

INTRODUCTION

Sweet chestnut (*Castanea sativa*) is a native of Southern Europe, Asia Minor and North Africa. It was first introduced to Wales by the Romans who cultivated the tree for its nuts which were milled to produce a flour used to make a porridge called polenta.

THE TREE

Sweet chestnuts grow best on fertile, well-drained soils. They grow to approximately 20m in height, with a girth of up to 2m. The trees are susceptible to frost damage in spring and care must be taken to avoid frost hollows. Sweet chestnuts grow quickly producing fencing poles in 15 years and small sawlogs in 20-25 years. They coppices freely producing clean straight poles. Figure 1 shows sweet chestnut fruit on the variety “Marigoule” – a high yielding hybrid of European and Asiatic chestnuts.



Agroforestry Research Trust
Fig 1: Sweet chestnut “Marigoule”

PROPAGATION

Timber producing trees are easily grown from seed planted immediately it falls. It is better to select larger seed if possible. This is usually produced by isolated trees or those growing along rides. Seed producing varieties are propagated by grafting selected strains and hybrids on to seedling rootstocks.



Fig 2: Chestnut plantation

PESTS AND DISEASES

Bark stripping by grey squirrels is the main threat to sweet chestnut. Damage to trees can begin from about 8 years old and continue throughout the life of the tree. Continuous culling is the only effective control.

Chestnut stocks in North America and Europe have been severely depleted by a fungal disease, *Endothea parasitica*. Although this is not yet a problem in Wales it makes sense not to rely too heavily on this species.



Fig 3: Chestnut logs

THE TIMBER

Sweet Chestnut timber is pale brown in colour and often confused with oak. It is softer and weaker than oak but just as durable with only a narrow band of perishable sapwood under the bark. The round timber is easy to split (cleave) and it can be sawn well with band and circular saws. The sawn timber is best dried slowly. When dry it is an easy timber to shape, plane and

sand. It takes glues and varnishes very well and is one of the easiest timbers to steam-bend. The heartwood is rich in

tannin which corrodes iron rapidly. Copper, brass or stainless fixings are not affected. Timber from older trees is usually inferior. The commonest defects are “shake”, circular or radial splits, and “ginger stain” caused by a fungus. Younger trees and coppice poles are less prone to these defects so early harvesting is recommended.



Fig 4: Sweet chestnut blanket box

USES OF THE TIMBER

Sweet chestnut is a very versatile timber because of its durability and easy working. Fencing is the main use for roundwood and cleft material. Sawn timber can be used in timber framing, as cladding and shingles. The dry timber is used in joinery and furniture. Traditional uses include trugs, barrel hoops, chestnut paling and walking sticks. Dry chestnut firewood is best burned in a closed log-burner as it is inclined to spit on an open fire.

CULINARY CHESTNUTS

Mature trees produce seed from time to time and of variable quality. Woodland trees seldom produce good nuts except from rideside trees. To produce reliable crops of large nuts from young trees requires selected strains grown under orchard conditions, typically on a 10m x 10m grid. Many of the commercial strains are hybrids with Asiatic species. They have been selectively bred to retain the excellent nuts of the European parent but incorporating the cold hardiness and disease resistance of the Asiatic parent. Some of these are not self-fertile. These varieties must be planted in mixtures.



Fig 5: Ripe sweet chestnuts

For further information on culinary varieties see www.agroforestry.co.uk

FURTHER READING

Coed Cymru Woodland Owners Handbook available on request. This give details of planting and care of young trees, the processing and drying of timber and further information on products.