

# Conserving Whole Crop Cereal Silage

## Can ensile cereals at 2 stages of growth

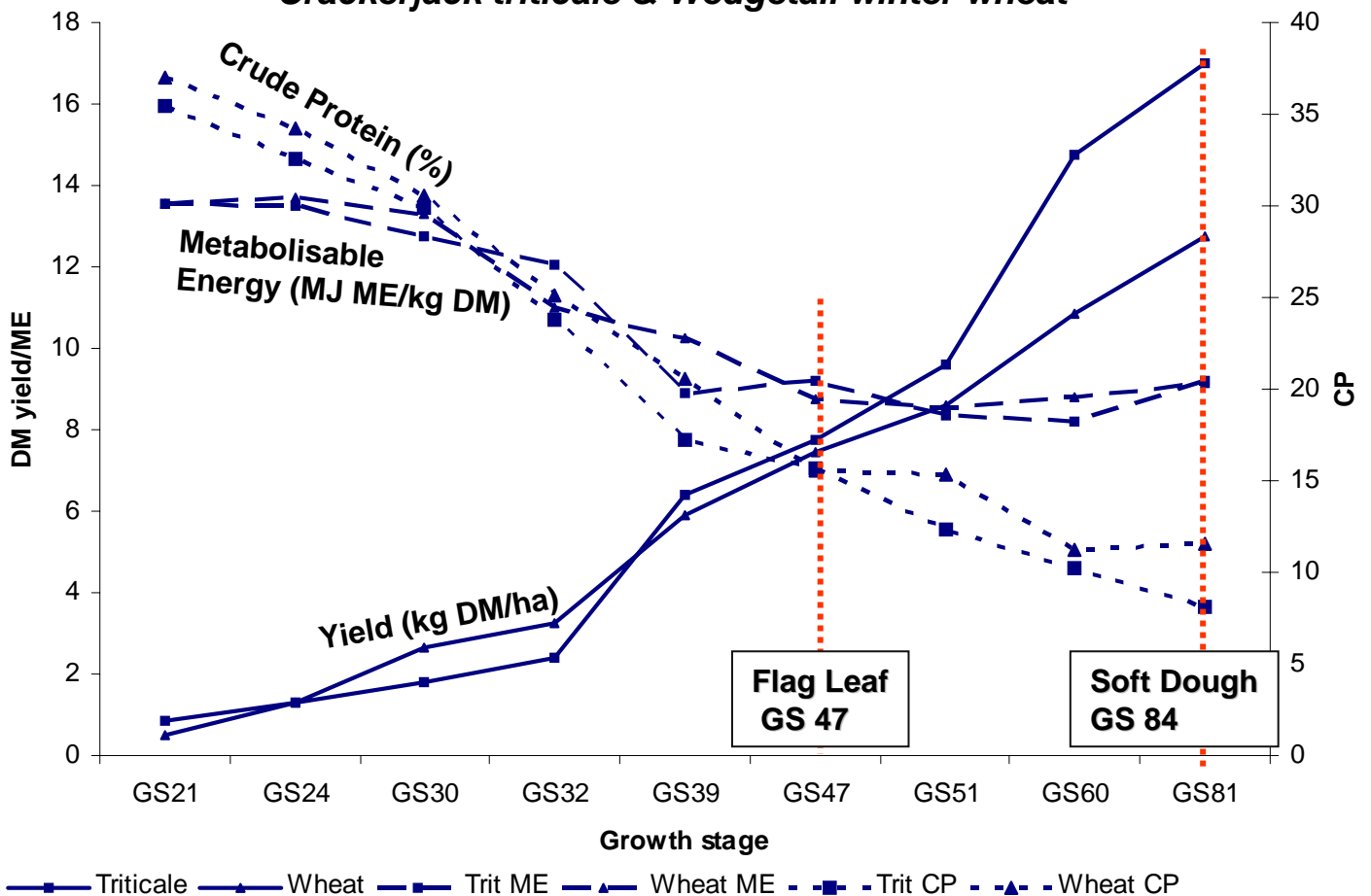
1. Flag leaf – Boot stage (Lower yield, higher ME & CP)
2. Late milk – Soft dough stage (Higher yield, similar ME, lower CP)

**Table 1: Target DM content and stage of growth for ensiling cereals**

Species	Flag leaf - Boot		Late milk - Soft dough	
	Stack/Pit <sup>1</sup>	Baled <sup>2</sup>	Stack/Pit <sup>1a</sup>	Baled <sup>2</sup>
Oats & Ryecorn	33 - 40	38 - 50	NR	NR
Barley, Wheat & Triticale	33 - 40	38 - 50	36 - 42	38 - 45 <sup>3</sup>

NR – Not recommended, <sup>1</sup> Ideally, should be precision chopped, <sup>1a</sup> Must be precision chopped, <sup>2</sup> Preferably baled with chopper baler, <sup>3</sup> Lower bale DM recommended to ensure greater compaction

**Figure 1: Effect of Growth Stage on Yield & Nutritive Value of Crackerjack triticale & Wedgetail winter wheat**



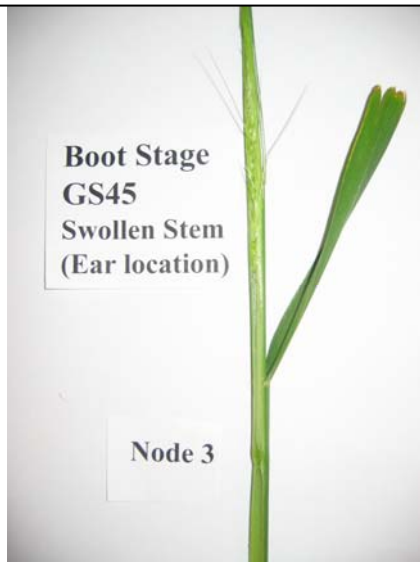
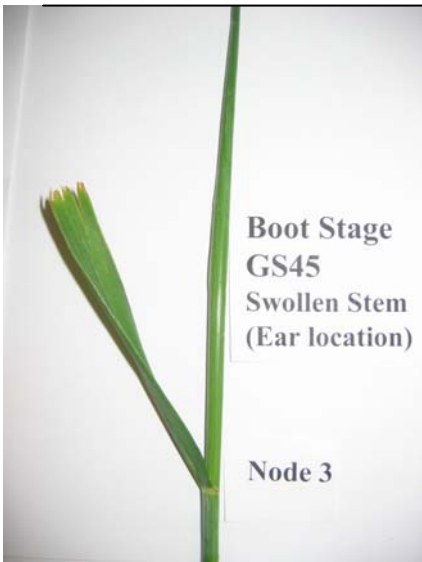
3030

Further information: 1: DPI Agnotes (Google Forage Cereals. 2: [www.project3030.com.au](http://www.project3030.com.au))

## 1. Flag leaf – Boot stage (Lower yield, higher ME & CP)



1. Targa Oats: Early boot stage 2. Marombi Wheat: Boot stage 3. Granodor Trit: Boot stage



4. Granodor Trit: Boot stage 5. Granodor Trit: Dissected boot 6. Cereal: Dissected early boot

- Must wilt to target dry matter content! (See Table 1)
- Cut at ~10 cm height
- Use tedder immediately after mowing. Avoid tynes picking up soil & manure
- OR use mower-conditioner (Flailed types). Leaf wide, fluffy windrows
- Ideally harvest with Precision chopper
- Loader wagon (fine chop) or baler (preferably chopper) are suitable
  - Harvest at lower end of DM range to aid compaction
- Hard to wilt at this stage of growth i.e. time of year
- Silage additives highly recommended, especially if not wilted enough!
  - Use traditional or “normal” types that enhance or inhibit fermentation



3030

Further information: 1: DPI Agnotes (Google *Forage Cereals*. 2: [www.project3030.com.au](http://www.project3030.com.au))

## 2. Late milk – Soft dough stage (Higher yield, similar ME, lower CP)



7. Crackerjack Triticale: Late milk – Early soft dough



8. Triticale: Single head  
Late milk – Early soft dough



9. Crackerjack Triticale: Grain squeezed showing soft dough

- Can direct cut (at 10 cm height) as standing crop! (See Table 1)
- Preferably use Precision chopper with direct cutting front
- Can use Precision chopper with pick-up front but.....
  - mow only, leaving swathe wide, no raking, to avoid grain/leaf loss
- Use *Aerobic Spoilage Inhibitor-type* silage additives
  - Specific Inoculants (*Lactobacillus buchneri* 40788)
  - Normal inoculants with *L. buchneri* in mix
  - Buffered Acids, Sulphur + Amylase, etc.
- Use Loader wagons at own risk!
  - Chop length too long, impossible to compact well
  - If used, use above aerobic spoilage inhibitors to control spoilage
- **Use balers at own risk!**
  - High DM (& Quality) losses due to grain/leaf losses
  - If doing so, use traditional/"normal" silage additives to assist fermentation
  - If storing large square bales under sheets, use aerobic spoilage inhibitor.
  - Vermin must be controlled (they'll chew through plastic to get the grain)



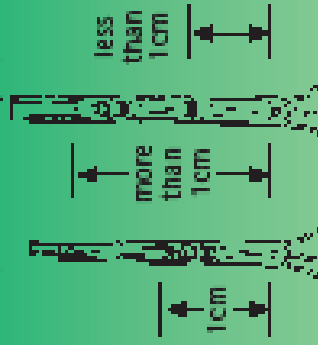
3030

Further information: 1: DPI Agnotes (Google *Forage Cereals*. 2: [www.project3030.com.au](http://www.project3030.com.au))

# Ravensdown Cereal Growth Stages Guide

Ear at 1cm (30)  
(main shoots split)

Growth Stage 30:  
Tip of developing ear is 1cm or more from above the stem base, but first node is less than 1cm from the stem base



Growth Stages (Zetlinks)

11	12	21	22-29	30	31	32	37	39	45	51-59	61-69	71-79	81-89	91-99
One shoot shoot 1st leaf	2nd leaf	Tillering begins	Leaf- sheaths lengthen	Leaf- sheaths strongly erect. Start of stem elongation	First node of stem visible	2nd node visible	Last (flag) leaf just visible	Base (ligule) of last leaf just visible	Booting- ear swollen in boot	Heading- ear emergence	Flowering	Milk development	Dough development	Ripening

## Vegetative stages | Grain formation stages

0-29

30-59

61-harvest



Further information: 1: DPI Agnotes (Google Forage Cereals. 2: [www.project3030.com.au](http://www.project3030.com.au))