

PASTURE ESTABLISHMENT BEFORE PINE PLANTING - WHY NOT?

by R. J. Underwood

Most foresters are aware of the salutary effect old pastures have on pine growth. There are many examples in Western Australia. A question worth asking is whether it may not be worthwhile for the Department to consider some form of pasture establishment on virgin hardwood country well in advance of pine planting.

The establishment of a crop of a suitable variety of sub-clover or perhaps lupins for about five years before pine planting would have the following advantages:

- (i) improvement of the soil, through nitrogen fixation, increased organic matter content of surface horizons and increased soil microbiological activity;
- (ii) facilitation of scrub control;
- (iii) financial return, through clover burr harvest or grazing lease. (the latter to be considered for non-catchment areas only).

The sort of problems likely to arise are:

- (i) the necessity to find and prepare suitable areas four to five years in advance of planting;
- (ii) The possibility that a green crop appearing from nowhere out in the bush might encourage rabbit and kangaroo populations to increase;
- (iii) political problems, associated with the ultimate conversion to government forestry of areas initially developed as farmland;
- (iv) fire control problems;
- (v) the likelihood that the whole project may be economically unsound anyway.

It would be interesting and perhaps profitable to establish a well designed long-term experiment to test the likelihood of success of this idea. I would anticipate that the result would be a success in some regions but not in others. I can think of an area in the eastern country of the Mundaring Division comprising several thousand acres of poor jarrah on deep grey sands. The codominant height of these stands is about 35 feet and at this time they carry only about $1\frac{1}{2}$ loads per acre of mill logs together with about 20-30 tons per acre of green firewood. Volume increment on this area probably does not exceed 20 cubic feet per acre per annum. This is protection forest for the Goldfields Water Supply catchment and, in the sense that its timber productive capacity is so low, is not an economically viable forest.

However, the area is permanently dedicated State Forest less than 60 miles from Perth, the topography is easy and the rainfall assured at about a level of 20 to 25 inches per annum. Clearing costs are about on a par with coastal plain clearing.

On an area such as this a programme of progressive clearing, pasture establishment and plantation development (using conifer species with a proven productive capacity in a low rainfall environment) is immensely appealing. It may well be that the private investor would be interested in the pre-plantation phase of the programme, for I have no doubt that it would prove profitable. On non-catchment areas, the possibility of using the pre-plantation phase of development for sheep and cattle production also should not be dismissed lightly.

Heresy for a forester? The dreams of a frustrated agriculturalist? Some will probably think so, but in fact, far from it. Even the forester must admit that the end can sometimes justify the means. In this case the ultimate end must be the production of cellulose at an economically acceptable rate. If it could be shown that pasture establishment before pine planting on the sort of unproductive forest sites I am thinking about is of real benefit to the pine crop (and this must be conclusively shown), then a little short-term agriculture must be acceptable as part of a lot of long-term forestry.

The political problems inherent in this scheme may well be more devious and difficult than the technical ones. It is likely that certain interests would be strongly opposed to closing down a profitable agricultural operation for conversion to a departmental pine plantation. However, if the political ramifications of the proposal are foreseen well in advance, there is no obvious reason why the Department's interests could not be adequately safeguarded by water-tight contract agreements.

To return to my original question - it would surely seem to be worthwhile to give this type of land development some close consideration. All that is needed is the land, the plan, the initiative and the approval. And I'll gladly supply the land
