Clearing sandplain country

B. F. Carlin

Follow this and additional works at: https://researchlibrary.agric.wa.gov.au/journal_agriculture3

Recommended Citation
Available at: https://researchlibrary.agric.wa.gov.au/journal_agriculture3/vol8/iss5/13
The greatest scope for development of new land in Western Australia lies in the millions of acres of sandplain country along the west and south coasts and to a lesser extent in the Newdegate area. With the development, or at least alienation, of the South-West and the wheatbelt nearing completion, attention has been focused on these tracts of sandplain country.

Most readily developed are the soils with clay or gravel within two feet of the surface. These soils hold moisture and fertilisers more readily than deep sands. Deep sands, particularly white and grey sands, should be avoided wherever possible. The climate throughout is Mediterranean with a wet winter and dry summer. The growing period varies from about five months west of Mingenew to about eight months in the Esperance region.

DEVELOPING A NEW BLOCK
The successful development of a new block requires a combination of three factors.
(a) Adequate capital.
(b) Careful planning.
(c) Technical "know-how."

Obviously, the settler must have sufficient capital to clear, cultivate, supply seed and fertiliser, supply capital improvements, and provide for living expenses during the development. Even where cereal crops can give a cash income, substantial capital backing is still necessary.

Equally important is a systematic plan of development. The settler should at all times "know where he is going." Development should always be kept within the physical and financial resources of the farmer. Systematic development and consolidation is essential so that the greatest return can be obtained for each pound invested. Two obvious dangers are having too much cleared too quickly for control of regrowth or for adequate fertiliser application to pastures. By planning ahead for five years the settler can prepare working schedules for this period and budgets showing expected expenditure and receipts for each year.

Again, the settler requires a lot of knowledge in regard to the handling of light land and the sowing of suitable crops or pastures for his particular block.

We all know of settlers who have failed because they fell short of the mark in relation to one of these three factors.
CLEARING THE BLOCK

There are three steps to be followed in the successful clearing of a scrub plain block. These are:

1. Burning.
2. Cultivation.
3. Cropping to cereals and stubble burning.

Of course cropping is only suitable in some areas, but each of these steps is of vital importance. It is essential that each operation be carried out thoroughly so that full value is received for any expenditure made. This thoroughness, or efficiency of operations, is the keynote of development once requirements in regard to capital and planning have been met.

1. Burning.

Clean burning of all scrub growth is highly desirable. Growth of crops and pastures will be much poorer where the
harsh native scrub has not been removed, and burning is the most effective means of removing this material cheaply. Crops will suffer more from nitrogen deficiency and sub. clover pastures will suffer more from “seedling mortality” where the scrub is inadequately burnt.

The first step to take in burning, is to put a good firebreak right around the block. In scrub country, this will ensure that the only burning done on the block is that planned by the settler. All too often one sees large areas of sandplain burnt out and the subsequent development of blocks in such areas is rendered very difficult.

To obtain a good burn, it is important that the scrub be knocked down or laid over. This is most readily done by rolling the country with a cleated scrub roller, by chaining the country with an anchor chain dragged between two tractors, or by dragging a heavy log behind a tractor. Whichever one of these methods is chosen will depend on the resources of the farmer and the country being dealt with.

Fencelines should be well cleared. Two years of bare fallow is an advantage for fencelines. All too often we see fences put up in a hurry and later overgrown by scrub as a result of poor clearing. Firebreaks and fencelines can be planned at the same time.

In blackboy country it has been found necessary to use specially-arranged logs. These devices depend on one blow loosening the blackboy and a second one pulling it out of the ground. One such arrangement, commonly in use, consists of two parallel logs with the second log eight feet behind the first. The size of log used will vary according to the vegetation, soil type and available power. In the case of the blackboy country it is better left another year so that the blackboys burn completely.

The best time for chaining, rolling or logging is in the winter when the roots of much of the scrub are dragged free. Burning takes place at the end of the following summer.

In tussocky sandplain there is often no scrub to knock down. Efficient burning in such cases is obtained by winter ploughing and fire-harrowing at the end of the following summer. Fire-harrowing enables a fire to be taken across land where a fire would not run and is a valuable aid in burning some types of plain. On tussocky sandplain the fibrous roots are burnt up in fire harrowing.

2. Cultivation.

The initial cultivation should be done towards the end of winter with a good heavy disc plough. Ploughing should be to a depth of four to five inches and should be deep enough to be under the main root zone of the native scrub. Ploughing at this depth is not detrimental to the soil and

Fig. 2.—Fire harrowing ploughed-in sandplain west of Winchester
it is most important to root out as much as possible of the native scrub. The bare fallow period following ploughing aids in clearing the land and ensures better crops and pastures subsequently. Where possible roots and sticks should be picked up and burnt.

In the following autumn, the land should again be disc ploughed to a similar depth. Where necessary fire-harrowing should be carried out.

Following on a good burn, or with fire-harrowing, these two good cultivations should ensure that the scrub is well under control and that subsequent crops and pastures make satisfactory growth. The bare fallow period allows the breakdown of some organic matter and the build-up of available soil nitrogen. These benefits will be much greater if the first ploughing is done when the soil is really wet.

3. Cropping.

In some areas, cereal cropping on new light land is quite profitable. West of Midland Railway line, and in the drier portions of the southern plains, it is recommended that a cereal crop or, preferably, two crops be grown before pastures are established. Along the south coast crops have not been so promising and pastures, based on sub. clover are established on the bare fallow.
Where crops can be grown they give four main benefits to light land development.

(a) Crops help to defray the cost of developing new land. A cash return in the first year is obviously most desirable.

(b) Cropping aids clearing and the control of regrowth. A good stubble burn after the crop kills or checks nearly all regrowth. The first burn promotes the germination of poison plant seedlings. These are generally controlled by the two subsequent ploughings. A stubble burn promotes a further germination of poison plants which are then controlled by further ploughing.

(c) Cropping allows time for any remaining organic matter to decompose and for the soil to become more "civilised." In drier areas where cropping is practicable it is common for "seedling mortality" to be serious in sub. clover establishment. It is known that sub. clover is more readily established on older land and this time angle is most important.

(d) Another benefit of cropping is that it lays the foundation of a fertiliser bank before the establishment of sub. clover pastures. An initial sowing of sub. clover after two crops with liberal dressing of superphosphate and trace elements will nearly always be successful. The aim should be to use 1 bag of copper and zinc super to the acre with the first crop and not less than 150 lb. super to the acre with the second crop. Wheat crops in this area can be expected to yield between nine and 16 bushels of wheat to the acre.

**COSTS**

It is not proposed to deal with costs in detail but an example of costs at contract rates in the West Midlands will give some idea of costs to be expected.

Cost of Planting first Wheat Crop.

<table>
<thead>
<tr>
<th>Item</th>
<th>An Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logging or Rolling</td>
<td>£ 0 5 0</td>
</tr>
<tr>
<td>Burning and provision of firebreaks</td>
<td>£ 0 2 0</td>
</tr>
<tr>
<td>Initial Ploughing</td>
<td>£ 0 15 0</td>
</tr>
<tr>
<td>Second Ploughing</td>
<td>£ 0 12 6</td>
</tr>
<tr>
<td>Seed (45 lb. wheat an acre)</td>
<td>£ 0 12 6</td>
</tr>
<tr>
<td>Super (1 bag Cu/Zn super an acre)</td>
<td>£ 1 18 0</td>
</tr>
<tr>
<td>Drilling</td>
<td>£ 0 10 0</td>
</tr>
<tr>
<td>Harvesting</td>
<td>£ 1 0 0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>£ 5 15 0</td>
</tr>
</tbody>
</table>

*It is often unnecessary to log the whole area as some areas carry very short scrub which does not respond to logging.

Subsequent costs will include pasture establishment, fencing, buildings, water supplies and pasture topdressing. The report of the Esperance Down Development Advisory Committee published by the Government Printer sets out suggested costs for development of light land farms where pastures are established after the initial fallow period.
"Utility Universal" presents an unlimited range of buildings with the greatest economy ever offered in steel framed buildings.

From a skillion shed — to a storage building

or

A skillion sports pavillion

or

Build only with "Utility Universal"

Designed and made in W.A. by Utility Buildings (W.A.) Pty. Ltd., Norma Road, Melville. Tel. 30 2101.

★ Write or phone for our representative to call and discuss your requirements.

Steel framed pre-cut living quarters fully lined and ceiled. Easy to erect.

Please mention the "Journal of Agriculture of W.A.," when writing to advertisers.