



Red & white  
**clover**



**Sinclair McGill**

## Why clovers?

Making the most of clover varieties – both red and white – is a target that more livestock farmers should be aiming at. The need to reduce the purchase of concentrates by increasing the quantity and the quality of home-grown feed must be a priority for all progressive livestock farmers.

In this leaflet we have detailed the outstanding features and benefits that are associated with growing red and white clovers. With the pressures now being exerted on the livestock industry – including the soaring price of bagged nitrogen – it must make sense to exploit all of these.

If you analyse some of the performance figures attributed to both these legumes it becomes very clear why the re-appraisal of red and white clovers is so essential.

Apart from the 'free' nitrogen (a contribution of up to 250 kg N/ha/year) there is the fact that research has shown that the



**A Red Admiral/ryegrass mixture being cut in the summer.**

higher quality and improved intake characteristics inherent in clovers can boost animal outputs (milk, beef and lamb) from anything between 10% - 30%. To achieve the extra production you need to ensure that you have selected and sown the correct combination of species

and varieties. Our technical staff have already undertaken this fundamental work so you can be sure that whether you require a grass/white clover ley for grazing or a highly productive grass/red clover ley for silage the performance-proven mixture you need is available now.



**Cutting a stand of red clover**

# White clover



## Types of white clover

The white clovers are classified according to their leaf size and below you will find a brief description of the attributes as they relate to each category:

### Small Leaved

These tend to be slower to establish but have the benefit of a prostrate growth habit and they are very persistent. Small leaved varieties will tolerate less than ideal conditions and with their vigorous creeping root systems they can survive better under really close grazing systems. Not surprisingly small leaved white clovers are often found in mixtures for sheep grazing in upland areas.

### Large Leaved

Large leaved white clovers have a tall, more erect growth habit and can compete more successfully than the other types when the bagged nitrogen levels are increased – it is the 'shading' effect which depletes the clover population in grass/clover leys. This type of clover is, however, less tolerant of close or more frequent grazing.

### Medium Leaved

As you might expect the medium leaved varieties tend to be more generally tolerant of a wide range of growing conditions and they should always feature in any mixture formulation designed solely for animal grazing.

Over the years breeders have made some remarkable strides in the introduction of improved varieties of white clover and it is fair to say that modern cultivars have helped to 'blur' the attributes and characteristics that were traditionally linked to leaf sizes.

With white clovers, just as with grasses, there can be marked differences between individual varieties within each category – so it makes sense today to select a carefully designed blend. This will give you maximum flexibility because the management of the ley can change over the years yet still deliver the full benefits associated with the addition of white clover.

**More information on our clover blends is available in the panel on the right.**

## Clover Blend Technology

Sinclair McGill pioneered the development of clover blends in the 1980's in association with IGER. Certain principles were established that are still valid today but the varieties we now use are far superior.

### White Clover Blends CloverPlus

This blend is designed for inclusion in ley mixtures designed for beef and dairy systems. It includes varieties with a range of leaf sizes that can adapt to grazing with cattle and cutting for silage.

### Cheviot

A specialist blend primarily made up of very small leaved varieties with excellent persistence to stand up to the rigours of intensive and close grazing by sheep. As sheep are selective grazers it also includes some clovers with larger leaves which act as a "decoy" during the establishment phase.

### Tweed

A highly adaptable and persistent blend, for inclusion in long term mixtures. The range of leaf sizes enables Tweed to adapt to suit all classes of livestock and most management systems.

## HOT TIP WHITE CLOVER ESTABLISHMENT

- Clovers are especially sensitive to phosphate and potash levels and a soil index of 2 needs to be maintained in the top 5cm of soil
- A small amount of nitrogen applied at sowing time will help to encourage more rapid establishment
- Clovers will thrive best on free draining, lighter soils. A minimum soil temperature of 7°C at sowing time is vital.
- A firm, fine and level seedbed is important for small seeded white clover
- Ensure that the pH of the soil is between 6.0-7.0
- Clover seed needs to have 12 weeks from sowing before the onset of any serious frosts
- Restrict the 'competition' when sowing under a minimal cultivation regime
- In some cases (eg. upland heath soils or reclaimed land) the natural Rhizobia necessary for correct establishment may be absent in which case an inoculant should be used

But remember this important point as well – the successful establishment and exploitation of a clover-rich sward is only about 35% dependent on the approach you adopt at sowing time and 65% dependent on your post-sowing management!

# Pelleted white clover

## The practical advantages

Yorkshire livestock farmer Matt Mason, and his son Ted, are amongst those progressive farmers who prefer to re-seed first with grass and then add their white clover later on. However, in the past this has not always been easy. Matt takes up the story:

"We used to oversow the clover with a spinner on the back of a quad bike. But we did have some problems - the seed is so small and light that with just a bit of wind it would get blown about which meant clover coverage was a bit hit and miss."

Now, thanks to the introduction of the pelleted clover concept, the seed size and weight is roughly doubled and the process of adding white clover into an existing grass field is now really straightforward. And, as a bonus, if the weather is dry the pellet will protect the seed until there is sufficient moisture for germination!

The photographs show Ted Mason oversowing the CloverPlus/white clover blend into a grass-only field.



### How to check that your clover nitrogen 'factory' is working.

Dig up a clover plant and locate the nodules on the root system. 'Burst' a nodule with your thumbnail and if it turns red the nodule is fixing atmospheric nitrogen. If it does not change colour the likelihood is that there is sufficient nitrogen in the immediate environment – perhaps after an application of nitrogen fertiliser for example.



## CloverPlus Pelleted White Clover Blend

- Ideal for introducing clover into existing grass swards.
- Pellet increases the size and weight of the seed enabling easier drill adjustment and more accurate distribution.
- Treated with **HEADSTART**® a biological treatment proven to speed up germination and improve establishment.
- Pellet improves seed flow for more even distribution when broadcast.
- Suitable for broadcasting, harrows with a seed box and slot seeding.



Pelleted Seed



Natural Seed

## Benefits of **HEADSTART**®

This biological, non-toxic seed treatment helps the white clover plants to develop in a hostile environment such as competition from the existing grass sward.

# Red clover

The introduction of new varieties of red clover has provided this crop with a positive role on dairy units and on those farms where beef cattle are fattened and lambs finished. This legume can also be used on arable farms or horticultural units where there is a need to enhance the fertility of individual fields. Red clover is also a first-choice crop on many successful organic farms

Red clovers are classified into either the 'early' group (traditionally known as broad red or double-cut) or the 'late' group. The former flower in early June and should produce at least two conservation cuts followed by an autumn grazing. Varieties in the late group, which tend to generate one cut in late June followed by a grazing opportunity, are more persistent and can be exploited in medium term leys.

Red clover is essentially a crop for silage production. Those farmers currently making the most of its potential will aim to take 3 or even 4 cuts a year and allow around 7 weeks between cuts depending on the level and speed of the re-growth. Any regrowth which is available in the autumn period can be grazed by beef cattle or used to finish lambs.

One of the best ways of ensuring that your red clover generates the most value is to sow it

with a companion grass. A well established crop of grass/red clover should yield between 11 and 15 tonnes of DM/ha. Crops should be ensiled when the DM is between 25-35% as this will greatly reduce the potential losses during the wilting process. Also, avoid excess wilting as this will trigger excessive leaf shatter and reduce the quality of the resultant feed.

If you follow the basic rules then you will have an excellent silage with these typical analysis figures: ME: 9.5-12 MJ/kgDM Crude Protein: 15-20% pH: 4.5.

With improved varieties and well designed mixtures containing grass varieties ideally suited to this legume there is no doubt that red clover has the potential to increase feed intake, boost animal performance and generate extra profit from your livestock enterprise.

## IMPORTANT INFORMATION

It is worth highlighting the perceived 'problems' that are linked with the oestrogen content of red clover. Although the oestrogen content is beneficial in relation to lamb fattening it is disadvantageous in connection with ewe fertility and then there is also the added risk of bloat. Fortunately, the risk of bloat is almost non-existent if animals are fed red clover silage and with grazing animals the concern can be addressed by avoiding putting very hungry animals into a red clover rich sward. In relation to fertility it is wise to remove breeding ewes from red clover fields six weeks before tupping to six weeks after.



## Red clover blend

### Red Admiral

Farm scale trials have proven that this blend can deliver consistently high yields of protein rich forage for three full harvest years. It contains a blend of diploid and tetraploid varieties which cover a range of flowering dates enabling up to three or even four cuts to be taken every year.

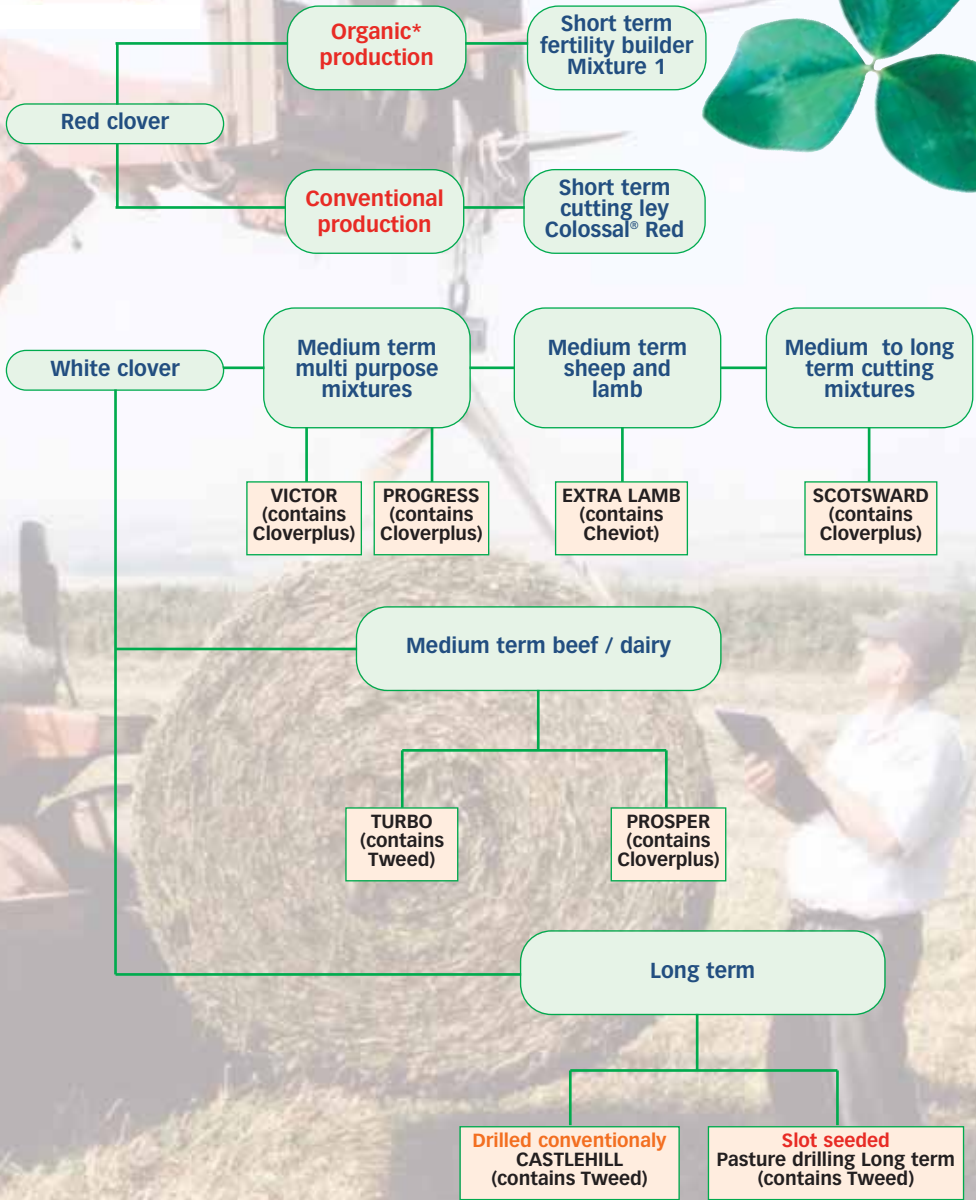
**The Red Admiral blend is used in our Colossal® Red mixture.**

## ARE YOU GOING TO RE-EVALUATE RED CLOVER?

If the answer is 'yes' then please ensure that you ask for a free copy of our new Growers Guide to Red Clover. This comprehensive publication contains valuable tips on establishing, managing and feeding the crop.



# Mixtures containing clover



**\* WE ALSO HAVE A COMPREHENSIVE RANGE OF OTHER GRASS/WHITE CLOVER MIXTURES FOR ORGANIC FARMERS – ASK FOR MORE DETAILS.**

# Features and benefits of clover

## FREE NITROGEN!

Both these legumes fix atmospheric nitrogen which saves you money and is more environmentally friendly than bagged N

## HIGH PROTEIN!

Red and white clover plants have excellent protein levels which boosts the value of your grazed/conserved herbage

## INCREASED VOLUNTARY INTAKE!

The inclusion of highly palatable and very digestible clovers in the diet should boost feed intake and animal performance

## MINERAL BONUS!

Red and white clover plants are rich in several minerals which means a better feed value for your cattle or sheep

## SUPREME FLEXIBILITY!

Both red and white clover offer supreme flexibility in the way that they can be exploited on farm which should enable all livestock farmers to maximise their production potential

## BETTER SOIL STRUCTURE!

The good rooting capabilities and nitrogen-rich organic material associated with red and white clovers can have a beneficial influence on your soil structure

## ORGANIC FARMING ADVANTAGE!

For the reasons mentioned above, and below, leguminous crops such as red and white clover should figure very strongly in any system which is following the organic route

## IMPROVED BIODIVERSITY!

The use of red and white clover will encourage beneficial insects and so both species can have a part to play in increasing the much needed biodiversity on UK farmland

## MID SEASON GROWTH!

The judicious use of legumes – especially white clover – on livestock farms can enable you to help fill the mid-season grazing 'gap'

## BREAK CROP OPTION!

Clovers, especially red, provide an excellent break between cereals and other arable crops due to their ability to build up nitrogen reserves in the soil and improve its structure

**SHOULDN'T YOU BE MAXIMISING THE AGRONOMIC, NUTRITIONAL AND FINANCIAL BENEFITS OF BOTH RED & WHITE CLOVER ON YOUR FARM?**



There is more information on our range of red and white clovers in our current catalogues – copies can be downloaded from our website.



Camp Road, Witham St Hughs, Lincoln LN6 9TW

Tel: 01522 861300 Fax: 01522 869703

[sinclairmcgill@limagrain.co.uk](mailto:sinclairmcgill@limagrain.co.uk) [www.sinclairmcgill.com](http://www.sinclairmcgill.com)

Unit 1, Site 4, Station Place, Forfar, Angus DD8 3TB Tel: 01307 463164 Fax: 01307 464001  
[forfar@limagrain.co.uk](mailto:forfar@limagrain.co.uk)

**TERMS & CONDITIONS OF SALE** All varieties listed in this leaflet are offered strictly subject to safe harvest, final certification and remaining unsold on receipt of orders. All other terms and conditions of sale will be advised by your individual 'Sinclair McGill' Authorised Distributor or stockist.