

Dryland cropping in the western division of New South Wales

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In the Western Division of NSW, approximately 150,000 ha have been developed for cropping since the early 1900's, although most of the expansion has been since the 1950's. This area represents about 5% of the land climatically suited for cropping in the region. The original incentive for cropping was to improve carrying capacity for livestock by removing dense timber and sowing introduced pastures. Carrying capacity on formerly heavily-timbered areas was increased from 1 sheep/7 ha to 1 sheep/2.5 ha. After the initial development, cropping was mainly carried out to control regrowth and rejuvenate pastures.

The regions involved in cropping are Walgett-Brewarrina (coolabah or open plains - heavy clay soils), Euabalong-Nymagee (poplar box - red earths, mallee - calcareous red earths) and Balranald-Wentworth (mallee - belah or open sand-plain - solonised brown soils or calcareous red earths).

Factors Affecting Developments

The "cost-price squeeze" has caused some landholders to consider increasing their earning capacity by diversifying into regular cropping enterprises. The greatly increased capacity of modern machinery and improved agronomic practices have enabled cultivation to be carried out rapidly, taking maximum advantage of rainfall events. In addition, improved varieties, particularly those with short-season characteristics, have provided opportunity for successful crops even with late sowing rains.

Current cropping is in areas of equivalent rainfall to land in adjacent regions which has been cropped successfully for over 30 years after recovering from the "dust bowl" conditions of the "living-horse power" era of the 1920's-1930's. The perception of today's farmers, confirmed by application of a rainfall/yield equation of high predictability ($r=0.96$, $P=0.01$), suggests that the 20-30% success rate of the earlier era would be replaced by an 80-90% success rate using present day machinery varieties and farming expertise.

Conditions Governing Clearing and Cultivation

All the land involved is held under perpetual leasehold tenure. Conditions for all clearing and cropping are set down in licences issued by the Western Lands Commission. The conditions aim to provide long-term cropping and pastoral productivity, as well as landscape stability.

Licence conditions relate to specific land forms within each region and refer to proportions and sizes of areas to be cleared/cultivated, areas to be left undisturbed - sandhills, erodible sites, fence lines, roadsides, specific vegetation associations - as well as soil conservation measures and cropping.

Conditions relating to cropping practices refer to rotations, requirements for establishment of sown pastures, prohibition on stubble burning, restrictions on fallowing in some areas and limitations on the use of herbicides that are damaging to medics.

Future Trends

The development of land for cropping is continuing to provide increased earning capacity as well as improving grazing land.

It is expected that cropping in these areas will continue to expand but, even at its maximum, will comprise only a small percentage of the total landscape. Cropping will continue to be a valuable adjunct to pastoral properties although care must be taken to counter any potential threat of soil erosion or weed invasion.

