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Agricultural progress on the Ord

By D. A. McGhee, Officer in Charge, Kununurra Regional Office

This is the first of occasional articles describing the experimental and commercial activity on the Ord River Irrigation Area (ORIA) in Western Australia's Kimberley region.

Against a background of extensive resources of land and water, a sometimes climatic advantage and a complementary disadvantage of a remote location, agriculture on the Ord has swung from various monocultures to a broadly based and diversified production. In 1986, the value of agricultural production on the Ord will approach values equivalent to those of the cotton era for the first time since the demise of that industry 12 years ago.

Background

The Ord River Irrigation Area is based on the unique resources of an extensive area of irrigable land and the huge water storage in Lake Argyle. Since the completion of the Ord River Dam in 1972, the area's cropping history has ranged through various major crops to the present diversified cropping programmes.

Major crops were directed at high volume markets with shipment from the nearby port of Wyndham. Cotton, grain sorghum and sunflowers have at various times been important (Figure 1). Problems such as chemical-resistant insects attacking cotton and a downturn in world prices of sorghum and sunflower have led to occasional collapses in the agriculture of the Ord Valley.

Government subsidies have been important through guaranteed prices, loans to farmers, subsidised processing of rice and peanuts, and an aerial spraying service which was managed and supported by the government. All subsidies have now been removed and valley production is determined by the innovative marketing of the farmer-based Ord River District Co-operative at Kununurra. Ord River agriculture has now diversified into the production of grain crops for specialised, highly-priced markets, horticultural crops for out-of-season markets,
a developing grain legume or pulse production, and a small cattle grazing industry based on irrigated pastures.

Although the ORIA’s remoteness from markets is a major disadvantage (see map), the Co-operative’s marketing endeavours have been rewarded with successful sales of field crops both within and outside of Australia.

Horticultural crops from the Ord are sold in cities and towns of all southern states, while quality rockmelons and honeydew melons have been exported to South-East Asia.
Development of this export market by air and sea freight will occur as the Ord's horticultural industry expands.

Of the horticultural crops, only bananas have a long production history on the Ord, and then only due to farmer innovation and persistence. Recent recognition of a shortage of banana supply in the southern winter has led to an expansion in banana plantings and production (Figure 2). Out-of-season cucurbit production for southern markets has also developed.

**New crops.**

Despite the successes of a variety of crops on the Ord, many of them are based on restricted and hard-won markets. The uncertainty of some of the crops demands a pioneering approach to the agriculture of the area. New crops are continually examined by both farmers and the Department of Agriculture.

After much research chickpeas show potential as one of the high value field crops grown in the area. From an initial commercial planting of 40 ha in 1985 Australian markets have now been identified for about 500 ha of the Macareena variety. Overseas exports are possible.

Farmers, in conjunction with Department research staff, have also examined the potential of navy beans, mungbeans, forage sorghum for a hay cubing operation and various horticultural crops such as table grapes, pawpaws and a range of melons.

New crops being studied include the pharmaceutical crop *Plantago ovata*, the tropical legume *Leucaena*, used for fattening cattle under intensive conditions, and specialised grain legumes such as lentils and faba beans. Each of these crops is the subject of detailed research programmes.

The commercial use of irrigated *Leucaena* pasture for beef and milk production is possible within the next year or two.

The development of new crops is well demonstrated by the introduction of the *Plantago ovata* programme to the Ord River. Used as a replacement dietary fibre in this era of convenience foods, *Plantago ovata* has traditionally been grown under peasant farming conditions in India. Concerned about supply from India, the Reckitt and Colman Company decided to examine possible alternative growing areas. After climatic information had identified the potential of the ORIA for this crop, the company approached the research group at Kununurra to undertake a joint programme studying the possibilities of *Plantago* production. Preliminary research results have been encouraging and further agronomic research is needed, along with a market assessment by the farmer co-operative.

Other new crops such as tumeric, cardamom, lentils, coffee and various dried bean crops will be examined. Continued emphasis on new crops is essential if the full potential of the ORIA is to be realised. The future of the Ord lies only partly in conventional field crops. Diversity has already proved to be the path to profitability, but the range of crops must be constantly examined and expanded.