Agricultural Revolution—Great Britain 1700–1850

**REASONS FOR CHANGES IN AGRICULTURE**

- Growing population, creating an increase in demand for food
- Increase in number of urban dwellers dependent on farmers for their food
- Improvement in transport (new roads, canals, and railways), making it easier to take food to the towns and to deliver coal and machinery to farmers
- Increase in corn prices resulting from reduced supply of corn to Britain from Europe during the Napoleonic Wars (1792–1815); higher prices provided an incentive to produce more
- Purchase of land by middle class who wanted to make profits from farming

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**CHANGES 1700–1850**

**Enclosures**

- Land was fenced and reallocated under the Enclosure Acts, creating compact farms. This replaced the open field system of scattered strips of land in large, unfenced fields

**Inventions**

- 1701 **Seed drill**, invented by Jethro Tull, allowed corn to be sown in regular rows
- 1703 **The Rotherham plow**, invented in village near Rotherham, Yorkshire
- 1786 **Threshing machine**, invented by Scotsman Andrew Meikle to separate ears of corn from stalks
- 1827 **First reaping machine**, invented by Scotsman Dr. Patrick Bell
- 1808 **First all-iron plow**, made by Robert Ransome
- 1850s **Steam power** was applied to plowing: fixed to long cables, plows were pulled across fields by stationary steam engines

**Crop Rotation**

- Early 1700s, Viscount Charles “Turnip” Townshend used turnips (introduced from Holland) as part of a four-course rotation of crops to preserve soil fertility
- Clover, lucerne (alfalfa), and other leguminous plants were also used

**Use of Fertilizers**

- From the 1750s, farmers built dung-pits (underground pits to hold and preserve animal manure)

**Drainage**

- Use of deep trenches for drainage and later (19th century) pipe drainage

**Livestock Breeding**

- c. 1750, Robert Bakewell experimented with selective breeding (breeding from the finest animals)

**IMPACT**

- Experimentation to increase productivity of the land
- Farms grew larger as wealthy landowners bought land from poor landowners who became tenant farmers. Those left with no land became farm laborers or moved to towns
- Less wasteful than scattering seed by hand; easier to kill weeds
- Easier to use; turned the soil more effectively
- Faster, more efficient, and requiring less labor (previously, this task was done by hand)
- Less labor intensive than cutting corn by hand (using a sickle or scythe)
- Stronger than wooden plows
- Steam plow could cut several furrows at once
- No longer necessary to leave a field fallow (unplanted) every two to three years to allow nutrients to replenish the soil
- Manure added to the soil helped to produce better crops
- Less waterlogging of crops, resulting in higher productivity and profits
- Better yields of milk and higher quality and quantity of meat and wool

**INCREASE IN WEIGHT OF MARKET ANIMALS**

**Cows (beef and milk)**

- 1710: 370 lbs
- 1795: 800 lbs

**Sheep (mutton and wool)**

- 1710: 38 lbs
- 1795: 80 lbs

1 lb = 0.454 kg

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