



# RED MEAT UPDATES

## T A S M A N I A

27 July 2018

# How to optimise the use of cocksfoot in your system

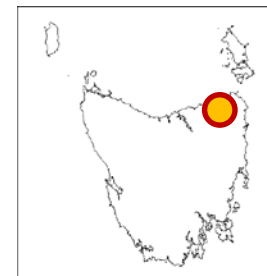
Rob Winter  
Heritage Seeds

# What is cocksfoot?

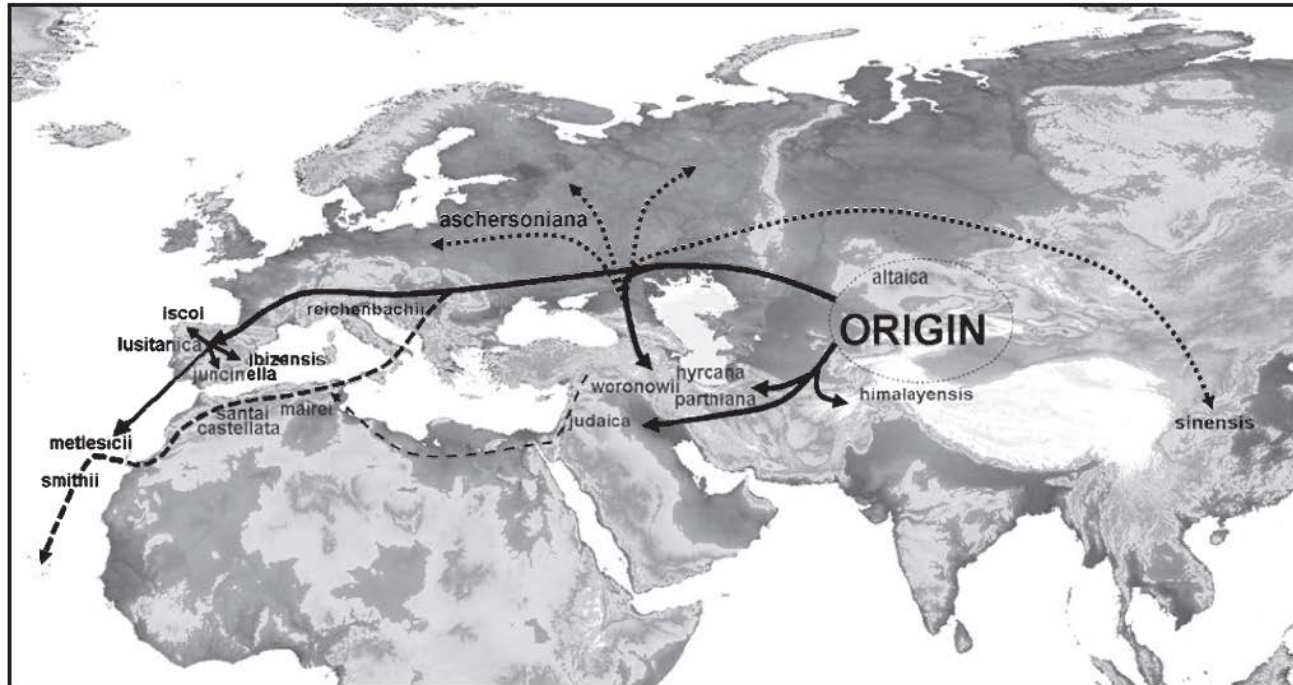
- *Dactylis glomerata* and sub-species.
- Important perennial pasture grass.
- Moderately deep-rooted.
- Greater degrees of drought tolerance than ryegrass and extends the range of potential pasture growth – time and space.
- Good feed values, ‘though usually a little lower than ryegrass’.
- No animal health concerns (e.g. alkaloids).
- Suitable for all stock classes.



NE Tas, remnant beef/sheep pasture,  
May 2018, Rob Winter



# Origins of cocksfoot



Probable migration routes of diploid *Dactylis* based on molecular results of Stewart and Ellison (2011):  
—, before the last glacialiation;  
---, North Africa during the glacialiation;  
· · ·, post-glacial, Northern Europe and China.  
Stewart & Ellison, *Crop & Pasture Science*, 2014, **65**, 780–786

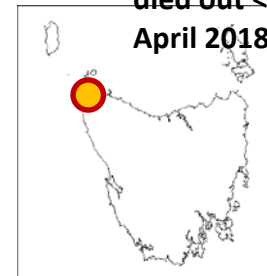
- Originated in Eurasia: various subspecies became localised.
- Naturalised in Australia by ~1850s.
- Seed almost entirely imported until Australian-bred types became available from the 1950s-1970s.

# Cocksfoot sub-types in use

- Continental mostly *ssp. glomerata*  
Remain in active growth year-round ('summer-active')  
Suit 600+mm winter-dominant rainfall in Tas  
(7-800 in northern Victoria/NSW)  
Later flowering, high annual yield potential
- Spanish *hispanica* subspecies  
Strongly summer dormant, very drought hardy  
Suit 400-550mm winter-dominant rainfall  
Earlier flowering, useful when persistence vital  
in summer dry areas
- Intermediate types ~*glomerata* selections and Xs  
Dormant when moisture limited, very drought hardy  
Suit 500-600mm+ winter dominant rainfall,  
longer season areas  
Range of growth habits, most versatile types.

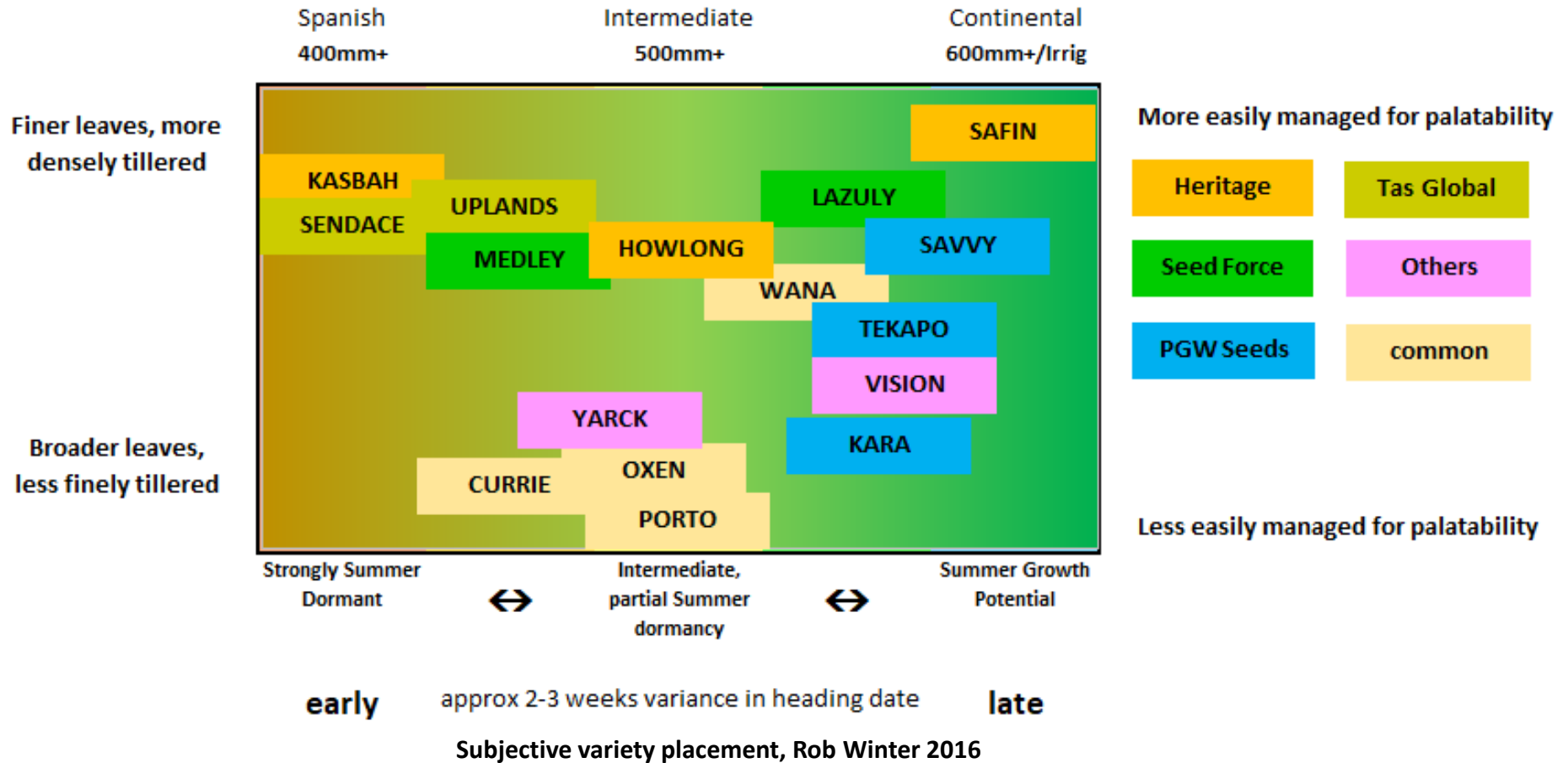


Marrawah, 1½ kg/ha Safin (cont.) mix  
2yrs after sowing (+ rye, +white, red  
died out <2yrs), beef dryland,  
April 2018, Rob Winter





# Cocksfoot varieties

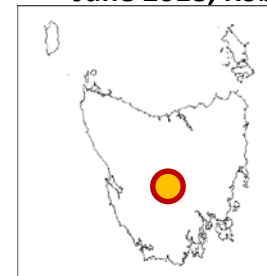


# Sowing cocksfoot

- Soils:
  - Lighter, well drained/not too waterloggable
  - pH 4.0 – 8.0 ( $\text{CaCl}_2$ )
  - P 15-18+ (Olsen)
- Otherwise: general good pasture fertility
- Will respond well to higher levels of fertility
- Right type / cultivar to suit environment and management
- Well proportioned with co-species:
  - 2 - 3 kg/ha in a mix with other grasses
  - 4 - 6 (8+?) kg/ha as the sole or dominant grass
- Reduce / remove competition:  
weeds/seeds, trash, pests
- Good seed-bed and sowing method/gear,  
~ 5-10mm deep
- Monitor and respond to pests etc



Hamilton, cocksfoot phalaris ryegrass + clovers pasture mix, sheep dryland, June 2018, Rob Winter



# Co-species for cocksfoot

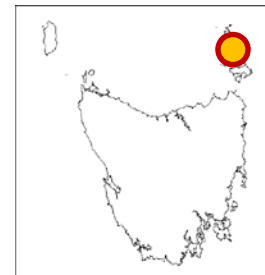
In a mix with cocksfoot

- Sub-clovers, esp. *sub.* and *yanni.* 6-8 kg/ha
- White clover 2-3 kg/ha
- Strawberry clover 1-2 kg/ha
- Lucerne 6-10 kg/ha
- Chicory, plantain 2-4 kg/ha
- Phalaris 2-4 kg/ha
- Tall fescue 5-8 kg/ha
- Perennial ryegrass \* 5-10 kg/ha

(\* > 600mm rainfall & well managed)



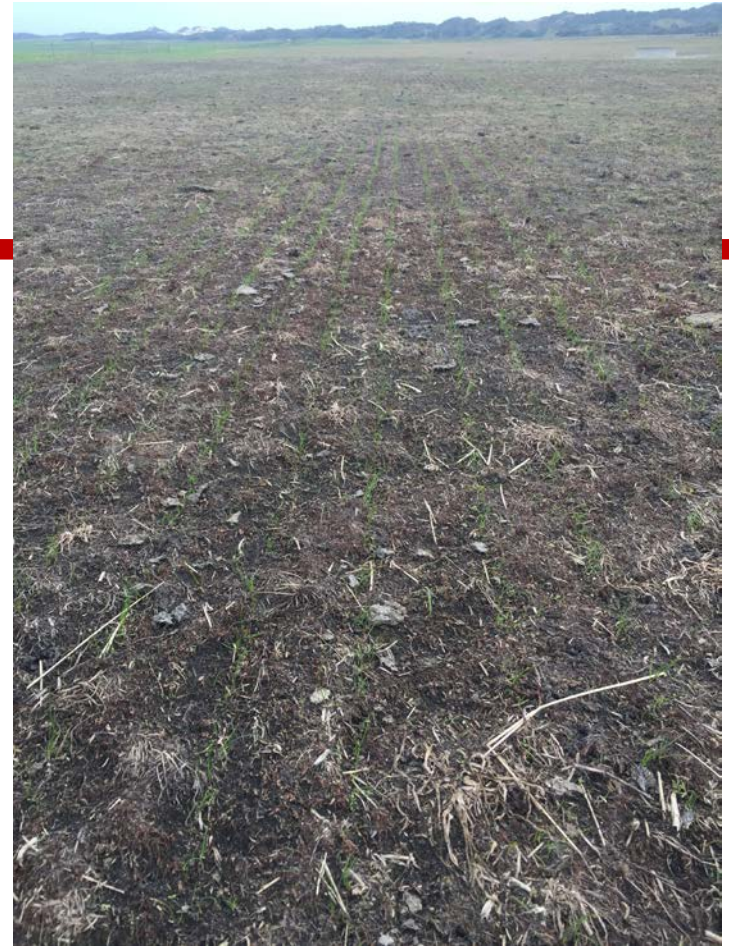
Emita, cocksfoot lucerne chicory  
plantain finishing mix, beef dryland,  
May 2018, Rob Winter



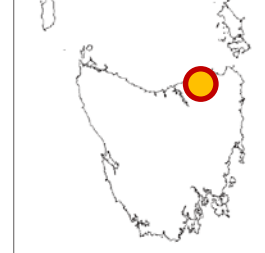


# Seed treatment

- High value and small seed
- Slow establishing
- Insecticide seed treatment highly recommended
- Co-sown clovers often-usually already treated
- Adds ~\$5-\$8 / ha to cost and may save a spray and may save a new paddock

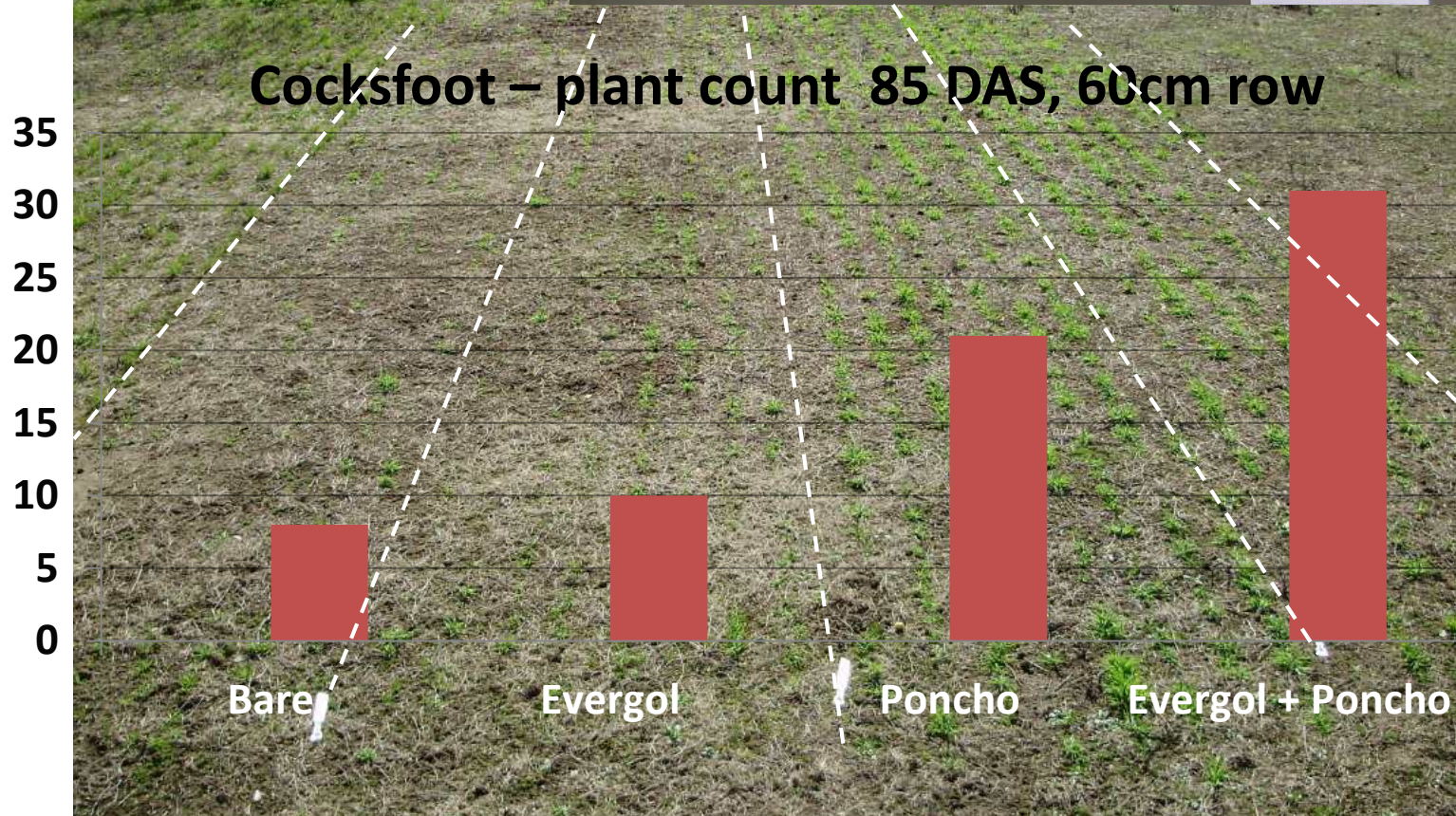


Bridport, Poncho treated Safin (cont.)  
cocksfoot + sub + WC, beef dryland,  
June 2018, Rob Winter



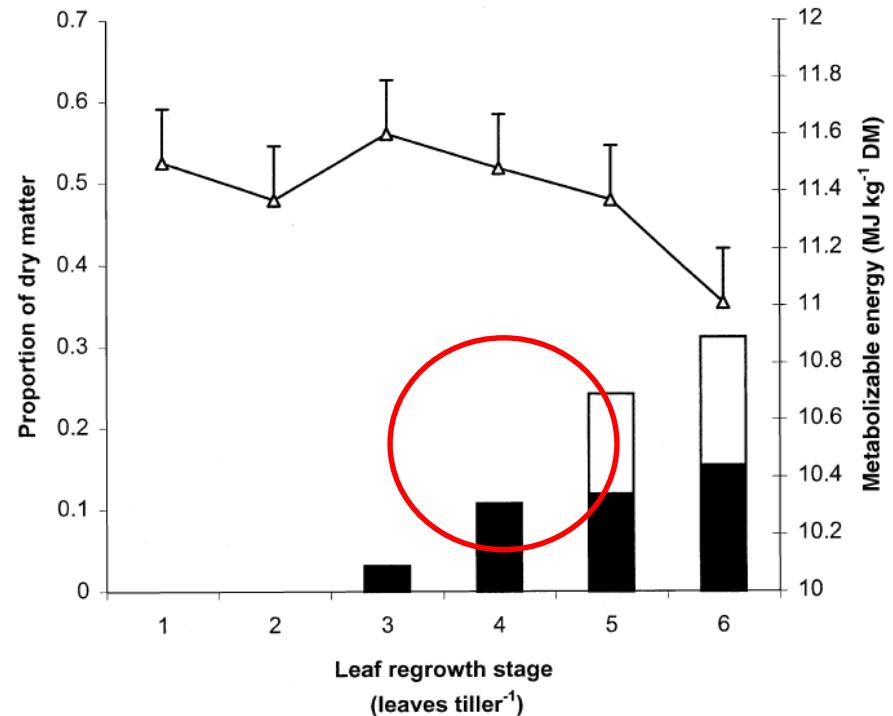


# Seed treatment



# Grazing management

- Quality and persistence:  
**Four-leaf stage**  
(carbohydrates restored and before stems develop)
- Increase dominance:  
Lax graze over late spring and allow seed-set, avoid grazing green pick in summer/autumn. Allow new seedlings to recruit before autumn grazing.
- Decrease dominance:  
Prevent seed set, fast rotational graze. Graze summer/autumn green pick <three leaf stage, before clovers emerge.



Changes in metabolisable energy concentration (MJ kg<sup>-1</sup> DM) (Δ) and the accumulation of senescent (■) and stem (□) (proportion of dry matter, DM) material with regrowth of cocksfoot after defoliation. R. P. Rawnsley, D. J. Donaghy, W. J. Fulkerson and P. A. Lane, *Changes in the physiology and feed quality of cocksfoot (Dactylis glomerata L.) during regrowth*, 2002 Blackwell Science Ltd. Grass and Forage Science, 57, 203–211

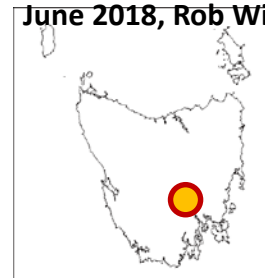


# Top three take home messages

1. Range of new/er cocksfoot types to suit various challenges and opportunities.
2. Sowing, establishment and management (grazing timing, duration, fertility) will affect cocksfoot pasture %.
3. Grazing at around four-leaf stage will offer balance of feed quality and persistence.



Gretna, Howlong (intermediate) + subclover mix 2 yrs after sowing, running 20 DSE/ha cf 5-8 DSE/ha on other parts of the farm, June 2018, Rob Winter





# Tools, resources and training

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- Australian Seed Federation, Pasture Seed Database  
<http://www.asf.asn.au/seeds/pasture-seed-database/>
- MLA:
  - More Beef from Pastures
  - Making more from Sheep, Tools 2.11, 3.6, 7.5
- Heritage Seeds, PGG Wrightson Seeds, Seed Force, Tas Global Seeds



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# How to optimise the use of cocksfoot in your system

Rob Winter

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