

# Scientists work to drought-proof beer

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University of Queensland scientists helping to drought-proof barley – an ancient and important ingredient in beer.

University of Queensland scientists are helping to drought-proof barley – an ancient and important ingredient in beer.

Researchers at UQ's Queensland Alliance for Agriculture and Food Innovation (QAAFI) have identified 'stay-green' characteristics in types of [barley](#).

They believe the discovery could help barley breeders develop barleys that are far less susceptible to environmental fluctuations such as drought and heat.

And from a brewer's point of view, consistency is the key to a great brew – and a better product.

QAAFI's Dr Glen Fox said sorghum breeders had long taken advantage of 'stay-green' characteristics for improved yield, and a similar trait in barley could present growers with an innovative way of responding to the challenges of climate change.

"Until now, no one had seriously looked at stay-green traits in barley," he said.

"Sorghum and barley are distantly related plants which both evolved in the warmer parts of the world, so if we can help growers produce barley that is more in-tune with what industry wants, we're well on the way to improving productivity and profitability."

"Each year Australia produces about two million tonnes of malting barley, and a good proportion of that is exported throughout Asia and the Pacific.

"Our team's research has shown that normal grain development and starch composition can survive significant water and heat stress in selected barley lines."

The QAAFI research paper published in the *Journal of Cereal Science* reports that preliminary studies have demonstrated that stay-green traits appear to be evident in barley, but more precise and detailed experiments would be required to better understand the genes that control this effect.

**More information:** Peter W. Gous, Jovin Hasjim, Jerome Franckowiak, Glen P. Fox, Robert G. Gilbert, Barley genotype expressing "stay-green"-like characteristics maintains starch quality of the grain during water stress condition, *Journal of Cereal Science*, Volume 58, Issue 3, November 2013, Pages 414-419, ISSN 0733-5210, [dx.doi.org/10.1016/j.jcs.2013.08.002](https://doi.org/10.1016/j.jcs.2013.08.002).

Provided by University of Queensland

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