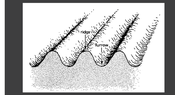
DEVELOPMENT OF THE PLOUGH

c.1200 B.C.
Hoeing
When agriculture was first developed, simple hand-held digging sticks and hoes were used in highly fertile areas, such as the banks of the Nile to create drills (furrows) to plant seeds in.



A long, narrow, shallow trench made in the ground by ploughing.

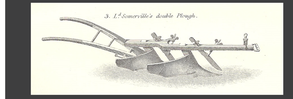
c. 1000 B.C.
Mouldboard Plough
A major advance for this type of farming, the plough not only cuts furrows with a cutting blade but turns soil, greatly reducing the amount of time needed to prepare a field, allowing farmers to work a larger area of land.

Since Medieval times (especially after the arrival of the Cistercians in the 1130s) most ploughs in Ireland have had three main working parts- the share, which cuts horizontally through the ground, the coulter, which cuts vertically through the ground and the mouldboard, which turns the slice cut by the share & coulter.

1730
Rotherham Plough
Joseph Foljambe in Rotherham, England, used new shapes as the basis for the Rotherham plough, which also covered the mouldboard with iron. It may have been the first to be widely built in factories and was described as 'the most perfect implement then in use'.

1775
Scotch Plough
Following James Small in the line of improvments came what is known as the Scotch Plough which incorporates a beam and handles of iron instead of wood. Names associated with the perfecting of the Scotch Plough include Wilkie & Finbayson.

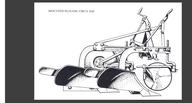
Early 19thC
Double Furrow ploughs
No dates available for the earliest double-furrow ploughs, but one of the first to meet with success was invented by Lord Somerville early in the 19th century.



1848
Steam Powered Ploughing Engines
The first demonstration of steam ploughing seems to have been by Mr.J.T.Osbourne in 1848 in Essex where the haulage of a plough across a field by an endless rope and steam-driven windlass was demonstrated. It is to John Flower that credit must be given for the first really practical system. In Britian Mann's and Garrett developed steam engines for direct ploughing. Places on either side of a field to haul a plow back and forth between them using a wire cable.

1936
Mounted Plough
Harry Ferguson revoluntionised tractor ploughing worldwide by developing a linkage and lifting system, which allowed the tractor driver to control the plough at the same time. Tractors using his system were first manufactured in 1936.

Naturally it was not long before other makers developed their own ploughs on similar lines and today the mounted plough reigns supreme for all except the large and heavier sizes.



Medieval Period
Scratch Plough
Prehistoric ploughs were ards or 'scratch' ploughs. Ard ploughs were used in some remote areas (e.g. parts of Fermanagh) well into the twentieth Century. These were larger animal-drawn ploughs which were powered by oxen and in later years by horses and mules.

Photograph of a Bronze Age Tailu, made from willow and hazel, from Ballyvourney, Co. Cork. The tailu was a wooden share found in a bog and dates between 1750-400 B.C. It is on permanent display in Ballyvourney Museum.

Image courtesy of Ballyvourney Museum

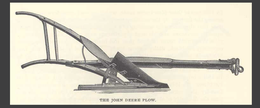
600 A.D.
Heavy Plough
The introduction of wheels to replace the runner allowed the weight of the plough to increase, and in turn allowed the use of a much larger mouldboard faced in metal, leading to greater food production.

Basic plough remained in use for a millennium. Major changes in design did not become common until the Age of Enlightenment, when there was rapid progress in design.

1760
Smalls Plough
Using mathematical methods James Small improved on the Rotherham plough design, producing a single-piece cast iron plough allowing the process to be carried out by one man and a pair of horses.
This was the beginning of the plough we know today. The most important thing about it was that the mouldboard was curved, mathematically designed to turn the furrow slice very neatly.

1789
'Self Sharpening' Ploughs
Robert Ransome, an Iron founder in Ipswich started casting plough shares as a result of a mishap, a broken mould caused molten metal to come into contact with cold metal, making the metal surface extremely hard. This resulted in chilled casting- which he advertised as
'self-sharpenng' ploughs, and received patents for his discovery. The Ransome's (and other makers') ploughs were important because they were made up of replaceable, standardised parts. Many Ulster Farmers referred to any wheel plough as a 'chill' plough.

1837
John Deere invents first steel plough
It was much lighter and stronger than Iron designs that it could work soil in areas that had previously been considered unsuitable for farming.



1850
Balance Plough
Steam power appealed to ploughing with the invention of the Balance plough by John Fowler an English Agricultural engineer and inventor.