

Cotton and Maize Production in the Ord River Irrigation Scheme

Can it complement cattle?

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Growing Cotton

The Ord River Irrigation Area provides the ideal environment for cotton production, due to its sunny, warm climate and guaranteed water security. The crop is planted within a mandated 8-week planting window usually commencing in early February, depending on the tropical 'wet season'. This is to protect the efficacy of genes introduced to the plant (GM) which have helped cut insecticide use by 90%.

The crop typically won't require irrigation until early flowering, being rainfed in its early growth stages. After flowering the plant produces fruit, called bolls, which when mature contain both seed and lint. These are picked from the plant by rotating spindles on the front of a cotton picker.

Yields range from 9 to 13 bales per hectare with an additional 3-4 ton per hectare of seed bi-product.

Despite its thirsty reputation, less water, fertiliser and insecticide is used than on other crops such as maize, sorghum and even sesame.

Cotton End Uses

The Ord Valley, and Australia in general, produces some of the world's highest quality cotton. The lint is the product that is spun into cotton by mills to make clothes and is the primary reason for its production.

When picked the cotton is attached to the seed and needs to be removed by an industrial process called Ginning. This process also creates a highly valuable bi-product, cottonseed. This seed is a high quality stockfeed for ruminant animals (and only ruminant animals, due to traces of gossypol). Cottonseed is high in energy and protein. Cottonseed can be fed alone or in a mixed ration but is recommended not to exceed 6% of the total diet as the high oil content can inhibit rumen function.

The increased productivity of feeding cottonseed into a mixed ration diet will need to be weighed against logistics and broader market prices for northern producers.

A cotton Gin is expected to commence operation in Kununurra in 2025 and service over 20,000 ha of newly developed land on Ord stage 2.

Maize

The reliable water security of the Ord River Irrigation Area allows for the large-scale production of maize. The bulk of this crop is exported to South Korea for human consumption. Maize is exported in bulk from the nearby port of Wyndham. The local farmer cooperative, ORDCO, manage this in a vertically integrated supply chain.

The crop is planted at the beginning of the tropical 'dry season' and relies solely on irrigation water. It will typically require >10ML/ha of irrigation water. For this reason, the abundant availability of water in the ORIA allows for continuation of supply to the South Korean market.

Yields range from 10-14 T/ha and specialised 'snapper' fronts are required on the headers for harvest.

The arrival of a destructive pest, Fall Armyworm (*Spodoptera frugiperda*), in 2020 did dampen production. However, farming methods have adapted to still produce a consistent crop.

It is also a very useful stockfeed and surplus grain, or non-gritting varieties can service this market. Cattle producers will again need to determine if the economics stack up.

