

ELM TREES

A chance to restore them to our countryside



Many of us over the age of 60 will remember the iconic tree of the shires. Massive statuesque trees in the hedgerows and clumps in the fields. They held the noisy rookeries and were the classic backdrop to so many rural activities ably captured in those old pictures of English life. They provided the food for many fungi and insects such as the White letter Hairstreak butterfly.

Sadly in the early 1970's they were nearly all dead, struck down by Dutch Elm Disease, a deadly fungus carried by a beetle that laid its eggs beneath the bark of the tree. The trees were cut down leaving a huge gap in any country dwellers mind.

The suckers of those trees still survive in our hedges- trying to grow into trees; they get to about 20 feet high and the trunk 6-9 inches in diameter only to be struck down again by the disease.

The classic Elm is the English Elm, but there are several other different varieties, all very susceptible to the fungus -so very few have survived as full grown trees. The related Wych Elm does have some protection from attack by the beetle (it produces a distasteful chemical) so a few specimens have managed to grow to some considerable size but, unfortunately, many will succumb.

Thankfully, much work over the last 40 years has been done in Europe and the US breeding resistant varieties of Elm. These have been rigorously tested by

inoculating with the fungus and are now beginning to be imported into this country, having undergone testing for other diseases.

Elms which are resistant to this disease have been developed – a group of Herefordshire Tree Wardens lead by Tony Norman have been working on a plan to make these trees available for planting.

The different varieties (described below) have very good resistance and will grow with a similar form to the trees of yesteryear. These are best planted in hedgerows or in positions where they can become features in our landscape.

The Tree Warden Network will also have available a naturally resistant Elm called The European White Elm which would be suitable for planting in damp conditions, river or stream sides.

Elm Tree Offer

European White Elm £10 (Plant anywhere especially wet or waterlogged sites)

Lutece £10 (plant in good or heavy soils –needs staking to start)

Wingham £12 (plant in good soils)

Fiorente £12 Available Dec (plant in good soils)

Ademuz £12 Available Dec (plant in good or heavy soils)

All prices subject to additional VAT

Each tree will come with a free used 1.2 metre Tubex Guard (while they last).

Trees must be picked up from Leenfields, Pembridge HR6 9HN

If you are interested in purchasing any of these please contact:

Tony Norman - tony@theleen.co.uk

or your local Parish Tree Warden

Further information: <http://www.resistantelms.co.uk>

European White Elm

(£10 each whips, bare root)

Species, grown from seed

Origin: Loire Valley, France.

Česká Lípa, Czech Republic

DESCRIPTION

Ulmus laevis is an anomaly, a fast-growing species which usually survives to great age by dint of Alnulin, a triterpene synthesized in the bark which deters *Scolytus* sp. from feeding on, and thus infecting, it. A unique, vast, surface root system enables the tree to survive anoxic ground conditions during prolonged (> 100-day) winter floods. *U. laevis* makes an important amenity tree and host of the White-letter Hairstreak. The tree is easily identified in spring by its flowers and later, seeds, on 25 - 30 mm-long stalks. In maturity, the roots form distinctive buttresses around the bole.

Lutece

(£10 each 125cm bare root)

Hybrid cultivar: ('Plantyn' × (*U. minor* × *U. minor*)) × ('Bea Schwarz' × 'Bea Schwarz' selfed)

Origin: Dorschkamp, Netherlands;

released 2002 by SAPHO, France (patent holders).

DESCRIPTION

The stem of LUTÈCE typically forks at a height of 1 - 2 m, with < 5 branches steeply ascending to form an open crown. The leaves are < 11 cm long × < 10 cm wide, similar in shape to those of the Field Elm *U. minor*, but with a very rough upper surface and coarsely serrated margins. The leaves are very late to flush, rarely before mid-May, a trait inherited from the Himalayan Elm *U. wallichiana* ancestor. In adolescence, the tree requires prolonged staking before it is able to freestand at about age 6 years.

PERFORMANCE

++ Stability (resistance to wind rock)

+++ Resistance to exposure (leaf scorch, branch breakage)

+++ Resemblance to native elm

+ Suitability for street planting

+++ Rate of growth (height increase: 87 cm, d.b.h. increase: 1.9 cm p. a.)

++ Tolerance of waterlogging

Wingham

(£12 each 3ltr pots)

[[((U. wallichiana x U. minor) x (U. pumila x U. minor)) o.p.] x (U. x hollandica “Vegeta” x U. minor)] o.p.FL 493, Castellaccio 2010

Istituto per la Protezione delle Piante, Florence, Italy

Ancestry

This is a complex hybrid, in essence three quarters European elm, one eighth Himalayan elm and one eighth Siberian elm. Of the European genetic inheritance one eighth is x Vegeta (Huntingdon elm), and that is the character which seems to be predominant. Wingham was introduced into Britain in spring 2013 with the gift of ten plants from the IPP.

Resistance

In inoculation trials conducted in Antella, Florence, in 2000, Wingham exhibited defoliation of only 1.44%, and dieback of 0%. This degree of resistance has been bettered by only one or two other hybrids, and appears to amount to virtual immunity

Growth

Wingham seen at the Castellaccio adaptation trials site in 2010, was reminiscent of the Dutch/French clone “Lutece”, with which it shares some U. wallichiana ancestry. Given the strong x Vegeta (Huntingdon) character of the foliage, it may be that the tree itself will develop into the ascending vase shape of Huntingdon Elm with time. Certain leaves on vigorous shoots show some pumila (Siberian) character. Flushing is synchronic with English elm.

Assessment

The exemplary disease resistance of Wingham in combination with its vigour and balance give it obvious potential. Its final form of growth is not fully apparent yet but at present this tree seems the best produced by any of the Elm breeding programmes.

Fiorente

(£12 each available in 2020)

Ulmus 'Fiorente' is a hybrid cultivar elm derived from a crossing of the Siberian Elm *Ulmus pumila* clone 'S.10' (female parent) from Lucca, Italy, with the *Ulmus minor* clone 'C.02' from Lungarno, Florence, by the Istituto per la Protezione delle Piante (IPP), part of the Italian National Research Council, in Florence. 'Fiorente' was patented in 2006, and released to commerce in 2012.^[1]

'Fiorente' was introduced to the UK in 2007 by Hampshire & Isle of Wight Branch, Butterfly Conservation as part of its assessment of DED-resistant cultivars as potential hosts of the endangered White-letter Hairstreak

Description

'Fiorente' is usually monopodial, and capable of exceptionally rapid development; during trials in the Northern Apennine on poor clay soils, growth exceeded 1.0 m in height and 1.5 cm in trunk d.b.h per annum. The tree's habit is conical, with a pronounced apical dominance; lateral growth is limited, the crown therefore rather columnar. The alternate leaves are of moderate size, < 8 cm long × < 5 cm broad; generally lanceolate in shape, they are rough on the upper surface and pubescent beneath, remaining green well into the autumn and shed relatively late.

Resistance

Tested by inoculation with unnaturally high concentrations of the fungal pathogen, 'Fiorente' revealed a good resistance to Dutch Elm Disease, sustaining 32% defoliation and 20% dieback; not as resistant as LUTÈCE (20% defoliation and 12% dieback), released in the early 1970s. 'Fiorente' is resistant to Elm Yellows, while susceptibility to the elm leaf beetle *Xanthogaleruca luteola* is much the same as that of the Field Elm *Ulmus minor*.

Cultivation

In Italy, the cultivar's rapid growth has bestowed it economic potential as a hardwood timber and biomass tree. Introduced to southern England in 2007 by Butterfly Conservation. 'Fiorente' has proven intolerant of ponding on lowland sites overwinter, while its growth rates elsewhere on clay and chalk have initially been moderate,

'Fiorente' is exclusively propagated by the Eisele nursery in Darmstadt as one of its 'Resista' series

Ademuz

(£12 each available in 2020)

Ulmus minor cultivar from Spain

Origin: Universidad Politecnica Madrid, release 20??

DESCRIPTION

Ademuz is one of a number of highly DED-resistant Field Elm *Ulmus minor* clones under assessment by the Escuela de Montes, Universidad Politecnica Madrid, as potential forestry trees. The branches are largely devoid of corky tissue, the leaves, on 5 mm petioles, are ovate, typically oblique at the base and acuminate at the apex, the average length and width 5.5×3.5 cm, the margins doubly serrate. The tree, cloned from an unidentified specimen near the eponymous town north-west of Valencia, develops a balanced, open structure, and was considered the most attractive of the 'Madrid 7', scoring 4.5 out of 5.. Ademuz suckers from roots to form clumps.

PERFORMANCE

- +++ Stability (resistance to wind rock)
- +++ Resistance to exposure (leaf scorch, branch breakage)
- +++ Resemblance to native elm
- ++ Suitability for street planting
- +++ Rate of growth
- ++ Tolerance of waterlogging
- +++ Tolerance of drought

Where to Plant these varieties

Sites with moist, well drained soils:

Lutece

Ademuz

Wingham

Fiorente

Ulmus laevis

Sites with heavy soils, wet but not waterlogged:

Lutece

Ademuz

Ulmus laevis

River/Stream side or Waterlogged sites:

Ulmus laevis