

Native grains update - July 2021

Its been a crazy few months of connections plus harvesting! With the relatively cool and certainly wet summer, the grasses have produced a massive amount of grain in 2021. I trust you are also enjoying a fruitful season.

Threshing – the Agrifutures project

The University of Sydney and Black Duck Foods are excited to commence work on a joint \$500k project on threshing/cleaning native seed to food grade, funded by Agrifutures. The goal is to test old, current and exploratory methods on 10 species/mixes to determine the technology into which investment should be made in the future. The methods will include traditional techniques with fire and water, common technologies in grass seed production like vacuum separators and threshers, expensive machines such as computer-aided sorters and exploratory technologies such as electrostatic separation. This will be done with participatory research from Aboriginal communities.

With some help from local farmers and land holders, we collected over 10 species bearing edible grain using a combination of machine, blower vac and hand harvesting, or purchased from revegetation suppliers, out of the good harvest of autumn 2021. This includes Mitchell grass (ganalay), Native millet (guli), button grass, kangaroo grass (gararr), purslane (dhamu), shot grass, tall oat grass, weeping grass, spear grass, Acacia pods, and more.

Food (flour?) for thought...

One key finding thus far is the actual proportion of food grade seed per weight of revegetation-grade seed (or wild harvested seed) can range from less than 1% of weight up to 50% of the weight, depending on species (Mitchell grass and kangaroo grass being amongst the worst, weeping grass being in the middle and warrego grass and arm grass coming up the top). This means that if you buy 1kg seed, you may end up with anywhere between 10g and 500g of flour.

Given a loaf of bread is about 500g, and that 1kg of seed may cost anywhere between \$20 and \$250 (sometimes more!), its clear to see why blending the flour is quite important to keep the costs realistic.



The glumes, lemma, palea and appendages are large relative to the size of edible seed in Curly Mitchell grass (ganalay). Pile on the left is the trash which produced the pile in the middle of seed. Right image is an intact floret compared to a typical seed.

Pic credit: R. Thistlethwaite



The glumes, lemma, palea and appendages are not as oversized relative to the edible seed in weeping grass. Pile on the left is the trash which produced the pile in the middle of seed. Right image is an intact floret compared to a typical seed. *Pic credit: R. Thistlethwaite*

Threshing, cooking, eating

Good thing we had all the harvesting and threshing to keep us fit, because in between we have been doing lots of cooking and eating!

- Assoc Prof. Guy Roth has been integral in bringing together the resources needed to demonstrate the paddock to plate system, plus many of the connection with locals where we have done workshops. Thanks Guy!
- Food scientists Dr Ali Khoddami and Dr Claudia Keitel, students Ellen Wong and Fran Abedi joined Kerrie and Angela in Narrabri to cater native grain pizza and muffins at the Narrabri Campus Summer Crops Field Day. We were honoured to have by Steven Booby, Cultural Heritage Officer at NSW OEH and local Aboriginal elder, speak to local growers along with the team.
- Kerrie and Angela were honoured to visit the Black Duck Foods Farm in May, then to have their farm staff visit Narrabri in June. There were lots of great discussions and experiments with threshing and baking as we shared knowledge, culture and food, and gifted each other seed and flour samples to share with our local communities.
- **Other cooking days/knowledge sharing workshops:**



Dunkerry Mitchell grass producers, 12 April, Walgett Wirringaas, 3 May, Ashford LALC, 5 May, Rosanne, Bec and Dan, 10 May, Toomelah LALC and community, 1 June, Inverell TAFE, 16 May, Zoom knowledge sharing day, 30 May, Walgett Landcare + Dhariwaa Elders, 14 July. Some pics above

Industry Research and Development Plan and Roadmap

Black Duck Foods has been tasked by the NSW Government and Agrifutures to create an industry Roadmap/RD & E plan for native grains. Please keep your eye out for meeting invitations and be ready with your opinion on what research and development should be done in the next 5 years. Contact: jacob@blackduckfoods.org

You may also like to follow the development of the industry plan for the wider native seed industry led by Greening Australia (Project Phoenix, so named as it emerged from the 2019 bushfires) <https://www.youtube.com/watch?v=cVixeEZVook>

A reminder of where to get resources

- Links to the Paddock-to-plate [pdf report](#) and [YouTube videos](#) can be found here <https://www.sydney.edu.au/science/our-research/research-areas/life-and-environmental-sciences/indigenous-grasslands-grain.html> (or just google “grasslands for grain”)
- A [TAFE course](#) (roughly 6 days duration) is available to provide basic field-based training in native grain production in NW NSW. Contact Anthony.meppem2@tafensw.edu.au for information.
- The results from the [nutritional analysis](#) of over 15 native grain species is almost complete. A preview is available within the Native Grains Knowledge Sharing: Culture and Cooking webinar (starts about 40 minutes in). Full results will be peer reviewed and published soon. <https://www.youtube.com/watch?v=00DGKBCjVCE&list=PLiNGfByLAQoEutEUk98Zbw4sBRfbkbT3c>

Cultural heritage at the University farms

A plan is currently being compiled for large scale comprehensive surveys of the sites of cultural heritage at the University farms near Camden and Narrabri.

Understanding the past is key to building the future of teaching and research.

There are known sites of grinding grooves, scar trees and other evidence of human occupation that the University is committed to preserving in consultation with the respective traditional custodians in both places, then developing appropriate plans on what to do in the future e.g. teaching cultural heritage, training the next generation of archaeologists, increasing the cultural competency of staff, students and the public...? This decision will be made alongside local elders.

The integration of evidence of human occupation with plants at the sites will also shed light on how land used to be managed, and inform how we can sustainably manage it going forward. For working farms, this is especially important!



Coming up...

- With excellent rain continuing in Eastern Australia, this summer is setting up to be another bumper year for native grain harvesting. A number of individuals and groups have expressed their desire to start a business in native grains in northern NSW and QLD, which is very exciting! Now is the time to start preparations to ensure you are ready to harvest grain in autumn next year.
- Over the next 5 months the University of Sydney is developing a research and education plan around the native grain expertise and resources it currently has. This process will be chaired by Bec Cross; contact r.cross@sydney.edu.au
- Black Duck Foods is continuing discussions with Food Standards Australia and New Zealand (FSANZ) regarding food safety (including safety of the stories/cultural knowledge that go with food) and related considerations for native grains. Watch this space – it will have implications for those wishing to market grain.
- Angela will be on maternity leave the rest of the year. But please contact native.grains@sydney.edu.au to stay in touch with the team!

Yalu!

The IFRP team

