

PLANTATION SUBDIVISION

by A.A. Macdonald

What is the purpose of dividing a plantation, or any other forest into compartments? For ease of management and proper recording. A compartment is defined as the smallest unit of forest management, permanently described and within which the same treatment is applied.

A degree of homogeneity is implied if the crop is to receive the same treatment at the same time, but plantations usually comprise large areas of uniform forest, which might indicate that compartments can be very large. Therefore administrative convenience must be considered along with silvicultural treatment in forming compartments.

A compartment should have these attributes: contain one species or forest type; in uniform forest, be of one age class; be under the same regime of silvicultural treatment; be restricted to one geographical area; be sufficiently precise that it is not confused with its neighbour; be sufficiently limited in area that there is no need to describe parts separately for records or prescribing operations; be clearly and permanently defined. It should be of practical application, and this should be the first consideration when a plantation is to be divided into compartments. It is not sufficient to divide an area into convenient looking sections on a map according to preconceived ideas of shape or size.

Starting from scratch, given a proposed or newly established plantation block, subdivision might be considered along these lines:

1. Age, separate areas by ages; i.e. the first subdivision would be by years of planting.
2. Species, where there is more than one species, unless there is no essential difference in growth rates or proposed silvicultural treatment, each species should be accorded different compartments.
3. Location, areas of the same age and species which are in separate localities should be placed in separate compartments.
4. Site quality, (if known from soil types and growth rates of the species on comparable sites) provides the basis of further subdivision. If site quality can be worked into subdivision at an early stage it may avoid redrawing compartment boundaries later.
5. Administrative convenience. Subdivision at this stage may not have created compartments which are easy to manage. If they are very large it will lead to confusion, for example in pinpointing an area to which to direct a fire fighting gang. If they are very small, there will be very high compartment numbers, difficult to memorise, locate and map. Large areas can be divided into compartments on the basis of the extraction road

pattern; I would suggest no fixed maximum size, but feel that it should be about 100 acres. Small areas at first separated on age or site may often be grouped with near similar neighbours, to make a compartment to be treated as a stand of the average age or site class; if there is a very wide difference it may be necessary to retain the small compartments. Again I would not suggest a fixed minimum size, but feel that it should be about 25 acres in plantations of any scale.

Finally a system of compartments should be flexible in the early stages. Thus if site quality is not known, I suggest compartments should be large but capable of being split when site quality becomes apparent. Similarly it should be possible to merge smaller compartments made on expected site differences, if it transpires that the differences are not reflected in the crop.

A lot of hot air is written and talked about compartments and subdivision, probably this note included. But I feel that there should be no magic formula, what is required is a unit upon which to base day to day working in the same way as the farmer divides his property into paddocks.

