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RED CLOVER

Interest in alternative forages is increasing as farms reduce their reliance on purchased concentrate feeds and search for improved production from homegrown forages. For maximum forage intake these crops need to provide either high protein or high energy. Red clover is a high protein forage – usually grown in a mixed grass/clover sward or undersown with spring barley.

BENEFITS

- Converts atmospheric Nitrogen into a plant usable form
- Reduces N fertiliser use
- Improves soil fertility
- Improves soil structure
- Is flexible:
 - harvest for high quality silage
 - quality aftermath for finishing lambs or beef
 - suitable for conventional & organic systems
 - valuable in arable rotations
- High yielding
- High quality- reducing the quantity of concentrates needed to balance silage based diets

OPTIONS FOR ESTABLISHMENT

- Direct seeding then roll well
- Tine harrow then broadcast into existing sward
- Broadcast and roll
- Shallow sowing – not deeper than 1.5cm (½")
- Sow from April – August (to minimise winter losses)
- Soil pH ~ 6.0
- Adequate soil P & K (Index 2+)
- Seed rate
 - mixed sward: 3 kg/acre red clover + 9 kg/acre Italian or hybrid ryegrass
 - cover crop barley: 3kg/acre red clover + 8kg/acre ryegrass (The options are to sow the spring barley 10-14 days before the red clover or at the same time)
- Cover crops minimise weed problems. (For best results conserve the cereal crop as arable silage before full maturity)

CONCERN	ADVICE
Bloat	Avoid putting hungry stock into clover rich fields Avoid daily fluctuations in quality and quantity of feed Take care on cold, chilly mornings Risk of bloat is negligible from red clover silage
Ewe fertility	Don't allow breeding ewes to graze red clover 6 weeks before and post tupping
Disease & Pests (clover rot & stem eelworm)	Don't grow continuously in the same field (6 year break) Choose more resistant varieties Avoid machinery movements from old to new swards
Persistence	Red clover is a short term crop (2-3 years) –to maximise its persistence avoid grazing by sheep over winter

WHICH RED CLOVER?

Lowland: AberRuby Milvus, Merviot, Mercury (double cut, early flowering)

Uplands: Britta (single cut)

CONSERVATION

- Red clover is best suited for silage
- 3 - 4 cuts can be taken each year – the number of cuts will affect both the quantity and quality of the crop
- Where two cuts are taken, the re-growth could provide a lighter third cut or be used as quality grazing for finishing lambs or beef cattle
- Allow 6-8 weeks between silage cuts
- Over 3 years a mixed grass/red clover sward can produce 9-15 t DM/year
- Conservation – ensile crops at 25 - 35% DM to avoid losses during wilting. Excess wilting leads to leaf shatter and lower feed quality
- Red clover has a high buffering capacity and low soluble carbohydrate content. Good fermentation can be achieved when ryegrass/red clover crops are ensiled using an inoculant additive
- Silage quality:
 - ME: 9.8-11.4MJ/kg DM
 - CP: 14-19%,
 - pH: 4.0-4.5
 - ammonia-N in the total nitrogen <5%

Good intakes and milk yields in dairy cows and good growth rates for finishing lambs and beef cattle from red clover silage