

In the United States, France, and Latin America, political revolutions brought in new governments. A different type of revolution now transformed the way people worked. The **Industrial Revolution** refers to the greatly increased output of machine-made goods that began in England in the middle 1700s. Before the Industrial Revolution, people wove **textiles** by hand. Then, machines began to do this and other jobs. Soon the Industrial Revolution spread from England to Continental Europe and North America.

Industrial Revolution Begins in Britain

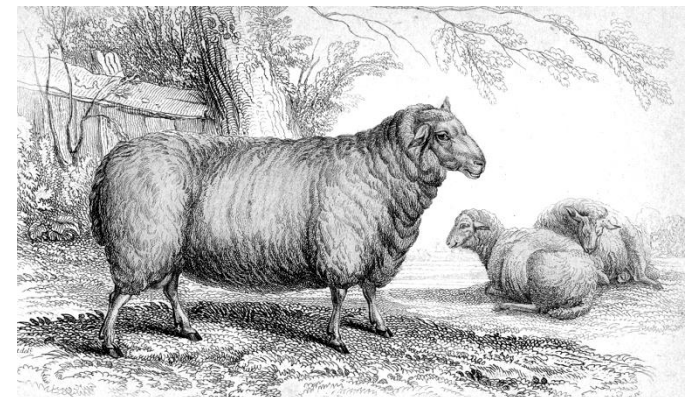
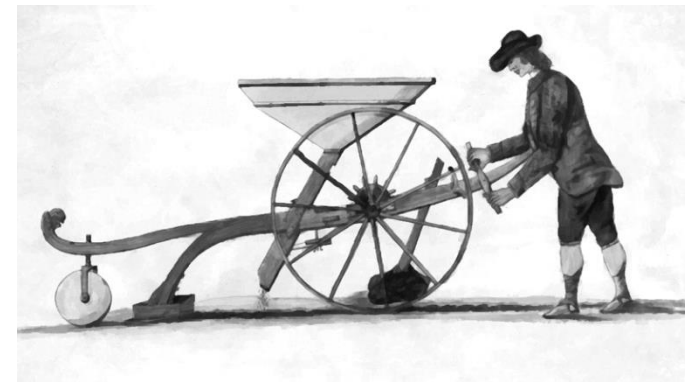
In 1700, small farms covered England's landscape. Wealthy landowners, however, began buying up much of the land that village farmers had once worked. The large landowners dramatically improved farming methods. These innovations amounted to an *agricultural revolution*.

The Agricultural Revolution Paves the Way After buying up the land of village farmers, wealthy landowners enclosed their land with fences or hedges. The increase in their landholdings enabled them to cultivate larger fields. Within these larger fields, called **enclosures**, landowners experimented with more productive seeding and harvesting methods to boost crop yields. The enclosure movement had two important results. First, landowners tried new agricultural methods. Second, large landowners forced small farmers to become tenant farmers or to give up farming and move to the cities.

Jethro Tull was one of the first of these scientific farmers. He saw that the usual way of sowing seed by scattering it across the ground was wasteful. Many seeds failed to take root. He solved this problem with an invention called the seed drill in about 1701. It allowed farmers to sow seeds in well-spaced rows at specific depths. A larger share of the seeds took root, boosting crop yields.

Rotating Crops The process of **crop rotation** proved to be one of the best developments by the scientific farmers. The process improved upon older methods of crop rotation, such as the medieval three-field system discussed in Chapter 14. One year, for example, a farmer might plant a field with wheat, which *exhausted* soil nutrients. The next year he planted a root crop, such as turnips, to restore nutrients. This might be followed in turn by barley and then clover.

Livestock breeders improved their methods too. In the 1700s, for example, **Robert Bakewell** increased his mutton (sheep meat) output by allowing only his best sheep to breed. Other farmers followed Bakewell's lead. Between 1700 and 1786, the average weight for lambs climbed from 18 to 50 pounds. As food supplies increased and living conditions improved, England's population mushroomed. An increasing population boosted the demand for food and goods such as cloth. As farmers lost their land to large enclosed farms, many became factory workers.



Use the reading to answer the following questions in the spaces provided.

1. Define: **Industrial Revolution**

2. What are **textiles**?

3. Who began England's *agricultural revolution*?

4. What does the author mean by **enclosures**?

5. List the two important results of the enclosure movement.

6. How did the seed drill help farmers?

7. What does the author mean by exhausted in the sentence, "One year, for example, a farmer might plant a field with wheat, which *exhausted* soil nutrients."?

8. How did **Robert Bakewell** increase his mutton output?

9. As food supplies increased and living conditions improved in England, what happened to England's population?

10. As farmers lost their land to large enclosed farms, what type of work did many turn to?