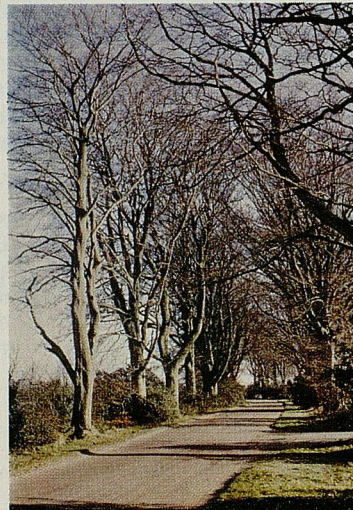
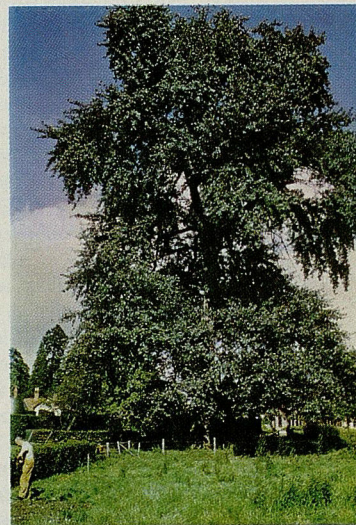
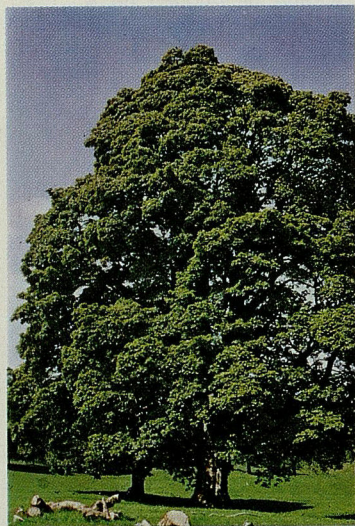


Replacement of Elm in the Countryside

A F Mitchell



REPLACEMENT OF ELM IN THE COUNTRYSIDE

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Dutch elm disease has caused extensive losses of countryside elms in some counties and the devastation may continue to spread. Whatever course events may now follow, the character of the countryside scenery has already been altered wherever elms formed a major feature and have been killed. Three elms dominate wide areas of landscape. The English elm (*Ulmus procera*) is the leading elm from Dartmoor through the Midlands to the Vale of York, and is the dominant tree in the Vale of Taunton, across the Cotswolds, in the Vale of Berkeley and much of the lower Severn and the Avon valleys. The Cornish elm (*Ulmus carpiniifolia* var. *cornubiensis*) entirely replaces the English elm west of a line from Bideford to Plymouth. In East Anglia and the east Midlands, the English elm is largely replaced by forms of the Smooth-leaved elm (*Ulmus carpiniifolia*). The Wych elm (*Ulmus glabra*), whilst common in the west and north, is seldom more than a minor component of the landscape. The large scale replacement of elms is a problem at present confined to the south-east of England, west to Somerset and north to the Midlands. It is most acute where the distinctive shape of the English elm has hitherto played a unique part in the landscape.

Many of our elms have originated from root suckers and even where large numbers of trees have been killed parts of this root system survive. These can form the basis for the long-term regeneration of the elm population and in this case the low cost of establishment justifies the disease risk involved.

Research in Holland has resulted in the production of two elm cultivars, the 'Commelin' and the 'Groeneveld' elms, which are more resistant than any of our native species and have a number of desirable growth characteristics. However there is some evi-

dence that the strain of the fungus now present in the current outbreak areas can cause severe damage on these trees also. Until more information is available on the performance of these trees in the field it is not considered advisable that they should be planted on a large scale.

In the short term, it may be best to replace the elms by other species, even though the character of elm countryside is unique and no other tree can fully replace it. Typical elm sites are rather base-rich, moist but well-drained deep soils. These occur particularly at the margins of flood-plains, in broad lowland river valleys and in gently rolling chalk and limestone areas where the overlying soil is deep. A wide variety of tree species also flourishes on such sites, but few are appropriate to the open countryside, for many exotics and cultivars of striking appearance are too prominent in themselves and do not blend with and become part of the rural scenery. Those species which do conform are almost all either natives or "near natives" that is, similar or related species from nearby countries. The planting of exotics and colour variants should be confined to decorative plantings near buildings or in towns and parks.

The most important feature of the English elm is the unique visual contribution it makes to the countryside as lines or individual trees in otherwise open areas. There can be no full substitute for it, but a few other trees have one or more of its characteristics. The oak, for example, can resemble the crown of some elms in winter; the Grey poplar has the tall stature, fine bole, and high-domed crown and produces suckers; the Small-leaved lime can be very like elm in crown-shape and in density of foliage, and the Field maple has a dense dark crown which turns a similar bright yellow in the

autumn. All these thrive on the same soils and in the same conditions as the English elm. These and other, less elm-like species suitable for replacing elm are listed in the table below. It must be emphasised that all these are not equally suitable in all positions where elms have grown. The Grey poplar or the ash, for example, may be unacceptable on the margins of agricultural land. Any tree will be very difficult to establish in an old hedgerow. It

may be necessary as well as desirable to take the opportunity to plant in a new place, and some hedgerow trees may be better replaced by clumps of trees where several fields join. Where ash or sycamore are chosen for their greater timber value, it must be accepted that they will change the scenery that the elms had provided, for they are very different from the elm in aspect all the year.

TREES SUGGESTED AS SUITABLE FOR REPLACING ELM IN RURAL AREAS

Species	Stature	Habit	Autumn Colour	Remarks
Common oak, <i>Quercus robur</i>	Large	Broad dome	Russet	Fine timber
Turkey oak, <i>Quercus cerris</i>	Large	Tall dome: open crown		Great vigour; poor timber
Beech, <i>Fagus sylvatica</i>	Large	Tall dome or broad	Orange- brown	Unsafe when old. Bears a little shade. Good timber
Sweet chestnut, <i>Castanea sativa</i>	Large	Tall dome; broad with great age	Yellow; russet	Great vigour; long-lived. Timber often split and shaken
Small-leaved lime, <i>Tilia cordata</i>	Large	Big domes; dense		Usually vigorous; attractive foliage; soft white timber
Large-leaved lime, <i>Tilia platyphyllos</i>	Large	Broad dome		Vigorous, good shape
Ash, <i>Fraxinus excelsior</i>	Large	High, open dome		Fast on rich, damp soil, when timber of high quality. Roots too strong for favour in hedges by crops
Grey poplar, <i>Populus canescens</i>	Large	High domes	Yellow	Silvery foliage in spring; vigorous; strong roots and suckers
Sycamore, <i>Acer pseudoplatanus</i>	Large	Broad, dense dome		Damaged by squirrels; unpopular with farmers and conservationists; timber very good

TREES SUGGESTED AS SUITABLE FOR REPLACING ELM IN RURAL AREAS—*continued*

Species	Stature	Habit	Autumn Colour	Remarks
Hornbeam, <i>Carpinus betulus</i>	Large	Broad; light fine twigs	Russet	Attractive; quite vigorous; timber too hard for normal use; very strong
White willow, <i>Salix alba</i>	Large	Tall, acute then domes		Vigorous; pale blue-grey
Italian alder, <i>Alnus cordata</i>	Large	Tall, conic, dense		Vigorous; adaptable and handsome
Norway maple, <i>Acer platanoides</i>	Large	Broad dome	Gold, orange or red	Mass of yellow flowers in April; vigorous
Common alder, <i>Alnus glutinosa</i>	Medium	Conic		Base-rich very moist soils preferred
Crack willow, <i>Salix fragilis</i>	Medium	Broad, low dome	Brief yellow	Long, glossy, bright leaves; handsome
Grey alder, <i>Alnus incana</i>	Medium	Broad column		Vigorous on wide variety of soils
Gean or Wild cherry, <i>Prunus avium</i>	Medium	Broad dome	Yellow, pink and dark red	Mass of white flowers in early May. High quality timber
Bird cherry, <i>Prunus padus</i>	Medium	Ovoid	Yellow, pink	Tassels of white flowers, June
Field maple, <i>Acer campestre</i>	Medium	Broad, dense dome	Gold, some crimson	Can be 25m tall; not slow
Wild Service tree, <i>Sorbus torminalis</i>	Medium	Conic, then domed	Crimson, dark red	Very handsome, unusual native

Notes:

Stature—Large On reasonable site often 23–25m tall, to 30m or more.

Medium On reasonable site seldom above 20m

Autumn colour Unshaded tree in good year; mentioned only where a feature.

Where English elm is a relic of the rural past, now engulfed by housing and shops or in urban parks, smaller and more strikingly decorative trees will be more suitable for their replacement. Hundreds of these are listed by the major nurseries.

Photographs: Sweet chestnut by Forestry Commission.
Remainder by author.