



Project Update:

R&D trials

- 1st sowing times of grazing wheat trials sown - good emergence (20th April) at Yerong Creek
- short term pasture trials ready to be sown on rain

Focus Farms

- monthly monitoring commenced in February at all sites (Coolamon, Tarcutta, Temora, Eurolie Bridge, Tootool) - results available soon in 'Farm Focus Facts'
 - Sheila deLange (MCMA) and Craig Muir* (NSW DPI) employed as Project Officers
- *Craig is employed by the 'Best Management Practices for Dryland Agriculture' project which is collaborating with Grain & Graze on the Focus Farms.*

G&G Seminar Series

- to commence in July, with 1st seminar on 'Lambing ewe nutrition' (details to follow)

For more details on the project and results to date, go to www.farmlink.com.au/gg.htm



Yerong Creek grazing wheat trial sown 14th April 2005, emerged 20th April. Photo taken 23/5/05.

What can we learn from 2004 grazing wheat trials???

With the late break to the season, many growers are wondering how much feed they'll be able to get from their grazing wheats. Although difficult to predict, results from last year (Marrar & Yerong Creek) with a similar late break can give a good guide on which to base decisions:

sowing time:

- dry matter to beginning Sept for 4th week May and 2nd week June sowing times was ~3t/ha and 2.5t/ha respectively (ungrazed Wedgetail)
- 2nd week June sowing wasn't grazed as didn't reach sufficient dry matter (~1000kg/ha) until end August, which coincided with stem elongation (1st node). Could have grazed if prepared to sacrifice some yield.

variety:

- Whistler, Wedgetail and Lorikeet produced more early dry matter than other varieties at both 4th week May and 2nd week June sowing times
- Marombi yielded highest regardless of sowing time (equal to Whistler at Marrar)
- Wedgetail highest gross margin for 4th week May sowing due to greater dry matter and Prime Hard quality (stripe rust fungicide not included in costs)

wheat growth rates (1st week August):

- 4th week May sowing: ~35kg DM/ha/day
- 2nd week June sowing: ~25kg DM/ha/day
- both similar by 1st week Sept (70-75kg/day)

weeks sowing to grazing (~1000kg DM/ha)

- 4th week May sowing: ~11 weeks
- 2nd week June sowing: insufficient dry matter before stem elongation (but estimate approx. 10-11 weeks if grazed 3rd/4th week August)

lamb intake:

- 40kg lamb: 1.25kg/hd/day (3% body wt)

acknowl'ment: Guy McMullen (DPI), Hugh Dove (CSIRO)

Fodder budgeting

Fodder budgets are an important tool to work out stocking rates and potential number of grazing days. They can also be used to decide how much grazing wheat (or other feed) should be sown to carry stock numbers. Following are examples based on results from last year (note that grazing periods and growth rates will vary from year to year):

1. How many lambs can I potentially run from a 4th Week May sowing?

- start grazing: 10th August (1000kg DM/ha)
 - stop grazing*: 30th August (500kg DM/ha)
 - grazing days: (30th - 10th) = 20 days
 - available feed: (1000 - 500) = 500kg DM/ha
 - wheat growth: 50kg DM/ha/day x 20 days = 1000kg DM
 - total available feed: (500 + 1000) = 1500kg DM/ha
 - lamb intake: (1.25kg/hd/day x 20 days) = 25kg/hd
- ⇒ **stocking rate:** (1500kg DM ÷ 25kg/hd) = **60 lambs/ha**
- ⇒ **if different wheat growth rates:**
- @ 40kg DM/ha/day = 52 lambs/ha
 - @ 60kg DM/ha/day = 76 lambs/ha

* assuming stock are removed when the 1st node can be felt at the base of the main stem (timing varies from year to year depending on temperature, daylength and grazing intensity - 2004 was particularly late). Prolonging grazing will reduce yield, but this may be acceptable if alternative feed is scarce. An additional trial this year will look at the impact of early and late lock-up times (combined with high and low stocking rates) on yield.

2. When would I reach 500kg DM/ha if I only stocked at 30 lambs/ha and was prepared to sacrifice yield by grazing past 1st node (from 4th Week May sowing)?

- start grazing: 1000kg DM/ha (10th August)
 - stop grazing: 500kg DM/ha
 - available feed: (1000 - 500) = 500kg DM/ha
 - wheat growth rate: 50kg DM/ha/day
 - stocking rate: 30 lambs/ha
 - lamb intake: (1.25kg x 30) = 37.5kg/ha/day
 - net DM gain: (50 - 37.5) = 12.5kg DM/ha/day
- ⇒ **wheat growth rates would exceed animal intake**
- ⇒ **if different stock numbers:**
- @ 40 lambs/ha: wheat growth rate equals intake
 - @ 50 lambs/ha: 40 days** (19th September)

** but if grazing later in the season, wheat growth rates will also increase so intake of 50 lambs/ha may not exceed wheat growth.

3. When would I reach 500kg DM/ha if I only stocked at 30 lambs/ha and was prepared to sacrifice yield by grazing past 1st node (from 2nd Week June sowing)?

- start grazing: 1000kg DM/ha (~25th August)
- stop grazing: 500kg DM/ha
- available feed: (1000 - 500) = 500kg DM/ha

- wheat growth rate: 70kg DM/ha/day
- stocking rate: 30 lambs/ha
- lamb intake: (1.25kg x 30) = 37.5kg/ha/day
- net DM gain: (70 - 37.5) = 32.5kg DM/ha/day

⇒ **wheat growth rates would exceed animal intake**

⇒ **if different stock numbers:**

- @ 40 lambs/ha: growth rate exceeds intake
- @ 50 lambs/ha: growth rate exceeds intake
- @ 60 lambs/ha: 100 days!

Note on grazing 'starting and stopping' dry matter:

Start grazing: we used a dry matter figure of 1000kg/ha (Fig. 1) as a guide to start grazing. If grazing before this, ensure plants are well anchored and can't be pulled out of the ground.

Stop grazing: we used a dry matter figure of 500kg/ha (Fig. 2) as a guide to stop grazing (~3-4cm high). Whilst this has not been recommended in the past, recovery was still very quick. With the short grazing period available to us in late breaks, high stock numbers are required to achieve this. Lower stock numbers will maintain or minimise excess wheat growth (see fodder budgets 2 & 3). In this case, the critical time to stop grazing (if not wanting to sacrifice yield) is when the 1st node can be felt at the base of the stem.

Fig. 1 ~1000kg DM/ha
(pre-graze Yerong Ck '04)



Fig. 2 ~500kg DM/ha
(post-graze Yerong Ck '04)



So, keep sowing grazing wheats or not?

Assuming we won't be sowing until at least the 2nd week of June, should we keep sowing grazing wheats? There are several scenarios to consider:

- **No**, if priority is grain recovery - unless you treat it as a grain only crop (Marombi & Whistler highest ungrazed winter wheat yields in 2004 from 2nd week June sowing). A short season spring wheat may be better if varieties are available.
- **Yes**, if priority is feed - 1) could sow a limited number of paddocks in which you are prepared to sacrifice yield* by grazing past 1st node. Consider economics of savings in supplementary feeding vs loss of grain income.

*note: yield is sacrificed both by grazing out developing ears, and by grazing delaying flowering into a period of potentially greater heat stress.

2) could sow into older pasture paddocks to increase dry matter production and treat as grazing only crops.

Options should be discussed with your adviser.