

New variety transitions quinoa from boutique to broadacre

AT A GLANCE...

- The AgriFutures Australia funded project has tested current quinoa varieties, advanced breeding lines and germplasm lines at 16 locations across Australia (throughout WA, NT, QLD, SA and NSW) with the results having implications for farmers, processors, marketers and consumers.
- Optimal quinoa sowing windows were established for each of the different field trial regions over the duration of the project.
- The Kruso White variety was developed and adapted through collaboration with growers and industry to suit Australian growing conditions.
- Gross margins of Kruso White quinoa were found to be double that of wheat and canola under rain-fed conditions in Geraldton, WA.

A NEW open access quinoa variety developed in Australia is set to boost opportunities for farmers to grow the popular superfood, with increased production potential for both local and international markets. As the first public, non-contract variety in Australia, 'Kruso White' may be the key to transitioning quinoa from a niche, cottage crop to wider adoption across Australian broadacre farming environments.

Funded by AgriFutures Australia, with co-investment from project lead the Western Australian Department of Primary Industries and Regional Development (DPIRD), a national quinoa research project was undertaken between 2015–19.

The project – focused on investigating where and how quinoa can be grown across Australia – was also successful in

developing the new variety, which is now ready for bulk up and commercialisation.

The new variety, known as Kruso White, was launched in Kununurra in northern WA in September 2020 by the WA Minister for Regional Development, Agriculture and Food, Alannah MacTiernan MLC.

Access to the locally bred Kruso White will soon be available following the completion of an Expression of Interest through DPIRD, which seeks to licence multiple organisations to bulk up and market the quinoa variety upon its commercial release. Both group and individual applications are encouraged.

AgriFutures Australia General Manager, Business Development, Michael Beer, welcomed the launch, emphasising the increased opportunity that a public variety of quinoa offers Australian producers.

High value cash and break crop

"The production of quinoa globally climbed from 23,000 tonnes in 1990 to almost 200,000 tonnes in 2019," he said. "Considering this huge increase in demand, the national quinoa project recognised the potential for quinoa as a high value cash and break crop in Australian cropping systems."

"AgriFutures Australia is delighted that our investment into the industry has contributed to providing growers with access to high quality quinoa seed suitable for Australian conditions that can be incorporated into local farming systems."

With promising results under both rain-fed and irrigated conditions, Kruso White has proven suitable for winter and spring-autumn sowing, has wide adaptability, good yield and high seed quality.

An agronomic package including weed control options, best management practice, improved techniques of seed processing and the economics of quinoa production has also been developed as part of the project outcomes.

Dr Harmohinder Dhammu, research scientist at DPIRD and principal investigator of the quinoa project, said the average yield of Kruso White across 15 good trials at a national level was 1.5 tonnes per hectare, with a yield range of 0.5 to 3.1 tonnes.

Gross margins of Kruso White production were found to be double that of wheat and canola under rainfed conditions at Geraldton WA, assuming quinoa yield of just 1.0 tonne per hectare.

Rich in proteins and essential amino acids, quinoa is well deserving of its reputation as a "superfood", and even offers a gluten free substitute for other cereals. Its wide availability and the varied uses of the seeds for consumption has led to an increase in demand for quinoa worldwide.

The launch of the Kruso White quinoa is an example of successful collaboration directing investment and research into a niche agricultural market with potential for expansion.

More information:

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AgriFutures Australia is the trading name for Rural Industries Research & Development Corporation (RIRDC), a statutory authority of the Federal Government established by the Primary Industries Research and Development Act 1989. ■



DPIRD research scientist Dr Harmohinder Dhammu, principal investigator of the project, in a quinoa variety trial at Geraldton, WA in 2017. At more than 3.0 tonnes per hectare, Kruso White yielded the highest amongst the national trials at this site. (PHOTO: DPIRD)