Barley Update

CROPMARK SEEDS

only the best!

CROPMARKSEEDS
only the best!

Disease of Barley

- Scald- build up in crop over season esp. after wet weather
- Leaf rust- mid season disease after warm weather
- Ramularia- late season disease, only visible after ear emergence
- Mildew- moist canopy environment
- Net Blotch- generally minor disease

CROPMARKSEEDS
only the best!

Scald (Rynchosporium Secalis)

Control Strategies -Scald

- Difficult to control once established at mid tillering/ early stem extension
- Likes cool wet weather, spread by rain splash
- Split application at GS30/GS49 essential for good control
- Protek (carbendazim) 500ml/ha a must in all fungicide mixes

CROPMARKSEEDS
only the best!

Leaf Rust (*Puccinia hordei*)

Control Strategies -Rust

- Likes warm condition
- Starts mid season and builds
- Relatively simple to control
- Proline + strobilurin gives good control at GS49

CROPMARKSEEDS
only the best!

Ramularia (*Ramularia collo-cygni*)

Control Strategies -Ramularia

- Infection levels vary by region- South Canterbury high incidence
- Seems to favour warm humid condition after ear emergence
- Ramularia produces toxins within the plant that react with sunlight leading to rapid loss of green leaf
- Spray at GS49 to cover emerging awns and Flag leaf
- Mixes of Proline, Protek plus a strobilurin provide good control of disease and help maintain green leaf area

CROPMARKSEEDS
only the best!

Net Blotch (Pyrenophora teres)

Control Strategies –Net blotch

- Infection seed born
- Controlled by seed treatments and basic fungicide programs

CROPMARKSEEDS
only the best!

Control Strategies –Mildew

- Likes moist growing condition found in thick canopies
- Heat and wind give good control
- Most varieties adequate control
- Some mildewacides now available (Tern and Impulse)
- Fungicides not generally required unless infect top 2 leaves

Robust fungicide Program

- GS30/31- 500ml Protek + 200 ml/ha Proline
- GS49 500 ml/ha Protek + 200 ml/ha Proline + 250 ml/ha Acanto
- MOFC $170-$410/ha

- Substitute Twist, Fandango and Amistar for Acanto

- May need extra fugicide for winter sown barley under high disease preasure at GS33

Fungicides for Cereal silage

- Will maintain green leaf area, help miximise grain fill, yield and quality
- Delay harvest by 3-5 days
- Slightly different to Grain as affected by withholding periods
- Proline 42 days, Twist 28 days, Acanto 28 days, Amistar 28 days withholding periods

Cereal Silage Fungicide programme

- GS26-30 2-400ml/ha Proline and /or 500ml/ha Protek
- GS 39 (flag leaf emerge)

  500ml/ha Twist/Acanto + 200 ml Proline

  OR

  GS49 (awn tips just emerge)

  250-500 ml Acanto / Amistar
- Golden Rule- Strobilurins are not very good at eradicating disease, just protecting from it

Nitrogen

- 140-180 kg/ha required
- Split over two applications windows
- Sowing – GS22 and then GS26 – GS32
- 1st window- establishment and tiller numbers
- 2nd window- tiller numbers and tiller maintenance
- Juggle between yield potential and paddock history
- Excess N →Lodging, screenings, regrowth, waste of money

Plant Growth Regulators

- For use in crops > 7-8t/ha and high risk of lodging
- Cycocel up to 2l/ha GS30-31
- Can add Moddus 0.2l/ha and reduce cycocel rate
  - 1-1.5l/ha cycocel + 0.2l/ha Moddus
- Terpal 1l/ha GS49 in high risk situations after cycocel/Moddus at GS30

Grain Harvest

- Harvest when crop mature
- Harvest when dry as possible then dry to 14% moisture
- 2% moisture on 100t grain = 2000l water to be removed
- Use 1-2l/ha roundup to spray off regrowth and any weeds once grain mature

Silage harvest

- Timing Critical to maximise drymatter and ME and have correct moisture for ensiling
- Cheesy Dough Stage 35 - 45% DM

CROPMARKSEEDS
only the best!

Silage Harvest

CROPMARKSEEDS
only the best!

Harvesting

- Aim to harvest at 35-40% drymatter, Cheesy- dough stage
  - Occur 27-35 days after GS49 (Canterbury) and 32-42 days after GS49 (Gore)
  - Yield increasing 200-250 kg DM/ha /day
  - DM increases by 1.5-2% /day during grain fill ,
  - Harvest window of 4-7 days (35-45% DM**)**

Silage Harvest

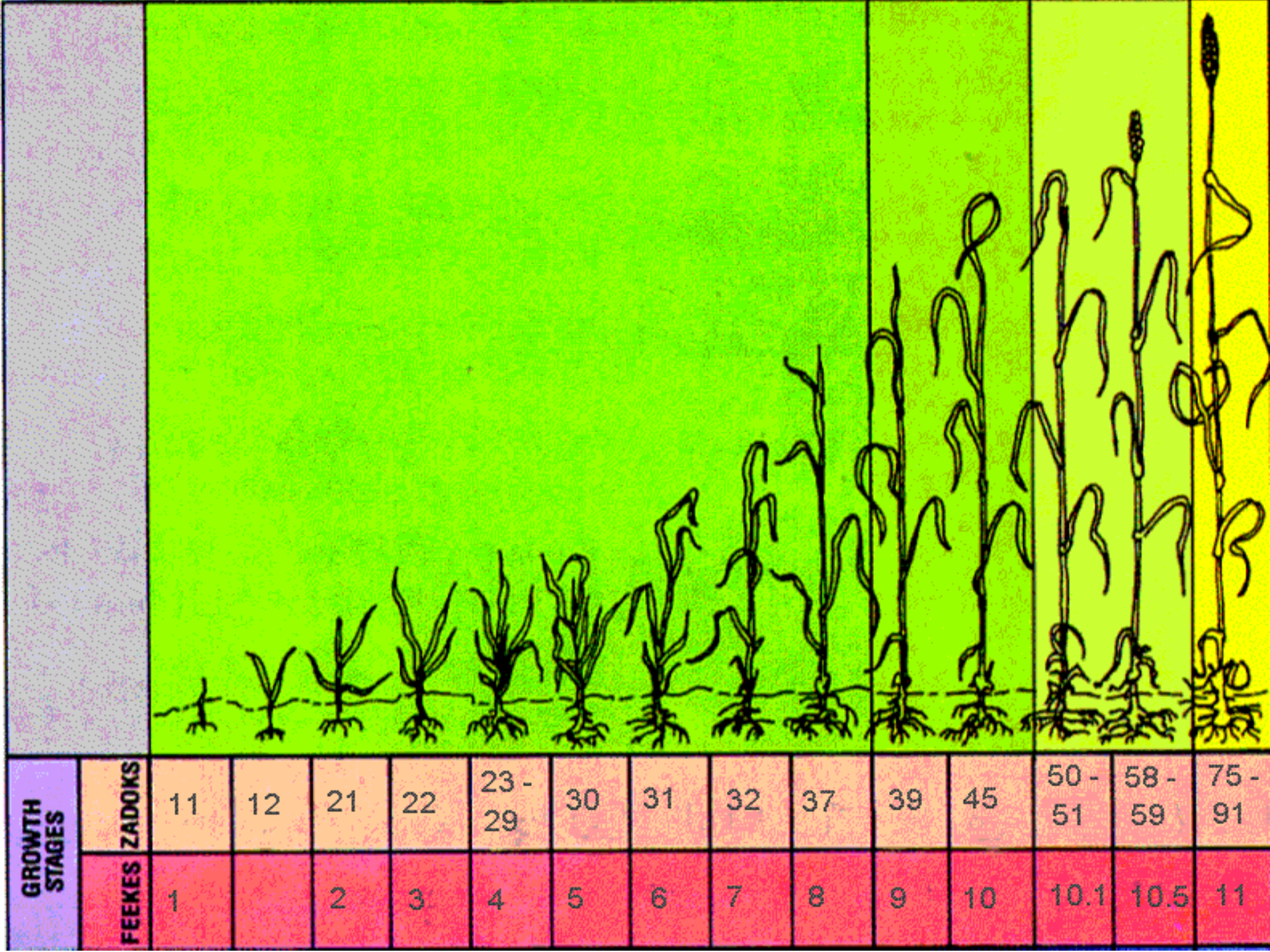
- Harvesting when DM > 45%
  - Gain loss during harvesting
  - Consolidation problems in the stack
  - Poor fermentation
  - Lower quality
- Better to cut few days early than few days late
- Better ↓starch and yield than↑ grain loss, ↓digest and poor ensiling due to poor compaction

DM Accumulation of Cask Barley Whole Crop Silage From Ear Emergence to Harvest

Relative Yield	Days after Ear emerg.	Growth Stage	Dry matter %
50	0	64	22
65	6	69	24
87	11	70	28
94	15	83	32
97	22	84	36
100	27	85	42

Harvest

- Chop length 25 mm- as small as possible to aid good compaction
- Inoculants improve fermentation, allowing for quicker use and limit yeast growth
- Able to use silage after a week
- Don’t cut and wilt on ground


GROWTH STAGES
ZADOKS
FEEKES
11
12
21
22
23 - 29
30
31
32
37
39
45
50 - 51
58 - 59
75 - 91
1
2
3
4
5
6
7
8
9
10
10.1
10.5
11