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THE ULTIMATE SIZE AND SPREAD OF TREES COMMONLY GROWN IN TOWNS
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Summary

Published information on the ultimate sizes of commonly planted amenity trees reflects performance in open grown positions. This Note reports sizes of trees growing in urban conditions. If the data are used when selecting trees for urban situations the need for future expensive pruning and early felling can be reduced.

Introduction

1. Arboriculturists are frequently faced with the problem of managing trees that are too big for their surroundings. This may be the result of established trees being retained and incorporated into intensive development to create a mature appearance. In other instances the problem arises because the species selected for planting was inappropriate for the space available, for example, between buildings. In either case expensive management is needed to make the tree fit man's environment rather than to improve the growth of the tree.

2. Knowledge of the maximum height a species may achieve under ideal conditions and the height and spread normally found in town plantings is therefore important for designers.

Published Data

3. Gruffyd, (1987) details normal ultimate crown spread. However these figures may have little value where the terminal shoot of a tree has been cut out in the nursery to encourage development of a bushy head (BS3936). This tends to produce a number of wide-spreading, upward sweeping branches. In addition the microclimate of a town, proximity of buildings and traffic may all influence the development of the crown.

4. Mitchell, *et al* (1994) provide the height of the tallest tree of the species recorded in Britain. These trees were generally growing in rural areas. Plantings in towns frequently utilise selected cultivars so that the maximum height may differ from the true species. This is especially true when propagation has been by budding or grafting when the root stock, the scion and the environment will all affect the development of the tree.

5. The table summarises the published data on tree sizes for the 23 species most commonly encountered in towns. In addition the table includes information based on observation of the same species growing in urban situations.

Species group	Tallest Known (Mitchell *et al*) (m)	Ultimate Spread of the Crown (Gruffydd) (m)	Normal Ultimate Height in an Urban Situation (m)
Maple	30	18	18
Cherry	13	8	9
Rowan	20	5	9
Birch	28	14	17
Whitebeam	23	10	18
Lime	44	16	30
Sycamore	37	20	28
Ash	41	18	17
Plane	48	18	30
Hawthorn	16	8	9
Robinia	29	14	15
Common alder	25	14	15
Hornbeam	30	16	18
Beech	46	20	30
Cypress	40	12	24
Crab apple	12	8	7
Wild cherry	31	16	18
Willow	32	14	18
Pine	36	8	20
Apple	-	9	8
Plum	12	8	8
Oak	42	20	22
Horse chestnut	37	20	28

Recommendations

6. When selecting trees to plant into urban streets and other restricted positions in towns consideration should be given to the likely mature spread and height of the species so that expensive pruning does not become a requirement. In addition, use of a tree with an ultimate mature size appropriate for the surroundings should ensure that otherwise valuable trees do not have to be felled prematurely due to their size.

References

Gruffydd, B. (1987) Tree form, size and colour – a guide to selection planting and design. E and F N Spon, London.

Mitchell, A.F.; Schilling, V.E; White, J.E.J. (1994) Champion Trees in the British Isles. Forestry Commission Technical Paper 7. Forestry Commission, Edinburgh.

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