

Distr.
GENERAL

TIM/EFC/WP.1/SEM.54/2002/R.12 (Summary)
19 July 2002

Original: ENGLISH

ECONOMIC COMMISSION FOR EUROPE
Timber Committee

FOOD AND AGRICULTURE ORGANIZATION
European Forestry Commission

INTERNATIONAL LABOUR ORGANIZATION



JOINT FAO/ECE/ILO COMMITTEE ON FOREST TECHNOLOGY, MANAGEMENT AND TRAINING

Seminar on
AFFORESTATION IN THE CONTEXT OF SUSTAINABLE FOREST MANAGEMENT

in conjunction with the 24th session of the Joint FAO/ECE/ILO Committee on
Forest Technology, Management and Training

Ennis, Co. Clare, Ireland, 15-19 September 2002

The Effect of Formative Shaping on the Stem Quality and Early Growth of Broadleaf Species

Basic paper by Mr. Michael Bulfin, Mr. Todd Radford and Mr. John Brosnan

Summary

From a commercial perspective, the most important part of any tree – whether broadleaf or conifer – is the lower section of the stem. This is the portion of the tree, particularly in the case of broadleaves, which yields the greatest financial return. The form and quality of this lower stem is laid down in the very early years of growth. At this time, significant form defects, should they occur, can quickly become intractable. Formative shaping can offer an efficient, cost-effective way of ensuring that the most valuable lower portion of future crop trees will be straight, clean and of sufficient quality to be marketable. Formative shaping is a silvicultural operation carried out before the stem reaches a height of four metres, to ensure that selected trees produce a straight defect-free stem with a single straight dominant leader.

This paper traces the effect of formative shaping on five species of broadleaves: ash (*Fraxinus excelsior*); sycamore (*Acer pseudoplatanus*); maple (*Acer platanoides*); beech (*Fagus sylvatica*); and pedunculate oak (*Quercus robur*). Two levels of shaping (light and heavy) plus a control were laid down in randomised blocks in young plantations. Over a 3-year period, measurements were taken of the effect of shaping on stem quality, diameter and height. Growth rates for cohort groups, within height growth categories, were compared over the same period. Results confirmed the beneficial effects of formative shaping.

—