**Agriculture: 1500 to 1690 Europe**

In agricultural practice, as in social and political structures, Ireland in 1500 fell into two distinct zones, with a large transitional area in between. In the Pale counties (Dublin, Meath, Louth, most of Kildare, and part of Westmeath) and some outlying areas of the southeast, agriculture in general followed a typical Western European pattern, with a strong emphasis on tillage. In the purely Gaelic areas of the north and west, however, there was a much greater emphasis on pastoralism, and tillage tended to be a monoculture of oats. The difference between the plow of the former colonial areas and the more primitive "short plow" of Gaelic Ireland was notable. Although both were drawn by a team of four horses, hitched abreast, and led by a driver ahead, the short plow also required the services of a "beam-holder" to hold the front of the plow in the ground, and was usually drawn by being tied to the horses' tails. There is evidence from County Louth of the occasional use of plow oxen in this period.

By 1500 the old colonial areas seem to have universally adopted the three-course rotation of autumn-sown crop, spring-sown crop, and a fallow year in which the land was plowed but left unsown until the autumn. The autumn-sown crops were wheat, Bere (six-or four-rowed barley) or, to a lesser extent, rye; the usual spring crop was oats, although peas, beans, and spring-sown barley are also recorded. So invariable was the three-course rotation that crops in these regions were universally reckoned in "couples," a couple being the unit of an acre of autumn-sown "hard corn" and an acre of oats. In the transitional areas, as in the Gaelic regions, the low population and abundance of land could lead to the fallow year being extended for much longer. In the Gaelic regions it was usual to cultivate oats—the standard food crop—for two years and then to let the ground grow grass for several years. Flax was grown extensively, at least in the Gaelic regions, to supply the widespread linen trade, but as a crop grown in small patches by the poor, it was rarely noted.

There is some uncertainty about the seventeenth-century spread of the potato. The surviving evidence suggests that Irish crop yields, at least in the Pale, did not differ appreciably from those in contemporary England, but there is no information on the ratio between seed sown and crops reaped. The townland was commonly treated as an agricultural unit for cultivation or grazing; boundary banks were usual between townlands, while otherwise the fields lay open and unenclosed. When it was necessary to make enclosures to protect crops, this was done with fences of posts and wattles, with an expected lifetime of two years. In the agricultural zones there existed around the coasts a belt in which abundant supplies of seaweed for fertilizer made possible an intensive agriculture in which corn crops could be raised, year after year, from the same land. The evidence suggests that in this period and in many areas, both Gaelic and [Old English](https://www.encyclopedia.com/literature-and-arts/language-linguistics-and-literary-terms/language-and-linguistics/old-english), there existed a class of "rural capitalists" who cultivated large areas with the help of their dependents, laborers, and share-croppers of varying status. Conversely, without the stock or dependents to adequately exploit it, land could be of little value to those who owned or worked it.

**The Pastoral Economy**

In Gaelic Ireland pastoralism was more important than tillage. Its mainstay was cattle, which provided not only meat and milk products but also the hides that were Ireland's principal export. Cattle were a mobile asset that could be quickly and easily moved to a safer locality in time of war as well as in search of fresh pasture. There has perhaps been too much readiness to identify all movements of the herds with transhumance ("booleying"), the movement from winter quarters in the lowlands to upland summer grazing. Gaelic legal custom allowed the grazing of unoccupied land either by the neighbors, if they were ready to pay tribute due to the lord out of the land, or by the lords themselves. The adverse side of this mobility was the prevalence of cattle raiding or rustling, not only in time of war. The herds—the *caoruigheachta* or *creaghts*—were particularly large and mobile in Ulster. The Gaelic Irish did not make hay, and the practice was instead to leave certain lands unused during the summer to provide winter grazing for the cattle. Irish cattle of the period are described as small, a description supported by what information there is on dead weights, but there was a larger breed in eastern Ulster. Sheep and pigs played a lesser role in the economy, but there is evidence of very large flocks of sheep in Munster. The native Irish sheep seems to have resembled the present Shetland breed, with a long coarse fleece, which was plucked in summer instead of being sheared and from which the famous Irish rug mantles were made. Pigs were fed on acorns in the woods in the usual European manner. To complete the pastoral picture, lords and other important persons kept great herds of mares for breeding purposes.

**The Seventeenth Century**

From the time of the Munster Plantation of the 1580s, English settlers (the "New English") moved into Ireland in large numbers, importing English agricultural techniques and the superior English breeds of cattle and sheep. Although interrupted by the Rising of 1641 and the subsequent wars, this immigration continued through the seventeenth century. The greater financial resources of the settlers, as well as their farming expertise, made English tenants as welcome on the lands of native Irish landlords as on those of the New English. Among the innovations that they brought were the liming of land with lime produced by burning limestone and the digging and spreading of marl, a lime-rich sub-soil. The Irish before this time seem to have used only local sources of agricultural lime, such as seaside-shell sands and rare inland deposits of lime-rich sand. The coming of the settlers coincided with an expansion of the native population, leading to a more intensive utilization of the land and a shift from pastoralism to tillage. As a result of this, and of a timber trade supplied by unsustainable exploitation of Irish forests, the period saw a rapid clearance of woodland. It also saw the beginnings of the process of permanent enclosure, hastened by the increasing scarcity of wood for the traditional temporary fences. It is difficult to tell how far the imported techniques influenced the native Irish, but evidence indicates that in County Sligo haymaking was already common by 1638. That English agricultural practices were not more widely adopted by the native Irish may have been due as much to lack of the necessary capital for innovation as to innate conservatism. The Scottish settlers in Ulster and the bordering regions, unlike the English, had little to teach the Irish in the way of tillage practices but the cattle which they brought with them were, to judge by their higher value, of a better breed than the native stock.

The most striking development in seventeenth-century Irish agriculture was the introduction of the potato. Research has shown that the potato, introduced into Ireland probably by merchants from the southern ports trading into Spain some time around 1600, must have been the Chilean variety, already adapted to a [temperate climate](https://www.encyclopedia.com/earth-and-environment/ecology-and-environmentalism/environmental-studies/temperate-climate), rather than the Peruvian, which required a longer [growing season](https://www.encyclopedia.com/plants-and-animals/botany/botany-general/growing-season) than was available in the [British Isles](https://www.encyclopedia.com/places/britain-ireland-france-and-low-countries/british-and-irish-political-geography/british-isles) (O'Riordan 1988). By the 1640s potatoes were being widely grown across the southern half of the country. The acid soils so prevalent in Ireland suited the potato, and it became an ideal crop for land reclamation. It was eventually to transform the hitherto unproductive wastelands of Ireland.

By 1700 over most of southern and eastern Ireland a class of large progressive farmers—usually of English origin—had emerged side-by-side with a native population, who were often relegated to the poorer lands and who continued to farm by traditional methods. Much of the Scottish settler population in Ulster resembled the latter class rather than the former.