

USDA Foreign Agricultural Service

GAIN Report

Global Agricultural Information Network

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Ord River Irrigation Offers Huge Potential and Ongoing Challenges

Report Categories:

Food Security

Cotton and Products

Grain and Feed

Approved By:

Grant Pettrie, Agricultural Counselor

Prepared By:

Mike Darby, Agricultural Specialist

Report Highlights:

The Ord River Irrigation Area (ORIA) in northern Western Australia provides scope for expanding Australia's agricultural production due to its enormous reserves of water, recent advances in genetic technology and changing economic conditions. However, it's extremely remote location; lack of developed infrastructure and lack of services continue to present significant challenges in utilizing this unique resource. The widely reported and record breaking drought in south eastern Australia is creating renewed interest in the abundant water resources of northern Western Australia.

General Information:

The Ord River Irrigation Area (ORIA) is located in the remote East Kimberley region in the far north of the state of Western Australia. The irrigation area covers around 15,000 hectares and is considered small in comparison with other irrigated areas in Australia.

Two factors make the ORIA unique. The first is its extremely remote location, 2,200 kilometers (1,400 miles) from the WA state capital of Perth, marginally closer than Jakarta in Indonesia. The second unique factor is the enormous water reservoir, Lake Argyle, which provides water to the irrigation area via Lake Kununurra, as well as environmental flows into the Lower Ord River.

Lake Argyle (pictured below) measures approximately 75 kilometers (47 miles) from the dam wall to its upper reaches and holds approximately 10,763,000 mega-liters of water. This is equivalent to 718 mega-liters per hectare of irrigated farming land and remains in stark contrast to irrigated farming areas in southern Australia, where irrigation water storages are currently at or near record low levels due to severe drought conditions.



Photograph: Mike Darby

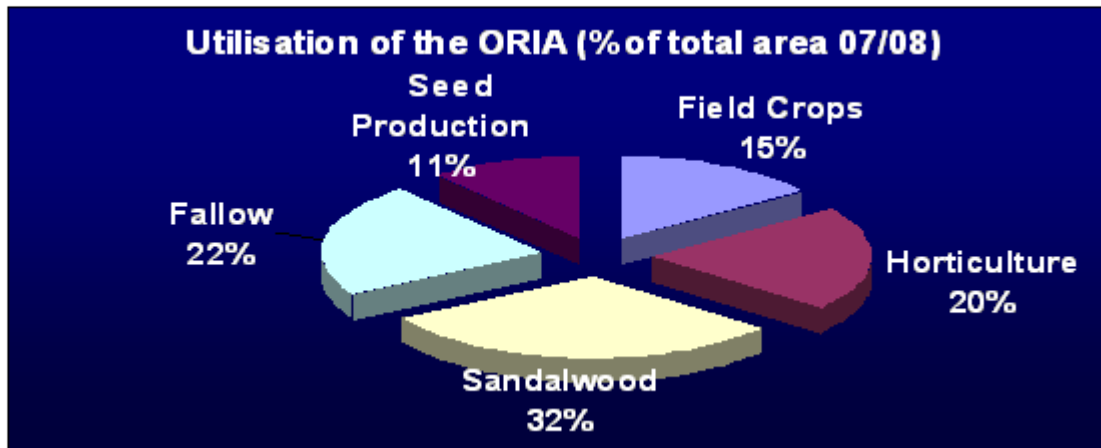
At flood, Lake Argyle covers an area of over two thousand square kilometers. In 2008, the lake discharged a total of 4,400,000 mega liters of water while the ORIA used only 171,500 mega liters (or around 3.8 percent) of that discharge. The following table shows the theoretical potential (planted area) of the outflow of Lake Argyle, not allowing for other requirements such as urban use or environmental flows.

Theoretical Potential use of Lake Argyle Discharge (not including environmental, urban or other requirements)			
	Assumed discharge (Mega Liters)	Assumed water use (Mega liters per ha)	Planted area (potential)
Rice	4,400,000	10-16	440,000
Sorghum	4,400,000	8	550,000
Sugar Cane	4,400,000	18	244,444
Wheat	4,400,000	5	880,000
Cotton	4,400,000	10	440,000

Source: Post Estimate

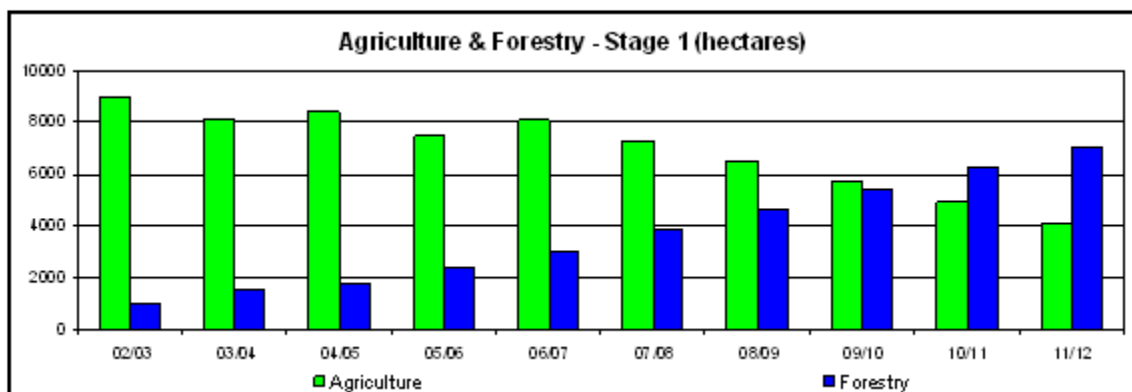
The ORIA resides in a tropical location at 16 degrees south latitude, the same distance from the equator as Acapulco in Mexico. The climate produces a distinctly "wet season" and "dry season" with the wet season running from December to February and the dry season from March to November. The average rainfall of approximately 760 mm falls in the period December - March.

Currently, the ORIA produces a broad range of horticultural and broad acre crops. Mangoes, cucurbits, citrus, hybrid seed, and field crops such as chickpeas, culinary beans and chia account for the majority of the agricultural crops. Sugar production ceased in 2007 with the closure of the local sugar mill.



Source: WA Agriculture

Large sandalwood plantations currently occupy around one third of all land in the ORIA. There are some indications that the sandalwood plantation industry will continue to grow at the rate of around 650 hectares planted each year for the next 3-5 years. Harvesting of these plantings is yet to commence.



Source: WA Agriculture estimate

Currently under trial are cotton and rice (along with numerous other field crops). Both of these industries failed at a commercial level during in the ORIA during the 1970's due to pest and diseases. However, with the advent of new

genetically modified (GM) varieties and improved cultural practices, local producers are optimistic that these crops could, with sufficient areas planted, form the basis of new field crop industries. In particular rice has potential with a geographic advantage for markets in Asia compared with other Australian rice growing areas.

Currently there are plans to expand the ORIA by another 8,000 hectares, and this development is commonly referred to "M2". Local sources believe that the crops to be grown in this area will likely be cotton and rice. The drought in southern Australia has seen areas planted to cotton and rice plummet to record low levels in recent times. Abundant water availability in the ORIA has created much interest in more traditional rice and cotton growing areas in southern Australia, which are currently facing record low water availability.

Continued expansion of the ORIA has created much discussion at industry and government levels. "Ord Stage 2" would likely compose of 15,000 hectares although this may not to be realized for some time. Local industry sources believe that up to 150,000 hectares of land could eventually be irrigated in the ORIA given the appropriate investment, and new export market opportunities.

The current public sector investment by both the Federal Government (AU\$220 million) and the State government (AU\$195 million) will facilitate East Kimberley infrastructure and social development which is designed to underpin a broad based regional economy.

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The reports listed below can all be downloaded from the FAS website at: <http://www.fas.usda.gov/scriptsw/AttacheRep/default.asp>.

Report Number	Title of Report	Date
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AS9033	FAIRS Export Certificate Report	09/02/09
AS9032	Livestock and Products Annual	09/01/09
AS9031	Exporter Guide	08/31/09
AS9030	U.S. Distillers Grains Promoted at Australian Grains Conference	08/18/09
AS9029	Grain and Feed Quarterly Lock-up Report	07/31/09
AS9028	FAIRS Country Report	07/27/09
AS9027	Agricultural Biotechnology Report	06/14/09
AS9025	Australia Gains Improved Access for Citrus & Mangos to China	06/17/09
AS9024	Global Biosecurity Conference to be held in Australia: Call for Abstracts	06/11/09