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Pasture regeneration in East Kimberley

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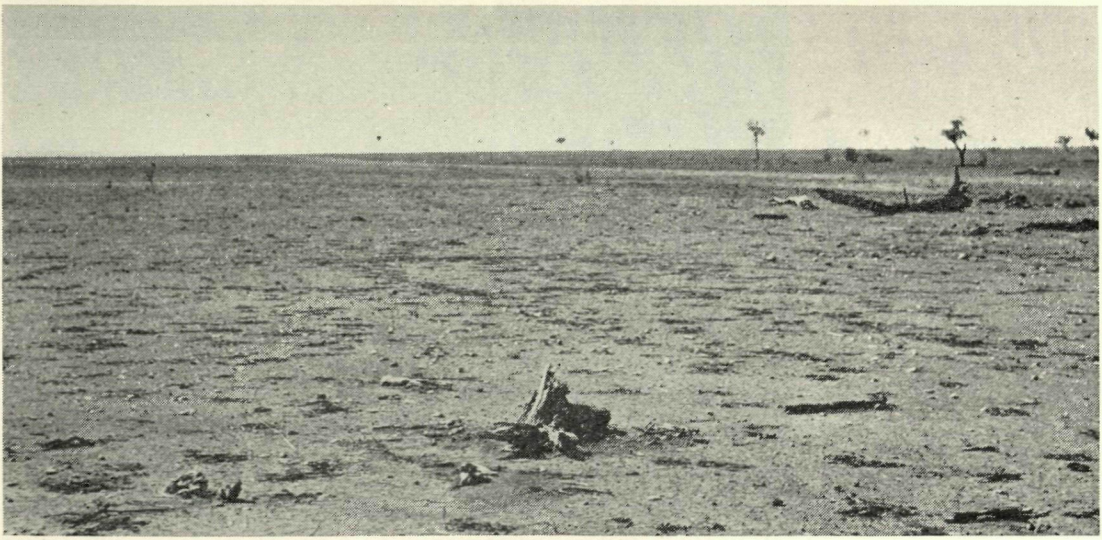


Fig. 1.—Bare soil east of the Ord River. This particular patch extends 60 miles in a north-south direction, traversing sections of several East Kimberley stations

PASTURE REGENERATION IN EAST KIMBERLEY

By W. M. NUNN, B.Sc. (Agric.), Officer-in-Charge, North-West Branch

TRIALS established by officers of the North-West Branch to demonstrate methods of recovering eaten-out country under pastoral conditions, have met with considerable success and have been described in earlier issues of the Journal. This article tells of two particular Kimberley station projects which are noteworthy for two very different reasons.

1.—ORD RIVER STATION

In the upper catchment area of the Ord River in East Kimberley and extending into the Northern Territory, are perhaps the worst and most extensive of the northern areas subject to, or threatened by, soil erosion. On the main road between Argyle and Nicholson one can drive for 60 miles through country continuously bare of grass—the direct result of consistent overstocking with cattle. In very good seasons a little short-lived cover of annual species is obtained; in poor, or average seasons, there is nothing but bare soil throughout the year. Not only have the perennial grasses gone but the tree population has gone also—killed by the parched conditions resulting from the wholesale removal of ground cover.

These are rich black soils which should recover well given a chance. The back country in this region must have grass because the stations are still producing and the cattle still have the run of the bare areas which already are gullying quite severely in places.

Stations in West Kimberley have been taking a keen interest in departmental demonstrations at several points on the Fitzroy River but, until recently, no move had been made in East Kimberley.

In September, 1956, the initiative was taken by Agricultural Advisers, Kevin Fitzgerald and Joe Ritson, and a start was made on Ord River Station with assistance from Manager Bill Hamel.

The two Advisers, who normally work at separate ends of the Kimberley Division, pooled resources for this venture. They set

Fig. 2.—Department of Agriculture mobile plant en route to Ord River Station. Tractor and implements are on trailer towed by Land-rover

out with truck, tractor and trailer and a number of agricultural implements—much of the equipment was borrowed from Kimberley Research Station.

The trip involved nearly 200 miles each way for the outfit and three full days on the station for our two Advisers and their assistants—Geof Henley and Jim Broun. They worked from dawn till dusk because they had no lights to enable them to work longer, and left 350 acres of checker-board furrows. These were set out of course in an experimental design to check the comparative effectiveness, under these new conditions, of the several different agricultural implements under trial, and were sown to several pasture species.

The station responded by fencing the area and keeping stock off it.

The 1956-57 summer was a drought in this region so startling results could hardly be expected. Nevertheless there

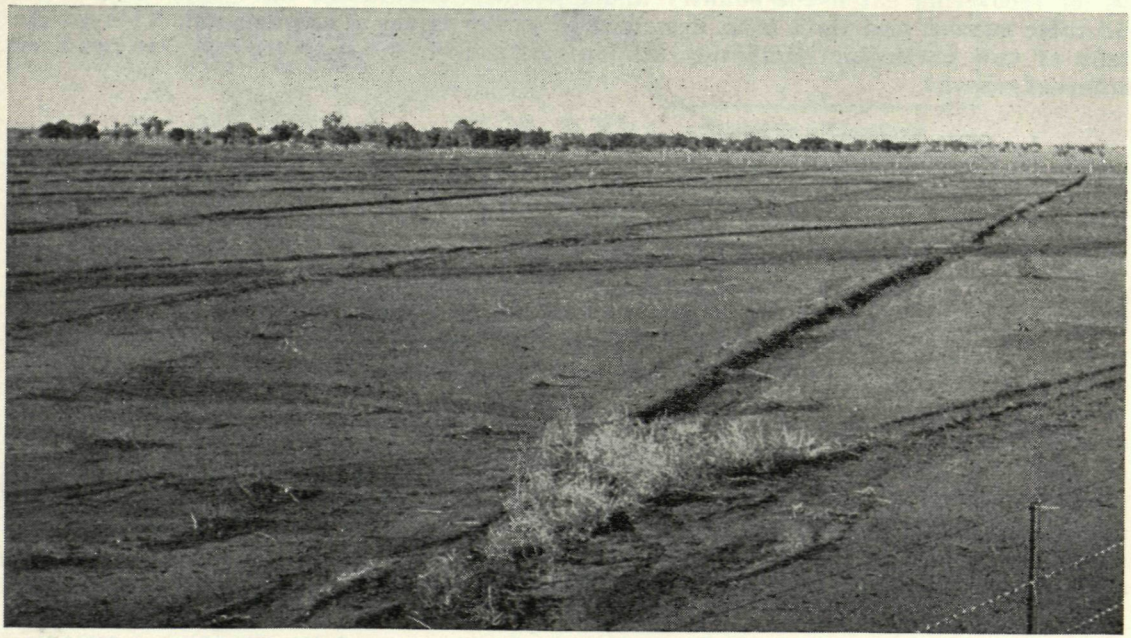


Fig. 3.—Furrows at Ord River Station after the first season—a severe drought year. Some response is shown where "ponding" occurred at furrow intersections

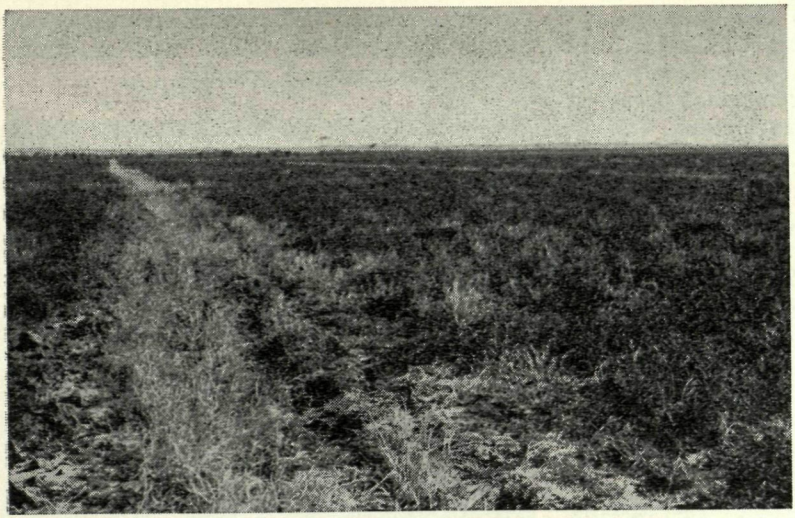


Fig. 4.—This area was bare 12 months prior to this photograph being taken. Buffel grass has grown densely in the furrows. The intervening areas are covered with annual pigweed (*Portulaca* spp.) with buffel grass spreading through it

were encouraging responses, particularly at points where furrows intersected and extra soakage was obtained.

In August, 1957, a follow-up visit was made by the team. Intermediate furrows were made, closing the checkerboard designs from a 2 chain to a 1 chain grid.

In addition a further area of something over 1,000 acres was furrowed and planted on the contour and fenced from station stock.

Mr. Hamel is certainly keenly co-operative and his Company—Vesteys Ltd., is capable of tackling the job in a big way if we can convince them by these demonstrations that the recovery programme is practicable and economical.

2.—OPERATION COONANGOODIE

This time, the urge to broach a particular project comes not from a feeling of need, but from one of real satisfaction that on Cherrabun Station at least the recovery processes are really under way.

Cherrabun is one of three stations in the Fitzroy Crossing area controlled by Emanuel Bros., and like a great many cattle stations has been badly eaten-out by continuous heavy stocking on the favoured areas near the river.

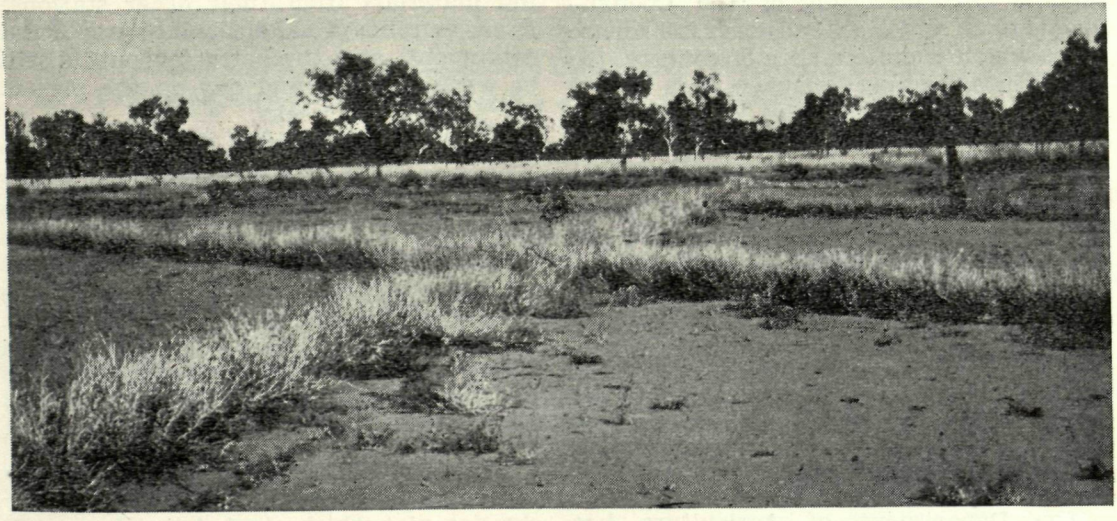


Fig. 5.—This photograph, taken on the Margaret River frontage of Gogo Station in May 1956, shows good growth of sown grasses (mainly buffel) in the furrows

Thousands of acres of the once beautiful grass plains of which Alexander Forrest and others wrote so glowingly, are now bare as a board for most of the year and the cattle still graze them.

Emanuel Bros., by the way, unlike a lot of others, admit the truth of this. It was unavoidable of course in earlier years with only the river pools available as watering points. Cattle thrived and multiplied. Numbers were higher in the early years of this century than they are now, but only a fraction of the country now in use was available at that time.

The company has followed an energetic programme of boring for some years to provide waters on the back country, but this had little effect in re-grassing the frontage. The way here has been shown by Agricultural Adviser Fitzgerald's trials on Gogo and Cherrabun.

Bare frontage soils furrowed and sown to buffel and Birdwood grasses and Kapok bush, and fenced off from grazing stock, have shown remarkable response. The initial trial of 100-odd acres on Gogo, gave such good establishment that Cherrabun's manager, Harry Scrivener, fenced in 1,000 acres and furrowed and spelled the lot.

This also succeeded despite comparatively poor seasons, and now "the game is really on." "Operation Coonangoodie," as Harry Scrivener has called it, is this year's reclamation programme, and involves the fencing and furrowing of the Coonangoodie plain which extends over 200 square miles which is quite a slice of country. To put it into farming language, it is 128,000 acres, or approximately 64 fair-sized wheat farms.

This area is to be enclosed, which means 40 miles of cattle-proof fencing; three flowing bores have to be fenced off; three new bores completed to water the cattle which must be moved farther south, and the enclosed area is to be furrowed and sown, in the first instance, at 5-chain intervals.

Later, if warranted, intermediate furrows will be made, reducing the interval to 2½ chains.

The Department of Agriculture has planned this approach and our demonstration tractor unit goes in as part of the team. Records and costs will of course be kept to evaluate results.

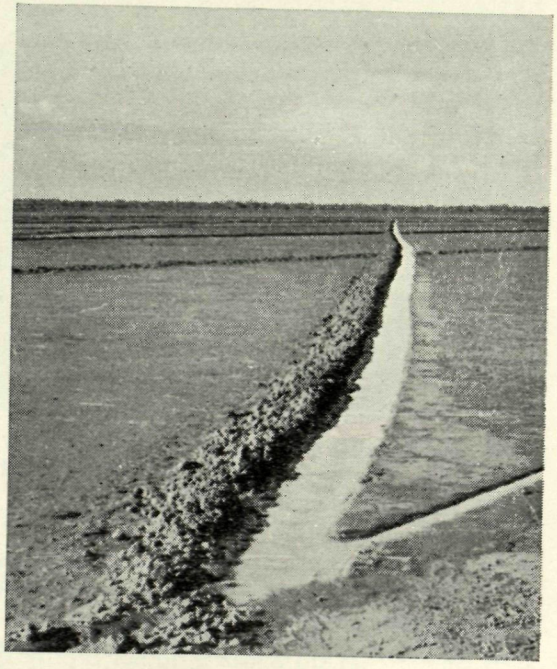
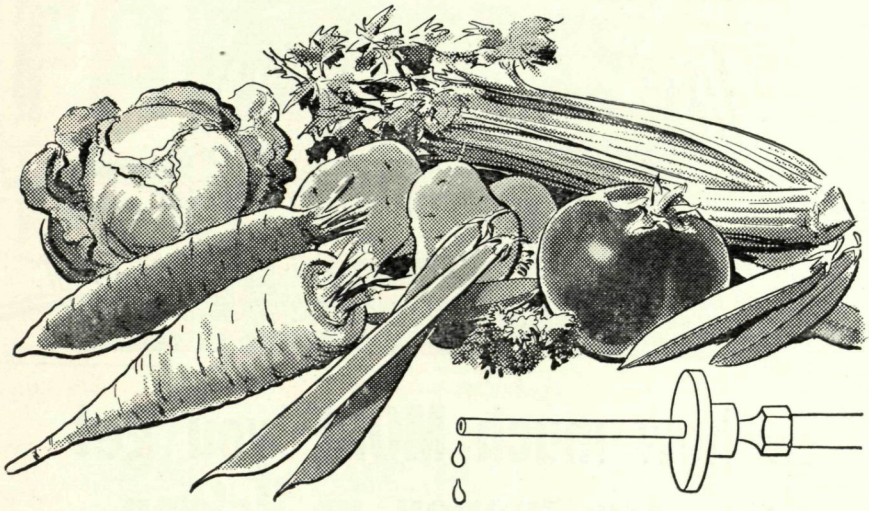


Fig. 6.—Single-furrow mouldboard ploughing on Cherrabun Station. It was photographed after early summer rain

As a commercial scale response to small-scale demonstration commenced only two seasons ago, this is really an impressive show. Emanuel Bros. have gathered fencing materials from their other stations; have purchased additional agricultural equipment, and three tractor outfits will be working night and day on the project for a period of weeks.

Forty miles of fencing is a large order and seems the most difficult part of the programme. Quite apart from the cost, its completion within the period to keep stock off the newly planted area during the first two seasons presents a labour and management problem of some magnitude. However, Emanuels are determined, and Harry Scrivener says the cattle will be kept off the planted area by men on horseback if the fences are not ready in time.

It is difficult to imagine a more heartening response to a departmental demonstration plot which started just two years ago.



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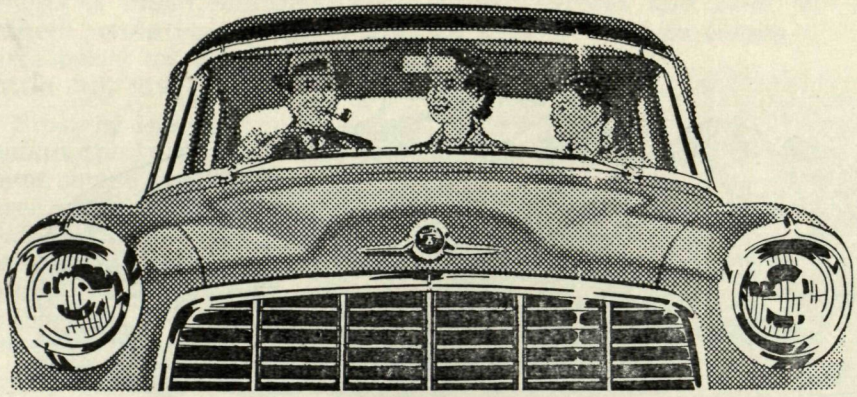

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