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## **OILSEEDS NEWS**

### **RESEARCH SUPPORTS BACK-TO-BACK IRRIGATED CROPPING**

While the ideal sowing time for soybeans in southern New South Wales is mid November, recent research has shown that they can be sown as late as Christmas with only a slight yield penalty – creating more opportunities for irrigators to grow winter and summer crops in succession.

Irrigators can harvest a winter crop and sow soybeans shortly after. The new research means that if the winter crop harvest is delayed, there is still time to sow a soybean crop until late December.

Luke Gaynor, soybean researcher, with the New South Wales Department of Primary Industries has conducted the research through James Cook University as part of his Master's degree.

He said that the new, shorter-season human consumption soybean varieties like Djakal and Snowy are faster growing and higher yielding than older varieties like Curringa and Bowyer. And they are usually harvested in April, allowing for another winter crop to be sown after the soybeans, making better use of any residual moisture or nitrogen following the soybean crop.

“Djakal and Snowy’s yields are more robust than the older longer season types,” said Mr Gaynor.

Although sowing later is possible, Mr Gaynor said that sowing of the new varieties should not be delayed any longer than absolutely necessary.

“Maximum yields are still only achieved by sowing early in the sowing window in mid November until mid December”.

Mr Gaynor said that poor yields of longer season varieties can be attributed to the cool overnight temperatures that they experience during early autumn.

“Early maturing varieties like Djakal and Snowy have normally finished by late March early April, effectively avoiding the cooler over night temperatures,” he said.



SOY ON BARLEY:  
Coleambally farmer Paul Bellato (left) – check – and NSW DPI's Luke Gaynor in a barley paddock last August which will soon be sown to soybeans.

Photo:  
Felicity Pritchard.

Oilseed Industry Development Officer, Felicity Pritchard, said that a number of growers in the Riverina were taking advantage of the short growing season and excellent water use efficiency of the new soybean varieties by alternating winter crops with soybeans.

She said growers had successfully produced up to seven grain crops in three and a half years.



BACK TO BACK CROPS: New soybean varieties for southern Australia can be alternated with cereal crops. Pictured is Felicity Pritchard.

Photo: Dale Grey, Vic

Coleambally farmer Paul Bellato has done just this, and now considers the task “easy”.

“Soybeans are ideal. They’re the only summer crop where you can go double cropping year in year out,” he said.

Mr Bellato said his rotations are flexible to adapt to seasonal conditions, but a typical double cropping rotation starts with bed preparation and winter fallow which is sown to maize in October. The following autumn, the paddock is sown to wheat or barley, followed by soybeans and then

another winter cereal. The cereal-soybean rotation can continue for up to two more years.

“Soybeans are the most flexible of the lot. To sow maize, you have to have everything spot-on. Soybeans are the total opposite. You just direct drill and spray.”

In some years the seeder has immediately followed the soybean harvester to sow a winter cereal.

He said that although the yields of soybeans and cereals are slightly lower than when following fallow, the income from two crops more than compensates for this.

Much more efficient water use across the farm is another major benefit. The Bellato’s soybean crops receive their final watering just before maturity when the crop starts to turn yellow, to ensure high yields and large seed size. The following cereal crops can use the near-full profile of residual water

from the soybean crop, and this year, his winter crops following soybeans have not required irrigation for establishment.

“We’re making the most of the winter rain. We don’t take water for granted,” he stated.

Soybeans are a low water user compared with other summer crops, and the combined gross margin both on a per hectare basis and a per megalitre basis is better than a single summer crop of rice or maize.

Another benefit of system is the fact that soybeans are a legume, and require no nitrogen fertiliser, a major cost for other summer crops.

He said that soybeans are lower risk as they have low up-front costs, compared with maize.

“Maize costs a fortune to sow. With soybeans, it only costs the seed, and if you’ve got the water, you can go on with them.”

“It doesn’t take a lot of expensive preparation to double crop. We just burn or bale the cereal stubble, pre-water, knockdown spray and sow. If the soybeans are sown following fallow we also band single super and shape the beds earlier in the year,” he said.

Mr Bellato said the only limitation to double cropping is the risk of a wet harvest for both the winter and summer crops. This can delay harvest and planting of the next crop.

“I think it’s easy now. If the weather’s on your side, there’s nothing hard about it,” he said.

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