

Chapter (non-refereed)

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An assessment of amenity tree planting in England and Wales: research note

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Since 1974-75, the Countryside Commission for England and Wales has paid grant aid amounting to over £9 million on about 30 000 amenity tree planting (ATP) schemes. In the summer of 1985, the Institute of Terrestrial Ecology carried out a survey to appraise the success of 288 schemes drawn from 3 counties in each of the Commission's 8 Regions. An assessment of the schemes included estimates of survival percentages and condition of trees; effects of post-planting maintenance on survival; effect on survival of planting by experienced or inexperienced individuals; and the potential contribution to the landscape of each scheme. Analysis of the data sought for differences between Regions and between planting years, and the sample was divided equally between the 3 planting years 1976-77, 1979-80, 1982-83.

Frequency distributions of percentage survival of trees were calculated for England and Wales for the 8 Regions and for the 3 planting years. The distributions were markedly skewed towards the highest survival class (90-100%) and, in order to best represent the central tendency, survivals were ranked and the median value was calculated. Non-parametric statistical tests (Kruskal-Wallis and Kendall coefficient of concordance) did not reveal any significant differences between years or Regions. When all years and Regions were considered together, the median survival was 77% with an interquartile range of 49-96%. Whilst 57% of schemes had 70% survival or better and complete survival had been achieved in 17% of schemes, 10% had less than 30% survival.

Several factors are thought to have affected the longevity of planted trees. Thirty per cent of schemes showed evidence of recent maintenance (weeding, repair work, etc) and had a median survival of 88%. This result was significantly different ($P < 0.01$) from those schemes which did not show such evidence of maintenance (73%). Post-planting maintenance grants, offered as an incentive for grantees to continue caring for their trees, have become less commonly available since 1978, and in only one of the local authority areas sampled were such grants paid. The small sample available did not have a significantly higher survival than other schemes and, if this result were confirmed in a larger sample, it

would suggest that, whilst post-planting maintenance leads to higher survival, the availability of maintenance grants *per se* does not necessarily do so. Perhaps surprisingly, no significant differences were shown to exist when the survival of trees planted by individuals or groups of varying expertise was examined. Although survival is the most important single criterion to be used in judging the success of an ATP scheme, the condition of surviving trees will also determine a scheme's eventual contribution to the landscape. The condition of individual trees was assessed in order to determine the proportion of healthy to unhealthy trees and to establish the principal causes and extent of damage. Using the Forestry Commission's criteria, trees were assigned to one of 3 health categories, and it was found that 75% of surviving trees were healthy, 12% moderately healthy and 13% unhealthy. Apart from environmentally determined tree damage (eg exposure, frost), which was apparent in 23% of schemes, domestic, farm and wild animals affected a further 14% and human or unknown causes were recorded in 7% of schemes. Of all the schemes affected by damage, 28% suffered at least some serious damage and half of those were unlikely to make any contribution to the landscape without replanting.

Seventeen per cent of schemes required some restocking, but the most common maintenance need, affecting 20% of schemes, was adjustment of tree ties and stakes. Fifteen per cent of schemes required weeding or mulching, etc, and an additional 14% needed some other form of attention. Only 34% of schemes did not require attention at the time of survey.

Schemes were most commonly planted along field boundaries (35%), an encouraging trend toward regeneration of hedgerow features, with planting around existing features such as buildings and silage pits also being common in most Regions (23%). Planting beside thoroughfares, including public and farm roads, private drives, footpaths and bridleways, was at about the same level (18%) as in field corners.

More detailed facts and figures are available from the authors or from the Countryside Commission, which funded this work.