

# Polycrylamides and soil wetting agents used in Canola at Badgingarra

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## SUMMARY

This report records the use of polyacrylamides (PAMs) and soil wetting agents in Badgingarra.

## BACKGROUND

Soil wetting agents have been used for many years to assist with crop establishment in paddocks with non wetting issues. The greatest success with them in the Mid West has been on soils which hold their furrow shape, often the gravelly soils. This is because the stream of soil wetter is applied on-furrow above the seed. This needs to remain uncovered and in place, to assist with water infiltration and then germination once rain does come.

PAMs are chains of acrylamide molecules that are capable of absorbing and then releasing water, up to 300 times their mass. They are becoming cheaper and may be of some use in dryland farming systems. They have the potential to improve the supply of water to plants at times when the soil can not supply water either due to low water holding capacity of the soil or infrequent rainfall events.

## DETAILS

Unreplicated 40' airseeder width strips of Rottnest canola were dry sown on the 14<sup>th</sup> May ahead of rain on the 23<sup>rd</sup> May. These were sown around the outside of a sandy gravel paddock at David Paish's farm, north of Badgingarra. The liquid treatments were applied on-furrow using existing equipment, the granules were mixed with the fertiliser. The treatments were;

- Untreated control
- Aqua Boost AG30 (PAM granule) @ 2kg/Ha
- AG30 FB (PAM liquid + fulvic acid) @ 4L/Ha in 29L water
- Irrigator soil wetting agent @ 1L/Ha in 29L water

500m strips were swathed with a 25' swather and then harvested with David's harvester. The results are yield monitor comparisons at the same point in the paddock. The paddock was variable and caution must be taken when considering these results.

## RESULTS

Plant numbers were variable and it is difficult to draw any conclusion from the final grain yields. The untreated strip yielded 1.8t/Ha. Both the PAM treatments were assessed as 1.9t/Ha, and the Irrigator soil wetter yield was 2.0t/Ha. This was what the remainder of the paddock yielded, and it was treated with Irrigator.

## DISCUSSION

The dry start lead to great variability within the crop, so no objective assessment of plant number or growth could be made. Care must be taken when considering the yields in a demonstration such as this.

The PAMs serve a different purpose to the soil wetter. They were easy to use and further work needs to be conducted to consider their performance in a range of different soil types and seasonal conditions.

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