

# Fact Sheet...

## Project Update:

(for more details go to [www.farmlink.com.au/gg.htm](http://www.farmlink.com.au/gg.htm))

### End to Grain & Graze...

Unfortunately the Murrumbidgee Grain & Graze project has concluded its final year of trials with another disappointing season. Although the current project officially finishes in June 2008, discussions are underway to determine the potential for another round of Grain & Graze funding.

### 2007 Trial Wrap-up:

(results courtesy of Vince Van der Rijt, NSW DPI)

#### a) Grazing cereal row-spacing (Muttama & Ganmain)

- To determine the effect of row spacing & plant density on dry matter, stock compaction & grain recovery.
- Varieties: Breakwell triticale, Wedgetail wheat & (ungrazed) Ventura wheat.
- Row spacings: 18cm & 30cm (also 36cm at Muttama)
- Plant densities: 140 & 200 plants/m<sup>2</sup>
- Preliminary observations: Although plant densities in the wider row spacing were 30-50% less than the narrow (where target densities were achieved), pre-grazing dry matter was only ~20-30% less. Wedgetail dry matter was lower than the other varieties. Stock compaction and wastage measurements were unable to be taken.

#### b) Grazing wheat management - lambs (Collingullie)

- To determine the effect of early or late 'stock on' & 'stock off' times on weight gains and dry matter (*no yield results due to drought*).
- Grazing periods:
  - » 'stock on *early*': from 25th June (~300kg DM/ha) for 25 & 30 days;
  - » 'stock on *late*': from 20th July (~1000kg DM/ha) for 11 & 20 days.
- Preliminary observations: liveweight gains from the 'early stock on' treatments averaged ~190g/day, compared with ~150g/day when stock were put on later (but these were variable between animals).

#### c) Grazing wheat management - cattle (Ganmain)

- To determine the effect of stocking rate on weight gains and dry matter (*no yield results due to drought*).
- Grazing period: 25 days from 27th July (~1500kg DM/ha) to 21st August.
- Stocking rates: 3, 4, 6 & 7 steers/ha (~200kg start wt)
- Preliminary observations: liveweight gains averaged from 1.2 to 1.7kg/day across the stocking rates, with the lowest stocking rate showing the highest weight gain.

## 2007 in Review

- G&G Fodder Budgeting Workshop for Advisers, Downside - July 07



- G&G Farmwalk, Collingullie grazing wheat management trial - August 07



- National G&G Forum (hosted by Murrumbidgee Region), 'Breakfast & Birds' at The Rock - August 07



## Drought affected crops - quantity & quality

The 2006 Grain & Graze trials at Ganmain and Eurongilly enabled Nigel Phillips and Guy McMullen from NSW DPI to collect valuable information on feed decline in drought affected wheat and canola crops. Trial plots were cut to ground level, divided into leaf, stem and head/pod samples and tested for feed quantity and quality over a period from **October to December** last year. Results are as follows:

- There was a **general decline in feed quality** (metabolisable energy and crude protein) **after flowering in both wheat and canola**.
- **Wheat had greater dry matter** than canola (Fig's 1 & 2), **but canola had higher feed quality** than wheat (Fig's 3 & 4).
- In **canola**, **stem** made up 60-80% of available feed (Fig. 1) but was of lower quality than leaf or pod. Although the **leaf** retained its high quality well over the period (compared to wheat), it declined rapidly in quantity. The **pod**, which increased in quantity and energy during grain fill, only represented less than 14% of available feed.
- In **wheat**, **leaf** made up 20-30% of available feed - up to 500kg/ha more than canola, (Fig. 2) and was better retained with over 70% remaining by early December. However its quality was lower and declined more rapidly than canola. The **head** made up around 50% of available dry matter and over 60% of energy after flowering.

Fig. 1: Drought affected canola - DM (kg/ha) of plant parts, 2006

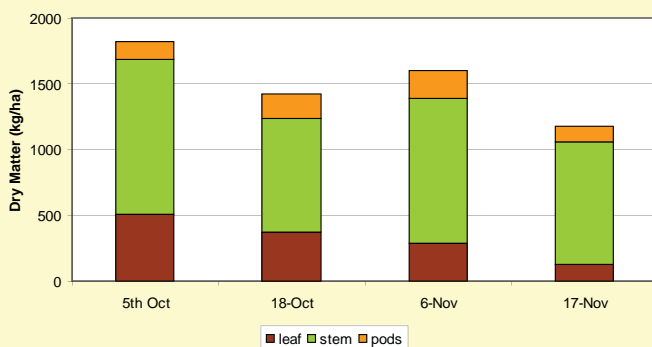


Fig. 2: Drought affected wheat - DM (kg/ha) of plant parts, 2006

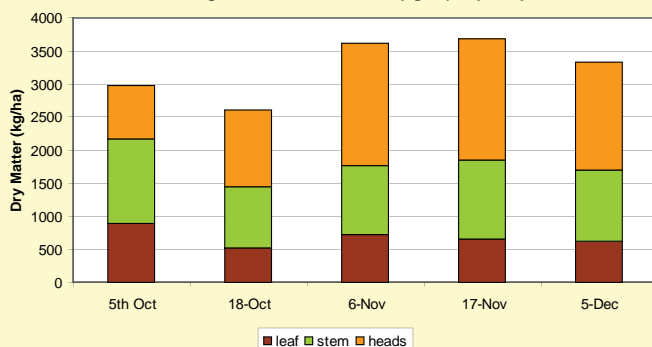


Fig. 3: Drought affected wheat & canola - metabolisable energy of plant parts, 2006

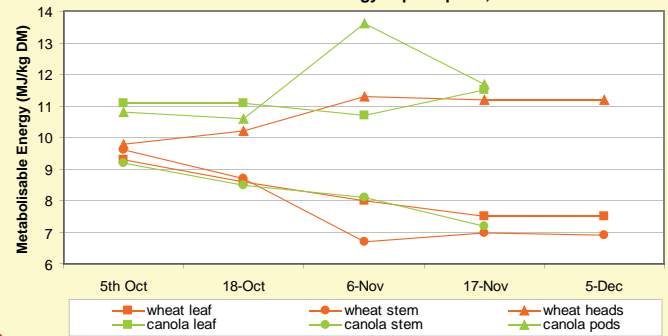
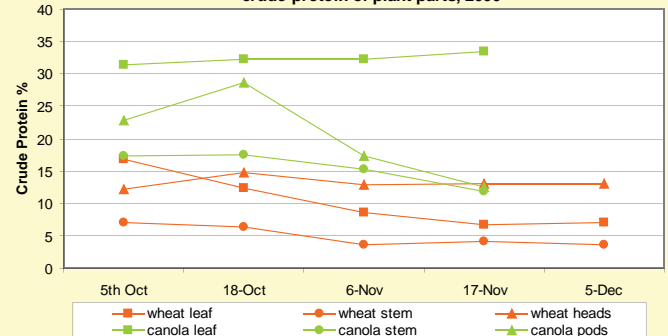


Fig. 4: Drought affected wheat & canola - crude protein of plant parts, 2006



### What does it mean?

- The best response from grazing failed canola or wheat crops will be from early grazing when stock can select higher quality leaf material.
- Higher quality hay or silage will be made from crops cut soon after flowering, before feed quality starts to decline.
- Grazfeed® can be used to model the effect of grazing or cutting time on animal performance, for example:
  - » **for crops cut on the 5th October:** lambs fed hay or silage are predicted to produce weight gains of 124g/day on canola and 82g/day on wheat
  - » **for crops cut on the 17th November:** predicted lamb weight gains are reduced to 79g/day on canola and 26g/day on wheat

Source: 'Drought affected canola & wheat - feed quantity and quality decline in standing crops' (N. Phillips & G. McMullen, NSW DPI) Oct 2007.

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