



# SAGIT RESEARCH SUMMARY

## UA415: Growing durum demand in SA - gross margin sensitivity analysis trials

### IN A NUTSHELL

This three-year SAGIT-funded project aimed to discover whether durum was a viable and profitable alternative for bread wheat growers when prices are low.

This was done by comparing the yields, price differences and gross margins of durum varieties to bread wheat varieties in a series of trials conducted in areas which are not known for growing durum. The project also sought to promote durum as a high-value crop by promoting it to growers and agronomists at field days and forums.

### FAST FACTS

#### THE DATES:

Start: 1 July 2015

Finish: 30 June 2018

#### PROJECT PARTICIPANTS:

University of Adelaide:

Jason Able, Alistair Pearce, Stuart Hentschke.

SADGA: Alwyn Dyer, John Green, Deb Baum.

Growers: Fred Schilling, Calum Dow, John

Mathieson, Tim Starkey, Phillip Johns, Jordan

Wilksch

#### THE PROBLEM:

Is durum a viable and profitable alternative for bread wheat growers when prices are low?

#### THE RESEARCH:

Comparing the yields, prices and gross margins of durums and bread wheats at different trial sites over a three-year period.

### BACKGROUND

Durum has several industry advantages over bread wheat including its hardness, protein content, yellow colour and reputation for quality from national and international millers and producers.

There is also usually a premium for growing durum most seasons compared to bread wheat.

The premium can be low or high depending on global volatility so the project aimed to inform growers whether durum was a viable and profitable alternative for their system when prices are low or negligible.

### RESEARCH AIMS

The core objectives of the project were to:

- Compare leading durum varieties and an advanced breeding line from Durum Breeding Australia's Southern Node Breeding Program to leading bread wheat varieties in the same trials.
- Establish trials in areas not known for growing durum widely or with diminishing uptake of durum.
- Promote durum as an alternative high-value crop through field days, highlighting trial results and updating growers, agronomists and consultants with more information about South Australia's durum industry.

### IN THE FIELD

A gross margin sensitivity analysis was undertaken by researchers to determine at what point for yield, price and inputs durum would be a profitable proposition.

The analysis was conducted using a series of trials performed in areas that were not considered optimum regions for growing durum. They included Yeelana on the lower Eyre Peninsula, Wandearah in the Upper Mid-North, Sanderston on the Western Murray Plains and Coonalpyn in the Upper South East.

The team also conducted a trial at Roseworthy in the Lower North as a baseline.

## IN THE FIELD (CONTINUED)

At Coonalpyn in the Upper South East, Trojan (ASW), Emu Rock (H1) and DBA-Aurora (DR1/DR2) had the highest gross margins across years one and two. Quality downgrades to the durum varieties occurred in year three due to yields well above expectations so the bread wheats returned a higher gross margin in the final year.

The Roseworthy trial site was sown at a similar time to bread wheat crops in the area and the trial site was subject to frost in year one, waterlogging in year two and a lack of rain late in the growing season for year three. Trojan (GP) and DBA-Aurora (DR1) had the highest gross margins in 2015 with similar results in 2016 and across all yield/price combinations durum had a higher return than bread wheat for the first two years.

In year one at the Sanderston site, bread wheat outperformed durum in yield but a higher market price for durum meant it returned a higher gross margin across nearly all yield/price combinations. Durum had a comfortable advantage over bread wheat varieties in several yield/price combinations in year two, while bread wheat out-yielded durums significantly in year three and achieved higher gross margins in all yield/price combinations.

Wandereah was a challenging site with quality issues across all varieties in year one. In 2016, high quality and high yields were seen in both bread wheat and durum varieties, with a higher gross margin for durum due to the much higher durum price.

Despite lower quality in durum than bread wheat at the Yeelana site, durums had higher gross margin returns across all price/yield combinations in year one and the majority in year two.

## RESULTS

The project found that the price difference between bread wheat and durum is a main driver for return. It was also confirmed that achieving good quality for durum will generally result in a healthy gross margins being achieved.

There is usually not a significant difference in yield between the best durum and bread wheat varieties under good growing conditions. However, durum can suffer a yield penalty when there is a later start to the season.

A three-year average across all of the evaluated trial sites showed that durum returned a higher gross margin than bread wheat.

## VALUE FOR GROWERS

Trial results for all three years were distributed to the South Australian Durum Growers' Association and were made available to growers on their website. Results for each year of the project were also presented at various grower forums.



Durum at Yeelanna

### SAGIT DISCLAIMER

Any recommendations, suggestions or opinions contained in this communication do not necessarily represent the policy or views of the South Australian Grain Industry Trust (SAGIT). No person should act on the basis of the contents of this communication without first obtaining specific, independent, professional advice. The Trust and contributors to this communication may identify products by proprietary or trade names to help readers identify particular types of products. We do not endorse or recommend the products of any manufacturer referred to. Other products may perform as well as or better than those specifically referred to. SAGIT will not be liable for any loss, damage, cost or expense incurred or arising by reason of any person using or relying on the information in this communication.

**CAUTION: RESEARCH ON UNREGISTERED AGRICULTURAL CHEMICALS USE.** Any research with unregistered pesticides or of unregistered products reported in this communication does not constitute a recommendation for that particular use by the authors or the author's organisations. All pesticide applications must accord with the currently registered label for that particular pesticide, crop, pest and region. Copyright © All material published in this communication is copyright protected and may not be reproduced in any form without written permission from SAGIT

### MORE INFORMATION:

Jason Able, The University of Adelaide

T: 08 8313 7075 M: 0459 841 586

E: [jason.able@adelaide.edu.au](mailto:jason.able@adelaide.edu.au)