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Best Practice Prescriptions for Propagating and Establishing Wild Cherry (*Prunus avium*) for Timber Production

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Introduction

The genus *Prunus* contains over 200 species, mainly found in the northern hemisphere (Savill 2019). Wild cherry, most commonly referred to as cherry (*Prunus avium*) is a fast growing, relatively short-lived tree and is one of two cherry species native to Britain, the other being bird cherry (*Prunus padus*). It has a wide natural distribution, being found across the temperate areas of Europe and parts of Anatolia, north Africa and western Asia (Welk *et al*. 2016). It is found from plains, through to montane areas, reaching altitudes of 2000m in the mountains of Iran, 1700m in the Alps and 1900m in south-east France. Its distribution is limited by lack of moisture in the south and cold in the north. It has been widely planted outside its natural range in Asia and north America (Welk *et al*. 2016).

The profuse flowering and fruiting make cherry an important tree for supporting woodland insect and bird populations (Pryor 1988). Cherry's fast growth in early life and valuable wood make it an attractive broadleaved tree for timber production (Pryor 1988) and financial returns can be double that from beech (*Fagus sylvatica*) and sycamore (*Acer pseudoplatanus*) (Joyce *et al*. 1998). Savill (2019) notes that demand for its timber outstrips supply in Britain so opportunities exist to increase domestic production. Productivity of Yield Class 6-10 m^3 ha^{-1} y^{-1} is possible on moist, fertile sites, with rotations of about 60 years. In 50 to 60 years on favourable sites it will reach a height of 20m and dbh of 60cm (Evans 1984). Longer rotations are not recommended as after 60 years of age, cherry is susceptible to heart rot (Savill 2019) and because of this it is also recommended that it be grown as rapidly as possible to a merchantable size (Evans 1984). Cherry is reported to not be damaged by grey squirrels (*Sciurus carolinensis*) (Savill 2019) but is susceptible to bacterial canker (*Pseudomonas syringae*) (Kerr and Evans 1993). In 1988 it was noted as being rarely planted for timber production in Britain (Pryor 1988) but 700,000 trees were supplied from nurseries in GB in 2022-23 (Forestry Commission 2023). However, overall it is likely to remain a minor productive species as cherry requires particularly good sites to produce quality timber (Evans 1984). This paper presents information on recommended practices for propagation and establishment of cherry for timber production in Britain.

Silvics of cherry

Cherry is one of our faster growing native broadleaves and individual trees live for between 100 and 150 years (Welk *et al*. 2016). In Britain, cherry is a tree of the lowlands, rarely occurring above 300m elevation and being intolerant of exposure (Savill 2019) and other site requirements are described in Table 1. Cherry is an opportunistic tree, with its growing season being strongly linked to temperature, rather than photoperiod, and even in conditions of a short day, above a temperature of 9°C growth will continue. In contrast, under a long day situation but at lower temperatures growth will cease (Heide 2008). Cherry produces a shallow, extensive root system that predisposes it to windthrow and is sensitive to other environmental stresses (Welk *et al*. 2016).

Cherry exhibits strong apical dominance, but also heavy branching, with branches borne in whorls (Joyce *et al*. 1998). The initial growth rate of cherry is very rapid and to maintain this it is important to thin heavily to release the trees from competition. In the first 40 years, biomass growth can be comparable to conifer stands of Yield Class 14-18 m^3 ha^{-1} y^{-1} (Joyce *et al*. 1998). Thinning is most effective when the trees are between 30 and 40 years old as the response in growth declines thereafter (Joyce at al. 1998). For timber production, pruning to 5m is required and this should take place in June and August to reduce the risk of infection by canker (*Pseudomonas syringae*) and silverleaf disease (*Chondrostereum purpureum*) (Evans 1984). Care should be taken as overly intensive pruning will reduce diameter growth and some forms of pruning encourage new branch formation (Springmann *et al*. 2011).

Table 1. Site requirements of wild cherry.

Attributes	Requirements
Light requirements	Shade tolerant when young, it becomes highly light demanding as it ages (Joyce *et al*. 1998, Savill 2019).
Frost	Moderately susceptible to frost, less so than ash, beech, sweet chestnut and oak (Kerr and Evans 1993). According to Joyce *et al*. (1998), it is susceptible to late spring frost and winter frost.
Warmth	Cherry prefers warm and sunny sites (Joyce *et al*. 1998).
Exposure	Susceptible to windthrow, and exposure detrimentally affects crown shape and form (Joyce *et al*. 1998).
Soil moisture requirements	It can tolerate periods of drought but not waterlogging (Joyce *et al*. 1998).
Soil fertility and texture	Requires fertile, well-drained light soils of high fertility and a pH of 5 to 6.5 (Evans 1984), particularly loamy calcareous soils (Joyce *et al*. 1998). Heavy soils are not suitable nor are poor shallow or poorly drained soils (Kerr and Evans 1993). The relatively poor rooting ability of cherry precludes planting on compacted sites (Joyce et al. 1998).

Plant Production

Recommended seed sources

Qualified seed is available from three seed orchards. Two are owned by Forestart; one provides seed suitable for planting in the west (Region of provenance 30) of Britain, while the other supplies seed suited to planting in the east (Region of provenance 40). Another seed orchard owned by the Earth Trust produces seed suited to the whole of Britain (Future Trees Trust 2022) and there is French improved material available (Clark pers. comm). It is recommended that planting material raised from qualified seed be used when planting cherry for timber. This is for three reasons: it has a high genetic diversity; it is likely to produce trees with better timber characteristics; and it is expected to shorten rotations by as much as 10 years (Savill 2019).

If qualified seed is not available, there is no information on superior provenances of cherry in Britain and there have been disappointing results from some imported seedlots (Hubert and Cundall 2006). This may be due to much of the seed being collected with the objective of amenity (Pryor 1988). Savill (2019) also described seed material derived from seed collected on the continent from cherry bred to produce heavy fruit crops, with large wide crowns and heavy branching. These were known as ‘jam factory’ cherry and exhibit poor attributes for timber production. In Ireland selected clones from France proved to be more rapid growing in the nursery than selected Irish material but there is no record of their field performance (Joyce *et al*. 1998). Given the lack of information, local source identified seed should be used, collected from the same seed zone or from an adjacent seed zone (Hubert and Cundall 2006). If collecting seed, care should be taken to ensure sufficient genetic diversity as cherry produces suckers as a preferred method of reproduction. This means that genetic diversity of populations of cherry trees in many woodlands is likely to be very low and it is unusual to find woodlands with more than 30 genetically distinct individuals in Britain (Russell 2002). The low level of genetic diversity in cherry was confirmed in the survey of two ancient semi-natural woodlands, where only 246 genetically distinct individuals were found in 551 trees (Vaughan *et al*. 2007). However, cherry is an insect pollinated tree and exhibits a self incompatibility mechanism to prevent selfing and ensure outcrossing (Boshier 2010). This promotes genetic diversity in the species.

Ten clones of superior, more canker (*Pseudomonas syringae*)-resistant cherry have been developed and sold under the Wildstar trademark (Russell 2002), but their field performance was found to be variable (Kerr and Rose 2004). Some of the better clones are now replicated in qualified seed orchards and it is no longer commercially available.

Seed selection, storage and pre-treatment

There are about 5,100 seeds or ‘stones’ in one kilogramme (Savill 2019). Collecting cherry seed presents some challenges. Seed will normally be collected prior to the fruits ripening, before they are consumed by birds. Cherries change from an unripe green and yellow colour to red in June and July (Gosling 2007). Gosling (2007) describes cherry seed as being orthodox with deep dormancy so eliciting germination is not straightforward. He recommends storing the stones at 0°C at a moisture content of 10-12%. Joyce *et al*. (1998) recommend that moisture content of cherry stones be reduced to 9-10% and then they can be stored for several years.

Good germination is best achieved by sowing cherry seed immediately, or in the autumn following that summer’s collection (Iliev *et al*. 2012). If this is not possible, pre-treatment of stored stones can improve germination to an extent. Gosling (2007) recommends a period of warming (15°C) for 2-8 weeks, followed by a period of chilling (4°C) of between 1-8 weeks whereas Iliev *et al*. (2012) found successful germination following six weeks warm pre-treatment followed by and five months chilling. Another approach is described by Joyce *et al*. (1998) who recommend the stones be stratified in outdoor pits between mid-August and mid-September. To achieve this, the stones are mixed with equal amounts of sand and peat and kept moist, until radicles emerge, normally from mid-February to early March, when the stones can be sown (Joyce *et al*. 1998). Gosling (2007) recommends a similar approach but storing the stones and medium in a fridge at about 4°C. If sowing is not convenient at this time, the stones and medium can be frozen at -3°C for up to 10 weeks and then defrosted and sown (Joyce *et al*. 1998). Germination can also be improved by the removal of the seed coat and chemical treatment with gibberellic acid, thiourea or potassium nitrate (Çetinbaş and Koyuncu 2006).

Raising planting stock

Raising planting stock from cuttings taken from seedlings up to two years old is a practical way of producing planting stock, but cuttings from older seedlings are difficult to root (Evans 1984). However, a variety of approaches to raising cuttings from root systems of three-year-old cherry seedlings was tested. Four different diameter classes were tested, three different lengths, and also buried and exposed cuttings. Leaving the ends exposed produced more successful cuttings, while using longer cuttings (15cm) and thicker diameters increased the number and length of suckers (Ghani and Cahallan 1991). Creating cuttings from a few individuals may not provide genetically diverse, resilient planting stock unless taken from a genetically diverse group of seedlings (Gosling 2007). Cherry planting stock can also be raised through micropropagation (Hammatt and Grant 1997) although this is more commonly applicable to cherry for fruit production (Druart 2013) or ornamental varieties (Scaltsoyiannes *et al*. 2009).

The effects of growth in the field of wrenching, - the bypassing of a wedge-shaped blade 20cm beneath the nursery bed at twice a year (early July and early August), - was investigated. Wrenching is employed to undercut the roots, reducing the length of the taproot and encouraging the production of lateral roots This reduced shoot growth when compared with a control. However, the early wrenching in July promoted greater aboveground growth two years after planting (Hipps *et al*. 1999).

Establishment

Planting stock type and season

Cherry planting stock can be produced in a number of ways, both bareroot and in a variety of cell types and containers. On four differing sites in Turkey, container-grown stock showed greater survival but growth after two years was the same as bare-rooted stock (Esen *et al*. 2012a). A general review comparing the benefits of bare-rooted seedlings versus containerised stock came to some general conclusions (Grossnickle and El-Kassaby 2016),that containerised stock was more resilient to poor planting conditions and handling due to a higher root:shoot ratio and greater root growth potential. On sites where planting stresses are low, containerised and bare-root stock exhibited similar survival and growth. Bareroot stock is less costly and so selection of planting stock type is also an economic decision. Kerr (1994) notes the difficulty in making comparisons between the performance of bare-rooted stock and containerised stock across species and sites. He suggests that a better approach is to develop a plant quality index, defining the traits that enhance survival and growth in a seedling and using this as a guide to growing quality planting stock.

Because cherry is sensitive to weed competition, planting taller bare-rooted stock improves survival. A study in Turkey recommended planting stock of 70cm height and 8mm root collar diameter (Esen *et al*. 2012a). This supports Joyce *et al*. (1998) who recommend using 2+0 year seedlings or alternatively 1+1 or 2+1 year-old transplants, of a height of 50 – 120cm. Morgan (1999) provides recommended root collar diameter and heights are given for broadleaves including cherry, and height, root collar diameter and cell volumes for cell-grown plants (Table 2 and Table 3 respectively), and a study by Kupka (2007) on cherry reinforces the importance of a balanced root and shoot system. It is interesting to note that the dimensions given do not include those for the larger stock recommended for planting of cherry by Esen *et al*. (2012a) and Joyce *et al*. (1998), or those recommended by Grossnickle and El-Kassaby (2016) more generally. Larger stock, however, is more expensive.

Morgan (1999) describes the recommended planting dates for bare-rooted stock, which normally takes place in late autumn/early winter (October to December) or spring (February to early April). The spring planting season can be extended in colder parts of Britain by about a month by using cold store seedlings. Cold storage of cherry should be at a temperature of between 0°C and 2°C (Morgan 1999). An advantage of cell-grown stock is that it can be planted late in spring, until the middle of May, provided ground and weather conditions are amenable (Morgan 1999).

Table 2. Minimum root collar diameters (mm) for different heights of bare rooted planting stock (birch = Betula *spp., beech =* Fagus sylvatica*, ash =* Fraxinus excelsior*, cherry =* Prunus avium*, oak =* Quercus *spp. and lime =* Tilia *spp.) (Morgan 1999).*

Species	Height range (cm) 20	30	40	50	60
birch	3	4	4.5	5.5	6.5
beech	4	5	6	7.5	9
Cherry/oak/ash/lime	5	6.5	8	9.5	11

Table 3. Minimum root collar diameter (mm) and cell volume (cc) for cell grown broadleaved trees (Morgan 1999).

Attribute	Height range (cm) 10-20	20-40	40-60	60-90
Minimum root collar diameter (mm)	4	4	6	8
Minimum cell volume (cc)	50	100	150	200

Nutrition

Cherry is a demanding tree in terms of site nutrition and moisture, and should only be planted for timber on good sites (Savill 2019). Where there are nutritional deficiencies, fertiliser may compensate and have a positive impact on growth, but this tends to be relatively short-lived as fertiliser generally does not improve the long-term nutrition on a site as it is taken up by the trees (Miller 1981). Also, for fertiliser application to be effective there must be good control of competing vegetation (Eşen *et al*. 2012b).

Soil acidity alters the availability of nutrients and a short-term study confirmed the preference of cherry to less acidic soils in a greenhouse experiment in Scotland (Neilsen *et al*. 1990). Aboveground growth over 168 days was better on the pH 4.81 to 5.41 substrate with the highest level of phosphorous fertilisation (145–173 µg g^{-1}) compared with seedlings growing on the pH 3.75 to 3.99 medium and lower levels of fertiliser application (31–44 µg g^{-1}). However, low levels of application of controlled release fertiliser (80g per tree) improved growth of cherry on two sites in Turkey, whereas higher rates were equally or less effective (Eşen *et al*. 2012b). A separate study by the same authors across four sites found no response in survival or growth to fertiliser, tillage or both, compared to a treatment adopting thorough weed control (Esen *et al*. 2012a). Not surprisingly, the response is likely to be linked to the concentrations and availability of nutrients on specific sites.

Reseach on the effect of inoculation by mycorrhizae on field performance of cherry seems to have been focused on micropropagated trees (e.g. Lovato *et al*. 2006) but is an area of research that would be worth pursuing.

Site selection

Cherry requires good sites to produce quality timber. Pryor (1988) recommends that if growing cherry for timber production, sites above 300m in altitude be avoided in Britain as well as exposed sites. On exposed sites, cherry is prone to windthrow and also develops misshapen crowns and stunted growth. A crucial site factor in growing quality cherry is soil depth, with soils of less than 40cm depth above the parent material being unsuitable (Pryor 1988). A further soil requirement is that the soil be freely draining, although good growth has been noted on heavy soils, but with a free-draining substrate. Waterlogged soils are not suitable for cherry and waterlogging can increase damage to roots by pathogens (Pryor 1988). Cherry is reported to grow well on sandy soils, provided they are sufficiently deep. However, sites for optimum growth are clays above calcareous parent material, and deep, flushed soils at the bottom of slopes (Pryor 1988). Cherry will tolerate a range of acidity, growing on soils with a pH of 5.5 to 8 (Savill 2019).

Controlling competing vegetation

Cherry is demanding of soil moisture and nutrients, and so is sensitive to the effect of competing vegetation. For example, grass competition has been shown to reduce rooting in the upper layers of the soil (Dawson *et al*. 2001). Complete weeding around the tree can double height and diameter growth in the first year (Figure 1) (Davies 1985). After three years' growth, mulches and spot weeding (1m and 0.5m diameter) gave excellent results with complete weeding giving only slightly better results at a higher cost (Kerr and Evans 1993). In France, mulches of black plastic and waxed newspaper covered in soil, were found to be effective, increasing height growth of cherry by three times over the control, two years after planting (Frochot and Levy 1986). An experiment in the Czech Republic comparing five-year growth of eight tree species used different mulches: a grass cover control; a mulch of fresh bark chippings; a straw mulch; and a textile fleece mulch. The complete straw mulch provided the best conditions, with twice the height growth of the other in-row mulches and nearly three times that of the control (Dostálek *et al*. 2007). While mulches are effective at supressing weed competition, vole (Microtus spp.) damage can be greater when mulches provide shelter (Kerr and Evans 1993) and in addition, mulches are a costly option, especially those that provide complete coverage.

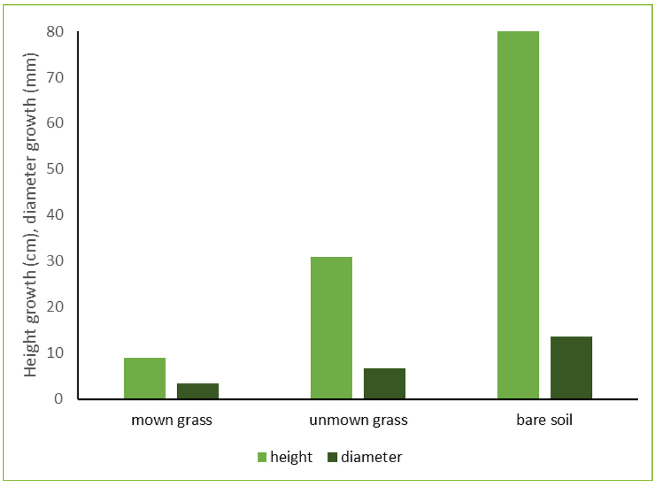

Figure 1. First year's growth in height (cm) and diameter (mm) of cherry at Alice Holt (Davies 1985).

Site amelioration

For timber, cherry should be planted on well-drained lowland sites with good levels of nutrition, and these will require no or limited cultivation for good establishment. The relatively poor rooting ability of cherry (Joyce *et al*. 1998, Welk *et al*. 2016) would suggest that any pan or indurated layer should be ripped to allow deeper rooting. To obtain good weed control, discing or herbicide is recommended (Evans 1984). Haufe (2020) provides useful general guidance on appropriate cultivation measures for a range of soil types.

Protection

Tree shelters do not increase the height of cherry as much as some other broadleaved trees, increasing growth by less than 50% over trees in mesh guards (Potter 1991). Furthermore, the rapid growth of cherry means that it outgrows the shelter rapidly (Kerr and Evans 1993). However, shelters do provide a more benign environment for young cherry by reducing transpiration. The foliage, however, acclimates to these conditions so removal of shelters during the growing season will result in high rates of transpiration and a risk of desiccation (Bergez and Dupraz 1997). It is also important to maintain a weed-free zone around the shelter as any reduction in the water use of trees and increase in soil moisture will benefit the weeds (Bergez and Dupraz 1997). An experiment introducing ventilation, through either a vent at the bottom or holes in the sides, increased biomass of field-grown cherry by 55% after one growing season in comparison with a traditional shelter (Bergez and Dupraz 2000). This is a modification worth investigation in terms of benefit and cost. A further modification was described by Evans (1996) who found fast growing cherry filled the shelter five years after planting and that this seemed to reduce health and increase mortality. He recommended slitting the shelter vertically with a Stanley knife to allow expansion but still provide some protection from deer fraying and rabbit (*Oryctolagus cuniculus*) damage (Evans 1996).

Joyce *et al*. (1998) describe the foliage of cherry as being highly palatable to deer and that it was susceptible to fraying, while Moore *et al*. (2000) found that cherry was browsed by roe deer (*Capreolus capreolus*) more heavily and for a longer period in summer than oak (*Quercus* spp.) and sweet chestnut (*Castanea sativa*). Cherry is also heavily browsed by red deer (*Cervus elaphus*) (Pépin *et al*. 2006). In contrast to these studies, a survey in Sweden found cherry to be only moderately attractive to deer and hares (*Lepus* spp.), compared to six other broadleaves and to Norway spruce (*Picea abies*) (Figure 2) (Kullberg and Bergström 2001).

Cherry does, however, seem to be relatively unattractive to pine weevil (*Hylobius abietis*) with tree preference being in the following order from most attractive to least: (1) Norway spruce; (2) beech (*Fagus sylvatica*) and oak; (3) ash (*Fraxinus excelsior*), lime (*Tilia cordata*) and cherry (Löf *et al*. 2005).

Planting patterns and use of mixed species stands

Most stands of cherry established in GB are mixed (Pryor 1988) and there are economic and biological reasons. Cherry is also planted mixed stands in Chile where it was found to have lower infection rates of canker, less insect damage and faster growth (Loewe *et al*. 2013) compared to cherry planted in pure stands. If planting a monoculture of cherry, it is recommended

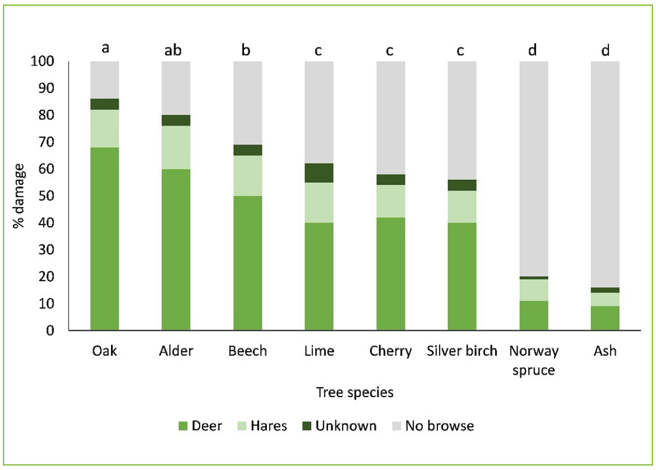

Figure 2. Mean percentage of browsed seedlings for different tree species. With reference to total browsing, means with the same letter are not significantly different (p<0.05) (Kullberg and Bergström 2001).

that the area be less than 2 ha to reduce the risk of disease. If the area to be planted is greater than 2ha, cherry should be only be used as part of a mixture. or cherry be mixed with other species to reduce the risk of disease (Loewe *et al*. 2003).

Cherry exhibits strong apical dominance, normally exhibiting a strong leading shoot (Savill 2019). This means that it can be established at wider spacings, for example 3m x 3m (1,100 stems ha^{-1}), than many broadleaves and still produce quality timber (Savill 2019). In contrast, Joyce *et al*. (1998) recommend planting at between 2,000 and 4,000 stems ha^{-1} as wider spacings will lead to large, persistent branching which will produce knots in the wood unless pruning is undertaken (normally to 5m height) (Savill 2019). Joyce *et al*. (1998) note that the poor self-pruning ability of cherry means pruning is necessary even at narrower spacings. Kerr and Morgan (2006) however, found that early formative pruning did not improve stem form in cherry.

There are financial benefits to growing cherry in mixed stands too; the rapid early growth of cherry makes it an attractive candidate for planting in mixtures with slower-growing species such as oak and beech (Evans 1984) as the cherry will provide an early return in thinnings, leaving a final oak or beech stand. Cherry can also be successfully mixed with faster-growing broadleaves. Kerr (2004) investigated the effects of interspecific competition in mixtures of ash and cherry with different proportions of each species. Height growth of the cherry was faster but the difference in height declined over the five years of the study and both species maintained a place in the canopy, but stem form changed. In terms of tree diameter, the higher the proportion of ash, the larger the diameter of cherry, while the higher the proportion of cherry, the smaller the diameter of ash. The relative yield total, which reflects the gain or reduction of yield of mixtures compared with monocultures, increased to 1.78 for ash and cherry after five growing seasons. While ash is no longer planted due to the impact of ash dieback (*Hymenoscyphus fraxineus*), the findings may be relevant to mixing cherry with other fast-growing broadleaves.

When creating a mixed stand, using tightly spaced groups rather than alternating rows was found to produce higher quality cherry stems. In Germany, survival and quality of cherry was compared in groups of five cherry and seven lime (*Tilia cordata*) (1m x 1m spacing in groups, 60 groups and 13m between groups) with the same species planted in rows at a stocking density of 3,300 stems ha^{-1} (1m x 3m spacing). The higher competition in the row planting resulted in poorer rooting and stability, slower growth and poorer stem quality of the cherry. Natural regeneration between groups also contributed to the better quality of cherry trees in group plantings (Saha 2018).

Mixing cherry with nitrogen-fixing trees may have some potential to at least boost early growth. A study in Italy examined the growth of broadleaves with nitrogen-fixing trees on a former open cast colliery site, with heterogenous soils. The stands were established at 1,100 stems ha^{-1} and the cherry was planted with Italian alder (*Alnus cordata*) or black locust (*Robinia pseudoacacia*) or Russian olive (*Elaeagnus angustifolia*). Seven years after planting, the trees species in the mixed stands exhibited increased height (other than with Russian olive) and diameter growth when compared to monocultures (Buresti and Frattegiani 1994). There were no interventions other than the black locust, which was pollarded at 50cm height in years 4 and 6 to reduce competition with the cherry. A study comparing nitrogen transfers from alder and Russian olive, two nitrogen-fixing trees to cherry showed that transfers were more than three times greater from Russian olive then from alder (Roggy *et al*. 2004). Given the demanding site requirements of cherry, creating mixed stands with nitrogen-fixing trees on nitrogen-poor soils may provide opportunities to broaden the range of sites that could be planted.

Agroforestry may offer an opportunity to grow cherry for timber in Britain and trials using cherry in silvoarable and silvopastoral systems have been established in France. The trees were established at stocking densities of between 50 and 400 trees ha^{-1} and were protected with tree shelters, and spot weeded. Pruning every year to between 4-6m ensured that quality timber was produced (Balandier and Dupraz 1999). There are however, trade-offs between tree growth and crop or pasture growth in some agroforestry systems. A study in northwest Spain showed that maize yields increased the further the distance from intercropped cherry trees (Ferreiro-Domínguez *et al*. 2017). In an analysis of potential areas for silvoarable systems in Europe, southern England was identified as being suited to systems incorporating cherry (Reisner *et al*. 2007).

Conclusions

Cherry has good potential as a timber tree, exhibiting fast growth and producing high-value wood. It should be planted only on best quality, lowland sites so this will limit its potential expansion. However, demand for cherry wood is high in the UK and is currently not met by domestic production. Cherry produces heavy branches in whorls and for high-quality timber, pruning to 5m should be undertaken.

As a minor broadleaved tree species, there is limited information on nursery and establishment techniques, even from overseas studies. However, a set of basic recommendations has been developed.

Recommendations

- Cherry should only be planted on good sites below 300m in elevation.
- Geographically-appropriate qualified seed orchard material should be used when possible. If this is not available, then source identified seed from an appropriate seed zone should be used.
- If bare-rooted stock is used, there is evidence that wrenching improves growth in the field. Larger planting stock of between 50-120cm is recommended. Consider cell-grown stock if planting on drier sites or to extend the planting season.
- Tree shelters have less effect on height growth of cherry than many other broadleaves. There is evidence that venting the shelter can improve performance.
- Stocking density should be at 2,500 stems ha^{-1} and regular pruning will be required to produce quality timber. Alternatively, planting in tight groups in a matrix of other tree species has been shown to produce quality timber trees.
- If planting in monoculture, the area should not be more than 2 ha.
- Planting cherry in mixed stands can be of benefit both to early growth and timber quality. Establishing cherry in groups has been beneficial in terms of stability and quality, while planting with nitrogen-fixing trees can increase early growth rates.
- The high demands for site nutrients and moisture mean that thorough weed control is essential. Mulches are effective but costly, and can increase vole damage.
- Fertiliser applications can improve growth, at least for a short period, but must be used in conjunction with effective weeding.
- Cherry is either moderately or very palatable so should be protected from browsing by deer, and hares.

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