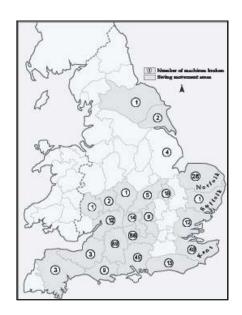
THE ADVENT OF MODERN AGRICULTURE IN ENGLAND

On 1 June 1830, a farmer in the north-west of England found his barn and haystack reduced to ashes by a fire that started at night. In the months that followed, cases of such fire were reported from numerous districts. At times only the rick was burnt, at other times the entire farmhouse. Then on the night of 28 August 1830, a threshing machine of a farmer was destroyed by labourers in East Kent in

England. In the subsequent two years, riots spread over

southern England and about 387 threshing machines were broken. Through this period, farmers received threatening letters urging them to stop using machines that deprived workmen of their livelihood. Most of these letters were signed in the name of Captain Swing. Alarmed landlords feared attacks by armed bands at night, and many destroyed their own machines. Government action was severe.

Captain Swing was a mythic name used in these letters. But who were the Swing rioters? Why did they break threshing machines? What were they protesting against?



1. The Time of Open Fields and Commons: Over the late eighteenth and early nineteenth centuries the English countryside changed dramatically. Before this time in large parts of England the countryside was open. It was not partitioned into enclosed lands privately owned by landlords. Peasants cultivated on strips of land around the village they lived in.

At the beginning of each year, at a public meeting, each villager was allocated a number of strips to cultivate. Usually, these strips were of varying quality and often located in different places, not next to each other.

The effort was to ensure that everyone had a mix of good and bad land. Beyond these strips of cultivation lay the common land. All villagers had access to the commons. Here they pastured their cows and grazed their sheep, collected fuelwood for fire and berries and fruits for food. They fished in the rivers and ponds, and hunted rabbit in common forests. For the poor, the common land was essential for survival. It supplemented their meagre income, sustained their cattle, and helped them tide over bad times when crops failed.

From about the sixteenth century, when the price of wool went up in the world market, rich farmers wanted to expand wool production to earn profits. They were eager to improve their sheep breeds and ensure good feed for them. They were keen on controlling large areas of land in compact blocks to allow improved breeding. So they began dividing and enclosing common land and building hedges around their holdings to separate their property from that of others. they drove out villagers who had small cottages on the commons, and they prevented the poor from entering the enclosed fields. Between 1750 and 1850, six million acres of land was enclosed. The British Parliament passed 4,000 Acts legalising these enclosures.

2. New Demand for Grain: The new enclosures were happening in a different context; they became a sign of a changing time.

From the mid-eighteenth century, the English population expanded rapidly. Between 1750 and 1900, it multiplied over four times, mounting from 7 million in 1750 to 21 million in 1850 and 30 million in 1900. This meant an increased demand for foodgrains to feed the population.

As the urban population grew, the market for foodgrains expanded, and when demand increased rapidly, foodgrain prices rose.

By the end of the eighteenth century, France was at war with England. This disrupted trade and the import of foodgrains from Europe. Prices of foodgrains in England sky rocketed, encouraging landowners to enclose lands and enlarge the area under grain cultivation. Profits flowed in and landowners pressurised the Parliament to pass the Enclosure Acts.

3. The Age of Enclosures: Food-grain production in the past had not expanded as rapidly as the population. In the nineteenth century this did not happen in England. Grain production grew as quickly as population. Even though the population increased rapidly, in 1868 England was producing about 80 per cent of the food it consumed. The rest was imported.

This increase in food-grain production was made possible not by any radical innovations in agricultural technology, but by bringing new lands under cultivation. Landlords sliced up pasturelands, carved up open fields, cut up forest commons, took over marshes, and turned larger and larger areas into agricultural fields.

Importance of turnip and clover for farmers: In about the 1660s farmers in many parts of England began growing turnip and clover. These crops improved the soil and made it more fertile. Turnip was a good fodder crop relished by cattle. These crops became part for the cropping system. These crops had the capacity to increase the nitrogen content of the soil. Nitrogen was important for crop growth. Cultivation of the same soil over a few years depleted the nitrogen in the soil and reduced its fertility. By restoring nitrogen, turnip and clover made the soil fertile once again.

Enclosures were now seen as necessary to make long-term investments on land and plan crop rotations to improve the soil. Enclosers also allowed the richer landowners to expand the land under their control and produce more the market.

4. What Happened To the Poor? When fences came up, the enclosed land became the exclusive property of one landowner. The poor could no longer collect their firewood from the forests, or graze their cattle on the commons. They could no longer collect apples and berries, or hunt small animals for meat. Nor could they gather the stalks that lay on the fields after the crops were cut. Everything belonged to the landlords, everything had a price which the poor could not afford to pay.

In places where enclosures happened on an extensive scale – particularly the Midlands and the counties around – the poor were displaced from the land. They found their customary rights gradually disappearing. Deprived of their rights and driven off the land, they tramped in search of work. From the Midlands, they moved to the southern counties of England. This was a region that was most intensively cultivated, and there was a great demand for agricultural labourers. But nowhere could the poor find secure jobs.

Labourers were being paid wages and employed only during harvest time. As landowners tried to increase their profits, they cut the amount they had to spend on their workmen. Work became insecure, employment uncertain, income unstable. For a very large part of the year the poor had no work.

5. The Introduction of Threshing Machines: During the Napoleonic Wars, prices of foodgrains were high and farmers expanded production vigorously. Fearing a shortage of labour, they began buying the new threshing machines that had come into the market.

After the Napoleonic Wars had ended, thousands of soldiers returned to villages. They needed alternative jobs to survive. But this was a time when grain from Europe began flowing into England, prices declined, and an Agricultural Depression set in. Anxious, landowners, tried to cut wages and the number of workmen they employed.

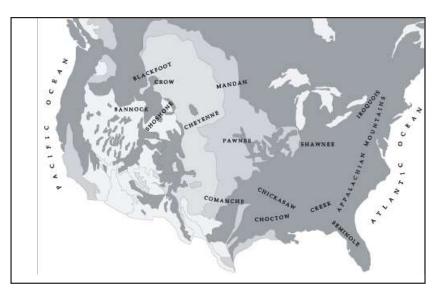
The Captain Swing riots spread in the countryside at this time. For the poor the threshing machines had become a sign of bad times.

BREAD BASKET AND DUST BOWL

At the end of the eighteenth century, settled agriculture had not developed on any extensive scale in the USA. Forests covered over 800 million acres and grasslands 600 million acres.

Most of the landscape was not under the control of white Americans. Till the 1780s, White American settlements were confined to a small narrow strip of coastal land in the east. Native American groups in the country were nomadic, and some were settled. Many of them lived only by hunting, gathering and fishing; others cultivated corn, beans, tobacco and pumpkin.

By the early twentieth century, this landscape had transformed radically. White Americans had moved westward and established control up to the west coast, displacing local tribes and carving out the entire landscape into different agricultural belts. The USA had come to dominate the world market in agricultural produce.

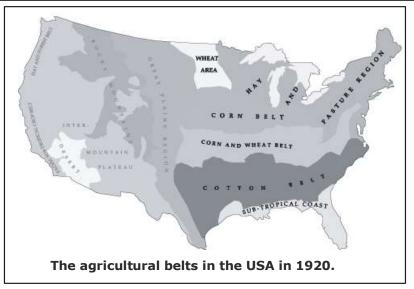


 The Westard Move and Wheat Cultivation: After the American War of Independence from 1775 to 1783 and the formation of the United States of America, the White Americans began to move westward. By the time Thomas Jefferson became President of the USA in 1800, over 700,000 white settlers had moved on to the Appalachian plateau through the passes.

Forest timber could be cut for export, animals hunted for skin, mountains mined for gold and minerals. But this meant that the American Indians had to be cleared from the land. In the decades after 1800 the US government committed itself to a policy of driving the American Indians westward, first beyond the river Mississippi, and then further west. Numerous wars were waged in which Indians were massacred and many of their villages burnt. The Indians resisted, won many victories in wars, but were ultimately forced to sign treaties, give up their land and move westward.

As the Indians retreated, the settlers poured in. They came in successive waves. They settled on the Appalachian plateau by the first decade of the eighteenth century, and then moved into the Mississippi valley between 1820 and 1850. They slashed and burnt forests, pulled out the stumps, cleared the land for cultivation, and built log cabins in the forest clearings. Then they cleared larger areas, and erected fences around the fields. They ploughed the land and sowed corn and wheat.

In the early years, the fertile soil produced good crops. When the soil became impoverished and exhausted in one place, the migrants would move further west, to explore new lands and raise a new crop. It was, however, only after the 1860s that settlers swept into the Great Plains across the River Mississippi. In subsequent decades this region became a major wheat-producing area of America.



2. The Weat Farmers: From the late nineteenth century there was a dramatic expansion of wheat production in the USA. The rising urban population, export market was becoming ever bigger and rise in wheat prices, encouraged farmers to produce wheat. The spread of the railways made it easy to transport the grain from the wheat growing regions to the eastern coast for export. By the early twentieth century the demand became even higher, and during the First World War the world market boomed.

In 1910, about 45 million acres of land in the USA was under wheat. Nine years later, the area had expanded to 74 million acres, an increase of about 65 percent. In many cases, big farmers the wheat barons - controlled as much as 2,000 to 3,000 acres of land individually.

3. The Coming of New Technology: Through the nineteenth century, as the settlers moved into new habitats and new lands, they modified their implements to meet their requirements. When they entered the mid-western prairie, the simple ploughs the farmers had used in the eastern coastal areas of the USA proved ineffective.

The prairie was covered with a thick mat of grass with tough roots. To break the sod and turn the soil over, a variety of new ploughs were devised locally, some of them 12 feet long. Their front rested on small wheels and they were hitched on to six yokes of oxen or horses. By the early twentieth century, farmers in the Great Plains were breaking the ground with tractors and disk ploughs, clearing vast stretches for wheat cultivation.

Before the 1830s, the grain used to be harvested with a cradle or sickle. At harvest time, hundreds of men and women could be seen in the fields cutting the crop.

In1831, **Cyrus McCormick** invented the **first mechanical reaper** which could cut in one day as much as five men could cut with cradles and 16 men with sickles. By the early twentieth century, most farmers were using combined harvesters to cut grain. With one of these machines, 500 acres of wheat could be harvested in two weeks.



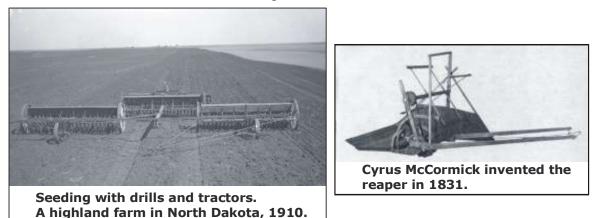
The new machines allowed these big farmers to rapidly clear large tracts, break up the soil, remove the grass and prepare the ground for cultivation. The work could be done quickly and with a minimal number of hands. With power-driven machinery, four men could plough, seed and harvest 2,000 to 4,000 acres of wheat in a season.

4. What Happened to the Poor? For the poorer farmers, machines brought misery. They borrowed money on loan to buy machines but found it difficult to pay back their debts. Many of them deserted their farms and looked for jobs elsewhere.

Mechanisation reduced the need for labour. After 1920's most farmers faced trouble. Production had expanded so rapidly during the war and post-war years that, there was a large surplus. Unsold stocks piled up, storehouses overflowed with grain, and vast amounts of corn and wheat were turned into animal feed. Wheat prices fell and export markets collapsed. This created the grounds for the **Great Agrarian Depression** of the 1930s that ruined wheat farmers everywhere.

5. Dust Bowl: The expansion of wheat agriculture in the Great Plains created other problems. In the 1930s, terrifying duststorms began to blow over the southern plains. Black blizzards rolled in, very often 7,000 to 8,000 feet high, rising like monstrous waves of muddy water. They came day after day, year after year, through the 1930s. As the skies darkened, and the dust swept in, people were blinded and choked. Cattle were suffocated to death, their lungs caked with dust and mud. Sand buried fences, covered fields, and coated the surfaces of rivers till the fish died. Dead bodies of birds and animals were strewn all over the landscape. Tractors and machines that had ploughed the earth and harvested the wheat in the 1920s were now clogged with dust, damaged beyond repair.

In part they came because the early 1930s were years of persistent drought. The rains failed year after year, and temperatures soared. The wind blew with ferocious speed. But ordinary duststorms became black blizzards only because the entire landscape had been ploughed over, stripped of all grass that held it together. When wheat cultivation had expanded dramatically in the early nineteenth century, zealous farmers had recklessly uprooted all vegetation, and tractors had turned the soil over, and broken the sod into dust. The whole region had become a dust bowl.



THE INDIAN FARMER AND OPIUM PRODUCTION

British rule was gradually established in India after the Battle of Plassey (1757). Over the period of colonial rule, the rural landscape was radically transformed. The British saw land revenue as a major source of government income. To build the resources of the state, efforts were made to impose a regular system of land revenue, increase revenue rates, and expand the area under cultivation. As cultivation expanded, the area under forests and pastures declined. All this created many problems for peasants and pastoralists. They found their access to forests and grazing lands increasingly restricted by rules and regulations.

In the colonial period, rural India also came to produce a range of crops for the world market. In the early nineteenth century, Indigo and Opium were two of the major commercial crops. By the end of the century, peasants were producing sugarcane, cotton, jute, wheat and several other crops for export, to feed the population of urban Europe and to supply the mills of Lancashire and Manchester in England.

1. A Taste for Tea: The Trade with China: In the late eighteenth century, the English East India Company was buying tea and silk from China for sale in England. As tea became a popular English drink, the tea trade became more and more important. In fact, the profits of the East India Company came to depend on the tea trade.

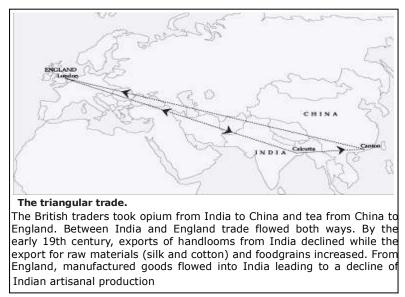
England at this time produced nothing that could be easily sold in China. In such a situation, how could Western merchants finance the tea trade? They could buy tea only by paying in silver coins or bullion. This meant an outflow of treasure from England, a prospect that created widespread anxiety. Merchants therefore looked for ways to stop this loss of silver. They searched for a commodity they could sell in China, something they could persuade the Chinese to buy. Opium was such a commodity.

The Chinese were aware of the dangers of opium addiction, and the Emperor had forbidden its production and sale except for medicinal purpose. But Western merchants in the mid-eighteenth century began an illegal trade in opium.

While the English cultivated a taste for Chinese tea, the Chinese became addicted to opium - People of all classes took to the drug-shopkeepers and peddlers, officials and army men, aristocrats and paumpers.

Opium was such a commodity. The Portuguese had introduced opium into China in the early sixteenth century. Opium was however, known primarily for its medical properties and used in miniuscule quantities for certain types of medicines. The Chinese were aware of the dangers of opium addiction, and the Emperor had forbidden its production and sale except for medicinal purposes. But Western merchants in the mid-eighteenth century began an illegal trade in opium. It was unloaded in a number of sea ports of south-eastern China and carried by local agents to the interiors. By the early 1820s, about 10,000 crates were being annually smuggled into China. Fifteen years later, over 35,000 crates were being unloaded every year.

While the English cultivated a taste for Chinese tea, the Chinese became addicted to opium. People of all classes took to the drug – shopkeepers and peddlers, officials and army men, aristocrats and paupers. Lin Ze-xu, Special Commissioner at Canton in 1839, estimated that there were over 4 million opium smokers in China.



2. Where did Opium come from? When the British conquered Bengal, they made a determined effort to produce opium in the lands under their control. As the market for opium expanded in China, larger volumes of opium flowed out of Bengal ports. Before 1767, no more than 500 chests (of two maunds each) were being exported from India. Within four years, the quantity trebled. A hundred years later, in 1870, the government was exporting about 50,000 chests annually.

For a variety of reasons, they were unwilling to turn their fields over to poppy. First, the crop had to be grown on the best land, on fields that lay near villages and were well manured. On this land peasants usually produced pulses. If they planted opium on this land, then pulses could not be grown there, or they would have to be grown on inferior land where harvests were poorer and uncertain. Second, many cultivators owned no land. To cultivate, they had to pay rent and lease land from landlords. And the rent charged on good lands near villages was very high. Third, the cultivation of opium was a difficult process. The plant was delicate, and cultivators had to spend long hours nurturing it. This meant that they did not have enough time to care for other crops. Finally, the price the government paid to the cultivators for the opium they produced was very low. It was unprofitable for cultivators to grow opium at that price.

3. How were Unwilling Cultivators Made to Produce Opium? Unwilling cultivators were made to produce opium through a system of advances. In the rural areas of Bengal and Bihar, there were large numbers of poor peasants. They never had enough to survive. It was difficult for them to pay rent to the landlord or to buy food and clothing.

From the 1780s, such peasants found their village headmen (mahato) giving them money advances to produce opium. When offered a loan, the cultivators were tempted to accept, hoping to meet their immediate needs and pay back the loan at a later stage. But the loan tied the peasant to the headman and through him to the government. It was the government opium agents who were advancing the money to the headmen, who in turn gave it to the cultivators. By taking the loan, the cultivator was forced to grow opium on a specified area of land and hand over the produce to the agents once the crop had been harvested. He had no option of planting the field with a crop of his choice or of selling his produce to anyone but the government agent. And he had to accept the low price offered for the produce.

The problem could have been partly solved by increasing the price of opium. But the government was reluctant to do so. It wanted to produce opium at a cheap rate and sell it at a high price to opium agents in Calcutta, who then shipped it to China. This difference between the buying and selling price was the government's opium revenue. The prices given to the peasants were so low that by the early eighteenth century angry peasants began agitating for higher prices and refused to take advances.

- **4. Benaras:** In regions around Benaras, cultivators began giving up opium cultivation. They produced sugarcane and potatoes instead. Many cultivators sold off their crop to travelling traders (pykars) who offered higher prices.
- 5. In Bengal: By 1773, the British government in Bengal had established a monopoly to trade in opium. No one else was legally permitted to trade in the product. By the 1820s, the British found to their horror that opium production in their territories was rapidly declining, but its production outside the British territories was increasing. It was being produced in Central India and Rajasthan, within princely states that were not under British control. In these regions, local traders were offering much higher prices to peasants and exporting opium to China. In fact, armed bands of traders were found carrying on the trade in the 1820s. To the British this trade was illegal, it was smuggling and it had to be stopped. Government monopoly had to be retained. It therefore instructed its agents posted in the princely states to confiscate all opium and destroy the crops.

This conflict between the British government, peasants and local traders continued as long as opium production lasted. We should not however, think that the experiences of all peasants in colonial India were like those of the opium cultivators.