Red Clover

Red Clover produces high yields of high quality protein feed. It has good summer growth with drought tolerance and little winter growth. Higher yields than white clover, it grows tall and is used primarily for silage production. It is a short lived perennial and will have a life of three to four years. Break crops of red clover are useful for improving soil fertility.

Growth Habit:
Red Clover has a tufted growth habit and a deep tap root, it does not have stolon's like white clover. Rhizobia bacteria form nodules on the finer roots.

Silage:
Expect 12-14t DM/ha/year. In the establishment year allow full flowering before harvest to aid root development for optimum N fixation. Normally 3-4 cuts per year at 6-8 week intervals from late May, after bud development but before flowering. Mower height no lower than 7cm. The crop should be wilted rapidly to 25-30% Dry matter. Leaf is prone to shatter so avoid excessive handling, advised not to use a conditioner mower. Advised to use an inoculant or acid to improve the fermentation, there are no natural lactic acid bacteria on red clover. The companion grass should have lactic acid bacteria and will supply sugar for fermentation.

Quality:
Red Clover swards are high in protein and normally expect 60% to be true protein. Red Clover silage will usually have a crude protein content of 15-20%. It is highly digestible and highly palatable leading to high intake.

Companion grass:
Will protect against poaching, improve the nutritional balance and improve the fermentation. Also helps to maintain the yields in years 2-4 and reduces weed ingress.

Grazing:
Works best under moderate stocking rate and rotations of 4 weeks. Graze to 6cm. Otherwise its persistence is reduced. Graze carefully to protect growing crowns. Avoid poaching. Watch for bloat, introduce clover slowly, ensure livestock are fully fed when entering the field.

High levels of oestrogenic compounds:
Red clovers contain phyto-oestrogens so care is needed when grazing breeding stock during mating. Keep ewes off red clover for 6 weeks either side of mating particularly in late summer and autumn when red clover is growing well. This also applies to Red Clover silage.

“Red clover silage is suitable for all livestock farms in Ireland and will increase in popularity”

Diamond Red Clover Silage

<table>
<thead>
<tr>
<th>Variety</th>
<th>Pack Size</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROSETTA</td>
<td>4.00 KGS</td>
<td>4.00</td>
</tr>
<tr>
<td>FINTONA</td>
<td>4.00 KGS</td>
<td>4.00</td>
</tr>
<tr>
<td>BARBLANCA WHITE CLOVER</td>
<td>0.50 KGS</td>
<td></td>
</tr>
<tr>
<td>RED CLOVER</td>
<td>4.00 KGS</td>
<td>12.50 KGS PACK</td>
</tr>
</tbody>
</table>

- Intensive silage mixture designed for 3-4 years
- Will continue as a normal grass sward afterwards
- White clover will fill spaces created by red clover dying out
- Produces high protein and high digestibility silage
- Can be grazed but important not to over graze red clover

Sow at 12.5kgs per acre
Crop Establishment and Management

Rotation:
Avoid continuous Red Clover due to risk of Sclerotina disease (Clover Rot) and Stem Eelworm. Best advice is to have a 6 year break between crops. White clover is resistant to Clover Rot and the Stem Eelworm species that attacks red clover.

Soil Type:
Well drained, fertile soils work best. Red clover is good for soil structure.

Fertiliser:
Apply Phosphate and Potash, target maintaining at index 3 for P & K. Normally there is no Nitrogen to be applied. Exceptions are; at establishment on soils with very low Nitrogen status (tillage rotations) in which case apply 50kg/ha N and with an established crop on low nitrogen soils in a cold wet spring apply 30-50kg/ha N.

Lime:
Maintain pH at 6.0-6.5.

Sowing:
Sow from April to late July. It needs a fine, firm seed bed. Drill at 0.5-1cm deep (never deeper than 1.5cm) or broadcast. Use inoculated seed if sowing in areas where no clover has grown in recent years. Can over-sow into existing swards.

Weed Control:
It is advisable to spray weeds 5-6 weeks after sowing with a suitable selective herbicide such as Clovermax or Legumex DB (apply once clover has one trifoliate leaf) to control seedling weeds particularly docks and thistles.

Sowing rate:
Red Clover will almost always be sown in mixtures with grass and possibly white clover. A number of Goldcrop Diamond mixtures cover different sward requirements and these are packed in acre packs. The sowing rates vary from 12.5kg to 13.5kg per acre depending on the mixture. In monoculture sow at 6kg/acre and expect an established crop with 200 plants per square metre.

Management:
Graze lightly in the autumn of the sowing year. Expect 3-4 silage cuts per year starting in late May. Graze in the autumn. When cutting silage or applying slurry, it is important to avoid wheel damage to the red clover.

Pest and Disease:
The two major problems are the disease Sclerotina (Clover Rot) and the Nematode ‘Stem Eelworm’. Sclerotinia causes a rot of the crown, leaves and stem. It is most evident in December and January and plants usually do not recover. Other diseases are Fusarium and Powdery mildew. At establishment Slugs and Sitona Weevil can do damage, monitor the crop every few days and treat if necessary.

Diamond Red Clover & Hybrid PRG

<table>
<thead>
<tr>
<th>Variety</th>
<th>KGS per Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTONCRUSADER (HRG)</td>
<td>9.00</td>
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<tr>
<td>BARBLANCA WHITE CLOVER</td>
<td>0.50</td>
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<tr>
<td>RED CLOVER</td>
<td>4.00</td>
</tr>
<tr>
<td></td>
<td>13.50 KGS PACK</td>
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</tbody>
</table>

- Intensive silage mixture designed for 2-3 years
- Produces higher short term yields than perennial mix
- White clover will fill spaces created by red clover dying out
- Produces high protein and high digestibility silage
- Can be grazed but important not to over graze red clover
- Suitable for multi cut silage

Sow at 13.5kg per acre

Diamond Red Clover Grazing

<table>
<thead>
<tr>
<th>Variety</th>
<th>KGS per Acre</th>
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</thead>
<tbody>
<tr>
<td>ASTONENERGY</td>
<td>4.75</td>
</tr>
<tr>
<td>ROSETTA</td>
<td>4.75</td>
</tr>
<tr>
<td>CHIEFTAIN WHITE CLOVER</td>
<td>1.00</td>
</tr>
<tr>
<td>RED CLOVER</td>
<td>2.00</td>
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<tr>
<td></td>
<td>12.50 KGS PACK</td>
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</tbody>
</table>

- Suitable for grazing and silage
- Can be grazed but important not to over graze red clover
- White clover will fill spaces created by red clover dying out

Sow at 12.5kg per acre