

White Clover

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Teagasc**

Why sow white clover?

- Save ~€50/acre on Nitrogen fertiliser (save 120 units N/acre, CAN @ €250/t)
- Increase grass production and quality
- Improve animal performance; 15% increase in milk solids, 13% increase in animal carcass weight & 25% increase in lamb live weight gain
- ~20% reduction in greenhouse gas emissions

Where to sow white clover?

- High fertility soils (soil pH>6.3, ≥Index 3 for P and K)
- In fields where weeds are well controlled
- Drier fields on farm, Don't sow on gley or peat soils



How to sow white clover?

- Sow between **late April to mid-July** and choose varieties from recommended list - view it [here](#)
- Sow small/medium leaf clover for sheep as their grazing pattern can remove the large leaf clovers
- Sow medium and large leaf clover for cattle
- Choose fields with a high perennial grass content, avoid old butty swards
- Always roll after sowing to ensure good seed contact with the soil
- Do not bury the seed

1) At reseeding;

Clover can be included in the grass seed mix

- Ensure you have a fine, firm seed bed
- Don't sow too deep, 10 -12mm
- Sowing rate of 0.5 to 2 Kg/ac
- Ensure good contact with soil by rolling

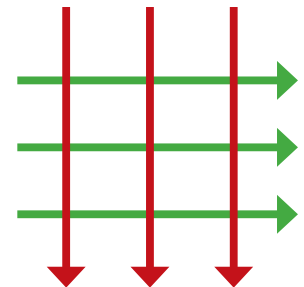


2) Broadcast:

- Just after cutting or grazing paddock tightly, <4cm.
- Mix **2 Kg** of clover with 1 bag of 0-7-30 or 0-10-20 per acre **in the field**, the clover seed is so small if you travel any distance with it in the spreader it will separate out.
- Phosphorus is required for seedling establishment.
- Nitrogen should not be used to give the clover time to establish and not be over shadowed by grass
- Spread in two opposite directions, across the field then up and down to get an even spread of seed
- Ensure to roll to get good seed contact with the soil
- Ensure there is good moisture in the soil, aim for rain after sowing.
- Avoid windy days
- Graze as soon as grass gets to 7-9cm (1,200-1,400 Kg DM/ha) to keep light down to the little plants, keep grazing regularly thereafter, 17 - 21 day rotations.

3) Stitch in

- Seeding rate of **2 Kg** of clover seed
- Follow the same management as above
- Don't bury the seed too deep, 10-12mm at most and remember to roll



4) Use a quad & slug pellet applicator.

Apply a zero or low nitrogen fertiliser with phosphorus after.

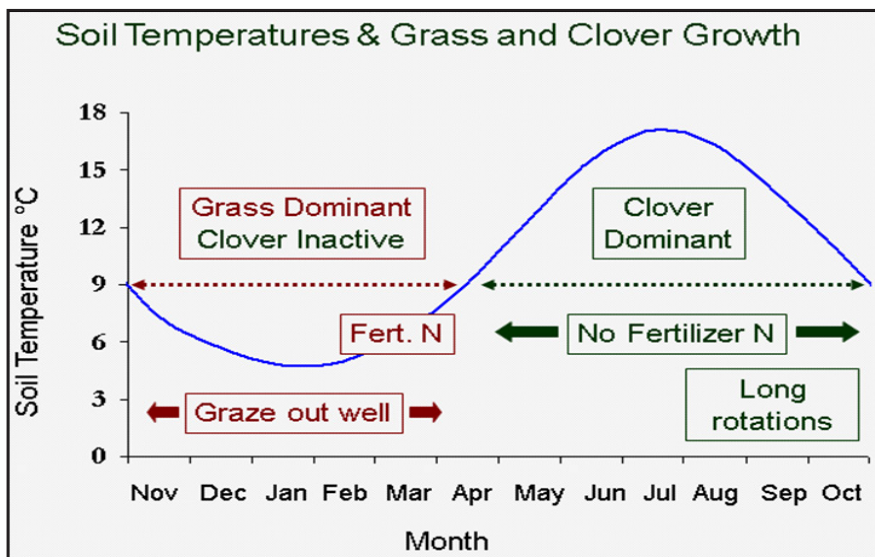


Client		Advisor	Sample Details											
Mr. Martin Doyle - (WAB) Teagasc, Old Dublin Road Ennisorthy, Co. Wexford. Y1850307		Received 24 January 2019 Analysis SDG WAB_19-01-24 (1) Comment on Sample	Authorised 16 February 2019 Sampled By Farmer Samples											
Nutrients Test Results		Laboratory Results		Nutrient Advice										
Ident	Field/NMP	Crop	pH	P		K	OM	Other	LR	N	P	K	Slurry Rate	
				mg/l	Index									mg/l
WAB2954-(2)	1. SAMPLE A	Good Permanent Grass	6.3	3.5	2	99.4	2				5	0	20M	
WAB2955-(2)	2. SAMPLE B	Good Permanent Grass	6.3	2.9	1	308.0				2.5	0	36	0	10C
WAB2956-(2)	3. SAMPLE C	Good Permanent Grass	6.2	2.4	1	201.0				1.5	0	33	0	20C

Conversion table: kg/ha x 0.8 = unit/acre tonne/ha x 0.4 = ton/acre litres/ha = gallon/acre x 11 (P-Phosphorus, K- Potassium, LR- Lime requirement)
This advice is given only for the area sampled and is based on test result from a Teagasc selected laboratory and on the information supplied with the soil sample. Do not exceed N & P limits as set out in the NAP on a whole farm basis. Teagasc cannot be responsible for any losses which occur from the use of this report.

How to manage white clover?

- You need to understand the growth pattern of clover to be able to manage it effectively. The diagram below shows the interaction between grass and clover growth.



- Grass starts to grow at soil temperatures of 5-6 °C while clover needs soil temperatures closer to 10 °C, therefore grass dominates in spring and needs to be fertilised.
- When soil temperatures increase, the clover starts to grow and its nodules begin to release fixed nitrogen therefore there is less of a requirement for nitrogen, so it can be reduced or pulled out altogether.
- Graze paddocks at 7-9 cm (1,200-1,400 Kg DM/ha) and graze down tight to 4 cm. Clover grows and spreads using stolons that stay on top of the ground, it is essential light gets to these stolons to promote growth so grazing needs to be tight and often. The stolon mass determines the clover content of swards.
- Avoid over grazing and winter damage.
- Avoid heavy silage cuts.
- Be careful spraying only use clover-safe products.
- Beware of bloat
 - » Keep post-grazing sward height to 4 cm
 - » Avoid switching from grass-only swards to mixed grass/clover swards
 - » Avoid letting in excessively hungry animals
 - » Check stock regularly during the first 3 hours after turnout
 - » Can be prevalent after high rainfall and if clover content >50%
 - » Use bloat oil in the water (25ml/LU/Day)



Notes

- To be efficient, you need 20-25% clover content in sward
- Clover persists for 3-8 years. It is recommended to over sow 20% of the farm annually to maintain a good clover content.
- Wilt for 1-2 days if making silage.
- Clover grows at 9 °C, whereas grass grows at 6 °C soil temperature, match fertiliser applications to growth pattern.

Suggested Fertiliser Application Strategy

Nitrogen fertiliser application strategy		
Rotation / Date	Grass 250 kg	Grass-Clover 150 kg
Mid-late January	28	28
Mid March	28	28
April (2 nd rotation)	33	33
May (3 rd rotation)	30	9
May (4 th rotation)	30	9
June (5 th rotation)	17	9
July (6 th rotation)	17	9
July (7 th rotation)	17	9
August (8 th rotation)	17	9
Mid September	33	12

Cost of Maintaining White Clover

Saving in fertiliser N = €50 per acre per year

White clover seed ~ €10 per kg

Sowing rate = 1 to 2kg per acre = €10 to €20 per acre

Over-sow 20% of the farm every 5 years

Average cost per year = €3 per acre

Net Saving in Fertiliser N = €75 per acre per year

Controlling Docks

What causes docks?

- Repeatedly harvesting silage from the one field
- High K levels in soil
- Reseeding and ground disturbance/poaching – Dock seed in soil

To avoid, alternate grazing and silage ground, don't over apply slurry to fields, don't poach, look at options when reseeding

Dock seeds can live in the soil for >80 years, so when ground is ploughed it's turning up the dock seeds from the seed bank. If you think docks are an issue, reseed without clover in grass seed, control the docks in the first year and then over sow clover the following year.

If there is no major dock problem reseed as normal and use a clover safe spray the following year. Spot spray docks if they are low in number. It's best to get them at the seedling stage before they establish a large tap root.

Further Information

For more information on clover, click [here](#) or alternatively visit the Teagasc website on www.teagasc.ie/crops/grassland/grass10/clover