PREHISTORIC CROPS

THE CELTIC EXPERIENCE

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Our only evidence for prehistoric cereals are carbonised seeds, seed impressions accidentally fired into pottery and pollen grains, all of which have been recovered from excavations of settlement sites. This kind of evidence, of course, only gives us an incomplete list but even that is very impressive. For example, the Celtic farmers had four types of wheat, four types of barley, oats, probably rye, beans, peas, flax, possibly Gold of Pleasure and even Fat Hen from which to choose. Many of these early varieties have continued to be grown in remote parts of Europe and the Middle East from which sources of initial supplies were obtained for research purposes at the Ancient Farm.

Emmer, Spelt, Einkorn

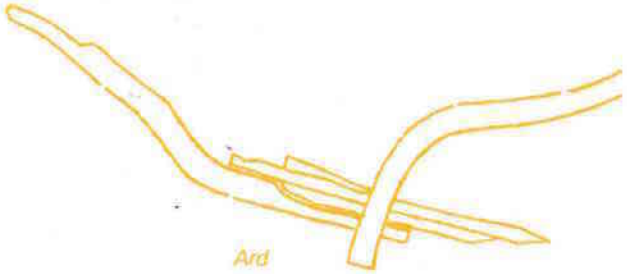
The principal wheat cereals of the Iron Age were Emmer *(Tr. dicoccum)* and Spelt *(Tr. spelta),* both of which are the progenitors of modern wheat. There is an even earlier variety, Einkorn *(Tr. monococcum),* the wheat man first of all exploited in the transition from hunter-gatherer to settled farmer. All three varieties are bearded, having long brittle hairs or awns and are extremely difficult to thresh. Their protein value, however, is approximately twice that of most modern cereals. The research programme focusses primarily on these cereals in order to obtain valid statistics of crop yields under different treatment regimes, manured or non-manured, in different soil types in different climatic zones. The fields at the farm, therefore, are laid out in randomised plot areas examining four or five varieties in the same area. For comparison purposes a modern wheat is always included.

A	C	D	B
D	B	A	C
C	D	B	A
B	A	C	D

A – *Emmer*
B – *Modern*
C – *Einkorn*
D – *Spelt*

Field layout example

The field areas are cultivated with replica tools of the Iron Age based upon originals recovered from peat bogs in Denmark and waterlogged deposits in Scotland. Illustrations of farming scenes drawn from rock carvings of Bronze and Iron Age dates in Scandinavia and northern Italy give us further evidence of how these tools were used. The prehistoric plough is properly called an ard since it stirs rather than turns the soil over. The mould board probably appears only in the tenth century A.D. In fact, the prehistoric farmer had three quite different types of ard, the sod buster used to bring into cultivation land previously fallow or undisturbed, the ordinary ard for ploughing and thirdly a seed furrow ard which drew the drills for planting.



Ard

In addition to these wheat cereals several other crops are studied including the legumes, peas *(Pisum sativum)* and beans *(Vicia faba minor)* which actually fix nitrogen in soil and may have been used in a simple rotation system. Flax *(Linum usitatissimum)* and Gold of Pleasure *(Camelina sativum)* are fibre and oil producing crops, the oil being made by crushing the seeds. Fat Hen *(Chenopodium album)* may well have been grown as a crop especially as it is an extremely versatile plant. The foliage can be eaten as a vegetable, the seeds ground into flour and the leaves can be harvested as a 'hay' crop for winter feed to livestock.

The fields are naturally infested with a large range of arable weeds, some of which like corn flower *(Centaurea cyanus)* and Corn Cockle *(Agrostemma githago)* are now extremely rare. Prehistoric and historic fields were always full of weeds until the agrochemical revolution of the last thirty years allowed modern farmers to create weed free crops. It is vital that our fields are weedy to validate our crop yield results.

Just to the north of the Ancient Farm area there still survives an extensive prehistoric field system. The lynchets, long low banks which form on the lower edges of the cultivated fields by soil creep, are clearly visible and demonstrate that the whole of this valley was farmed in the Iron Age.

Inevitably there were exotic crops, the principal one of which was woad *(Isatis tinctoria).* Caesar refers to the Celtic practice of personal tatooing with a blue dye, *'Britanni se vitro inficiunt'.* Woad, a biennial, is the only plant from which such a dye could be extracted by a process of fermenting the basal leaves of the first year's growth. In addition it is possible that the Opium poppy *(Papaver somniferum)* was cultivated as a medicinal resource. However, the real probability for these and a number of other plants is to project the beginning of gardening back into the Bronze Age.