



CROPPING

Oil alternative: Genetically modified safflower industry push

HANNAH DRISCOLL, *The Weekly Times*

VICTORIAN farmers are trialling a new genetically-modified safflower, developed using groundbreaking technology, which could help replace petroleum-based industrial oils.

A GM safflower, being trialled this season in two states including Victoria, will be the first commercial application of CSIRO's gene-silencing technology in Australia, according the CSIRO's spokesman Allan Green.

The GM safflower was developed by the CSIRO and licensed to GO Resources in 2015 to commercialise. GO Resources have a licence from the

Office of Gene Technology Regulator, to run field trials of the new GM variety.

The oil produced by the GM safflower has high amounts of oleic acid — about 92 per cent. It is intended for industrial use, rather than food production.

“What we’re now offering to the market, who want the high oleic oil, is (a crop) that is economically viable, so they can use it as a base oil to make bio-based products in the industrial world,” GO Resources chief executive Michael Kleinig said.

The CSIRO’s Dr Green said rather than adding in foreign genes, the high oleic-acid in the safflower was achieved by “silencing” certain genes, that were responsible for producing specific enzymes.

The interference means the plant is encouraged to produce as much oleic acid as possible, and also prevents it converting into anything else.

“Sometimes I describe it as a train with all the passengers as fatty acids — we want them all to go to Spencer St, you don’t want any of them to go onto Flinders St and you want none of them to get off before Spencer Street,” Dr Green said.

There are five trial sites from Narrabri, NSW to Victoria’s Wimmera and Western District, with multiple trials at each site. “We’re looking at different lines and then working out which one of them will be best to go to market with,” GO Resources director David Hudson said.

Kalkee farmer David Jochinke has previously grown conventional safflower, and has been participating in the GO Resources trials for three years.

He predicted the GM safflower wouldn’t have the consumer resistance other GM crops have had, because it was going to industrial use, rather than food production.

“It’s got to compete against canola in my eyes,” he said. “From what I can understand the seed will be cheaper, it’s got less diseases and its agronomic fit will be similar to canola, so it should have the ability to have a fairly wide footprint,” he said.

Dr Green said the future market for plant-based industrial oils was going to be “larger because we’re going to need to move away from petroleum eventually”.