

The Pros and Cons, and Ins and Outs, of Grazing Crops

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The Free Lunch



Livestock

	Advantage	Disadvantage
Livestock Feed	High quality feed at a critical time	
Pasture Growth	Pastures get spelled while crops are grazed	
Animal Weight Gain	High live weight gains from the quality feed	Na:Ca:Mg supplement often needed
Stocking Rate	Potential to increase winter grazed DSE/ha	Temporary fencing Small window of feed Reliability of feed
Supp Feeding	Reduction in supp feeding during winter	
Animal Health	Reduction in worm exposure	Mortalities may increase (e.g. Pulpy Kidney, Grass Tetany)

Crop

	Advantage	Disadvantage
Grain Yield	Can increase under some conditions	Late grazing will reduce yields
Grain Quality	Variable results. Can reduce screenings.	Protein can decrease
Weeds	Assists broadleaf weed control	Grazing favours annual grasses
Crop Maturity	Delay in maturity can reduce frost risk	Can increase risk of late moisture stress
Disease	Can reduce leaf disease risk	WSMV
Fertiliser		May require more N
Stubble	Better trash flow	Less summer feed and ground cover
Hay / Silage		Grazing will reduce yields.

Whole farm

	Advantage	Disadvantage
Soils		Grazing may cause soil compaction on wet soils
Management	Opportunity to better manage pastures with a short rest in winter	Shifting lambing ewes while grazing crops Larger mob size needed
Fencing		Will need smaller paddocks and/or temporary fencing
Crop:Livestock	Opportunity to increase crop area or stock numbers	
Economics	Profit decreases if yield losses outweigh extra grazing value	Profit increases if extra grazing value outweighs any yield losses

The Big Decisions

1. Which paddock?
2. When to sow?
3. What crop type / variety?
4. Which class of stock?
5. When to start grazing?
6. How hard to graze?
7. When to stop grazing?

Which paddock?

Consider...

- ▶ **Weed burden** (must be low in ryegrass)
- ▶ **Rotation** (canola vs cereal)
- ▶ **Soil moisture** (variable due to storms)
- ▶ **Access** (laneways, other crop/pasture, creeks)

When to sow?

Consider...

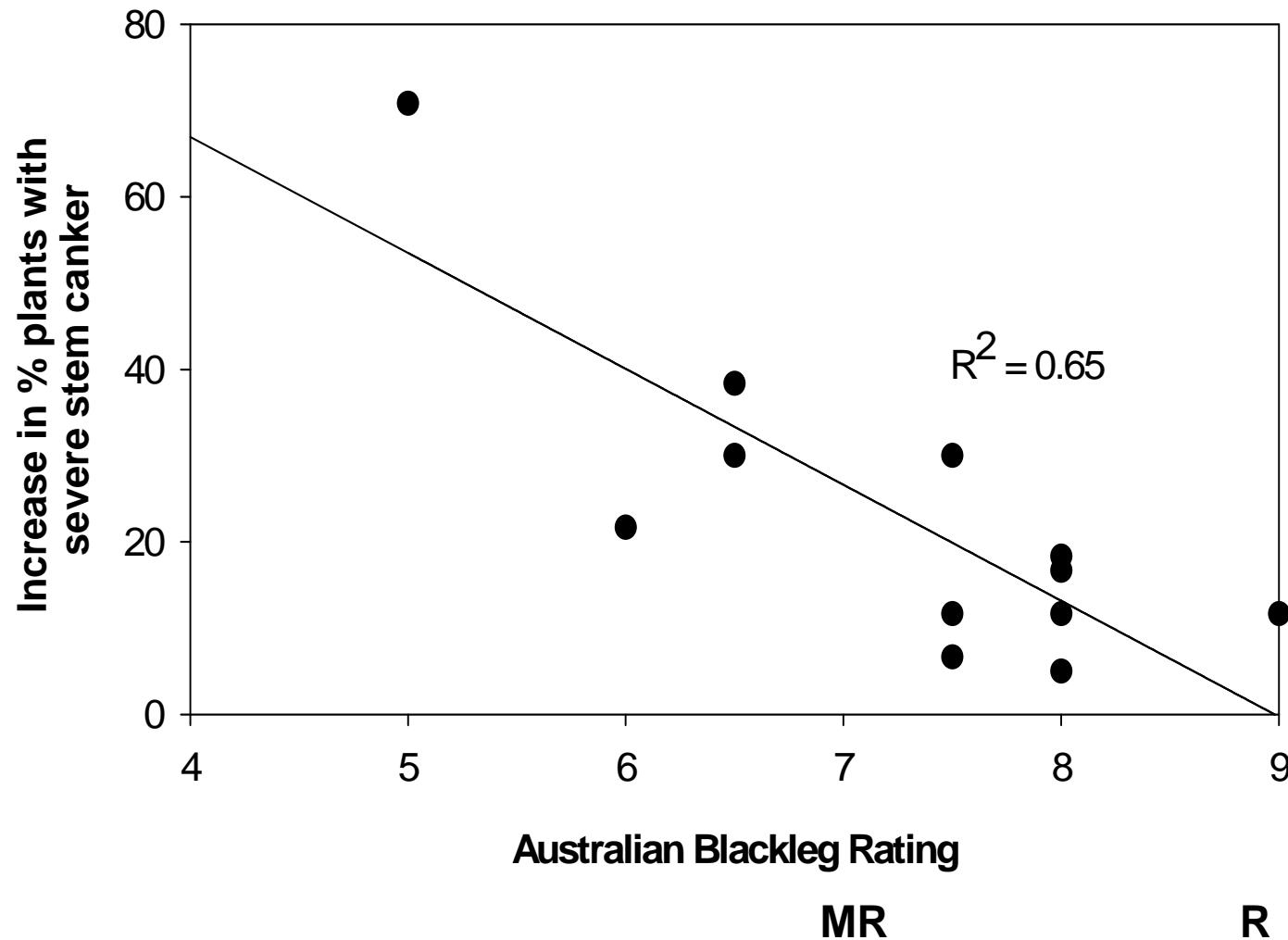
- ▶ **Soil moisture**
- ▶ **Weed burden**
- ▶ **Variety** (canola vs cereal, winter vs spring, late vs short)

What crop type / variety?

Consider...

- ▶ **Sowing time**
- ▶ **Winter vs Spring Cereals** (mid April cut-off?)
- ▶ **Late vs Mid vs Short maturity**
- ▶ **Blackleg tolerance in canola** (want R or MR)
- ▶ **Winter vigour** (oats>barley>wheat; hybrid>TT canola)

Use Blackleg resistant varieties



Which class of stock?

Consider...

- ▶ **Time of lambing** and ability to shift stock
- ▶ **Mob size** & grazing pressure

When to start grazing?

After...

- ▶ **Plants are anchored** (pinch and twist test)
- ▶ **WHP's** for pesticides are up

Grazing - when to start



Date of First Grazing (GS 20, 6 leaf)

Time of Sowing	April 22	June 3	July 1
45Y82 Hybrid	31-May	18-Jul	10-Aug
46Y83 CL	03-Jun	13-Jul	10-Aug
ATR Barra	05-Jun	19-Jul	23-Aug
CB Jardee Hybrid	10-Jun	19-Jul	12-Aug
Hyola502 RR	31-May	14-Jul	21-Aug
Thunder TT	10-Jun	20-Jul	12-Aug
Baudin	17-May	04-Jul	27-Aug
Mundah	20-May	05-Jul	06-Aug
Wyalkatchem	17-May	04-Jul	06-Aug
Yitpi	20-May	04-Jul	06-Aug
Wedgetail	20-May	14-Jul	26-Aug
Mackellar	20-May	06-Aug	02-Sep

Source:
DAFWA
Esperance
2010

How hard to graze?

Consider...

- ▶ **The white line** if you are desperate for feed!
- ▶ **Evenness of grazing**
- ▶ **Stock performance**
- ▶ **Weeds** (and the ability of the crop to compete)
- ▶ **Growth stage**

Grazing to the 'white line'

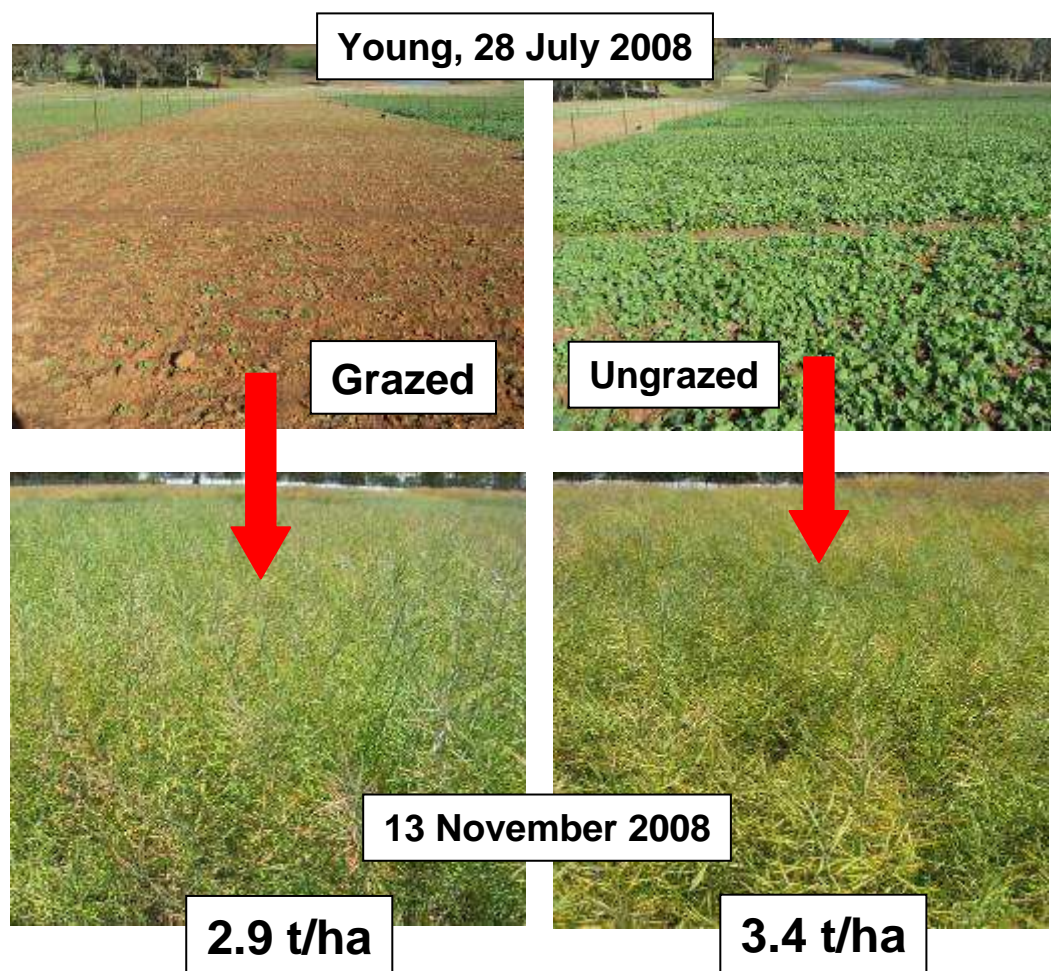


Recovery from grazing

Kellalac Wheat grazed to 200kg/Dm at GS28 then yielded 4.3t/Ha. Ungrazed section yielded 4.32t/Ha.



How hard to graze Canola?



When to Stop Grazing?

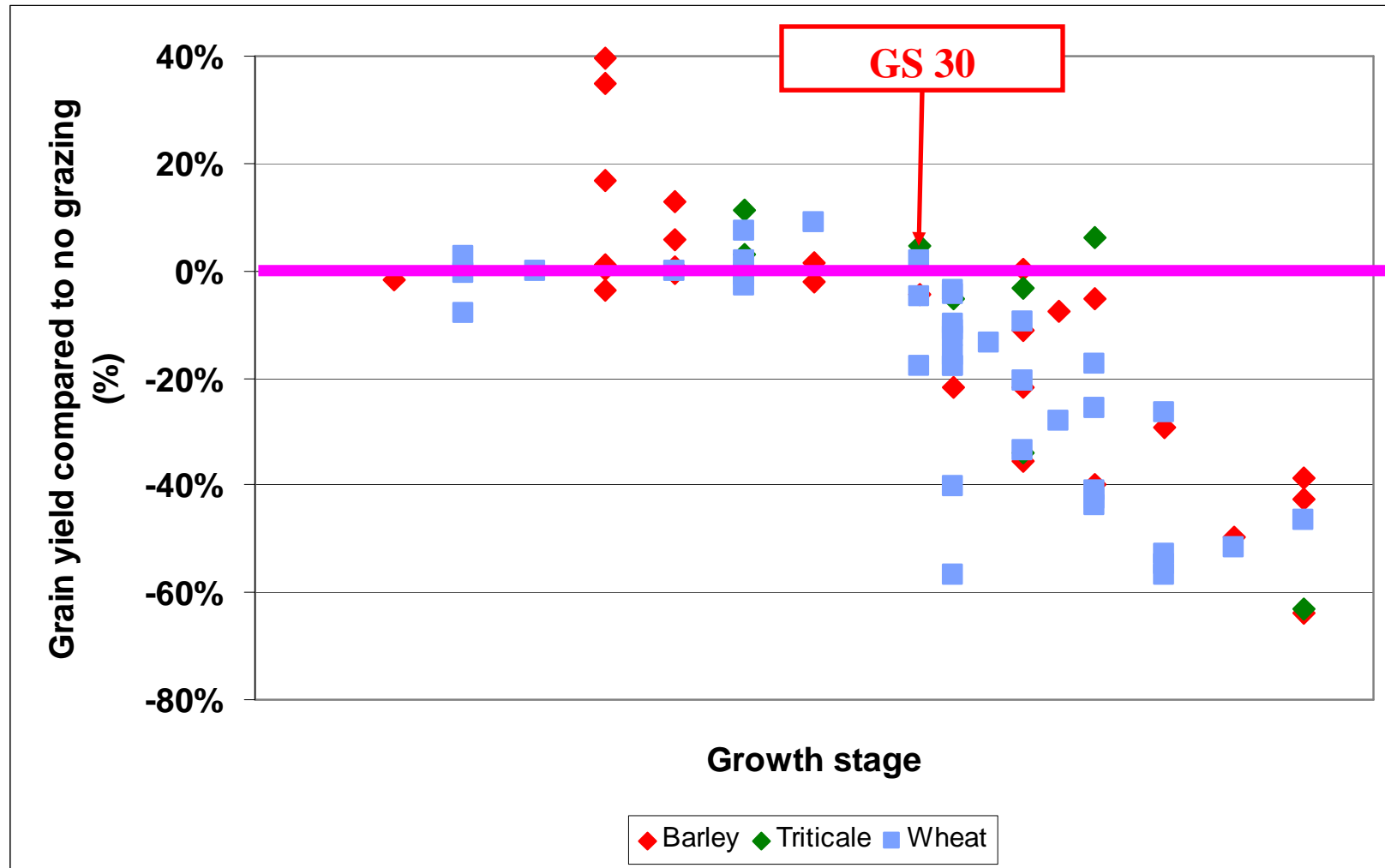
Before...

- ▶ **GS 30** (start of stem elongation)
- ▶ **Set calendar date** (15th July ??? - to allow recovery)

GS30 = Movement of developing ear



Effect of grazing on yield



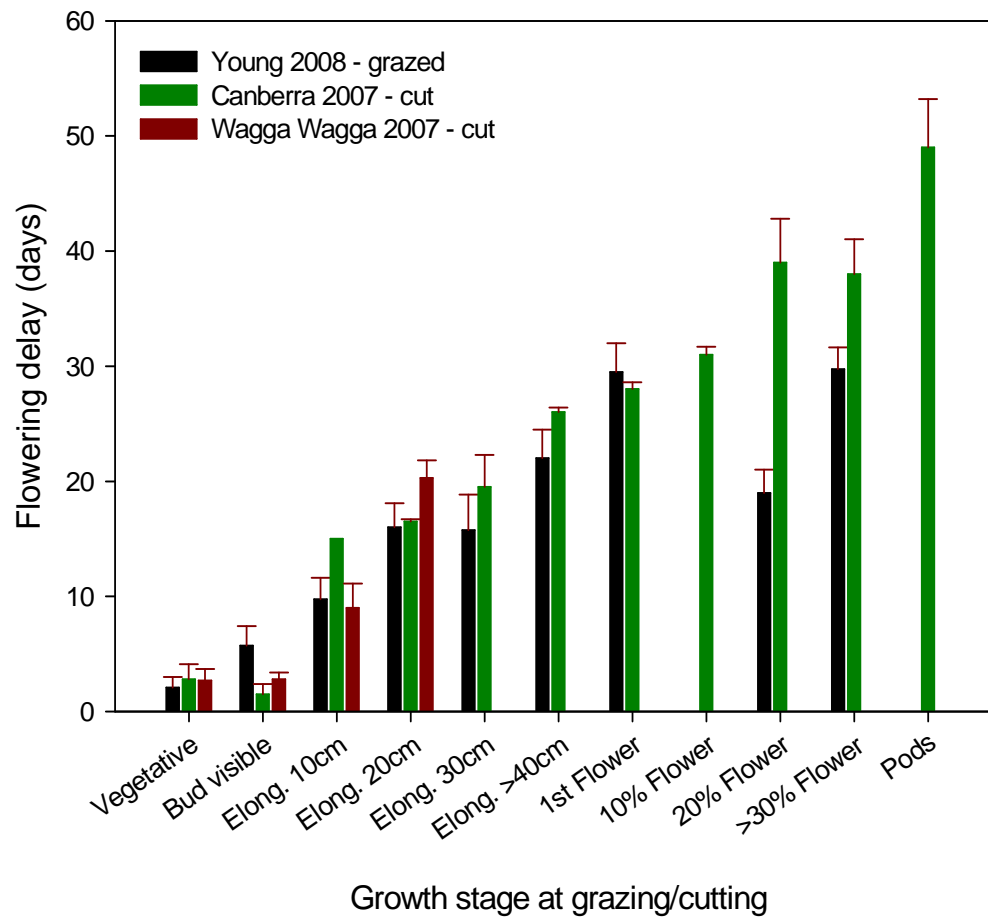
Date of ear at 1 cm (GS 30)

Time of Sowing	April 22	June 3	July 1
Baudin	4-Jul	2-Aug	
Mundah	16-Jun	21-Jul	11-Aug
Wyalkatchem	29-Jun	31-Jul	21-Aug
Calingiri	22-Jun	5-Aug	2-Sep
Yitpi	22-Jun	1-Aug	1-Sep
Preston	17-Jul	1-Aug	2-Sep
Wedgetail	5-Aug	13-Aug	14-Sep
Mackellar	14-Aug	22-Aug	29-Sep

Source: DAFWA, Esperance, 2010

When to stop grazing Canola

- ▶ Grazing after buds elongate > 10 cm delays flowering, potentially reducing yield



Date when green bud is visible

Time of Sowing	April 22	June 3	July 1
45Y82 Hybrid	05-Jul	04-Aug	01-Sep
46Y20 RR	13-Jul	04-Aug	01-Sep
46Y83 CL	13-Jul	04-Aug	01-Sep
ATR Barra	05-Jul	10-Aug	01-Sep
ATR Cobbler	05-Jul	03-Aug	27-Aug
CB Jardee Hybrid	13-Jul	10-Aug	25-Aug
CB Mallee Hybrid	22-Jun	01-Sep	
CB Tanami	05-Jul	04-Aug	25-Aug
Hurricane TT	13-Jul	10-Aug	01-Sep
Hyola502 RR	10-Jun	27-Jul	25-Aug
Hyola601 RR	05-Jul	10-Aug	01-Sep
Thunder TT	13-Jul	10-Aug	25-Aug

Source:
DAFWA
Esperance
2010

Exclusion Cage



Top 10 Tips for Grazing Crops

1. All cereal and canola varieties can be grazed
2. Sow as early as possible to maximise feed supply
3. Choose clean paddocks esp. for ryegrass
4. Select the right variety for the sowing date
5. Graze early (pinch & twist) and evenly
6. Don't graze too late (before GS 30 and mid-late July)
7. Use a Ca:Na:Mg supplement
8. Adhere to WHP's for pesticides
9. Apply top-up Nitrogen after grazing, not before
10. Start with dry sheep if you lamb in winter...

Next 10 Tips for Grazing Crops

1. Oats > Barley > Wheat for early vigour = more feed
2. Hybrid > TT canola for early vigour = more feed
3. Cereals provide quicker feed than canola
4. Higher sowing rates = more feed
5. Don't introduce hungry or stressed stock to lush crops
6. Big paddocks need subdividing with temporary fencing
7. Small mobs might need boxing together
8. Vaccinate stock for pulpy kidney etc
9. If ryegrass is an issue, graze quickly and only lightly
10. Late grazing delays flowering more than early grazing

Questions in need of answers...

- ▶ How early can “spring” Barley and Wheat varieties be sown? As early as April 1?
- ▶ How reliable are “winter” wheats (e.g. Wedgetail, Currawong) in lower rainfall areas / dry finishes?
- ▶ Which traditional “spring” cereal varieties give the best early feed? Certainly not Wyalkatchem...
- ▶ To avoid WHP issues, is one Atrazine application post-grazing on TT canola enough to control weeds?

