

Getting more from cereal crops

Through the Northern Victoria Grain & Graze 2 program, a project looking at how to efficiently convert irrigation water to grain and meat by grazing winter crops is occurring. The project aims to increase the knowledge and skills of farmers engaging in, or considering, grazing crops by providing them with information about varieties, crop agronomy, grazing management and the effects on livestock and crop production.

Location: Deniliquin

Farming operation: cropping and sheep

Livestock: 800 Merino ewes joined to Border Leicester rams to produce first cross progeny

Crops: wheat, canola, rice and fodder (lucerne, clover, ryegrass)

Mean annual rainfall: 320-325mm

Soil type: mostly clay

Deniliquin irrigator Michael Hughes has embraced a grain and graze system that is delivering flexibility and a means to better integrate his livestock and cropping enterprises.

According to Michael, who farms 600 hectares with his wife Simone, the system enables them to use cereal crops to feed livestock without compromising grain yields.

At the same time, young pasture crops can be preserved, allowing them to mature and provide more nutrition to livestock later in the season.

"Grazing some of our cereals gives us an opportunity to take the pressure off our pasture crops," he said.

"They get a chance to get up and going before being grazed."

The System

While grazing crops is something Michael has done "opportunistically" over the years, it was only in 2009 that it became standard practice on his farm.



"It was more out of necessity than planning," Michael said.

"We took it up in 2009 as we were coming out of the drought."

The inclusion of longer season winter wheat varieties, such as Wedgetail, has helped strengthen the success of the system, allowing sowing, and subsequent grazing, to begin earlier.

Michael said the dual-purpose wheat had good early vigour, was palatable to stock and had a quality grade (APH) that was accepted at his local silo.

"It also germinates well in high soil temperatures," he said.

"We can make it rain (with irrigation) so we sow by the calendar."

Wedgetail wheat is usually grazed by ewes with lambs at foot from early tillering and may continue up until GS30 (the end of tillering), depending on the season. Grazing is always terminated before the first node stage (GS31) to avoid any yield penalty.

All the crops are grazed for between six and nine weeks; from the first week of May through until the end of June.

"We're conscious of animal health and need to watch for things like calcium deficiency," Michael said.

"Supplements are mandatory."

Michael ensures causemag, lime and salt are readily available to stock and uses the supplements to gauge when they are ready to be moved.



"You use your own knowledge and visual assessments. Graziers know when their livestock are happy. If they are gorging on the supplements they need to be taken out," he said.

Once the sheep are removed, the crops are left for ten days before a broadleaf spray and a liquid fertiliser is applied. They are then irrigated in spring and left to mature until harvest.

Meanwhile the sheep are moved to pasture paddocks where they benefit from the additional development afforded the pastures while they have been grazing crops.

Challenges

Calcium deficiency and herbicide withholding periods are the main challenges to the grain and graze system according to Michael.

"Pre-emergent herbicide withholding periods we initially overlooked," he said.

"Weeds are too hard to kill if we wait until July when sheep have been removed so a pre-em is essential, but you do have to be careful to acknowledge withholding periods."

The nutritional management of grazed crops can also be a challenge with cereals having a higher nitrogen need post grazing.

"It does get a bit hungry," Michael said.

But with thoughtful planning and regular monitoring, managing the challenges needn't be burdensome.

Michael said his system required no 'additional' labour and when crop grazing ceased it was 'business as usual'.

"The grazed wheat doesn't take long to catch up to the rest of our crops so post-July, all the cereals can be managed the same," he said.



"You just need to make sure you select a variety with a 'winter habit', provide animals with a supplement and acknowledge herbicide withholding periods."

Benefits

According to Michael his grazing crops system delivers a multitude of benefits to ongoing growth and improvement of his farm, and importantly, the business' bottom line.

"It's definitely beneficial to our cash flow and our farming system," he said.

"We're turning off better quality livestock and extending the productivity of our pastures. It has also allowed us to put in a larger area of cereals which equates to more revenue."

Cereals provide sheep with early feed coming out of summer, helping to bridge the March to May feed gap and giving pastures an opportunity to get going before grazing re-commences.

"It has given me options," Michael said.

"I get more with less – more from my pastures as well as stock feed and grain from my crops."

The efficacy of broadleaf herbicides applied to grazed crops is also improved, Michael said.

"We get a better result from herbicides

because grazing opens the canopy, improving herbicide-plant contact."

The future

The grain and graze system is continually evolving on the Hughes farm.

"This year (2013) we are hoping to overcome the crop's high nitrogen demand after grazing by putting more underneath it," Michael said.

"Hopefully this will lift early dry matter production and reduce the amount of N required post grazing."

Michael believes there is enough research to suggest grazing crops is a sound and sensible approach.

"With the right management our crops can be grazed without sacrificing yield," he said.

"Research from the Irrigated Cropping Council and DEPI, as well as my own experiences, confirm this."

Find out more

For further information about the Northern Victoria Grain & Graze 2 program, including opportunities to get involved, contact:

BCG

Phone (03)5492 2787, www.bcg.org.au

Grain & Graze 2

www.northernvictoriagrainandgraze2.com.au

