feeding the farm animals.

Harry got up every morning at five a.m. to do this chore, while his father did the milking. Cattle could be sold to nearby consumers in Kansas City, or shipped farther away on the train. The Trumans raised hogs, specializing in the Hampshire breed. A cholera epidemic killed most of the hogs in 1912, but by 1917, the farm had 40 hogs. The Trumans also raised chickens, counting 65 in a 1910 report.

**Standard:**

SS.5.E (3,4,5) Describe, analyze and/or evaluate how changes in communication and transportation technologies affect people’s lives.

4.TS.7.B.b Create products such as maps, graphs, timelines, charts, models, diagrams, etc. to communicate information and understanding

**Vocabulary:**

Crop rotation - Crop rotation is based on growing a series of different types of crops in the same area in sequential seasons.

Fertilizer - is any material of natural or synthetic origin that is applied to soil or to plant tissues to supply one or more plant nutrients essential to the growth of plants.

Nutrients in soil - Soil is a major source of nutrients needed by plants for growth. The three main nutrients are nitrogen, phosphorus, and potassium.

Soil conservation - the prevention of loss of the top most layer of the soil from [erosion](#) or prevention of reduced fertility caused by over usage.

Thresher/threshing machine - a device that first separates the head of a stalk of [grain](#) from the straw, and then further separates the kernel from the rest of the head.

Vaccination - is the administration of a vaccine to help the immune system develop protection from a disease.

Yield - to bear or bring forth as a natural product especially as a result of cultivation.

**Assessment:**

Students will complete four activities and accompanying graphic organizers to learn about Truman’s life on the farm, crop rotation and use primary sources from the time period.

**Activities:**

**Activity 1.** Examine the Crop information cards for Clover, Wheat and Oats and the background information on Crop Rotation.

What are the advantages and disadvantages of crop rotation and of using clover, wheat and oats? (see graphic organizer).

For example: An advantage for Clover is that it would be a natural fertilizer.  
An advantage for crop rotation is that it keeps soil balanced

**Activity 2.** Harry Truman rotated Clover, Wheat, Oats and one other crop? Which one is missing? (Corn)  
Have students create a Crop Information card similar to the other three for Corn. (see graphic organizer)

**Activity 3.** Examine the background information, the Crop Rotation Diagram, the Crop information cards, and the Crop Rotation background material and answer these questions

- Which civilization started crop rotation?
- Why is the crop rotation in the crop rotation diagram designed this way?
- Why are the crops in this particular order?
- What are the benefits of crop rotation?
- What would happen if farmers did not rotate crops?
- How did crop rotation help Harry Truman?
- Write a paragraph about what Harry Truman had to do on the farm for wheat, oats, corn, and hay.

**Activity 4.** Examine the photograph of the Threshing Machine and complete the photograph analysis worksheet.

## Crop information cards

### CLOVER

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Use: Animal feed

1. Clover belongs to the family of plants known as legumes, as do pulses.
2. Clover works as a natural fertiliser.
3. As it grows in the soil, clover draws nitrogen from the atmosphere and makes it available to plants that follow in the next crop rotation.



### WHEAT

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Use: Ground into flour or used in animal feed

1. Wheat belongs to the family of plants known as grasses, as do other cereal crops like barley and oats.
2. Fertilizer is often placed in the soil before a wheat crop, as wheat cannot draw nitrogen from the atmosphere like beans or clover.
3. Wheat can be planted at both the start of autumn and the start of spring.



### OATS

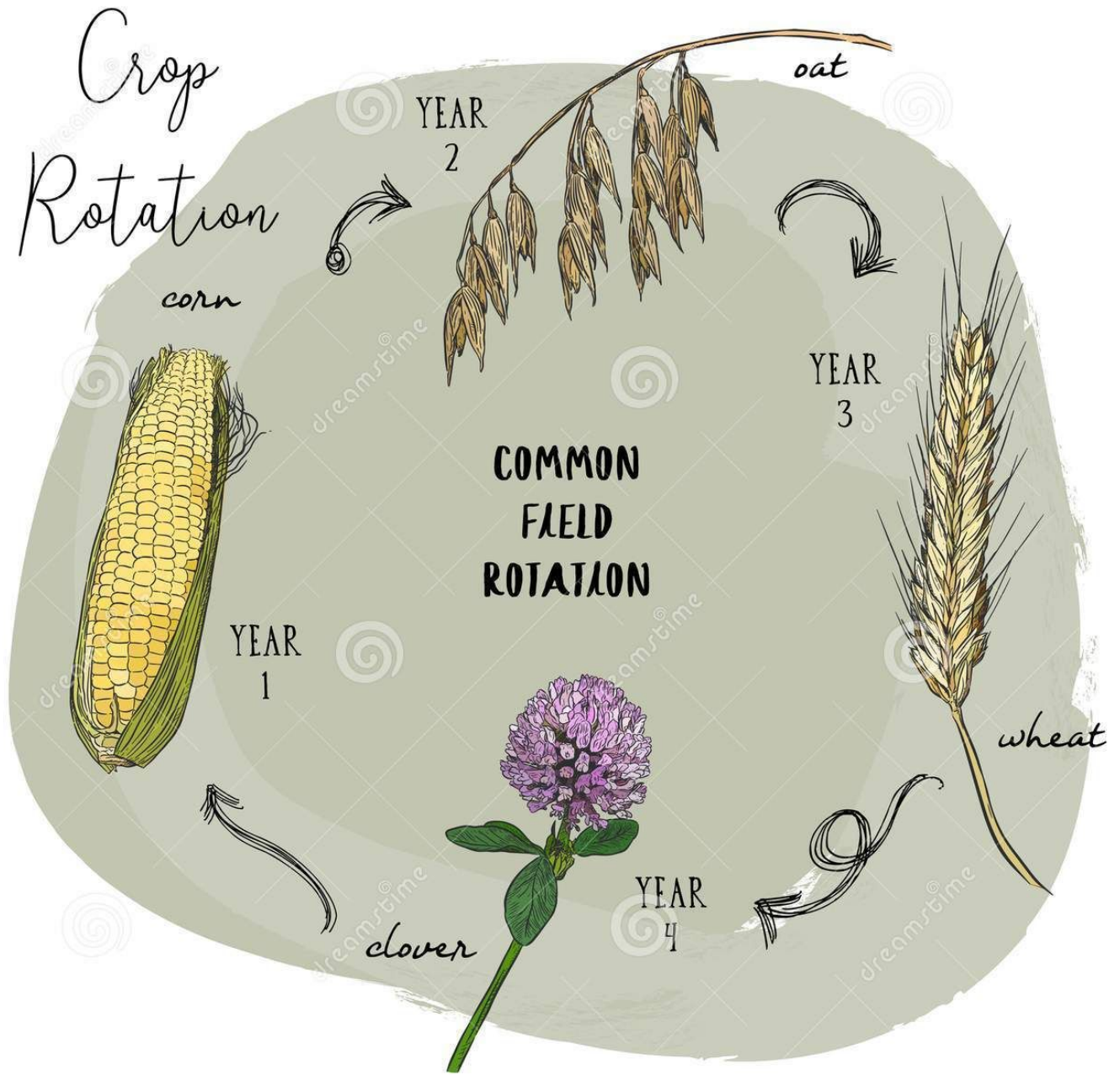
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Use: Breakfast cereals and snack bars.  
Also used as animal feed

1. Oats generally require less fertilizer than other crops to grow.
2. Oats and other cereal crops like wheat and barley have fibrous root systems that are good at capturing soil nutrients.
3. Crops like oats have leaves that quickly create shade which stops small weeds growing.



Crop Rotation diagram



## Crop Rotation - background information

Crop rotation is a farming technique dating as far back as the Roman Empire or Ancient Greece. Although ancient farmers didn't fully understand the science behind the crop rotation, they observed that growing the same crop at the same plot for several years depletes soils of nutrients and decreases crop yield.

To solve the problem, the Romans came up with a simple system called "food, feed, fallow." During this practice, farmers divided the land into three sections. In one section, *food* crops such as wheat were planted; in the next section, livestock *feed* like oats was grown, and the last section was left *fallow* to recover. Every growing season, sections were rotated to ensure the highest land productivity in the long-term.

Crop rotation is based on growing a series of different types of crops in the same area in sequential seasons. The planned rotation may vary from a growing season to a few years or even longer periods. Farmers usually do not follow one specific crop rotation plan. They choose to alternate crops based on their individual requirements, possibilities, environmental conditions and budget.

Crop rotation helps to eliminate diseases. Certain diseases only feed on certain types of plants. If the plants don't stay in one place, the disease is stopped before it ever could get started.

By rotating your crops, you boost your garden's defenses. It's important to make sure you keep your crops on a four-year rotation because some soil-borne diseases can live in the soil for up to three years.

## Crop Rotation Reduces Crop Pests

Certain insects burrow in the soil and feed on your plants when least expected. Like soil-borne diseases, most insects have particular plants they like to feed on. With proper crop rotation, the pests don't know where to look for food and die out. With fewer eggs being laid, there are lesser new generations of harmful insects in your garden. If you rotate your crops, you'll starve the **bugs** out and make your garden less desirable to them.

## Crop Rotation Keeps Soil Balanced

If you keep planting the same crops in the same place, the crop is going to leach your soil of whatever key nutrients the plant desires. This will cause your soil to be out of balance. But if you rotate your crops around, it keeps your soil in balance.

## Crop Rotation and Erosion

Repeated planting of the same crop makes soils more susceptible to erosion. Each crop species has a specific shape of the root system, water requirements, spacing between plants and canopy. When growing only one kind of crop over prolonged periods of time, soil will start eroding in places where plants leave it uncovered and

weakened. When rotating crops, in particular, cover crops, on the same land, soil structure improves because we alternate between deep and shallow rooted plants. For example, oats have large and deep reaching root systems, while red clover has small and shallow roots.

#### Benefits

- Improving nutrient management by plants – e.g. oats reach for nutrients from the deeper soil layers, while clover draws nutrients from the upper layer.
- Increasing water retention in soils
- Providing habitat for more diverse soil organisms
- Supplying higher content of organic matter

**T-chart graphic organizer for Activity 1**

**Crop Rotation  
Clover, Wheat and Oats**

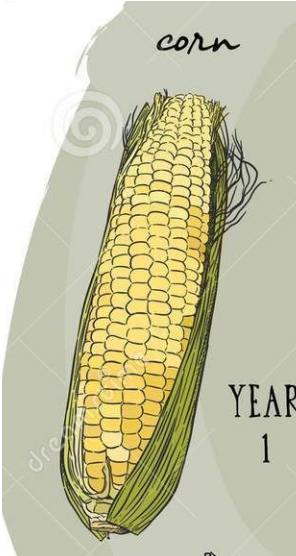
<b>Advantages</b>	<b>Disadvantages</b>



## Activity 2 graphic organizer

### Crop Information Card for Corn

# Corn



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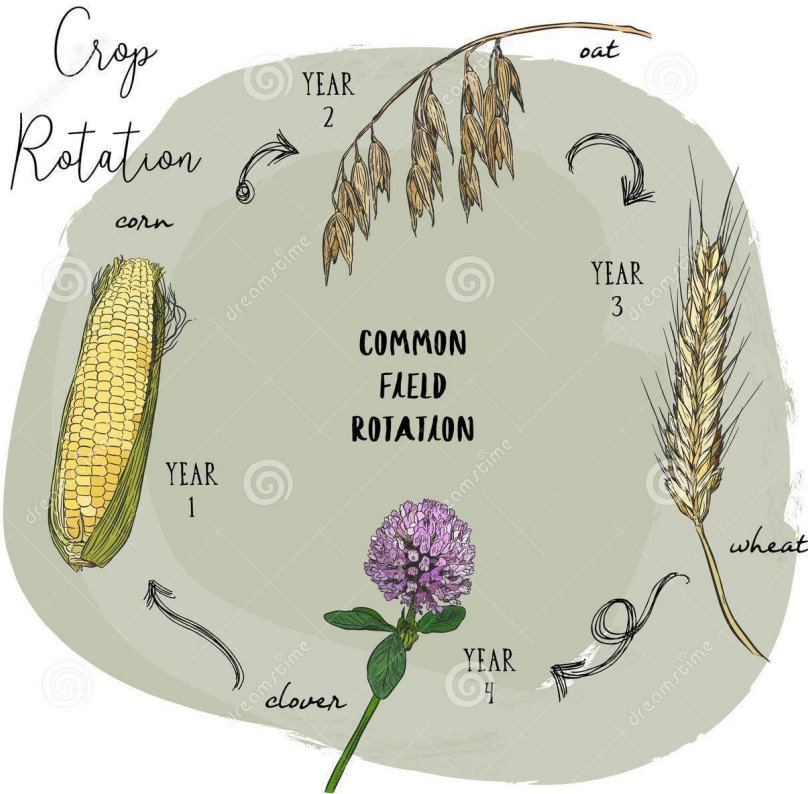
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### Graphic organizer for activity 3



Examine the background information, the Crop Rotation Diagram, the Crop information cards, and the Crop Rotation material and answer these questions

1. Which civilization started crop rotation?
2. Why is the crop rotation in the crop rotation diagram designed this way?
3. Why are the crops in this particular order?
4. What are the benefits of crop rotation?
5. What would happen if farmers did not rotate crops?
6. How did crop rotation help Harry Truman?

7. Write a paragraph about what Harry Truman had to do on the farm for wheat, oats, corn, and hay.

Threshing Machine that was used on the Truman farm in Grandview. From left to right: Ella Hall (at wheel); L.C. Hall, Hobart Hall, Cecil Hall, Stanley Hall, Tony Keaton, Lester C. Hall's Machine in Grandview, Missouri.



<https://www.trumanlibrary.gov/photograph-records/62-2>


[https://www.archives.gov/files/education/lessons/worksheets/photo\\_analysis\\_worksheet\\_novice.pdf](https://www.archives.gov/files/education/lessons/worksheets/photo_analysis_worksheet_novice.pdf)

#### Activity 4

- A. Name the family that provided the Trumans with the threshing machine?
- B. Why do you think the Truman family did not have their own machine?
- C. What kind of power did the machine use? Gas, oil or steam?
- D. How did the Threshing Machine work, what did it do?

## Activity 4 - Analyze a photograph worksheet

### Analyze a Photograph



**Meet the photo.**  
What do you see?



Is the photo?

BLACK AND WHITE     COLOR


Is there a caption?


YES     NO


If so, what does the caption tell you?



**Observe its parts.**  
Circle what you see in the photo.

  
PEOPLE

  
OBJECTS

  
BOTH

What are the people doing in the photo?

What are the objects used for in the photo?

Write two words that describe the photo.


**Try to make sense of it.**  
Who do you think took this photo?

Where do you think this photo was taken?

List something that helps you prove where it was taken.

Why do you think the photo was taken?

How does this photo compare to modern times?



[https://www.archives.gov/files/education/lessons/worksheets/photo\\_analysis\\_worksheet\\_novice.pdf](https://www.archives.gov/files/education/lessons/worksheets/photo_analysis_worksheet_novice.pdf)

## Answer key - Activity 1

### Crop Rotation and Clover, Wheat and Oats

Advantages	Disadvantages
Clover - works as a natural fertilizer	Wheat - cannot draw nitrogen from atmosphere
Clover - draws nutrients from the upper layer	Crop rotation - requires equipment for numerous different crop types instead of one set of equipment
Clover - captures nitrogen and allows crops planted later to use it	Crop rotation - requires knowledge in how to farm many different crop types
Oats - require less fertilizer to grow	Crop rotation - requires advanced planning and time
Oats - root systems capture soil nutrients	
Oats - reach for nutrients from the deeper soil layers	
Wheat - can be planted in spring and fall	
Crop rotation - keeps soil balanced	
Crop rotation - Increasing water retention in soils	
Crop rotation - Providing habitat for more diverse soil organisms	
Crop rotation - Supplying higher content of organic matter	

## Activity 3 - Answer key

1. Roman Empire and/or Greeks
2. It shows the most beneficial or effective way to cycle different plants through the system to gain the best results
3. Clover provides nutrients for corn, Oats don't take as much out of the soil, this order is most beneficial to the soil (it is the same order Harry Truman used - although he started with Wheat, the order is the same)  
They planted "clover", a nitrogen-fixing plant that could replace the nutrients depleted by wheat and corn. They followed the clover with corn, then oats, and then wheat. The rotation boosted crop production and the clover provided additional feed for the cattle. Most of the corn crop went toward feeding the farm animals.
4. Improving nutrient management by plants – e.g. oats reach for nutrients from the deeper soil layers, while clover draws nutrients from the upper layer; Increasing water retention in soils; Providing habitat for more diverse soil organisms; Supplying higher content of organic matter
5. Crops would not grow as well, soil would more likely be eroded, more likely to have pests and disease
6. It provided more crops for him (increased yield) and increased his profits on the farm
7. Wheat - The Trumans planted the wheat and oats using a twelve-disc drill that covered eight feet. They cut the wheat with a horse or mule drawn binder, a machine that replaced the old method of hand cutting with a cradle-scythe, or cradle. The binders in operation in the early 1900s could also tie the cut stalks into shocks.

Oats - The Trumans planted the wheat and oats using a twelve-disc drill that covered eight feet.

Corn - Harry would pick two rows of corn by hand, using a curved husking knife. A farmer handpicking the corn walked down each row, picking corn from stalks on the right and left, twisting each ear from the stalk and tossing it into a wagon pulled by horses.

Hay - At about 80 pounds per bale, moving a load of some 250 bales was an exhausting job. Perhaps the worst part was loading the bales into a railroad car.

## Answer key - Activity 4

A. Name the family that provided the Trumans with the threshing machine?

The Hall family

B. Why do you think the Truman family did not have their own machine?

Possible answers include - too expensive to buy, too expensive, difficult to maintain, don't have expertise to operate, only a short season where it is needed so hard to justify expense, convenience of hiring out task

C. What kind of power did the machine use? Gas, oil or steam?

Steam powered

D. How did the Threshing Machine work, what did it do?

A threshing machine or a thresher is a piece of farm equipment that threshes **grain**, that is, it removes the **seeds** from the stalks and husks. It does so by beating the plant to make the seeds fall out.