

A Revolution in Agriculture

The mechanization that took place in industry also helped transform agriculture.

No longer did farmers have to harvest their grain with hand tools. In the 1830s, the American inventor Cyrus McCormick developed a horse-drawn mechanical reaper that could cut and collect the grain. In the years that followed, a variety of other machines appeared to help farmers plant, harvest, and process crops. Through mechanization, farmers could expand their production while cutting back on the amount of labor needed to produce food.



Besides using new machinery, farmers used new agricultural methods. They improved the soil with chemical fertilizers and cover crops. [Cover crops](#), such as clover, add nutrients to the soil when plowed under. Farmers also worked to control pests, increase irrigation, and breed superior livestock. The agricultural revolution helped expand the population by making more healthful food available, and it helped farmers produce enough food to feed the growing population.

The agricultural revolution coincided with a changing perspective on land rights.

Traditionally, peasants had raised crops and grazed animals on so-called common lands. But technically, the land was private property. Peasants who farmed the land paid dues to the landowner.

During the 1500s in England and continuing there and elsewhere into the 1800s, landowners took back the rights to their land. Historians call this the [enclosure movement](#). Landowners, often under force of law, enclosed their land with hedges or fences to mark its boundaries.

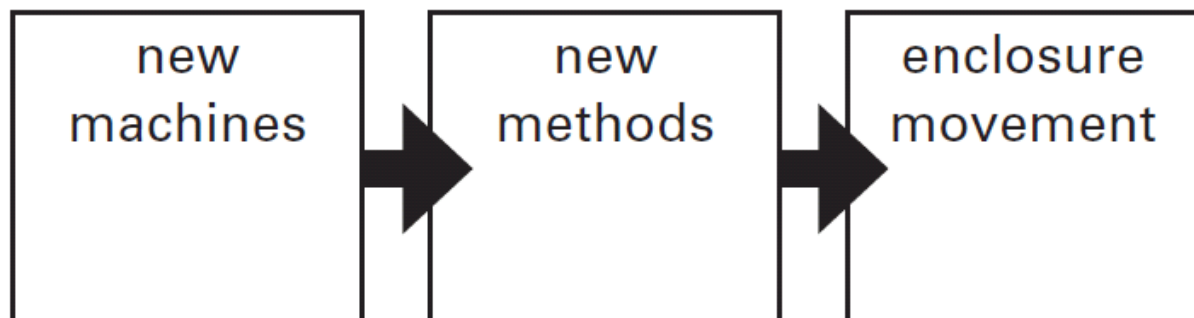
One reason for enclosure was economic. Large landowners realized that they could earn more from growing cash crops such as grain, or raising sheep for the growing textile industry, than they could from renting the land to peasants. The enclosure movement had several important consequences. Many peasants were left with no land

to cultivate. The same was true for many smallholders—farmers owning smaller amounts of land. Because of economic downturns or the expense of fencing in their land, they sold their plots to wealthier landowners. On their estates, many large landowners established commercial farms.

Some peasants and former smallholders stayed on the land as wage laborers. Others turned to manufacturing in their homes and later in independent shops or small factories. But many became landless and unemployed—or, at best, seasonally employed—workers. **As countries began to industrialize, these former farmers provided a ready workforce for the early factories as they migrated to urban areas in search of work.**

The enclosure movement had moral and legal effects as well. It helped develop the notion that making a profit from one's land—even if that meant ending traditional land rights of peasants—was acceptable. It also marked the appearance of capitalist agriculture, or the large-scale growing of crops and raising of animals for profit. Through the years, this commercialization of agriculture led to the establishment of a legal system that would support the rise of industrial capitalism.

Complete an illustrated flowchart like the one below. For each agricultural change, draw a simple illustration and write a caption explaining the effect of the change you illustrated.



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