

The Coppice Chestnut Industry in Northern Italy and South East England

Debbie Bartlett discusses how English coppicing of chestnut compares with that in Italy and what lessons might be learned.

This article summarises research funded by EuroCoppice, COST Action FP1301 (for full the report see: <https://www.eurocoppice.uni-freiburg.de/stsms/STSMreports>). The aim was to compare and contrast the situation for the chestnut (*Castanea sativa*) coppice industry in England and Italy with view to informing training and business development research proposals.

EU forestry policies are dispersed under several topics (e.g. environment, rural development, industry, trade). The current context is the Forest Europe Principles agreed in 2011 (See http://5th.mcpe.org/foresteurope.org/pBI7xY4UEJFW9S_TdLVYDCFspY39Ec720-U9or6XP:ips.)

The Italian Ministry of Agricultural, Food and Forestry has overall responsibility for implementing these but regional laws are set within this context. The UK Government policy statement 'Sustaining and enhancing trees, forests and woodland' (Defra, 2013) acknowledges regional differences.

The Resource

European average woodland cover is about 44%. In Italy it is around 30%, about 40% of which is publically owned. Italy is the largest European producer of chestnuts with about 800,000ha of chestnut woods; about 150,000 as orchards (Castellini et al, 2010). Tuscany is the most wooded region with about 90% in private hands. In Piedmont 70% is privately owned, comprising most of the chestnut/mixed broadleaves; the 30% public forest is mostly mountain and conifer. In England, the South East is the most wooded region, and has most of the chestnut resource, although area calculations vary. Dannet (1991) suggested that there were 18,066ha of chestnut in the South East, with most (12,544ha) in Kent.

Lindsay Marketing Services (1993) suggested a lower total of 17,286ha with the Forestry Commission (1996) estimating 16,000ha in Kent and East Sussex. Braden and Russell (2001) consider there are 18,788ha of chestnut in the UK, about 60% of which is Kent, East and West Sussex. More recently, Lockhart Garratt (2009) suggested these figures are an under-estimate of the chestnut resource. Most English commercial chestnut is privately owned. Braden and Russell (2001) found only 216ha in public ownership.

In England woodland is classified as either 'ancient', meaning it was shown as having tree cover on early maps of around 1600, or 'secondary' when land has been cleared but reverted back to woodland. There is no similar Italian designation.

In both countries it is almost impossible to determine the area actively managed as coppice as rotations vary with species, product and market dynamics. In Italy information can be derived from public forest tenders although these record approval not evidence of harvesting. In Tuscany cuts of less than 1000m² or in rotation coppice up to 5ha have to be declared while larger areas require authorization. No cut can be of more than 20ha and, if coppice is overstood (40 years or more) then a strip of forest at least 100m wide must be maintained between adjacent cuts. The details vary between regions. Until the late 1990s most coppice in South East England was sold by public auction so price acre-1 and total area could be tracked. Sales are now by private contract and permission not usually required. (A felling license is only required for large diameter material or large quantities.) A simple survey asking coppice workers disclose the area and species cut between 1st September and 31st August has

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revealed far more coppice in Kent is actively managed than previously thought; it is repeated regularly (Bartlett and Rossney, 2007).

Forest Administration

In Italy the Ministry of Agricultural, Food and Forestry Policies has overall responsibility with about 10,000 national Forestry Police whose remit includes controlling hunting. The autonomous regions (Valle d'Aosta, Friuli Venezia Giulia, Sicilia, Sardegna) and provinces (Trento and Bolzano) also have regional Forest Guards, some mounted on horseback. Regional Forest Technicians develop management plans for public forests and may advise private owners. In Tuscany each local administration has up to six of these. Tuscany also has about 550 forest workers, coppicing in winter but moving to fire prevention in summer. These are paid 25% by the region, the rest from a national budget. Research funding comes from multiple sources, including the EU, the regions, government agencies and private companies.

In England Defra (Department for the Environment, Food and Rural Affairs) sets forestry policy, which is implemented by the Forestry Commission. This advises woodland owners, administers grant schemes and felling licenses as well as promoting woodland biodiversity and recreation. Staffing is significantly less than in Italy. State Forest Design Plans are developed in consultation with stakeholders with private woodland owners encouraged to prepare management plans. Forest Research is the in house research and development unit, with around 200 staff, covering Scotland and Wales as well as England. Direct labour, some with housing, was more common in the past. Many counties, equivalent to Italian regions, had county woodland officers, a role that has virtually disappeared. There are various NGO woodland initiatives in England with no real equivalent in Italy.

The workforce

In England coppice workers and forestry contractors can be distinguished, and the arboricultural sector is larger than both combined. The Forestry Contracting Association holds data on contracting companies and coppice workforce surveys have been carried out (Bartlett and Rossney, 2007; Bartlett, 2011a; 2011b). In Italy the two cannot be separated easily, perhaps because much coppice is on steep slopes requiring sky lining. The arboriculture sector is small although reportedly expanding in Piedmont as former Fiat workers diversify. The term 'logger' is used to cover both coppice and forestry. Italian researchers' surveys focus on firms and

machinery despite the fact that, like South East England, most are small-scale companies with few modern machines. Sole traders and informal associations are common features and there is no real data on either the area under coppice management or make-up of the workforce in either country.

Knowledge transfer

There is a well-established, traditional pattern of intergenerational knowledge transfer in both Tuscany and Kent, with sons following fathers (Bartlett, 2011a). The industry may be less insular in Italy, with 'industry leaders' appearing to have better dialogue with the institutions; further research is needed to confirm this.

The recession has affected both countries and led to new entrants producing firewood without necessarily complying with the legislation. This has led to increased inspections in Italy, putting pressure on those who are fully certificated. Training material there is translated into Eastern European languages and Arabic, and a 'digital divide' has been reported with even some younger workers not using computers or email. While true of older workers in the South East England, the majority have smart phones, although using the Internet for marketing is rare.

Industry Structure

In England the 'coppice merchant' tradition is well established (as represented in fiction by Thomas Hardy's novel *The Woodlanders*), and can pass down the generations. These play a very significant role supporting the livelihoods of many workers without actually employing them. In both countries most workers are self-employed, the 'fiscal wedge' of tax, insurance and pension contributions discouraging formal employment. In England support with office/paperwork is often carried out by female partners; there was conflicting information on this in Italy. In both countries the 'merchants' report difficulty in finding enough workers. Informal collaboration to complete jobs and orders is common.

Historically coppicing was combined with other agricultural/rural livelihood activities and this continues to some extent in England. In Italy the combined livelihood strategy remains in forestry, thinning beech, pine and fir or river bank clearance in summer. The profile of the biomass industry has encouraged construction workers, with existing equipment (but no experience) into the industry; this causes tensions.

Chestnut Coppice Industries Compared



Chestnut fencing (round)

Representation

There is no organisation representing the coppice industry in Italy or Tuscany but many regional loggers associations. The extent to which the workforce or private woodland owners have a 'voice' in decision making at local, regional or national level is unclear. In England forestry is represented by the Forestry Contractors Association (FCA) (see <http://www.fcauk.com/>), the larger owners by the Country Landowners Association (CLA) (see <https://www.cla.org.uk/>) and National Farmers Union (NFU) (see <http://www.nfonline.com/home/>) and small ones by the Small Woodland Owners Group (SWOG) (see <http://www.swog.org.uk/>). It is highly debatable whether the Independent Review of Forestry, based on stakeholder workshops, involved the 'woodland floor'.

Chestnut coppice products

Historically chestnut timber was used extensively in Italy for construction, vineyard supports and fuelwood. Some timber is still produced but, as in England, there is an issue with both ring and star shake. Nut production, not commercially viable in England, is in orchards in Italy, but remnant pollards and buildings previously used by seasonal harvesters are still evident.

All the Italian workers encountered produced multiple products, usually posts, firewood and chip, with deadwood favoured as it is already dry. 90% of coppice harvesting is not mechanised. The chestnut industry in England is more specialised where the focus is on value added processing, notably pale and cleft post and rail fencing. Both these products have significant export markets.

Not a single example of split chestnut was seen in Italy; all the fencing was made up round to round. This was surprising as cleaving chestnut is common across northern Europe and into Spain. One family group visited reported supplying three basket makers, presumably splitting chestnut similarly to the oak spale baskets made in northern England.

In England domestic firewood is commonly delivered loose or in dumpy bags. The Italians seemed highly organised with logs delivered in returnable stillages and small diameter fuel for pizza ovens tied into round bundles (see photo below).

Both countries have policies supporting biomass. In England grant aid targets capital projects, assuming market draw will drive chip production. The Italians recognise large plants need cheap fuel so will source globally. (The European Commission, Directorate-General for the Environment, published a call (2014-08-07) for tenders for provision of a study on the environmental implications of the increased reliance of the EU on biomass for energy imported from North America.) Therefore support focuses on small installations. Wood chip is the lowest value product in both countries despite involving costly machinery. Some Italian producers lend chippers to other co-operative members, others hire machines in. One family graded chip so micro-chip could be used in boilers designed for pellets, a more costly fuel; a particularly effective strategy as they also sell boilers. Chestnut is not favoured as a fuel in England although it is burnt in closed stoves. Some fencing processors chip the by-product but it is not as important economically as in Italy.



Pizza wood

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Access to woodland

In contrast to the situation in South East England, the better quality chestnut in Italy tends to be in publically owned forests, with permission to cut tendered. Italian private owners make arrangements with local cutters and, if the area is large, intention to cut is submitted for permission, which, once given, lasts for three years and can be extended. The price is likely to be based on yield ha⁻¹ in Italy as the main products are firewood and chip. In England the proportion with potential for added value processing combined with demand are significant influences. Extraction costs affect both, slope predominantly in Italy, soil in England. Contracts here are usually for one season and may require all produce to be off site before the summer. Italian workers tended to plan long term, with one admitting to 'arrangements' stretching forward for ten years, providing a buffer against fluctuations in demand. Some own woodland. In both countries access to woodland is restricted if workers cannot provide documentation of certification, significant in publically owned

forests. In England this is also an issue on NGO landholdings.

The cutting period, set regionally in Italy, varies with growing season and altitude (reported by Lamberto Santini to start 1st October and end 15th April, with a month permitted for extraction; at higher altitudes this changes to 15th September to 15th May). Wildlife considerations determine this in England, despite the relevant legislation being Europe-wide. Italian workers are apparently expected to "keep their eyes open and leave fruiting trees and any of cultural or wildlife significance". Official bird nesting season is 1st March to 31st July in England although some feel milder winters mean this should be changed to 1st February. Risk assessments are required if bats or dormice, for example, are likely to be present. Extending the cutting season for chestnut is being discussed in Italy.

Conversion to high forest, considered more 'natural', has been policy in Italy for the last thirty years and, while now accepted to be incorrect, change will be slow. The practice is still subsidised in some regions. If more than twice the 18 years rotation for chestnut then, in Tuscany, special permission is required to coppice. If refused, conversion to high forest is required. Different aged poles may be grown on a single stool, a practice not seen in England. Around the 1990s some chestnut was converted, thinning shoots at 10 years, harvesting later depending on the timber market. Chestnut coppice can still be considered 'in rotation' at eighty years plus for post and rail fencing.

The coppice industry in Italy is affected by fire, not generally an issue in English broadleaved woodland, although arson attacks on firewood stacks can be an issue. Windthrow can be significant in both countries with flooding a particular issue in South East England recently, making extraction impossible on heavy ground.

Diseases, such as chestnut blight (*Cryphonectria parasitica*), present in Italy since the late 1930s and found in Central England in 2011 (See <http://www.forestry.gov.uk/chestnutblight>), are a constant concern. Chinese gall wasp (*Dryocosmus kuriphilus*), introduced with scion material, is reducing foliation, growth rate and yield, and is responsible for nut and honey failures in Italy. Biological control, using *Torymus sinensis*, has begun but is expected to take ten years to become effective. It is not present in England.

Deer, particularly roe (*Capreolus capreolus*), protected in Italy for the last two decades, are damaging coppice regrowth and eating bark in winter. Florence University are

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experimenting with deterrents including treacle and ox blood. Hunting is not permitted in national or regionally owned forests but communes issue permits to shoot from June to September, after surveying to determine number, age and gender of quarry. In England deer can be culled, the season depending on species, by trained stalkers with landowner permission. Night shooting and hunting with dogs is banned in both countries. Italy has no rabbits (*Oryctolagus cuniculus*) in but mountain hares (*Lepus timidus*) are present.

Housing and security are key issues for coppice workers in South East England although not a problem for those questioned in Italy. It was suggested the stable rural population, with most workers living in the countryside, meant thieves would be observed. In contrast housing costs, particularly in the South East England, mean most rural workers are forced to live in towns, so have problems parking large vehicles and no safe storage. Theft is not uncommon, increasing insurance costs and impacting business viability.

Main findings

There are both similarities and differences in the chestnut industries in northern Italy and South East England. The nature of the resource, the tradition (intergenerational involvement of family groups) and policy emphasis on biomass and woodfuel is found in both countries. Differences include:

In Italy:

- 'Coppice' includes scrub clearance, as well as rotational harvesting of multi-stemmed and singled stools.
- There is no status for ancient woodlands.
- Forestry is taken seriously as demonstrated by staff numbers.
- Chestnut is not split.
- Large biomass plants are recognised as unlikely to have local benefit.

In England:

- NGOs and stakeholder organisations are involved.
- Operational considerations for natural and cultural heritage are taken seriously.
- Cleaving chestnut is the basis of value added processing.

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