

# Hill Country and Dryland Development

Participants: Clayton, Paddy, Mike, Sue, Hayden, Mark, Duncan, Duncan Rose, Lyndsay, Justin, Jason

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## *How to develop Brown Top>Returns of the development*

Looking at Hill and Dry and Hill that is Dry. Dry can be different to Hill. Hill can be high. Hill can have very different altitudes and slopes.

- 1) What/how can we cultivate?
- 2) What are the best mixtures/species for persistence and animal performance?
  - Most species lack persistence especially over calving
  - Ryegrass - phalaris is good especially in Central Otago dry for persistence
  - Deer feed curve demand for quality quite different to some other livestock
  - Need to factor in Environmental Considerations. There is a huge variation in environmental rules. Need to be aware of those constraints. Deer well suited to hills. Sediment tests at bottom of gullies easy to do?
- 3) How to decide on cost-benefit of hill country development. As an example Mt Peel spray and pray – 3T-12T DM production. Able to increase hind numbers for security of supply.

Considerations:

- Fence set out – by natural contours
- If pasture is not controlled quickly reverts to expansive brown top. Key is subdivision.
- Advantage feeders to supplement dry and poor quality feed
- Hill problem can be that a volume of feed will go dry and rank before Christmas. Stock integration can help the quality.
- Cheapest to develop the really good country for mid Jan through Feb for hinds and fawns.
- Big plus of development is the increase of quality but that can be difficult to measure/quantify.

What species to plant

- Red clovers/sub clovers need to be allowed to seed. Need to be patient with clovers.
- Cocksfoot.
- Match pasture species to rainfall.
- Plantain allowed to re-seed are persisting very well. Deer complement plantain well. Need to mix N fixers with plantain.

Weed/Pasture control options

- Chemical options to top or control weeds to allow pasture to out compete weeds or clovers out compete grasses.
- Gallant good for brown top but not good for animals.
- Want long term species to keep soil on the hill.

- Spinning on clovers of heavily grazed area can be successful.
- Put seed in with fertilisers, Choppers are more accurate than planes.

### **Personal Experiences:**

**Clayton** – did repeat oversow as had poor initial strike

**Paddy** – Lucerne and Brones as Jan/Feb runoffs. Cut Nov, Hinds eat next round. White clover flown on hills – hit and miss. New cocksfoots – less clumpy. Bareno P.G later seeding. P.G doesn't like set stocking. Galant may be better option than glyphosate – less soil exposed.

**Mike** – Cocksfoot/clover/lime. Good but also had rain. Undersown.

**Sue** - Chicory then grass/clover in autumn. Chicory in a bit late after beet – contractors late. Chicory to 500g/day R1 deer. Lucerne lasted 7t years. Lost one (high pH?) but putting in more. Issue with Nil winter grazing due to need t grow R1 deer all year.

**Hayden** – older Lucerne varieties 30T years, new ones <8 years. Plant shallow and slow. Probbaly best to avoid roller/harrows.

**Duncan** – Kale on hills, fallows old pasture but wet soil – losing plants. Tried Sulla – disaster (4ha), weeds, spring sown.

**Duncan Rose** – Brassica first - Broadcast. In easier country.

**Lindsay** – re-doing old country. Flying on 5T lime/ha. Annual –brassica winter – cocksfoot wc. Trouble keeping quality. Big blocks (100ha) with hinds set stocked.

**Mark** – no tractor country. Ratstail and brown top thatch restricted one drilled paddock and one oversown area. Have to spray and pray – wants good seed/soil contact so removing thatch important. Unsure what to sow – new grass/chicory. Galant wasn't great 0- no go don ratstail.

**Jason** – Met then burn in winter then fly lime and seed. Red clover ok – then seed rank. Lucerne and Chicory haven't been successful – seed/soil contact poor. Value for money for seed cost?

**Justin** – Hinds had three blocks so grass-grass-rape by late summer. Lucerne 14 -15 years then 2 crop rotations then Lucerne again. Small seeds strike best when flown on ie clover/plantain/chicory vs ryegrass.