



Major findings - canola

- Cattle take 2 weeks to become accustomed to canola
- Most canola varieties can handle grazing
 - Ones outside their comfort zone in terms of sowing date are more likely to be affected

Grazing Trial Sown April 15 or May 18

Conventional and Clearfield

- CB Agamax, 44Y84 CL, Av Garnet, 46Y83 CL
- CBI 406, CBI 306, CB Taurus, CBIW 208

Roundup Ready

- GT Scorpion, Hyola 404 RR, Hyola 505 RR, 45Y21 RR, 45Y22 RR,
- GT Mustang, 46Y20 RR, 46Y20 RR Low Density

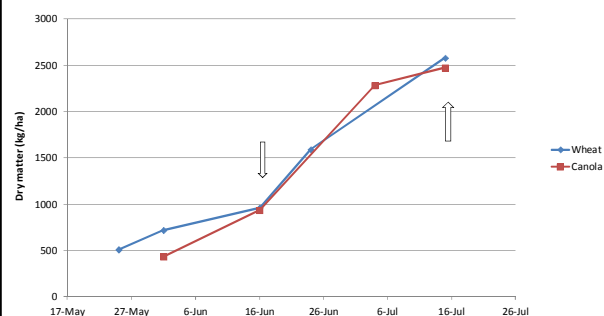
Grazing

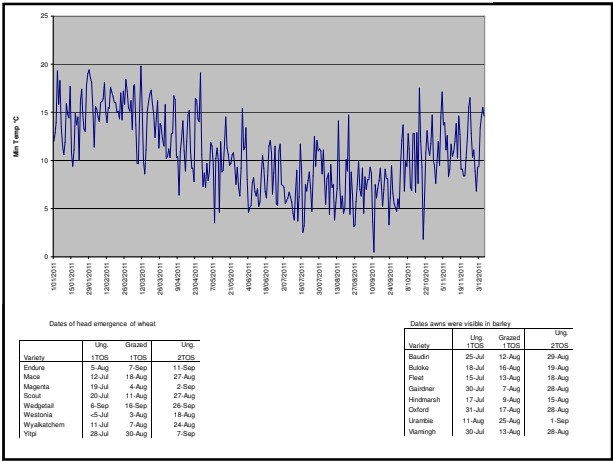
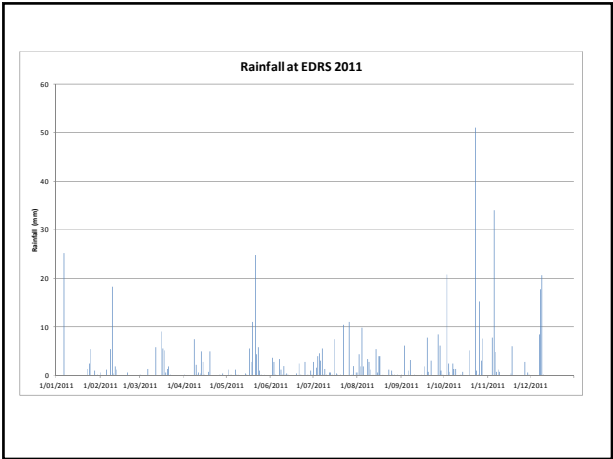
- 16th June cattle begin grazing
- 4th July grazed area split in two (2 and 4 weeks)
- 14th July grazing ceases
- Stocking rate of 20 DSE/ha for canola.
 - 12 – 30 DSE/ ha to ensure adequate grazing pressure.

Optimum grazing time – courtesy of John Kirkegaard CSIRO



11ED15 Crop biomass over time





July 5 EDRS Grazing Canola Plot 6011 44Y84 CL



Will be grazed for another 9 days – "4 weeks"

July 13 44Y84 CL Plot 6011

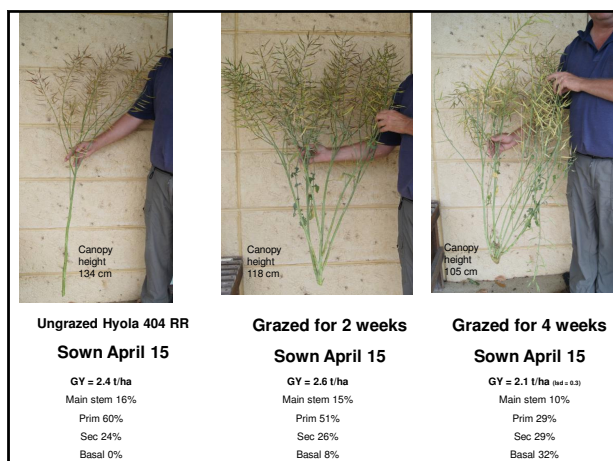


Biomass (t/ha)

	Sampled	Grazed	Un-grazed
April 15 sown	16 th June		0.9
	6 th July	1.1	2.0
	14 th July	1.0	2.5
May 18 sown	14 th July		0.5

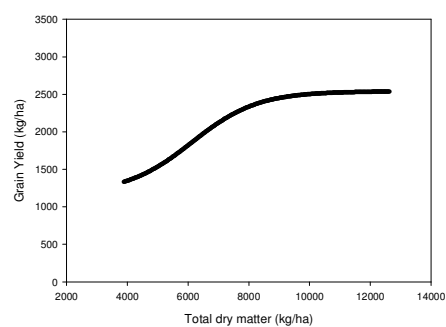
Grazing canola

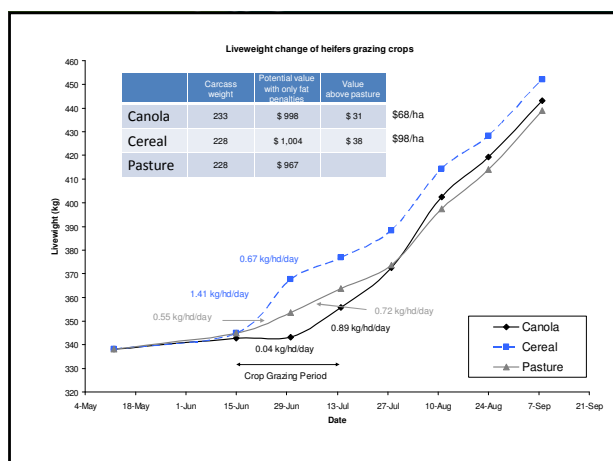
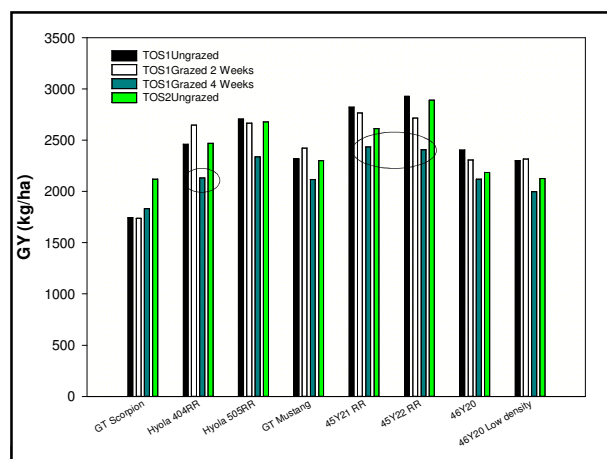
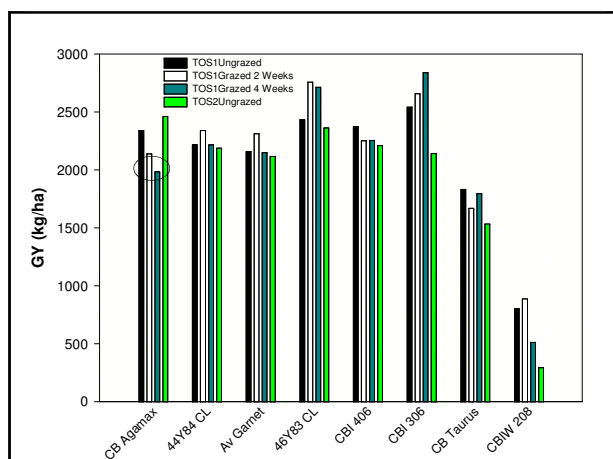
- Delays development
 - @ 3-5 days if buds not eaten
 - Up to 22 days if bud eaten (GT Scorpion)
- Reduces final dry matter
 - 2 weeks grazing 13% reduction
 - 4 weeks grazing 25% reduction
- Changes plant architecture
- These changes did not always effect grain yield in 2011



Increasing canola biomass did not always lead to higher yield

11ED15 April 15 sown Canola
 $f = y0 + a/(1 + \exp(-(x-x0)/b))$





Canola comments

- Most varieties can handle some grazing
 - Pick the variety to suit your time of sowing, blackleg risk, weed profile etc.
 - Easiest way to manage WHP's – Av Garnet – OP and you control seed dressings
 - RR and CL – use hybrids
 - Conv. – Av Garnet, CB Taurus might be too late for WA
 - TT – WHP issues require altered herbicide use, not as vigorous

Future activities/ideas

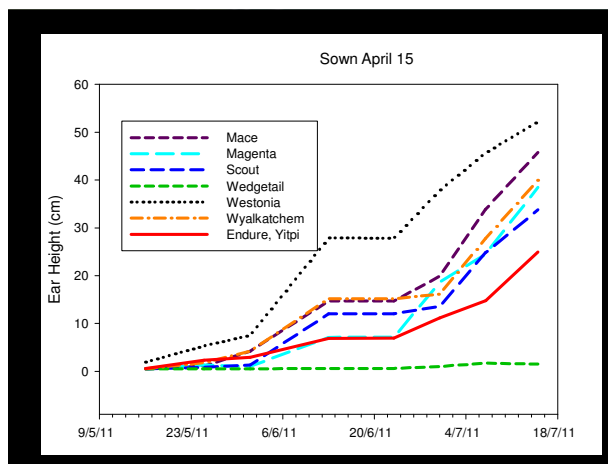
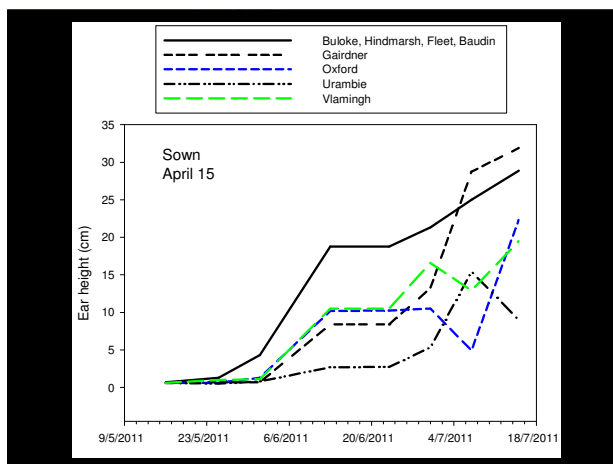
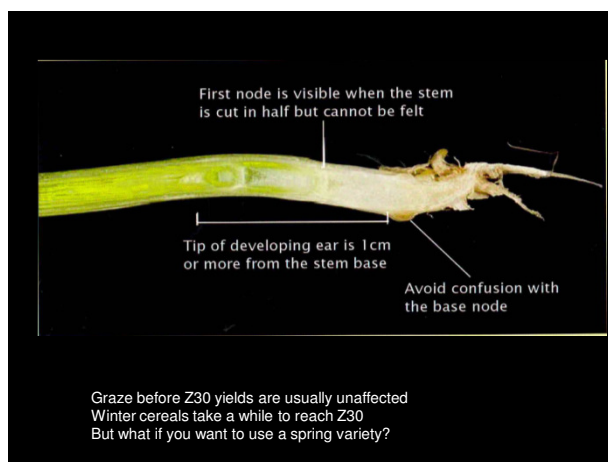
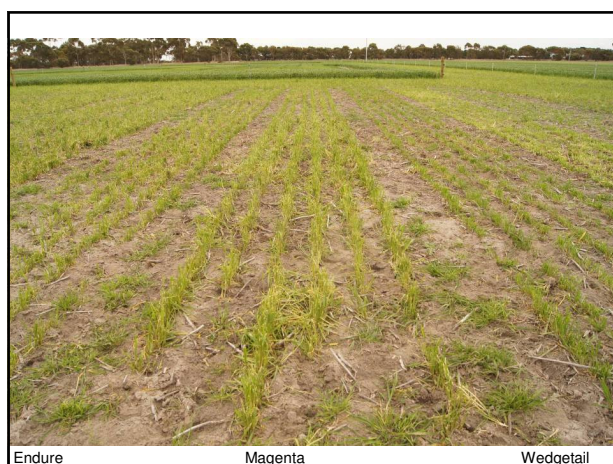
- Need to adapt the system so it suits WA/Bring the activity into the mainstream
 - Range of environments in WA
 - Use more crops – not just March and April sown crops
- Grazing May sown crops – when to stop
 - Clip vs. Crash grazing
 - Height x time of grazing x frequency/length trials
- Maximising animal performance whilst on crops and when they go back to pasture (MLA project starting 2012 at EDRS)
 - Extending time on crops – in particular canola
 - Improving pasture deferment
 - Clip vs. Crash grazing
- Nice to have but...
 - A slightly longer wheat variety (9 weeks to ear at 1 cm from April sowing)
 - Better system for April sowing/Seedling vigour for April sowing

Nitrate

Forage nitrate concentrations >1% nitrate dry-weight basis (10,000 ppm NO₃) may cause acute toxicoses in un-acclimated animals, and forage nitrate concentrations 5,000 ppm NO₃ (dry-weight basis) are recommended for pregnant beef cows.

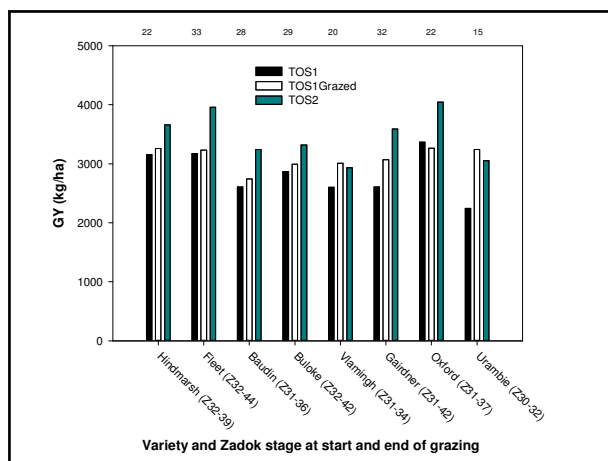
However, even forage concentrations of 1,000 ppm NO₃ dry-weight basis have been lethal to hungry cows engorging themselves in a single feeding within an hour, so the total dose of nitrate ingested is a deciding factor.

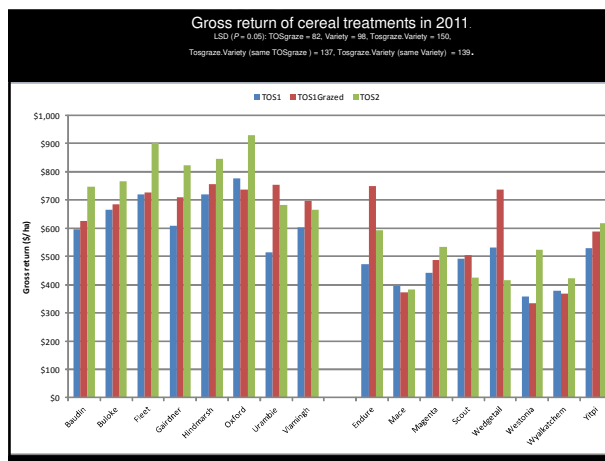
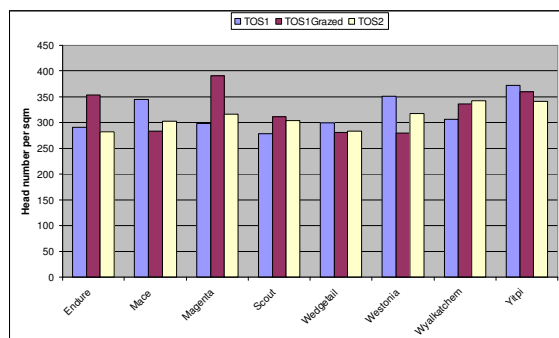
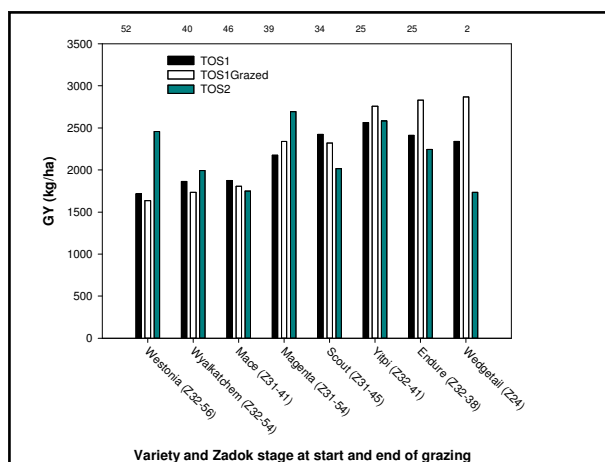
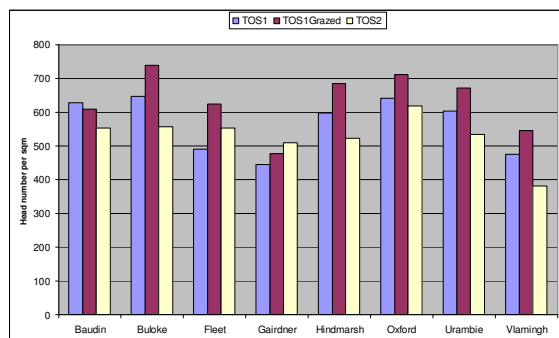
	Mean	% TT	11ED09	11ED11	11GS23	11NO21
CI	1682	40%	108	3202	1423	1995
TT	4173	100%	800	7476	4609	3808
RR	1867	45%	233	4263	1314	1659



So

- What happens if you graze past Z30 but you stop grazing before July 15?
 - Heading/ear emergence is delayed
 - Gairdner 8 days, Wedgetail 10 days, Urambie/Vlamingh 14 days,
 - Baudin, Oxford, Scout and Magenta 16-22 days
 - Buloke, Fleet, Endure, Mace, Magenta, Wyalkatchem, Yitpi about 1 month
 - Westonia – cattle ate the first ear!
 - Reduced total dry matter
 - Barley by 21% and wheat by 13%
 - Equal yields to sowing early and not grazing
 - But delayed sowing till May 18 often a better choice





Cereal comments

- April sown spring cereal varieties are likely to be 'running' up at grazing time
- Spring barley ears were often lower and slower than spring wheats we have tested
- In kind conditions cereals can recover from incorrect grazing - too late and hard
- Need more info for clip grazing at low DSE's
 - Graze more of your crop but lighter
 - Better for crop and animal

