

Sam Chesney - Winner
Farmers Weekly
Grassland Manager of the Year Award 2020

**'Germinal
are helping
me drive
more value
from grass'**

**Forage Seed
2021**

 **Germinal.**

Sowing future seeds

Germinal continues to drive progress in support of Northern Irish farmers

Grassland is the biggest crop in the Northern Ireland, accounting for two thirds of agricultural land. Any small improvement you make in how you manage your grassland can impact your productivity.

Grass and forage seed specialists

As specialists in forage, we are ideally placed to help farmers improve performance and address challenges faced on farm. Our combination of technical expertise and practical knowledge is one of our greatest assets. We work alongside you to share our knowledge and give advice on grassland management when you most need it.

Quality forage, real gain

Our focus on the future and developing the solutions you need means we deliver new varieties that help livestock farmers meet the challenges they face. In recent years our new grass and forage varieties have consistently delivered improvements in forage use and environmental performance, driving on-farm efficiency, maximising yields and farmers' profitability.

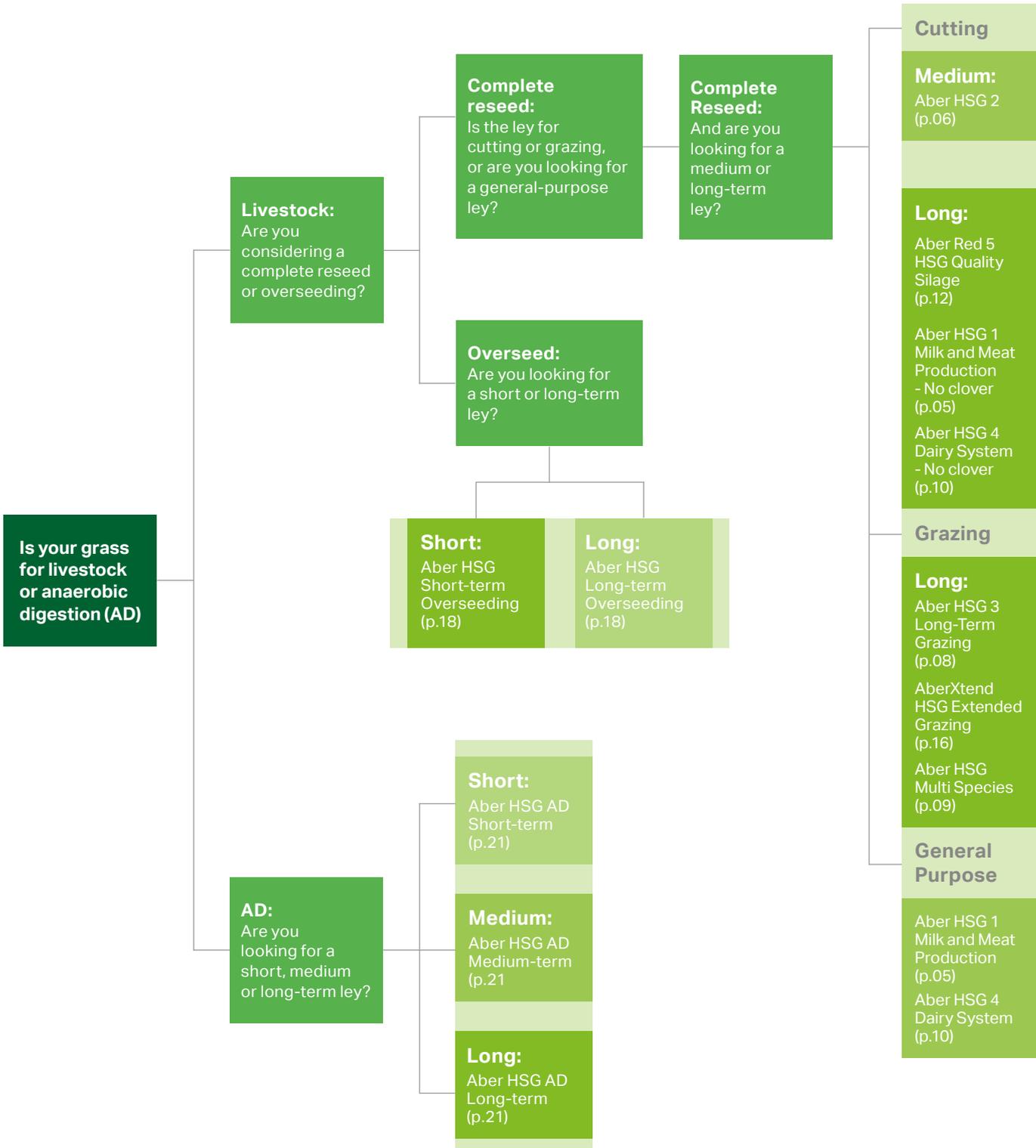
Proven products to help sustain your business

With innovation at the heart of all we do, Germinal is committed to research and development. Our ongoing, exclusive partnership with the Institute of Biological, Environmental and Rural Sciences (IBERS) at Aberystwyth University has led to the development of market-leading seed varieties, including Aber High Sugar Grasses. All our new varieties are also tested at our own research station in Wiltshire, where trials are undertaken with scientific rigour in a real-life farming situation. We take our products from the lab to the field, so you know Germinal's products work effectively on farm. Throughout this catalogue you'll hear from farmers themselves about how they're using Germinal products and the gains they've made in their businesses as a result.

David Little
Area Sales Manager,
Germinal NI



Planning your forage requirements



Aber white and red clovers, herbs, chicory and plantain are available for use in mixed swards.
To discuss your specific requirements and which product is best for you, contact your local Germinal grass and forage technical expert, see page 41 for details.



Aber High Sugar Grass (HSG) range

As the name suggests, grasses within the Aber HSG range contain higher levels of sugar, and therefore energy, than those found in conventional ryegrasses. This high level of available energy helps bacteria in the rumen of livestock convert more of the protein in forage into meat and milk. Without enough energy, most forage protein is wasted, producing ammonia and methane. So, not only does the extra energy from high sugar grasses help produce more meat and milk but reduces the production of these gases.

Aber HSG varieties dominate the most highly-rated varieties for metabolisable energy (ME) yield/ha, a key determinant of livestock performance. Even small increases in ME can produce important increases in milk production and liveweight gain. Milk yields have been seen to rise by 6% and significant liveweight gains shown in both sheep and beef cattle. Choosing mixtures comprising top-ranking Aber HSG varieties is one step towards a more productive and profitable business.

The Aber HSG range includes short, medium and long-term leys with specialist mixtures for cutting and grazing systems, as well as general purpose leys. Aber HSG mixtures are also available for overseeding and for biogas production. Each product contains a carefully selected combination of Aber varieties to fit its specific requirements.



General Purpose

Aber HSG 1 Milk and Meat Production
Aber HSG 4 Dairy System

Grazing

Aber HSG 3 Long-Term Grazing
AberXtend HSG Extended Grazing
Aber HSG Multi Species

Cutting

Aber HSG 2 Medium Term Cutting
Aber Red 5 HSG Quality Silage

Overseeding

Aber HSG Short-term Overseeding
Aber HSG Long-term Overseeding

Anaerobic digestion

Aber HSG for AD Short-term
Aber HSG for AD Medium-term
Aber HSG for AD Long-term

Forage breeding for a sustainable future

Germinal has funded the breeding of grass and clover varieties at the Institute of Biological, Environmental and Rural Sciences (IBERS), Aberystwyth University, for 30 years and markets the Aber varieties worldwide.

The forage breeding and genetics team have an unrivalled track record of developing new genetic material with novel properties relating to quality and persistency. Through the strategic alliance with Germinal, the impact of this progressive scientific research has been translated into the commercially successful grass and clover varieties that feature strongly on UK Recommended Lists and the Irish Pasture Profit Index.

Importantly, the IBERS animal nutrition team works in close collaboration with the forage plant breeding team, particularly informing and influencing the direction of forage crop breeding. With an emphasis on quality forage and livestock performance, this collaborative approach has led to the Aber High Sugar Grass varieties.

Aber HSG varieties have elevated levels of sugar, or water soluble carbohydrate (WSC). These high sugar varieties have been scientifically proven to reduce emissions of nitrous oxide and methane and increase production of meat and milk, when fed to ruminant livestock.

Similar innovation is seen in clovers, with the first long lasting red clovers being developed and the first hybrid white clover now included in commercial mixtures.

The impact of this breeding programme on sustainable agriculture and the environment has been recognised with numerous prestigious awards from inside and outside the agricultural arena:

- Queen's Anniversary Prize in 2009
- NIAB Cup for Improvement in Quality 2003 and again in 2015
- Royal Agricultural Society of England (RASE) Award for Technology and Innovation in 2007
- The Times Higher Education Award (THE Award) Outstanding Contribution to Innovation and Technology
- British Grassland Society Innovation Award 2011
- Biotechnology and Biological Sciences Research Council (BBSRC) Innovation with Excellence Award

The breeding programme is ongoing, continually seeking more productive varieties to underpin sustainable agriculture into the future.

LONG TERM



Aber HSG 1 Milk and Meat Production



AVAILABLE WITH PUNA II AND TONIC PLANTAIN



AVAILABLE WITHOUT CLOVER

Aber HSG 1 Milk and Meat Production is a long term, general purpose mixture for milk and meat production.

Ideal for grazing, the mixture also offers the potential for a heavy silage cut in late May. Ideally suited for set stocking, it can be grazed with cattle, ewes or used to finish lambs. Aber HSG 1 Milk and Meat Production produces a dense sward which will resist poaching and with good management will maintain its quality for 5 – 7 years. Puna II perennial chicory can be included for added drought tolerance and sward variety.

Fig 01.

Aber HSG 1 Milk and Meat Production:

T = Tetraploid

Kg / acre	Variety	Type	Heading Date
3.00	AberWolf	Perennial Ryegrass	26 May
3.00	AberMagic	Perennial Ryegrass	27 May
3.00	AberGreen	Perennial Ryegrass	28 May
4.00	AberGain	Perennial Ryegrass (T)	03 Jun
1.00	AberPasture	White Clover Blend	
14.00			

Heading date average for Aber HSG 1 Milk and Meat Production is 29 May for Northern Ireland. When cutting for silage, aim to cut 5 - 10 days before average heading date for optimum quality. Optimum spread of heading dates within mixtures for grazing and cutting results in better performance of the leys.

Fig 02.

Aber HSG 1 Milk and Meat Production:

Spread of heading dates



Key benefits in summary

- Combines an outstanding grazing yield and D-value
- 100% Aber HSG grasses
- Correct balance of diploid and tetraploid varieties
- High palatability and increased dry matter intakes
- Reduced nitrogen losses to the environment




AVAILABLE
WITH
ABERCLARET
RED CLOVER

Including red clover in your cutting mixtures

MEDIUM TERM

Aber HSG 2 Medium Term Cutting

Aber HSG 2 Medium Term Cutting is a specialist silage mixture for those aiming to cut a very high quality crop in mid May.

Combining the outstanding hybrid Aber High Sugar Grass AberEcho with compatible Aber perennial ryegrasses, this mixture delivers quality and yield and can persist for 3 - 4 years – twice as long as Italian ryegrass based swards. Aber HSG 2 Medium Term Cutting is a straight grass mixture that will perform under medium and high levels of nitrogen. Red clover can be included, whilst for those seeking longer lasting specialist silage mixtures we recommend Aber Red 5 HSG Quality Silage.

The addition of red clover at 3kg/acre within the Aber HSG 2 mixtures will increase the yield and quality of your silage.

More farmers are choosing to include red clover in their cutting mixture to:

- Increase overall forage production potential
- Improve the protein content of silage
- Reduce protein losses in the clamp
- Benefit from red clover's ability to contribute over 150kgN/ha of nitrogen through fixation
- Improve soil structure and drought tolerance

Fig 04.

AberHSG 2 Medium Term Cutting:

T = Tetraploid

Kg / acre	Variety	Type	Heading Date
5.00	AberEcho	Hybrid Ryegrass (T)	14 May
5.00	AberEve	Hybrid Ryegrass (T)	20 May
5.00	AberWolf	Perennial Ryegrass	26 May
15.00			

Heading date average for Aber HSG 2 Medium Term Cutting is 20 May for Northern Ireland.

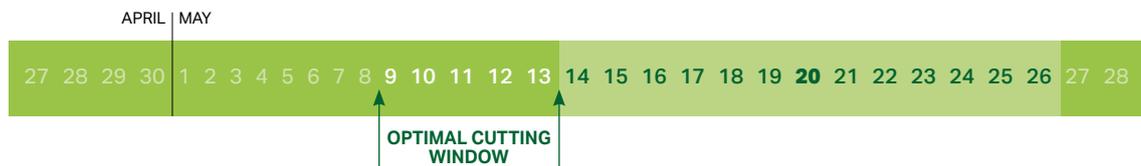
When cutting for silage, aim to cut 5 - 10 days before average heading date for optimum quality.

Optimum spread of heading dates within mixtures for grazing and cutting results in better performance of the leys.

Fig 05.

Aber HSG 2 Medium Term Cutting:

Spread of heading dates



Key benefits in summary

- Hybrid Aber High Sugar Grass content
- Compatible heading date varieties
- Over twice the persistency of Italian ryegrass leys
- Suitable for combination with red clover
- Aber High Sugar Grasses enhance fermentation, especially when red clover is included
- Very high ME yield



Sam Chesney

Maximising output per hectare

Producing 1,400kg of beef liveweight per hectare means Sam Chesney is achieving more than double the national average for beef production per hectare in Northern Ireland.

His approach to forage management lies at the heart of his success, with disciplines including regular soil testing and reseeding with quality grasses being key to a trend of year-on-year improvement.

Situated on the Ards Peninsula, Sam runs 140 Limousin spring-calving cows and 30 bulling heifers, aiming to produce a finished animal as cost effectively as possible using grazed grass and homegrown, quality silage.

Most of the grazing platform has been reseeded with an Aber High Sugar Grass mixture including AberEve, AberGain, AberMagic and the white clover, AberDai. He has also been including the long-lasting red clover, AberClaret, which has helped reduce protein in meal by 2 - 3%.

The benefits of reseeding are clear to see, with one 10-year ley this year producing around 7.3t/ha following an application of 126kgN/ha, whilst the neighbouring grass reseed produced 13.75tDM/ha.

Beef Farmer, Ards Peninsula, County Down



LONG TERM

Aber HSG 3 Long Term Grazing



AVAILABLE WITH PUNA II AND TONIC PLANTAIN



AVAILABLE WITHOUT CLOVER



AVAILABLE WITH TIMOTHY

The biggest selling mixture in the Aber HSG range, Aber HSG 3 Long Term Grazing is for cattle or sheep systems aiming to maximise returns from grazing, whether rotational or set stocked.

Aber HSG 3 Long Term Grazing is made up exclusively of Aber High Sugar Grass diploid perennial ryegrasses which have the highest ratings for grazing quality and yield on the Recommended List. This mixture is unrivalled for persistency under grazing; managed well it can continue to perform for 7 to 10 years, giving you maximum yields of the highest quality grazing. AberBann HSG, one of the outstanding perennial ryegrasses on the NIAB Recommended List is included this year.

Fig 06.

Aber HSG 3 Long Term Grazing:

Kg / acre	Variety	Type	Heading Date
3.00	AberWolf	Perennial Ryegrass	26 May
2.00	AberMagic	Perennial Ryegrass	27 May
3.00	AberGreen	Perennial Ryegrass	28 May
2.00	AberBann	Perennial Ryegrass	07 Jun
3.00	AberChoice	Perennial Ryegrass	08 Jun
1.00	AberPasture	White Clover Blend	
14.00			

Heading date average for Aber HSG 3 Long Term Grazing is 31 May for Northern Ireland. When cutting for silage, aim to cut 5 - 10 days before average heading date for optimum quality. Optimum spread of heading dates within mixtures for grazing and cutting results in better performance of the leys.

Fig 07.

Aber HSG 3 Long Term Grazing:
Spread of heading dates



Key benefits in summary

- Combines an excellent grazing yield and D-value
- Outstanding autumn production for the mixture
- 100% Aber HSG diploid perennial ryegrasses
- Very persistent sward with good 'bottom'
- High palatability and dry matter intakes
- Reduced nitrogen losses to the environment
- Persists for up to 10 years

LONG TERM



Aber HSG Multi-Species



Aber HSG Multi-Species is a specialist mixture for lower input systems where improving soil health is a priority. Aber HSG Multi-Species provides a long-term ley ideal for rotational and set-stocked grazing.

Aber HSG Multi-Species is a mixture of high sugar grasses, legumes and herbs. The mixture of plants within the sward drives dry matter production. Areas of poor soil health also benefit from the plants' different abilities to fix and lift nitrogen, with their water uptake increasing performance in dry conditions. Aber HSG Multi-Species produces a dense sward which resists poaching.

Fig 11.

Aber HSG Multi-Species Grazing:

T = Tetraploid

Kg / acre	Variety	Type	Heading Date
3.00	AberClyde	Perennial Ryegrass (T)	23 May
3.00	AberWolf	Perennial Ryegrass	26 May
3.00	AberGreen	Perennial Ryegrass	28 May
1.00	Comer	Timothy	
0.75	Tonic	Plantain	
0.50	Puna II	Chicory	
1.00	AberPasture	White Clover Blend	
1.50	Lemmon	Clover	
13.75			

Benefits of Aber HSG Multi-Species

- Superior sward performance through complementary plant species
- Improved soil structure and fertility
- Increased drought tolerance
- Lower ammonia excretion reducing environmental impact
- Legumes and herbs combined with Aber HSG grasses

LONG TERM



Aber HSG 4 Dairy System



AVAILABLE WITH PUNA II AND TONIC PLANTAIN



AVAILABLE WITHOUT CLOVER

Aber HSG 4 Dairy System is a mixture for milk producers who are aiming for one or two high quality silage cuts followed by the best possible rotational grazing.

First cut will be mid-to-late May, with the option of a second cut approximately 4 – 5 weeks later, or alternatively commence rotational grazing. The Aber HSG varieties selected for this mixture significantly outperform other grasses for grazing quality and grazing yields. This year Aber HSG 4 Dairy System is further improved by the introduction of AberGain HSG, the stand-out grass on the latest Recommended Lists.

Fig 10.

AberHSG 4 Dairy System:

T = Tetraploid

Kg / acre	Variety	Type	Heading Date
3.00	AberWolf	Perennial Ryegrass	26 May
3.00	AberGreen	Perennial Ryegrass	28 May
4.00	AberGain	Perennial Ryegrass (T)	03 Jun
3.00	AberChoice	Perennial Ryegrass	08 Jun
1.00	AberDai	White Clover	
14.00			

Heading date average for Aber HSG 4 Dairy System is 1 June for Northern Ireland. When cutting for silage, aim to cut 5 - 10 days before average heading date for optimum quality. Optimum spread of heading dates within mixtures for grazing and cutting results in better performance of the leys.

Fig 11.

AberHSG 4 Dairy System:

Spread of heading dates



Key benefits in summary

- Long-lasting ley with outstanding quality
- Top yields of high ME silage at first cut
- For cutting and rotational grazing
- 100% Aber HSG perennial ryegrasses
- Balance of diploid and tetraploid varieties
- High palatability and dry matter intakes
- Extended spring and autumn grazing

A man, Hugh Harbison, is sitting in a grassy field. He is wearing a black jacket with yellow accents and dark waders. He is smiling and looking towards the camera. In the background, there are several black and white cows grazing in the field. The sky is overcast.

Hugh Harbison

All about the grass

In the last five years, collecting weekly grass growth measurements has provided Hugh Harbison valuable management data to increase milk from forage yields by 1,000 litres per cow per year.

The 100ha (247 acres) farm, located in Aghadowey, Coleraine, is home to 170 Friesians, and currently averages 3,000 litres from forage from total yields of 7,830 litres a cow a year.

"I've found it really useful to know how each field is doing so we can reap the benefits by adjusting our management to match growth," explains Hugh.

To maximise grass utilisation, Hugh implemented an intensive rotational grazing plan to give cows access to new grass every 12 hours. Grass quality also gained importance, leading the farm to grow a mixture containing AberChoice and AberGain with fields reseeded at least every six years.

During 2018's summer drought, the farm went three weeks without rain – which is a long stretch for a region acclimated to rain several times a week. However, while some older leys were slowing down and dying off, reseeded leys continued to perform.

Dairy Farmer, Aghadowey, County Londonderry



MEDIUM TERM

Aber Red 5 HSG Quality Silage

Aber Red 5 HSG Quality Silage offers a significant breakthrough in silage production, providing for the first time a mixture including 4 - 5 year persistency red clover.

Aber Red 5 HSG Quality Silage overcomes the normal restriction of red clover leys, extending the life of the red clover component beyond the normal 2 - 3 years up to 5 years with the inclusion of AberClaret.

It is also now time to rethink the grasses that are paired with red clover. AberClaret can last five years, so the grasses must too. Aber Red 5 HSG Quality Silage therefore includes intermediate and late perennial ryegrass, including the latest Aber HSG varieties AberGreen HSG and AberGain HSG perennial ryegrasses which will also improve silage quality especially in the second cut.

Fig 12.

Aber Red 5 HSG Quality Silage:

T = Tetraploid

Kg / acre	Variety	Type	Heading Date
2.00	AberWolf	Perennial Ryegrass	26 May
3.00	AberGreen	Perennial Ryegrass	28 May
4.00	AberGain	Perennial Ryegrass (T)	03 Jun
3.00	AberClaret	Red clover	
12.00			

When cutting red clover for optimum quality silage, aim to cut when 25% of clover flowers show. Optimum spread of heading dates within mixtures for grazing and cutting results in better performance of the leys.

Fig 13.

Aber Red 5 HSG Quality Silage:

Spread of heading dates



Key benefits in summary

- Red clover with potential for five years persistency
- 100% Aber HSG perennial grasses
- Balance of diploid and tetraploid varieties compatible with long-lasting red clover
- 150kgN/ha nitrogen fixed from red clover
- Reduced nitrogen losses to the environment
- Aber High Sugar Grasses enhance fermentation, especially when red clover is included

New generation long term red clovers

One of red clover's traditional shortcomings is its relatively short persistence, typically remaining in the sward for just two to three years when a longer productive life would make it more compatible with medium-term leys.

Now, a new generation of red clovers is being bred at IBERS Aberystwyth University, with the first varieties, AberClaret and AberChianti, now on UK Descriptive Lists and commercially available in Germinal's Aber HSG mixtures.

AberClaret and AberChianti are the first of a new generation of red clovers bred and selected by plant breeders at IBERS to last 4 years and longer in a cutting sward, and to be significantly more tolerant of grazing by dairy animals. Dry matter yields in IBERS longterm trials were in excess of 14,500kg of dry matter in the fourth year and averaged over 13,500kg in each year of the trial. Over the four years, AberClaret totalled around 60tDM/ha compared with 40 - 45tDM/ha from the controls.

With greater persistency of red clover remaining a key objective, the latest breeding work at IBERS is focused in particular on resistance to the soil borne pathogens Sclerotinia and stem nematode.

David Kenwell

Focus on high energy silage

Understanding the financial value of silage has made Northern Irish milk producer David Kenwell completely re-evaluate how he views grass.

This came about through his participation in the Yara Grass Prix competition, where his farm's grass silage was attributed a value of £1,559/ha, well above the UK average.

However, having seen even better results from other Grass Prix farms, he has been convinced of the merits of further investing in grass management and, in particular, improving grass quality.

In order to achieve greater ME value, David is working with Germinal to select the most appropriate Aber High Sugar Grass varieties to suit his farm's requirements. He has also worked with Yara to draw up a nutrient management plan based on soil analysis results.

Grass silage forms the main forage component of the diet for his 300-cow Holstein Gulladoo herd at Kenwell Farms. With the herd yielding 9,000 litres and housed for most of the year, improving the ME yield of his grass through regular reseeding with the right varieties, and attention to detail in all aspects of silage making is imperative.

Dairy Farmer, Kenwell Farms, County Tyrone



A photograph of John Martin, a sheep and beef farmer, crouching in a lush green field. He is wearing a dark blue quilted jacket and black rubber boots. The background shows a dense line of trees under a soft, overcast sky.

John Martin

Maximising output per hectare

John Martin's strategy to maximise output per hectare at his 83ha unit in County Down has been built on a combination of improved animal and plant genetics. He's focused on his 680 ewe lambing flock and now routinely produces 500kg of lamb carcass per hectare.

He's achieving these outputs by breeding more efficient ewes, with a mature liveweight down from 110kg to 80kg, and by boosting the productivity of his grassland by including the best available varieties.

Quality grazing and grass silage comes from leys predominantly reseeded with Aber High Sugar Grasses and Aber white clovers, with grass silage typically analysing at over 12MJ/kg ME with good protein content.

John's expertise in silage making has been recognised this year with first place in the Ulster Farmers' Union Beef & Lamb Silage Competition and he has received the prestigious BGS Grassland Farmer of the Year award for his overall achievements.

Sheep and Beef Farmer, Gordonall, Greyabbey, Co Down



MEDIUM / LONG TERM

AberXtend HSG Extended Grazing

Extend your grazing season without compromising persistence, grazing yield and grazing quality.

AberXtend HSG is the Aber HSG mixture for livestock farmers aiming to increase yields and lengthen the grazing season. The Recommended Lists in both the UK and Ireland show how varieties such as AberWolf HSG, AberGreen HSG and AberGain HSG top the lists for spring and autumn performance, but there is absolutely no compromise on the other main performance criteria, with top scores for grazing D-value, ME yield and overall dry matter yields. With the appropriate management, AberXtend HSG can perform to a high standard for 5 – 7 years.

Fig 14.

AberXtend HSG Extended Grazing:

T = Tetraploid

Kg / acre	Variety	Type	Heading Date
4.00	AberWolf	Perennial Ryegrass	26 May
5.00	AberGreen	Perennial Ryegrass	28 May
4.00	AberGain	Perennial Ryegrass (T)	03 Jun
1.00	AberPasture	White clover blend	
14.00			

Heading date average for AberXtend HSG is 29 May for Northern Ireland. When cutting for silage, aim to cut 5 - 10 days before average heading date for optimum quality. Optimum spread of heading dates within mixtures for grazing and cutting results in better performance of the leys.

Fig 15.

AberXtend HSG Extended Grazing:

Spread of heading dates



Key benefits in summary

- Mixture averages an outstanding 106.7% of control varieties on the Recommended List for early grazing yield and 101.3% for autumn production
- The best Aber HSG perennial grasses selected for spring and autumn yield
- Outstanding season-long yield and quality
- High palatability and dry matter intakes
- Reduced nitrogen losses to the environment

A man with a beard, wearing a blue hoodie with a 'Brave Soul' logo, is kneeling in a lush green field. In the background, there are rolling hills and a white house with a chimney. A blue and black tool, possibly a soil testing device, lies on the grass in the foreground.

Cathal McAleer

All about the grass

With a reliance on forage production to keep feed costs down, improving soil health is one of the biggest priorities to optimise grass performance at Omagh Dairy Farm in Co. Tyrone. According to farm manager, Cathal McAleer, soil is managed with the same philosophy used to maximise production from the cows – fertility is everything.

Omagh Dairy Farm comprises 500 acres split into two milking platforms with a 340-cow, spring calving crossbred herd. Average milk yield is 6,000 litres at 4.4% butterfat and 3.65% protein, with 3,500 litres from forage.

“If you don’t feed your soil, you’re not going to reach your forage production potential. Nutrient application helps significantly. We take soil samples every year to determine P and K distribution and pH levels. We also blanket spread slurry in the spring and autumn and have started nutrient testing. This tailored approach to uplifting soil fertility through efficient nutrient application has resulted in the farm increasing forage production from 10tDM/ha to 14tDM/ha in six years.

“To maintain grass growth and quality we’ve also implemented a robust reseeded programme, with 85% of the farm in reseeded grass. Each year, the bottom three performing paddocks are reseeded with AberGain, AberChoice and AberClyde varieties; the soil type of each paddock dictating the variety used. We want late-intermediate or late grass varieties ranking highest for quality on the Pasture Profit Index (PPI).

“Our business model keeps a firm grip on costs by optimising output for as little inputs as possible. This means taking a holistic approach to cow and grassland management to safeguard financial performance from preventable inefficiencies. We are not chasing yield – we’re chasing profit.”

Dairy Farmer, Omagh, Co Tyrone

Aber HSG Overseeding

Where a full reseed is impractical or unwarranted, short term productivity can be improved through a number of different overseeding methods. When overseeding, it pays to use the best available varieties that have been selected specifically for the purpose.

AberHSG Long Term Overseeding

Fig 20.

AberHSG Long Term Overseeding:

T = Tetraploid

Kg / acre	Variety	Type	Heading Date
3.00	AberClyde	Perennial Ryegrass (T)	23 May
3.00	AberGain	Perennial Ryegrass (T)	03 Jun
4.00	AberBite	Perennial Ryegrass (T)	04 Jun
10.00			

Key benefits in summary

- 100% tetraploids for rapid establishment
- Perennial ryegrasses for persistency
- High ranking Aber HSG varieties

AberHSG Short Term Overseeding

Fig 21.

AberHSG Short Term Overseeding:

T = Tetraploid

Kg / acre	Variety	Type	Heading Date
5.00	AberEcho	Hybrid Ryegrass (T)	14 May
5.00	AberNiche	Festulolium	22 May
10.00			

Key benefits in summary

- Rapid establishment
- High yielding under cutting
- New festulolium for increased rooting

A photograph of two men, Kevin McGrade and another man, kneeling in a lush green grass field. They are both looking down at a piece of grass that the man on the right is holding. Kevin McGrade is on the left, wearing a dark jacket over a blue shirt. The man on the right is wearing a dark vest with a green logo over a light blue shirt. The background shows a clear blue sky and a line of trees in the distance.

Kevin McGrade

Grassland renewal key to productivity

Continual improvement of grazing and silage leys is an integral part of Co Tyrone dairy farmer Kevin McGrade's strategy of maximising milk production from forage.

He's currently reseeding around 15% of his grassland each year, ideally following a full cultivation, but over-seeding – or stitching-in – is also proving invaluable.

Farming at Dromore, Kevin is milking 180 autumn calving Holstein Friesians. He operates a grass-based system, with high quality silage and well-managed grazing underpinning production, and he is currently at around 3,000 litres from forage of a herd average just under 7,000 litres.

Currently, silage leys are based on the late heading perennials AberGain, a tetraploid, and the diploid AberChoice, both Aber High Sugar Grasses that are highly ranked on both the Irish PPI and the Recommended Grass and Clover List. The proportion for these silage leys is typically 30% tetraploid and 70% diploid, though Kevin uses closer to a 50:50 mix on his drier fields. He also uses a higher proportion of tetraploids for over-seeding, as he believes the larger seed has a better chance of establishing in the conditions.

Grazing leys are also dominated by Aber High Sugar Grass varieties, with intermediate diploids including AberGreen and AberWolf typically included. Kevin finds these diploids provide the higher sward density that is required in a grazing situation, particularly on his heavy ground.

Dairy Farmer, Dromore, Co Tyrone



Grass as a feedstock for anaerobic digestion

Anaerobic digestion (AD) is a growth area in renewable energy with increasing numbers of farm businesses involved with their own units or by growing feedstock.

The use of grass leys as a feedstock is attracting interest due to the range of advantages offered:

- Grass as a crop is relatively cheap and easy to grow in our climate and soil types
- It is cost effective compared to other biogas fuels (see Fig. 32)
- Equipment and infrastructure to grow and handle this feedstock is already in place
- Grass can be used fresh (offering the highest rate of gas production) and would be cut and carried on a rotational basis; it can also be stored and used as silage
- Medium and long term grass leys offer a more environmentally sustainable option than crops requiring annual cultivations
- Grass leys allow more opportunity to spread the waste products from the digesters, whether that is liquid or solid, without the need to plough back under
- Blackgrass control:
 - Medium to long term grass leys cut three or more times a year will reduce the blackgrass seed production; by constantly cutting the ley there is little if any seed returning to the soil
 - The viability of old undisturbed blackgrass seed within soil reduces by 70% per annum, meaning after the 3 plus years of grassland the blackgrass seed populations are reduced dramatically
 - 65% to 75% of blackgrass volunteers germinate in the autumn, so establishing your grass ley in the spring (even undersown to a cereal crop) will help to further reduce the blackgrass populations

Fig 32.

Comparative costs of methane production:

	Estimated Fresh Weight (Tonnes / Acre / Year)	Cost £ / Acre	Methane m ³ / Tonne	Methane m ³ / Acre	Cost £ / m ³
Spring Barley (35%DM)	10	£480.00	108	1080	£0.44
	12	£480.00	108	1296	£0.37
Spring Triticale (35%DM)	12	£485.00	108	1296	£0.37
	14	£485.00	108	1512	£0.32
Winter Hybrid Rye (35%DM)	14	£535.00	108	1512	£0.35
	16	£535.00	108	1728	£0.31
	18	£535.00	108	1944	£0.28
Hybrid Ryegrass (25%DM)	26	£635.00	90	2340	£0.27
	28	£635.00	90	2520	£0.25
	30	£635.00	90	2700	£0.24



Aber HSG for AD

As with the supply of feed for livestock, where well managed Aber HSG leys are the cheapest source of nutrition for meat and milk production, Aber HSG offers great potential for biogas production.

Studies carried out at IBERS show that Aber HSG ryegrasses perform well compared to general grassland mixtures. All the Aber HSG varieties outperformed mixed grassland with the conclusion that higher water soluble carbohydrate (sugar) content in grass has a positive effect on both the yield and rate at which biogas is produced.

To help answer outstanding questions, Germinal is setting up further research at IBERS comparing Aber HSG varieties with alternative feedstocks that have a range of D-values and at varying harvest dates.

Aber HSG mixtures for AD

Aber High Sugar Grass varieties that have been bred for higher water soluble carbohydrate content and rank high for D-value offer the ideal combination of characteristics for an AD feedstock, whether ensiled or as a fresh crop.

Fig 33.

AD Short term:

T = Tetraploid

Kg / acre	Variety	Type
5.00	AberEcho	Hybrid Ryegrass (T)
4.00	AberEve	Hybrid Ryegrass (T)
5.00	AberNiche	Festulolium
14.00		

Fig 34.

AD Medium term:

T = Tetraploid

Kg / acre	Variety	Type
6.00	AberEcho	Hybrid Ryegrass (T)
8.00	AberMagic	Perennial Ryegrass
14.00		

Fig 35.

AD Long term:

T = Tetraploid

Kg / acre	Variety	Type
5.00	AberMagic	Perennial Ryegrass
4.00	AberGreen	Perennial Ryegrass
5.00	AberBite	Perennial Ryegrass (T)
14.00		

Reseeding

Timing

Autumn reseed may suit from a feed budget perspective, but there are some risks:

- Lower soil temperature can decrease seed germination – aim to sow seed by early September
- Poor weather may make it more difficult to graze a new reseed or apply a herbicide for weed control – grazing helps tiller the grass plants and creates a dense sward

Spring reseed

- Improving temperatures aid germination and establishment of new sward
- Opportunity to take several grazings to help tiller the new sward
- Improved soil conditions will make it easier to apply a post emergence spray
- The sward will be well "settled" in the following spring
- Easier to establish clover

Follow our 10-point plan when reseeding.

1

Soil test. Target pH is 6.3, target P and K index is 3. Apply lime and P and K as necessary. If ploughing, wait until after ploughing to soil sample

2

Spray off the old sward with glyphosate

3

Cultivate to ensure a fine, firm seedbed is achieved. Ploughing will help level any rough fields

4

Select Recommended List varieties suited to intended field use e.g. grazing or silage

5

Sow 14 kg seed/acre in good conditions (warm with rain forecast), no deeper than 10 to 15 mm

6

Roll well to ensure good soil/seed contact

7

Apply N, P and K as per guidelines

8

Monitor reseed for pest attack e.g. slugs, frit fly, leatherjacket, rabbits etc., take immediate action where necessary

9

Post emergence weed spray is essential, apply approx. 5-6 weeks after establishment, prior to 1st grazing. Where clover was sown, use a clover safe spray

10

Graze the new reseeds, frequently and at light covers to assist in tillering and to help create a dense sward

Reseeding advice

Generally there is little difference between sowing method, assuming everything is completed correctly.

Liming

Liming at sowing is important to help counteract any acidity as the old sward decays. Therefore, even if the field was limed in the previous 2 years, applying 1 - 2 t lime at sowing will help with the establishment of the new sward.

Seed-bed

A fine firm seedbed is critical – you should be easily able to ride a bike across the field before seed is sown. Direct drilling is less successful in dry conditions so ensure rain is forecast if using this method.

Roll

Post-sowing rolling is a necessity. Rolling will help compact the soil and therefore maintain more moisture in the seedbed. Rolling also increases soil/seed contact which is necessary for the seed to germinate successfully.

Pests

Pest attacks are more prevalent with an autumn reseed. Applying best practice can minimise the risk of a pest attack. Ensuring good kill of the old sward and sufficient time between spraying and cultivation, preparing a fine, firm seedbed, sowing at appropriate time to ensure good growing conditions for the new reseed and rolling afterwards will all help reduce the risk of a pest attack.

- **Frit-fly** – can result in a patchy, poorly established reseed. The frit-fly larvae burrow into the base of the newly emerging grasses and cut off the plant at the growing point. Autumn reseeds and min-till presents the greatest risk.
- **Leatherjacket** – can result in bare patches or missing rows. Leatherjackets are the larvae of the crane fly (daddy-long-legs). Large crow populations feeding can indicate a leatherjacket problem. The leatherjacket cuts the new plant off just below the soil surface, destroying the seedling.
- **Slugs** – more prevalent during wet weather or in damp sections of a field, e.g. headlands. High levels of surface trash or inadequate/no rolling will increase the likelihood of a problem. Shredded leaves indicate a problem. Greater risk in direct drilled reseeds as the slit in the ground allows the slug shelter. Reduce the risk by creating a fine, firm seedbed with adequate rolling. Use slug pellets when direct drilling or if a problem is identified.

Weed control

Post-emergence weed spray is essential, and provides the best opportunity you will have for weed control in the sward. Apply 5 - 6 weeks after sowing and ensure you use a spray which targets the weeds present in the field. If clover was sown, spray should be applied at the trifoliate stage and you must use a clover-safe spray.



Summerhill

Quality cutting and grazing mixture

Summerhill is a mixture for producers who are aiming for one or two high quality silage cuts followed by the best possible aftermath grazing. First cut will be late May, with the option of a second cut approximately 4 – 6 weeks later, or alternatively commence rotational grazing.

Fig 16.

Summerhill:

T = Tetraploid

Kg / acre	Variety	Type	Heading Date
2.00	AberClyde	Perennial Ryegrass (T)	22 May
4.00	AberMagic	Perennial Ryegrass	27 May
2.00	AberAvon	Perennial Ryegrass	01 Jun
2.00	AberBite	Perennial Ryegrass (T)	04 Jun
3.00	AberLee	Perennial Ryegrass	07 Jun
1.00	AberPasture	White Clover Blend	
14.00			

Heading date average for Summerhill is 31 May for Northern Ireland.

When cutting for silage, aim to cut 5 - 10 days before average heading date for optimum quality.

Key benefits in summary

- Long-lasting ley with outstanding quality
- Good yield credentials for grazing and cutting
- Balance of diploid and tetraploid varieties
- High palatability and dry matter intakes
- Reduced nitrogen losses to the environment
- Excellent mixture of intermediate and late varieties





Marathon

Quality cutting and grazing mixture

Marathon is a mixture for producers who are aiming for one or two high quality silage cuts followed by the best possible aftermath grazing. First cut will be late May, with the option of a second cut approximately 4 – 6 weeks later, or alternatively commence rotational grazing. Marathon will also be suited to heavier ground conditions.

Fig 17.

Marathon:

T = Tetraploid

Kg / acre	Variety	Type	Heading Date
2.00	AberClyde	Perennial Ryegrass (T)	23 May
3.00	AberGreen	Perennial Ryegrass	28 May
2.00	AberAvon	Perennial Ryegrass (T)	01 Jun
2.00	AberBite	Perennial Ryegrass	04 Jun
3.00	AberLee	Perennial Ryegrass	07 Jun
1.00	Comer	Timothy	
1.00	AberPasture	White Clover Blend	
14.00			

Heading date average is 31 May for Northern Ireland.

When cutting for silage, aim to cut 5 - 10 days before average heading date for optimum quality.

Key benefits in summary

- Traditional general purpose mixture
- Contains intermediate and late varieties
- Balance of diploid and tetraploid
- Excellent persistence and density
- Reduced nitrogen losses to the environment
- Suitable for all areas





Sheepmount

Specialist sheep mixture

Fig 18.

Sheepmount:

T = Tetraploid

Kg / acre	Variety	Type	Heading Date
2.00	AberClyde	Perennial Ryegrass	23 May
2.00	AberGreen	Perennial Ryegrass	28 May
2.00	AberAvon	Perennial Ryegrass (T)	01 Jun
4.00	AberLee	Perennial Ryegrass	07 Jun
1.00	Comer	Timothy	
2.00	Maxima	Creeping Red Fescue	
1.00	AberSheep	White Clover Blend	
14.00			

Heading date average for Sheepmount is 1 June for Northern Ireland.

When cutting for silage, aim to cut 5 - 10 days before average heading date for optimum quality.

Key benefits in summary

- Intensive sheep grazing
- High carrying capacity
- Palatable forage
- Specialist white clover blend for sheep grazing
- Dense sward



Equestrian

Specialist horse and pony mixture

Fig 19.

Horse Paddock:

T = Tetraploid

Kg / acre	Variety	Type	Heading Date
2.00	Elusium	Perennial Ryegrass (T)	25 May
4.50	Kerry	Perennial Ryegrass	02 Jun
4.00	Glenroyal	Perennial Ryegrass	04 Jun
2.00	Maxima	Perennial Ryegrass	
2.00	Comer	Timothy	
0.50	Liherold	Meadow Fescue	
15.00			

Heading date average for Horse Paddock is 01 Jun for Northern Ireland.

When cutting for silage, aim to cut 5 - 10 days before average heading date for optimum quality.

Key benefits in summary

- Creeping grasses to minimise poaching
- Rapid establishment
- Dense and persistent sward
- Good grazing and hay yields
- Very palatable



Tonic plantain and Puna II perennial chicory

Tonic



Tonic plantain is a broad leaved perennial forage herb that is an ideal companion in multi-species swards with Aber red and white clovers and Aber High Sugar Grasses.

Plantain is a coarse-rooted plant that is well adapted to a range of soil types. With similar total annual yields to Puna II perennial chicory, it has slightly better spring and autumn growth.

Tonic plantain is highly productive and provides high-quality feed that can boost liveweight gain in livestock. It is ideally suited to intensive or rotational grazing systems, with rapid regrowth post-grazing in dry summers.

Key benefits of Tonic plantain

- More milk or meat production
- Increased daily liveweight gain
- Heavier weights at weaning
- High dry matter production from early spring to late autumn
- Reduces the effects of internal parasites
- High in minerals, especially copper and selenium
- Very palatable

Puna II



Puna II is the leading perennial chicory variety, selected through a long term breeding programme in New Zealand for its nutritive value, productivity, palatability and persistency.

It is a broad-leaved perennial forage crop that can be grown in the UK as a pure stand or as a key part of multi-species swards with clover, or grass and clover, for medium to long term rotational grazing (2 - 5 year persistency). Perennial chicory should not be confused with short-lived common chicory, grown unsuccessfully previously.

Selection strategy in breeding Puna II has included tolerance to the fungal disease Sclerotinia, which causes plant death, and an erect growth habit to improve compatibility with ryegrass.

Key benefits of Puna II

- Outstanding animal performance (e.g. lamb growth rates of 300-400g/day)
- Yields up to 15tDM/ha in a season; crude protein up to 25%; D-value 70-80
- High mineral content, including zinc, potassium and copper
- Good tolerance to drought, acid soils and major pests
- Rapid regrowth after grazing
- Reduces the effect of internal parasites
- Provides high quality feed through the summer
- Does not cause bloating

Multi-Species swards

Fig 22.

Lamb Finisher:

Kg / acre	Variety	Type
1.00	Puna II	Perennial Chicory
2.00	AberClaret	Red Clover
1.25	AberChianti	Red Clover
1.00	Tonic	Plantain
5.25		

Key benefits in summary

- 2 - 3 years, intensive finishing mixture
- Red clover can contribute up to 150kgN/ha
- Full production from May to September
- High protein forage suitable for finishing early lambs

Fig 23.

Lamb Finisher with White Clover:

Kg / acre	Variety	Type
1.00	Puna II	Perennial Chicory
1.50	AberChianti	Red Clover
1.00	AberClaret	Red Clover
1.00	AberDai	White Clover
1.00	Tonic	Plantain
5.50		

Key benefits in summary

- As Lamb Finisher, but with the benefit of white clover to improve ground cover during late season
- 2 - 3 years duration

Fig 24.

Livestock Grazer/ Beef Finisher/ Puna II HSG Medium Term Ley:

T = Tetraploid

Kg / acre	Variety	Type
4.00	AberEcho	Hybrid Ryegrass
4.00	AberWolf	Perennial Ryegrass
0.75	Puna II	Perennial Chicory
1.50	AberDai	White Clover
1.00	Tonic	Plantain
11.25		

Key benefits in summary

- 3 - 4 year medium term ley
- Ideal for lambs, beef youngstock – finishing or flushing ewes
- The grasses in this mixture offer improved grazing and ground cover in autumn

Timbale

Galaxie

Galaxie Max

Lucerne

Lucerne is a nitrogen-fixing legume, most commonly grown as a stand-alone crop for cutting and with some grazing potential.

TIMBALE

- Excellent nutritional value (thin stemmed with good leaf retention)
- Good disease resistance
- High yielding

GALAXIE

- Exceptional yields
- Good disease resistance

GALAXIE MAX

- A blend of Timbale and Galaxie
- Two of the leading lucerne varieties with cold tolerance for northern European climates

Pre-inoculated and treated seed

Timbale, Galaxie and Galaxie Max from Germinal are pre-inoculated and treated with Seed Applied Solution (SAS Energy) :

- Unique Seed Applied Solution (SAS Energy) to improve lucerne establishment
- Multi-layered permeable coating with 100% active ingredients
- Essential minerals and trace elements specific to lucerne requirements
- Stimulates early vigour and improves root and leaf development

Optimum seed rate

- Timbale, Galaxie and Galaxie Max are sold in Pricidose packs
- Pricidose ensures optimum plant population and prevents problems due to overseeding or underseeding
- Easy to use; 2 Pricidose packs per hectare in good conditions
- Increase to 2.3 packs/ha for later sowing or heavier conditions

Proven performance

In trials, SAS Energy treated seed drilled at Pricidose rates achieved:

- **14% INCREASE IN PLANT ESTABLISHMENT**
- **6% INCREASE IN FIRST CUT DRY MATTER YIELDS**

Fig 26.

Improved development of roots and foliage is seen in the lucerne seedlings on the right as a result of Pricidose seed treatment:



Clover Blends

The role of clover

The roles of white and red clovers in modern sustainable livestock farming are growing as new varieties offering higher yields and greater persistency become available.

Varieties of white clover bred at IBERS Aberystwyth University lead the way and are now, for example, achieving optimum targets of a 30-35% contribution to total sward dry matter under a range of management systems.

Grass and clover breeding at Aberystwyth has always maintained a strong affinity with real agricultural practice, which means selection and testing takes into account performance in the silo and in the rumen, as well as in the field under animal grazing and/or cutting regimes. This coordinated approach ensures the new varieties meet farmers' needs.

Aber grass and clover mixtures are offered as standard with a recommended Aber clover blend. However, specific blends of white or red clover can be requested to suit a particular farming system or requirement.

Fig 26.

AberPasture:

Selected Aber white clover varieties provide a unique blend of small and medium leaf size clovers selected for their suitability for cattle set stocking and rotational sheep grazing.

%	Variety
75%	AberDai (medium leaf)
25%	AberAce (small leaf)

Fig 27.

AberSheep:

Small leaf size Aber white clover varieties combined with a medium leaf size variety provide a blend suitable for sheep systems ranging from continuous to rotational grazing on either upland or lowland farms.

%	Variety
25%	AberDai (medium leaf)
75%	AberAce (small leaf)

Benefits of Aber clover blends

- Boosts output of milk and meat from forage
- Improves soil structure
- Improves the quality of grazing
- Helps to maintain a balanced grass/clover sward
- Performs reliably on most soil types and under most management systems
- Tolerates moderately high applications of nitrogen fertiliser
- Reduces fertiliser requirements

White Clover varieties

AberAce (small leaved): The smallest recommended variety, it has excellent grazing persistency at low nitrogen levels and while having the low yield potential expected of such a very small clover variety, it supports a high grass yield.

AberDai (medium leaved): Produces very high clover yields, is at its most vigorous in the main summer periods and maintains a good persistency rating for its leaf size.

Grow your own protein to cut costs of production



High protein forage brassicas present a significant opportunity to drive down costs of production, yet are not grown on a large majority of livestock farms.

According to Germinal's latest survey, less than a third of UK livestock farmers are growing forage brassicas, with fewer still tapping into the benefits of other homegrown high protein sources such as red clover and lucerne.

With growing uncertainty over agricultural support and the likelihood of continued commodity price volatility, livestock farmers need to reduce their reliance on bought-in feed and fertiliser and become more self-sufficient.

"Homegrown forage protein crops will reduce the need for bought-in protein, which will always be expensive and susceptible to price volatility, and there are additional benefits too, such as improved soil fertility, soil structure and pest control," says Germinal NI's David Little.

"There are now many modern forage brassica varieties that offer an excellent source of protein and can boost productivity as summer catch crops, autumn grazing or even out-wintering. These brassicas also work very effectively as break crops in grassland reseeding, helping to reduce the threat of common pests such as leatherjackets and frit-fly. This is more important as chemical pest control options become more restricted."

Mr Little points out that the varying attributes and agronomy of forage proteins means farmers should make the decision on which crop to grow based on individual farm conditions and requirements.

"Look at where you can start building protein crops into a rotation if that fits with your system. When growing any crop, it's important to pick the right field and grow it well. It's also important to know how much you are growing, to utilise it effectively and ensure you have enough of the crop to make a difference in the ration."

Planning your brassica crops

Summer/ Early Autumn

Jun - Sep

Stubble turnip

- Appin
- Vollenda

Forage rape

- Stego

Hybrid brassica

- Swift
- Redstart

Summer/ Early Autumn

Jun - Sep

- Stubble turnip
- Forage rape
- Hybrid brassica

Regrowth Potential *

Nil

- Vollenda
- Stego

High

- Swift
- Appin
- Redstart

Sowing to Grazing Period

8 Weeks

- Appin
- Stego

10 Weeks

- Swift
- Redstart

12 Weeks

- Vollenda

When do you require your brassica crop?

Autumn/ Winter

Oct - Feb

Stubble turnip

- Appin
- Vollenda

Hybrid brassica

- Swift
- Redstart

Kale

- Maris Kestrel

Swede

- Triumph

Autumn/ Winter

Oct - Feb

- Stubble turnip
- Hybrid brassica
- Kale
- Swede

Regrowth Potential *

Nil

- Vollenda
- Triumph

Moderate

- Maris Kestrel

High

- Swift
- Appin
- Redstart

Winter Tolerance

Low

- Vollenda

Good

- Swift
- Appin
- Redstart

High

- Maris Kestrel
- Triumph

* Rate and extent of regrowth depends on weather conditions.

Forage brassicas

Kale

Maris Kestrel

Kale is a high-quality, cost-effective winter feed for all classes of stock.

It can also help overcome grass shortages towards the end of summer. This high-yielding, high leaf-to-stem ratio variety is highly digestible, suitable for grazing.

Benefits of kale

- High palatability driving intakes
- Outstanding leaf-to-stem ratio
- Good cold weather and frost tolerance
- Stems resistant to lodging
- Ideal for outwintering
- Suitable for all classes of stock

Variety

Maris Kestrel Sow at 2 - 3kg/acre from May to the end of June. Feed from July to the following February.



Hybrid brassicas

Swift and Redstart

 **Swift**

 **Redstart**

If you're looking for a flexible, cost-effective forage crop, hybrid brassicas are a new interspecies of kale and rape, ideal for high energy grazing of cattle and sheep.

The crop grows quickly and vigorously, offering grazing options from July to around the end of January depending on sowing date.

Benefits of hybrid brassicas

- High energy and protein
- Suitable for cattle and sheep
- Fast and vigorous growth offering multiple grazing opportunities
- Good cold weather and frost tolerance
- Good late season yields

Variety

Swift Sow at 2 - 3kg/acre from May to the end of August. Feed from July to the following January.

Redstart Sow at 2 - 3kg/acre from May to the end of August. Feed from July to the following January.



Grazing turnip

Appin



Like stubble turnip, grazing turnip offers a flexible feeding option reducing reliance on concentrates during the autumn and winter.

It, too, can be used as a catch crop during summer shortfalls.

Benefits of grazing turnip

- High palatability and easy-to-digest driving intakes
- Suitable for cattle and sheep
- Fast growing with excellent regrowth potential offering versatile grazing
- Wide sowing window

Variety

Appin Drill at 2kg/acre (or broadcast at 3kg/acre) from March to mid-September. Feed from May to December.

Swede

Triumph



A high-yielding feed suitable for outwintering all classes of stock.

Benefits of swede

- High energy feed for cattle and sheep
- Outstanding dry matter yields
- Good cold weather tolerance

Variety

Triumph Drill at 250g/acre (precision drilled) from mid-May to end of June. Feed from December to March.

Forage rape

Stego

Stego

Rape is a fast-growing, high protein feed particularly well-suited to finishing lambs.

It also offers potential for extended grazing of cattle through summer, autumn and winter.

Benefits of forage rape

- High leaf-to-stem ratio
- Excellent disease resistance
- Suitable for outwintering

Variety

Stego Drill at 3.0kg/acre (or broadcast at 4kg/acre) from March to July. Feed from June to December.

Stubble turnip

Vollenda

Vollenda

Stubble turnip is another flexible forage crop offering a cost-effective feeding solution in summer, autumn or winter for sheep or cattle.

As well as providing a main crop, it can be used as a catch crop during summer grazing shortfalls.

Benefits of stubble turnip

- High energy and protein
- Suitable for cattle and sheep
- Easy establishment and quick growth
- Good clean grazing for lambs

Variety

Vollenda Drill at 2 - 3kg/acre from May to the end of August. Feed from July to the following January.

Brassica mixtures

Brassica mixtures are an effective way of tailoring a grazing crop more precisely to specific circumstances.

Individual crops including kale, forage rape and turnips have their own strengths but also grow well in combination.

Benefits of Brassica mixtures

- Increased choice of forage for livestock
- Higher dry matter intakes
- Greater overall production per hectare

Fig 33.

Winter Feed:

Kg / acre	Variety
1.00	Maris kestrel
1.00	Swift hybrid brassica
2.00	
Main use	Key features
<ul style="list-style-type: none"> • Out-wintering for all ruminant livestock 	<ul style="list-style-type: none"> • A winter-hardy blend of palatable fodder • Yield potential of over 12 tonnes DM/ha

Fig 34.

Late Sown Winter Feed:

Kg / acre	Variety
0.75	Swift hybrid brassica
0.75	Redstart hybrid brassica
0.65	Appin grazing turnip
0.10	Maris Kestrel kale
2.25	
Main use	Key features
<ul style="list-style-type: none"> • Out-wintering for sheep or cattle 	<ul style="list-style-type: none"> • Fast growing fodder for late sowing

Fig 35.

Summer Multigraze:

Kg / acre	Variety
0.50	Appin grazing turnip
1.00	Swift hybrid brassica
0.90	Stego forage rape
0.10	Maris Kestrel kale
2.50	
Main use	Key features
<ul style="list-style-type: none"> • Early lamb finishing • Supplementary summer grazing for dairy or beef cattle 	<ul style="list-style-type: none"> • A blend of fast growing grazing turnips and forage rape with the added high yield, quality and regrowth potential of Swift • Regrowth potential

Fig 36.

Autumn Multigraze:

Kg / acre	Variety
1.25	Swift hybrid brassica
0.90	Appin grazing turnip
0.10	Maris Kestrel kale
2.25	
Main use	Key features
<ul style="list-style-type: none"> • Late lamb finishing • Flushing ewes • Improving late season grazing when grass growth is declining 	<ul style="list-style-type: none"> • A blend that combines the winter hardiness and quality feed value of Swift for later grazing and the rapid establishment of Appin grazing turnip

A photograph showing two men, Paul and Frank Turley, in a field of green brassica plants. They are wearing blue jackets. In the background, several black cattle are visible, some eating from a trough. The scene is outdoors, likely on a farm.

Paul & Frank Turley

Forage focus helps cut feed costs

Father and son business partners Paul and Frank Turley have, over the last four years, seen savings in feed costs of £90 per head per year across their beef enterprise near Downpatrick, Co Down.

Their 162ha (400 acre) farm runs 150 head of Aberdeen Angus x British Friesian suckler cows and 100 head of bucket reared Holstein cross Aberdeen Angus beef calves.

105ha (260 acres) of the farm is in Aber High Sugar Grass leys. Recently, the farm started growing AberGain perennial ryegrass as a monoculture for its 78.6 D-value. In the last two years, AberGain has been used in mixtures with AberWolf and AberClyde perennial ryegrasses.

Grass utilisation at grazing is maintained above 80% by ensuring paddock sizes are the right size and daily allocations of grass are controlled. This is aided by weekly grass measurements and a discipline of moving cattle on at 1,500kgDM/ha covers.

Each June, an additional 16ha (40 acres) of grass is taken out and sown to brassicas for out-wintering cattle as part of the reseeding rotation. Traditionally, the farm has used Swift or Redstart hybrid brassica for late season sowing, and Maris Kestrel kale for main crop sowing for out-wintering.

Beef Farmers, Downpatrick, Co Down

Find out more

Should you require any more information or to request a selection of free brochures and technical guides please visit our website:

germinalni.com



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The mixtures in this brochure are correct at the time of going to press and the supplies of the varieties used in the mixtures should be adequate for this season. If however we do run short of some, they will be replaced by the next best variety on the Recommended List.



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