

# *Dryland Legumes Workshop*

*Farmer experiences with increasing  
Legume*

Warwick Lissaman, Breach Oak, Seddon.

**Gland Clover**



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# Breach Oak

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- 400 ha sheep and beef farm, approx 100 ha cultivable, of which 40 ha is in lucerne
- Soils: Loess silt loams which can be very wet and then very dry due to their imperfect drainage characteristics.
- Additional 10-20 ha ear marked for lucerne, leaves 300+ ha for another legume to dominate.
- Can 4-5 su/ha be increased to 6-8 su /ha on this land.



- Broken land areas, ridges run north south, paddocks from 2 ha to 35 ha, average 6 ha, desired 4.5 average
- Area of lucerne could be increased, but bigger area of farm will never be suitable for lucerne, class 6 and 7 land
- Legume options for this other area is what set off search for alternatives.



- **Undulating country, prone to under runners,**
- **Soil types, aspect and contour vary within and between each paddock**
- **Not a lot of shelter**



# Gland Clover

(*Trifolium glanduliferum*) 16 Oct 2010

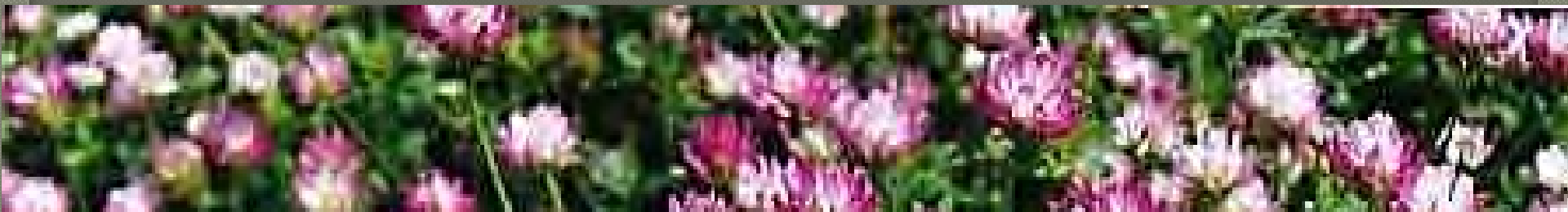


Flowering at 45-50 cm

# Gland Clover

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- Top Flowering Annual clover, Pink
- One of the earliest flowering annual clovers
- Areas of use very limited.
- Very winter active
- Potential production limited by flowering date



## Warwicks Comments

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- Has established remarkably well, when spread over tracks after grading etc., Where devoid of organic matter.
- Early flowering limits DM potential, although DM trials at Lincoln University show quite impressive DM production through winter early spring when it is valued higher per unit.
- 6 month or less growing season

# Gland Clover



Top flowering  
Serrated narrow leaf  
Early maturing  
Stalky plant.





## Seedlings:

Small seeds = small seedlings,  
need lack of competition –  
bare earth policy best environment.

Must not be sown deep,  
thrown on surface and chain harrow or trample



Mid August 2010,  
ungrazed since sowing in April,  
Gland, Balansa and Tall fescue mix



Early October 2010-  
ungrazed, Gland flowering



### Warwick's Comments

- No other area of farm had a clover content anything like the area with Gland in August.
- 30 cm ruler dwarfed by crop, 40-45 cm height at flowering
- Only the gland flowering at this time, best establishment in this paddock was on the hard headlands where drill didn't go too deep.

29 Nov 2010

Red mark on spade = 45 cm

25+ kg N fixed per tonne DM

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### Warwick's Comments

- Result was thousands of seeds per ha. But without the long hot summer and droughty autumn this past season, with usual high solar radiation levels, have not seen subsequent plant populations this autumn or in 2011
- One earlier sown hill block had good re establishment in years 2009 & 10 but 2011 and 2012 haven't fired.
- Questions remain over long term persistence of species in this environment
- The test will be how much survives until the next real drought.

# Gland Clover

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## Potential uses,

- ⦿ Post root raking, land contouring, track establishment areas
- ⦿ Very droughty north west faces, where ewes and lambs are lambed prior Lucerne available
- ⦿ 6 month or less growing season

# Warwick's Comments

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- Land development tool, where soil structure compromised and/or devoid of OM
- Winter moist but prone to very high ET rate areas, nullifying spring or summer rainfall.
- Coastal Marlborough? and steep NW faces of Withers, Lower Awatere and Flaxbourne
- David Grigg, comments? Put on with top dressing
- Simon Harvey? , at 2000 ft a.s.l.