

**A MANUAL ON FELLING AND BUNCHING SMALL TREES
FROM THINNINGS WITH SMALL SCALE EQUIPMENT
ON GENTLE TERRAIN.**

Final Report IEA-FE-CPC7 by Pieter D. Kofman, Skovteknisk Institut — The Danish Institute of Forestry Technology — 1985 Amalievej 20, 1875 Kobenhavn V. 116 pages. Price not quoted.

In 1975 twenty one countries signed the Charter of the International Energy Agency (IEA) and in 1978 ten of these signed the Forest Energy Agreement. Representatives from nine of the ten countries participated in a working group on the

felling and bunching of small trees from thinnings with small scale equipment on gentle terrain. These countries were Austria, Belgium, Canada, Denmark, Ireland, New Zealand, Norway, Sweden and the U.S.A.

Ireland's objectives in joining the working group are identified by representative, Henry Phillips, as — (1) creating and maintaining contacts with other organisations and (2) developing expertise and knowledge in the harvesting of thinnings — two objectives which Mr. Phillips says were "met in full".

This manual is the final report of the working group which calls itself IEA-FE-CPC7. In all some 120 reports form the basis of the work. Together with the experiences of those participating it includes results from countries other than those listed above. Summary reports and evaluations appear in Section 7.

The bulk of the manual — Sections 3, 4 and 6 — is concerned with felling and bunching patterns and descriptions of harvesting operations and methods. There is a very small section (5) on harvested products.

Sections 3 and 4 deal with bunching and felling. There are some forty bunching patterns illustrated on as many pages by schematic drawings many of which have sub patterns. These are useful basic references. Irish readers will need to familiarise themselves with the concept of unbrushed trees being bunched and their perception of a stand unopened for transport will not fit with drawings 3.3.3.5 to 3.3.3.8. The drawing 3.3.5.5 is incorrectly headed in the copy of the manual supplied to this reviewer.

Section 6, consisting of 14 pages, deals extremely briefly with motor-manual and machine felling and with hand, horse, machine and winch bunching of whole trees in selective and combined thinnings. It is presented in a very readable form.

The selection of the harvesting methods which are illustrated in Section 6 is based on an analysis of the literature which forms the basis of the report. For the prospective reader the following is a summary:

Felling:	machine 44%; motor-manual 53%.
Bunching:	hand 23%; horse 12%; machine 22%; winch 28%.
Products:	whole tree (everything except stump) 87%.
Thinning Patterns:	selective 38%; combined 53%.

The productivity figures which appear in Section 6 are entirely limited to the context in which they are presented and for a variety of reasons, they have no application to local situations.

The glossary at the end makes an important contribution towards understanding the terms used. This reviewer enthusiastically welcomes every effort to standardise terms and with this in mind suggests that the glossary is not explicit enough on — road system, skidroad, thinning skidroad and track. Also the words "gentle terrain" which appear in the title could well do with a definition.

This book is a useful primer for students, a good basic reference for people specialising in harvesting and a well worthwhile read for anybody interested in the harvesting of thinnings.

T. Hunt.