

Safflower set for 2019 comeback as a new 'green' oil

[Gio Braidotti](#)

The almost-forgotten crop on the Australian grains landscape, safflower, is set to return following regulatory approval for the commercial cultivation of a new super-high-oleic (SHO) variety.

SHO safflower was specifically developed by the joint GRDC–CSIRO Crop Biofactories Initiative to expand crop options and develop new markets for Australian grain growers. It produces oil with an oleic acid content greater than 90 per cent, making it the only plant-based source of oil suitable for a large number of high-value industrial applications.

The SHO variety is being commercialised by GO Resources Pty Ltd, an Australian clean technology company that specialises in the production and supply of renewable and biodegradable raw materials for use in industrial and oleochemical markets.

GO Resources research and development manager David Hudson says that bulking up seed is underway with a view to launching the first-generation SHO safflower variety in 2019. Growers are invited to attend field days this spring to look at trials and evaluate whether the crop is a potential fit in their rotations.

Mr Hudson says that prior to the introduction of canola, safflower was once a significant oilseed crop grown in medium-to-high-rainfall regions of Victoria and South Australia, along with the cotton-growing regions of northern New South Wales.

“What we have in mind is a high-value – not a high-volume – crop option that also has potential to not only deliver economic benefits to farmers

but also agronomic and soil-amelioration benefits," he says. "In field trials over three years we have seen benefits from including safflower in a crop rotation in a range of both dryland and irrigated cropping systems."

Among these benefits are safflower's tolerance to sodic soils, its ability to crowd-out weeds and the fact that providing another crop alternative within rotations will help manage herbicide resistance.

Also, the plant's deep taproot enables it to source water deep in the soil profile, which may help lower watertables where salinity is an issue. The taproot will help improve water penetration and equipment trafficability by breaking up subsoil hardpans.

"What we saw in trials was that in one tough, dry year when canola was slashed for straw, safflower still managed to yield 0.75 tonnes per hectare," Mr Hudson says. "So this is a hardy plant and can be grown across a range of environments."

The GRDC's manager of commercial technology delivery, Dr Ron Osmond, says investment in the Crop Biofactories Initiative is designed to expand crop options for growers, develop new and high-value markets, plus deliver agronomic benefits that make Australian growing systems more resilient.

He is encouraging growers to assess the SHO safflower at field days in Victoria and northern NSW. Dates will be announced on the GO Resources website.

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