



agrovista
seeds



Grass seed

*mixtures for
Scotland*

2024
season

*growing through
innovation*

2022 and 2023 have been years of extremes, 2022 being one of the hottest driest years on record and 2023 one of the wettest.

There can be no doubt that we are all now living with the effects of climate change and the need to mitigate the challenges created by these weather extremes has never been more important. For livestock farmers the ability to grow enough good quality forage is a key determinant of enterprise efficiency and so having future proof leys that are able to thrive in changing climatic conditions can reduce production costs and offer some very welcome peace of mind.

As the person responsible for producing the TechniSward range of grass seed mixtures I am in the rare and very fortunate position of being able to source the very best varieties available from all the major seed breeders and put them into one bag. This means that every mixture we sell is as technically correct for its intended use as possible.

For the most part the TechniSward range of grass leys contain only the top varieties from the BSPB/AHDB recommended lists, the SRUC Scottish lists and the Teagasc PPI index. However, through working closely with the seed breeders we are sometimes able to identify varieties that have particular desirable trait but, for one reason or another, do not appear on the recommended list. Where we use non listed varieties in our mixtures it is always for their ability to bring desirable traits to the mixture,

and never to reduce the price at the cost of performance as is the case with some of our competitors.

Quality and innovation are at the forefront of our mixtures, and we are proud to support the SRUC via the levy payment and the British Grassland society through corporate membership. TechniSward grass mixtures combine varieties with high fibre digestibility and high sugar to ensure maximum animal performance, and make use of the latest grass breeding innovations to produce a sward that will stand up to the rigours of an increasingly unpredictable climate.

At Agrovista we believe that growing quality forage crops starts with the soil and no other company is better placed to be able to advise on all aspects of soil health, mixture selection, crop nutrition and agronomy. In addition, our highly experienced rural consultants can help you tailor your farming operations around other land use considerations, including Countryside Stewardship and the Sustainable Farming Incentive.



NIGEL STORER
Forage and Environmental Seeds
Technical Manager

Please contact your local Agrovista agronomist or email enquiries@agrovista.co.uk for further details.



Contents

| | |
|-----------------------------------|----|
| The technology behind TechniSward | 4 |
| Seed quality | 6 |
| Overseeding | 8 |
| Mixture selector | 11 |
| Standard grass seed mixtures | 12 |
| Drought and flood mixtures | 22 |
| Herbal leys | 24 |
| Equine mixtures | 28 |
| Forage crops | 30 |
| Amenity grass mixtures | 33 |
| Silage inoculants | 34 |





The technology behind TechniSward

TechniSward grass seed mixtures combine the top varieties from the UK's recommended grass and clover lists to produce swards with outstanding production and quality traits. The ability to pick the best varieties from all the leading seed breeders means that quality is never compromised.

Balance is the key to producing seed mixtures that work well in the field and the rumen. Using varieties that contain higher levels of water-soluble carbohydrates (sugars), allows the rumen bacteria to convert more of the plant protein into meat and milk, meaning less protein is wasted, resulting in improved performance and lower ammonia and methane emissions.

Cell wall components contain up to 60% of the energy found in a grass plant, and it is for this reason that Ruminants developed their multi chambered digestive tract, enabling them to make use of cell wall carbohydrates, something no other mammal can do. Using grass varieties that exhibit greater cell wall digestibility means that much more of the plant's energy is available for rumen fermentation.

The combination of high sugar and available cell wall carbohydrates make TechniSward grass leys some of the most productive, cost effective and environmentally friendly options available.

In an age when environmental responsibility is as important as food security, being able to produce sustainable, energy and protein rich food for a growing population from grasses and legumes that we ourselves cannot eat, and often from ground, upon which we cannot grow food crops for human consumption makes perfect sense.

Added to this grasses and forage legumes are also very good at recycling and storing carbon, removing greenhouse gasses from the environment, and helping to combat climate change.

Festuloliums

A festulolium is a type of intergeneric hybrid that possesses a wider range of agronomic traits than traditional interspecific hybrids.

The word festulolium comes from the Latin names for fescue; *Festuca* and ryegrass; *Lolium*. The parent plants of a festulolium can be any ryegrass crossed with any type of fescue. The most common crosses are between Italian or perennial ryegrass and meadow fescue or tall fescue.

The resulting hybrids demonstrate:

- Greater stress tolerance
- Deeper roots
- Improved disease resistance
- Higher yields (up to 3 tonnes more DM per year compared to the parent ryegrass)
- Higher levels of hybrid vigour



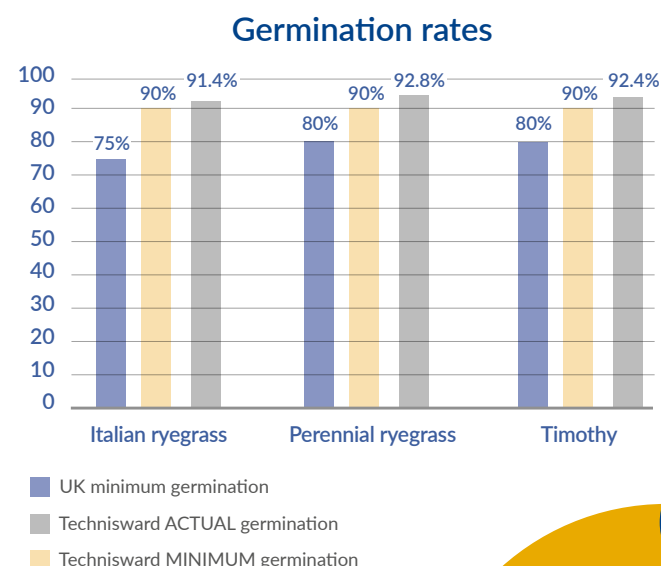
The combination of high sugar and available cell wall carbohydrates make TechniSward grass leys some of the most productive, cost effective and environmentally friendly options available.



Seed quality

All seed varieties used in TechniSward grass mixtures are produced to the very highest standards, far exceeding the HVS minimum standards for germination and weed seed contamination.

Each variety and mixture has been submitted to extensive trial work before being chosen, and almost all varieties in TechniSward mixtures are listed on the BSPB recommended list and SRUC list for Scotland.



TechniSward mixtures could contain up to 1 million more viable seeds per acre compared to the government minimum standard

Reseeding pays

Research has shown that increasing the proportion of the farm reseeded each year increases the annual grass yield across the total forage area with farm profitability running in line.

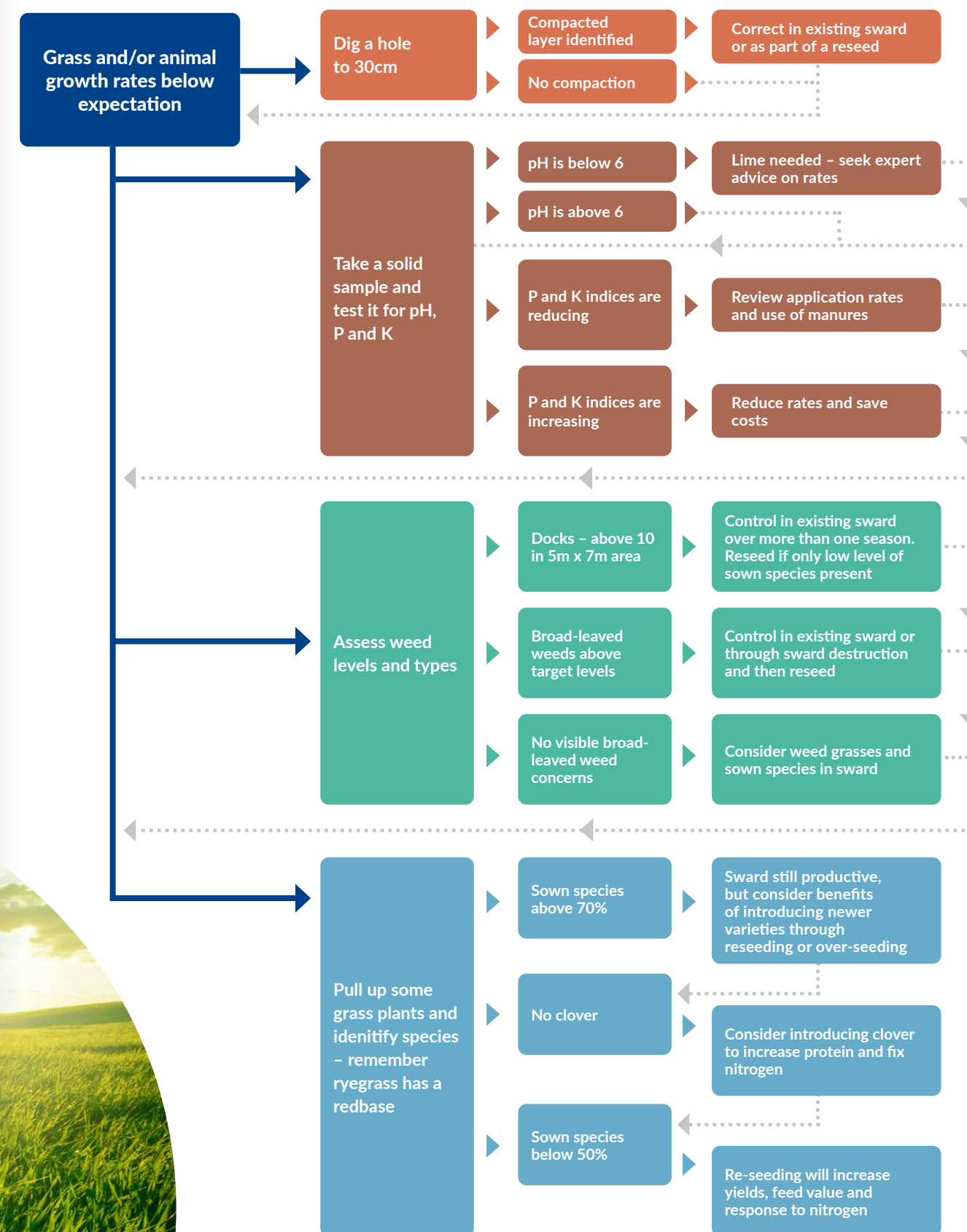
In addition to the yield enhancements associated with a reseed, new leys perform better. Utilisation is greater and nitrogen use efficiency is also improved.

Each year new grass varieties find their way onto the recommended grass and clover lists. These new varieties have, on average, taken 18-20 years to come through the breeding and trials process and represent significant genetic improvements compared to the varieties that they replace. Using genetics to increase production rather than throwing more fertiliser at tired and unresponsive swards can represent significant cost savings.



Deciding if a reseed is needed

Pasture improvement flow chart



Overseeding

Key benefits

- Cost effective solution where a short-term boost to production is needed
- Enables rejuvenation of worn-out pastures where ploughing is not an option
- Effective means of establishing clover into a sward after weed control has been carried out
- Overseeding clover into an existing sward could be eligible for the SFI NUM2 action

Overseeding, or “stitching in” of a new ley into an old sward can bring multiple benefits.

Over time swards naturally lose their vigour and become open in the bottom. This space is quickly taken up with weed grasses and broad-leaved weeds reducing the productivity of the sward.

Overseeding offers a cost-effective solution without the short term loss of production or cost associated with a complete reseed.

Key benefits

- Cost effective solution where a short-term boost to production is needed
- Enables rejuvenation of worn-out pastures where ploughing is not an option
- Effective means of establishing clover into a sward after weed control has been carried out

Introducing clover

Clover safe sprays are now virtually non-existent meaning that reseeding with a mixture containing clover can be problematic. Introducing clover into a new ley by overseeding after weed control has been carried out is a cost effective and practical solution to this problem and could make the ley eligible for the SFI NUM2 action worth £102/ha.

Typically, overseeding white clover at 1.5kg/acre will provide sufficient clover in the established sward to boost protein yield, increase dry matter intakes and provide up to 180kg/ha of nitrogen.

Red clover seeds are almost twice the size of white clover and so a more robust seed rate of around 3kg/acre is needed to produce a suitable plant population.

Establishment

The key to success with overseeding is achieving a good seed to soil contact and reducing competition from existing grasses. Therefore, the optimum time for overseeding is in mid-summer when grass growth slows, as long as moisture is present. Overseeding earlier than this will mean that existing grasses will be growing more vigorously and will compete with the emerging seedlings for light, space, and nutrients.

As with a complete reseed, pH and P & K requirements should be met. pH should be a minimum of 6 and

ideally 6 to 6.5. P & K should be at index 2 or above. Nitrogen should not be applied until the seedlings are well established at around 4 to 6 weeks. Applying nitrogen prior to this will lead to excessive growth in the existing grasses and weeds which will compete with the emerging seedlings.

Overseeding immediately after a defoliation, either by cutting or grazing but not topping is advised and scarification to remove thatch and shallow rooted weed grasses is also highly beneficial.

Use of a tined grass harrow for scarification will also produce a fine surface tilth where soil is exposed. If overseeding into an old permanent pasture, effective scarification is essential, and excessive amounts of removed thatch should be gathered up and removed from the field where possible.

Specialist overseeding drills are now widely available and are by far the best means of establishment, though a grass harrow with an air seeder attached can do a good job in optimum conditions, especially with clover seed. Heavier cereal disc drills can be used successfully but care must be taken not to place the seed too deep. 1cm to 3cm is deep enough and anything deeper than this can reduce seedling viability especially if moisture is in short supply.

If using a cereal drill, sowing at half rate, and using two passes at 45° to each other is recommended to ensure a dense sward is achieved. Rolling, ideally with a ring roller is a must with all establishment methods to ensure good seed to soil contact.

Livestock can continue to graze after sowing thus reducing competing grasses as well as helping to tread the seed in. Upon seedling emergence stock must however be removed or they will take out the emerging seedlings. Sheep or cattle can be used but care needs to be taken with sheep as they will graze too low if left in for too long and will nibble off the emerging seedlings at or near soil level.

Grazing lightly after 4-5 weeks can encourage the seedlings to tiller but care should be taken not to graze too hard. Grazing at this point with cattle can rip up the new seedlings if roots are not well established.

TechniSward overseeding mixtures, available with or without clover, contain fast establishing tetraploid varieties that will provide a boost to production for up to four years.

TechniSward Overseeding with clover



| | |
|-------------------|---|
| Seagoe | Tetraloid intermediate perennial ryegrass |
| AberEve | Tetraploid hybrid ryegrass |
| Ballintoy | Tetraploid late perennial ryegrass |
| Cairnsmore | White clover blend |



TechniSward Overseeding no clover



| | |
|------------------|---|
| Seagoe | Tetraloid intermediate perennial ryegrass |
| AberEve | Tetraploid hybrid ryegrass |
| Ballintoy | Tetraploid late perennial ryegrass |

TechniSward Clover blends



- TechniSward clover blends can be added to any grass mixture or be used for overseeding into new leys following weed control or for boosting clover content in existing swards

| White clover blends | Grazing | Dual purpose | Cutting |
|---------------------|---------|--------------|---------|
| Small | 54% | 27% | - |
| Medium | 46% | 23% | - |
| Large | - | 30% | 60% |
| Very large | - | 20% | 40% |
| Red clover blend | | | |
| Diploid | 70% | | |
| Tetraploid | 30% | | |

Mixture selector

| Mixtures | Page | Cutting | Grazing | Duration (years) | Clover options | Organic version |
|-----------------------|-------|---------|---------|------------------|----------------|-----------------|
| Catch crop | 13 | ✓✓✓✓ | ✓ | 1 - 2 | | |
| Turbo charge | 13 | ✓✓✓✓ | | 2 - 3 | Red 15% | ✓ |
| Multi-cut plus | 14 | ✓✓✓✓ | | 3 - 4 | Red 22% | ✓ |
| TriStar | 14 | ✓✓✓✓ | ✓ | 4 - 5 | White 5% | ✓ |
| HS Cutting | 15 | ✓✓✓✓ | ✓✓ | 5 | White 6% | |
| Border mixture | 16 | ✓✓✓ | ✓✓✓✓ | 6 | White 5% | ✓ |
| Calenonian | 16 | ✓✓✓✓ | ✓✓✓ | 6 | White 5% | |
| HS dual purpose | 17 | ✓✓✓✓ | ✓✓✓ | 5+ | White 5% | |
| Early start | 18 | ✓✓ | ✓✓✓✓ | 6+ | White 7% | |
| HS Intensive graze | 19 | ✓✓ | ✓✓✓✓ | 6+ | White 7% | |
| Multi-purpose | 20 | ✓✓✓ | ✓✓✓✓ | 5+ | White 5% | |
| ScotHay | 21 | ✓✓✓✓ | ✓✓✓✓ | 5+ | White 6% | |
| ScotHerb | 21 | ✓ | ✓✓✓✓ | 4 - 5 | | |
| Drought prone | 23 | ✓✓✓ | ✓✓✓✓ | 4 + | White 6% | ✓ |
| Flood prone | 23 | ✓✓✓ | ✓✓✓✓ | 4 + | | ✓ |
| Herbal light land | 26 | ✓ | ✓✓✓✓ | 4+ | | |
| Herbal med-heavy land | 26 | ✓ | ✓✓✓✓ | 4 + | | |
| MeadowMax | 27 | ✓✓ | ✓✓✓✓ | 6+ | | |
| Horse paddock | 29 | ✓ | ✓✓✓✓ | 5+ | | |
| Herbal horse paddock | 29 | | ✓✓✓✓ | 5+ | | |
| Forage crops | 31-32 | | ✓✓✓✓ | | | |
| Amenity mixtures | 33 | | | | | |



Standard grass seed mixtures

- Key benefits**
- TechniSward standard grass seed mixtures are premixed meaning that delivery lead times are shorter than with bespoke mixtures
 - Mixtures designed to fit most situations, eliminating the need for more costly bespoke mixtures
 - Tried and tested over time meaning complete reliability

TechniSward Catch crop

1-2 years



Heifers grazing catch crop aftermaths

- 50% Sikem Italian ryegrass
- 50% Turgo (T) Italian ryegrass

Italian ryegrass blend specifically designed to fill short term gaps in a crop rotation

| | | | |
|---|-------------------|---|-------------------|
| ✓ | Intensive cutting | | Beef grazing |
| ✓ | Cutting | | Sheep grazing |
| | Dairy grazing | ✓ | Aftermath grazing |

- Minimum suggested sowing rate of 12kg/acre (30kg/ha)
- Provides good early production for cutting or grazing
- Can be autumn or spring sown
- Vigorous establishment and winter hardiness lends to sowing after maize
- High sugar content provides a rapid lactic fermentation

TechniSward Turbo charge

2-3 years



A highly productive intensive cutting ley suitable for aftermath grazing

| | | | |
|---|-------------------|---|-------------------|
| ✓ | Intensive cutting | | Beef grazing |
| ✓ | Cutting | | Sheep grazing |
| | Dairy grazing | ✓ | Aftermath grazing |

- Minimum suggested seed rate 14kg/acre (35kg/ha)
- 5 day spread of heading dates for optimum silage quality
- Intensive cutting with good aftermath grazing
- Quick recovery after cutting
- Ideal for haylage production
- Contains Perseus ryegrass plus™ for yield, persistency and disease resistance
- 15% red clover option available

| Variety | Heading date |
|-----------------------------------|--------------|
| Hunter (T) Italian ryegrass | 20th May |
| Alamo Italian ryegrass | 23rd May |
| Perseus Festulolium | 25th May |
| Astoncrusader (T) Hybrid ryegrass | 21st May |



TechniSward Multi-cut plus

3-4
years



| Variety | REE |
|-----------------------------------|-----|
| Lofa <i>Festulolium</i> | 34* |
| Perseus <i>Festulolium</i> | 37 |
| Perun <i>Festulolium</i> | 33* |

REE = Relative ear emergence

* Estimated REE based on mainland UK heading dates

High production specialist multicutting mixture containing 100% ryegrass plus festuloliums for improved yield persistency and stress tolerance

| | | | |
|---|-------------------|---|-------------------|
| ✓ | Intensive cutting | | Beef grazing |
| ✓ | Cutting | | Sheep grazing |
| | Dairy grazing | ✓ | Aftermath grazing |

- 5 day spread of heading date for optimum quality
- Minimum suggested seed rate 14kg/acre (35kg/ha)
- 4-6 cuts per year plus aftermath grazing
- High sugar content provides a rapid lactic fermentation and drives intakes
- 22% red clover option available
- Up to 3.5 tonnes/ha more dry matter from ryegrass plus varieties compared to standard Italian ryegrass
- Organic version available



TechniSward TriStar

3-4
years



| Variety | REE |
|--|-----|
| AberEcho (T) Hybrid ryegrass | 27 |
| Barsilo (T) Hybrid ryegrass | 37 |
| Fintona (T) Intermediate perennial ryegrass | 32 |
| Galgorm Intermediate perennial ryegrass | 36 |

REE = Relative ear emergence

Tried and tested intensive short-term cutting mixture producing huge yields of excellent quality silage

| | | | |
|---|-------------------|---|-------------------|
| ✓ | Intensive cutting | | Beef grazing |
| ✓ | Cutting | | Sheep grazing |
| | Dairy grazing | ✓ | Aftermath grazing |

- Minimum recommended sowing rate 14kg/acre (35kg/ha)
- Huge yield potential
- Suitable for producing multiple cuts and zero grazing
- High sugar content provides a rapid lactic fermentation and drives intakes
- Available with Nithsdale white clover blend



TechniSward HS Cutting

5
years



| Variety | REE |
|---|-----|
| AberZeus Intermediate perennial ryegrass | 40 |
| AberGreen Intermediate perennial ryegrass | 43 |
| AberSpey (T) Intermediate perennial ryegrass | 44 |
| AberGain (T) Late perennial ryegrass | 49 |

REE = Relative ear emergence

HS Cutting performance

| Mean conservation yield | 1st cut D value | Aftermath grazing yield |
|-------------------------|-----------------|-------------------------|
| 103% | 103% | 110% |

Figures expressed as a percentage of the average SRUC recommended list benchmark figure for perennial ryegrasses

A specialist long-term cutting mixture containing 100% Aber high sugar varieties

| | | | |
|---|-------------------|---|-------------------|
| ✓ | Intensive cutting | | Beef grazing |
| ✓ | Cutting | | Sheep grazing |
| ✓ | Dairy grazing | ✓ | Aftermath grazing |

- Minimum recommended sowing rate 15kg/acre (37kg/ha)
- Huge yield potential over multiple cuts
- High sugar content provides a rapid lactic fermentation and drives intakes
- White clover option available



“

Though principally designed as a long-term, late heading cutting mixture, HS Cutting is an extremely durable ley.

The combination of high yields, high levels of water-soluble carbohydrates, excellent digestibility and outstanding late season aftermath grazing make it an excellent allrounder.



TechniSward Border mixture

5+ years



Tried and tested multi award winning dual - purpose mixture that will thrive in all conditions

| | | | |
|---|-------------------|---|-------------------|
| | Intensive cutting | ✓ | Beef grazing |
| ✓ | Cutting | ✓ | Sheep grazing |
| ✓ | Dairy grazing | ✓ | Aftermath grazing |

| Variety | REE |
|---|-----|
| AberGreen Intermediate perennial ryegrass | 43 |
| AberZeus Intermediate perennial ryegrass | 40 |
| Gusto Intermediate perennial ryegrass | 44 |
| AberSpey (T) Intermediate perennial ryegrass | 44 |
| AberChoice Late perennial ryegrass | 55 |
| Glenrock Late perennial ryegrass | 52 |
| Callan Late perennial ryegrass | 46 |
| AberGain (T) Late perennial ryegrass | 49 |
| Ballintoy (T) Late perennial ryegrass | 46 |
| Scots Timothy | 51 |

- Minimum recommended sowing rate 15kg/acre (37kg/ha)
- 71% Diploid inclusion produces a dense hard-wearing sward
- High quality silage plus quality grazing
- Aber high sugar varieties ensure animal performance and excellent fermentation characteristics
- Available with Nithsdale white clover blend
- Organic version available with white clover as standard



REE = Relative ear emergence

TechniSward Caledonian

5+ years



A multi use mixture containing no Timothy

- Minimum recommended sowing rate 14kg/acre (35kg/ha)
- Huge yield potential over multiple cuts
- 48% tetraploid inclusion ensures a rapid lactic fermentation and drives intakes
- Very close spread of heading dates for optimum quality
- Available with Cairnsmore white clover blend



| Variety | REE |
|--|-----|
| Galgorm Intermediate perennial ryegrass | 36 |
| Gosford Intermediate perennial ryegrass | 42 |
| Caledon (T) Intermediate perennial ryegrass | 44 |
| Callan Late perennial ryegrass | 46 |
| Ballintoy (T) Late perennial ryegrass | 46 |
| Gracehill (T) Late perennial ryegrass | 47 |

REE = Relative ear emergence

TechniSward HS dual purpose

5+ years



A dual-purpose, medium-term, high sugar mixture that will thrive in any situation

| | | | |
|---|-------------------|---|-------------------|
| | Intensive cutting | ✓ | Beef grazing |
| ✓ | Cutting | ✓ | Sheep grazing |
| ✓ | Dairy grazing | ✓ | Aftermath grazing |

| Variety | REE |
|---|-----|
| AberOpal (T) Hybrid ryegrass | 35 |
| AberZeus Intermediate perennial ryegrass | 40 |
| AberGreen Intermediate perennial ryegrass | 43 |
| AberSpey (T) Intermediate perennial ryegrass | 44 |
| AberChoice Late perennial ryegrass | 55 |
| AberAvon Late perennial ryegrass | 47 |
| AberGain (T) Late perennial ryegrass | 49 |

REE = Relative ear emergence

- The high levels of water-soluble carbohydrates ensure a rapid, stable fermentation when ensiled and high voluntary intakes when grazed.
- High sugar levels also ensure that more energy is left for the animal after fermentation demands.
- Available with AberDairy white clover blend.
- Optimum sowing rate 15kg/acre (37kg/ha).



TechniSward Early start

6+
years



| Variety | REE |
|---|-----|
| Strangford <i>Intermediate perennial ryegrass</i> | 35 |
| Gosford <i>Intermediate perennial ryegrass</i> | 42 |
| Galgorm <i>Intermediate perennial ryegrass</i> | 36 |
| Fintona (T) <i>Intermediate perennial ryegrass</i> | 32 |
| Glenrock <i>Late perennial ryegrass</i> | 52 |
| Ballyvoy <i>Late perennial ryegrass</i> | 47 |
| Gracehill (T) <i>Late perennial ryegrass</i> | 47 |
| Comer <i>Timothy</i> | 53 |

REE = Relative ear emergence

A specialist long-term, hard-wearing mixture that will produce quality forage over a long grazing season

| | |
|-----------------|-------------------|
| ✓ Hay/haylages | ✓ Beef grazing |
| Cutting | ✓ Sheep grazing |
| ✓ Dairy grazing | Aftermath grazing |

- Optimum suggested sowing rate of 15kg/acre (37kg/ha)
- Huge early production that persists throughout the season and well into the autumn
- Produces a dense highly palatable sward
- Timothy provides early grazing up to a month ahead of ryegrasses
- Available with Cairnsmore white clover blend



When compared to the SRUC recommended lists average figures for spring and autumn grazing yields Early start scores an impressive 108% and 115% respectively!

TechniSward HS intensive graze

5+
years



| Variety | REE |
|--|-----|
| AberZeus <i>Intermediate perennial ryegrass</i> | 40 |
| AberSpey (T) <i>Intermediate perennial ryegrass</i> | 44 |
| AberBann <i>Late perennial ryegrass</i> | 46 |
| AberGain (T) <i>Late perennial ryegrass</i> | 49 |
| AberLee | 55 |

REE = Relative ear emergence

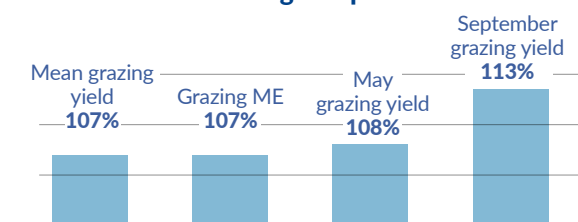
A medium to long term specialist grazing mixture for rotational grazing systems

| | |
|-------------------|-------------------|
| Intensive cutting | ✓ Beef grazing |
| ✓ Cutting | Sheep grazing |
| ✓ Dairy grazing | Aftermath grazing |

- Minimum recommended sowing rate 15kg/acre (37kg/ha)
- 100% Aber high sugar grasses
- Produces a dense, palatable, and highly digestible sward that produces right through the season
- Paddocks can be shut up to produce excellent quality silage
- White Clover option available



HS Intensive graze performance



Figures expressed as a percentage of the average SRUC recommended list benchmark figure for perennial ryegrasses



Intensive graze has been designed to meet the demands of extended grazing systems using only Germinal high sugar grasses.

Varieties have been selected to give exceptional production right through the grazing season.

TechniSward Multi-purpose

6+ years



| Variety | REE |
|---|-----|
| Gosford <i>Intermediate perennial ryegrass</i> | 42 |
| Caledon (T) <i>Intermediate perennial ryegrass</i> | 44 |
| Ballyvoy <i>Late perennial ryegrass</i> | 47 |
| Glenrock <i>Late perennial ryegrass</i> | 52 |
| Callan <i>Late perennial ryegrass</i> | 46 |
| Ballintoy (T) <i>Late perennial ryegrass</i> | 46 |
| Comer <i>Timothy</i> | 53 |

REE = Relative ear emergence

A multi-purpose, late heading mixture suited to higher climbs and tough conditions

| | | | |
|---|-------------------|---|-------------------|
| | Intensive cutting | ✓ | Beef grazing |
| ✓ | Cutting | ✓ | Sheep grazing |
| ✓ | Dairy grazing | ✓ | Aftermath grazing |

- Excellent winter hardiness and ground cover
- Timothy provides good early grazing and improves palatability
- 100% SRUC first choice varieties
- Available with Cairnsmore white clover blend
- Optimum sowing rate 15kg/acre (37kg/ha)



The balance of production with Multi-purpose leans heavily towards late season production, late grazing yields in particular are outstanding.

This mixture will do well in all situations but is especially suited to late farms where most of the production is needed from June onwards.

TechniSward ScotHay

5+ years



| Variety | REE |
|---|-----|
| Gosford <i>Intermediate perennial ryegrass</i> | 42 |
| Gusto <i>Intermediate perennial ryegrass</i> | 44 |
| Glenrock <i>Late perennial ryegrass</i> | 52 |
| Ballyvoy <i>Late perennial ryegrass</i> | 47 |
| Scots <i>Timothy</i> | 51 |
| Fantazja <i>Meadow fescue</i> | N/A |

REE = Relative ear emergence

Specialist hay mixture with 100% diploid varieties, ensuring rapid, even drying

- The inclusion of Timothy and Meadow fescue increases persistency and will produce a hay crop that is fine textured and palatable with an appealing aroma
- Provides a very dense sward suitable for winter sheep grazing
- Available with Cairnsmore white clover blend

TechniSward ScotHerb

4+ years



| Variety | REE |
|--|-----|
| Galgorm <i>Intermediate perennial ryegrass</i> | 36 |
| AberGreen <i>Intermediate perennial ryegrass</i> | 44 |
| Seagoe (T) <i>Intermediate perennial ryegrass</i> | 35 |
| Gracehill <i>Late perennial ryegrass</i> | 47 |
| AberChoice <i>Late perennial ryegrass</i> | 55 |
| Callan <i>Late perennial ryegrass</i> | 46 |
| Scots <i>Timothy</i> | 51 |
| Nithsdale <i>White clover blend</i> | N/A |
| Plantain | N/A |
| Grazing Chicory | N/A |

REE = Relative ear emergence

A simple but highly productive multi-species ley that will suit most soil types

- The deep penetrating roots of plantain and chicory make this mixture very drought tolerant as well as bringing up trace elements and minerals from deep within the soil profile
- Suitable for rotational grazing and cutting systems
- As with all multi species leys cutting or grazing too low should be avoided
- Sow at 12-13kg/acre

Drought and flood mixtures

Key benefits

- Deep rooting varieties stand out in dry summers
- High quality early production and fast recovery after cutting/ grazing
- Excellent winter hardiness and stress tolerance
- Designed to withstand challenging environmental conditions

TechniSward Extreme drought prone

5+
years

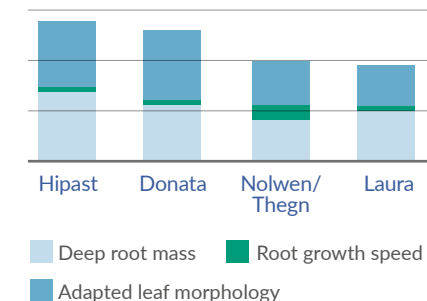


A specialist long term grazing mixture that can withstand long periods of hot dry weather

- Minimum recommended sowing rate 15kg/acre (37kg/ha)
- Incredibly dense hard-wearing sward
- Contains deep rooting varieties including tall fescue plus™ festuloliums
- White clover helps maintain ground cover, reducing moisture losses to evaporation
- Available without clover



Drought coping mechanisms



TechniSward Extreme flood prone

5+
years



A specialist long term grazing mixture specifically designed for flood prone land

- Minimum recommended sowing rate 15kg/acre (37kg/ha)
- Incredibly dense hard-wearing sward
- Contains deep rooting varieties including Hipast tall fescue plus™ festulolium and Donata soft leaved cocksfoot
- Creeping red fescue helps to prevent soil erosion due to its extensive rhizomes that hold the sward together in the face of fast flowing flood waters
- All varieties are proven to be winter hardy, give good ground cover and have excellent stress tolerance
- While no grass sward can withstand months under water this mixture has shown that it fares better than most when faced with fast rising and falling seasonal flood water



Hipast *Festulolium*

Dolina *Timothy*

Bowie *Late perennial ryegrass*

Donata *Soft leaved cocksfoot*

Laura *Meadow fescue*

Evora *Smooth stalked meadow grass*

Maxima *Creeping red fescue*

Herbal leys

Key benefits

- Improvements in soil structure and fertility
- Drought tolerance
- Improved animal performance and health
- Good for building soil carbon stocks
- May be suitable for environmental schemes

Drought tolerance

Diverse swards containing a range of grasses, herbs and legumes have a wide range of root types and depths, from shallow fibrous roots to deep penetrating tap roots that can extend to several metres below ground, breaking through compacted soil to reach moisture at levels that ryegrass could never reach.

Additionally; the diverse root structures in herbal leys help to build soil organic matter and for every 1% increase the soils water holding capacity can increase by up to 188,000l per hectare.

Soil health and fertility

Diverse herbal mixtures are made up of multiple stratified layers both above and below ground with the different species growing to different heights within the sward and with varying leaf sizes and shapes. This allows for maximum capture of sunlight whatever the time of day and position of the sun. This in turn means that more CO² and water are converted to sugars. Sugar that is surplus to the plants requirements is released into the soil around the roots and is used by the mycorrhizal fungi encouraging them to colonise the area around the roots where they form a symbiosis with the plant which helps the plant to make use of soil nutrients such as phosphorous.

Animal health and performance

Diverse swards containing herbs and legumes benefit livestock performance in several different ways:

- Legumes are protein rich and have the benefit of fixing N
- The deep roots of many of the species bring up essential minerals, trace elements and vitamins from deep within the soil
- Some legumes are bioactive meaning that they contain condensed tannins or polyphenol oxidase. These compounds can protect protein from rumen fermentation meaning that the risk of bloat is reduced, and the protein is degraded in the hind gut where it is used more efficiently by the animal
- Fermentation within conserved forages is also improved and dry matter losses at ensiling are reduced
- Some herbs and legumes have anthelmintic properties, and so reduce parasitic worm burdens
- The diverse nature of the sward tends to drive up utilisation and dry matter intakes

“

The deep roots of many of the species bring up essential minerals, trace elements and vitamins from deep within the soil

TechniSward Herbal light land



- TechniSward's light land herbal mixture contains species specifically selected to work well in drought prone soils
- Hipast festulolium with it's tall fescue genetics is deep rooting and incredibly drought tolerant whilst it's perennial ryegrass genetics ensure excellent grazing quality
- Sainfoin and Lucerne are light land specialists that fix nitrogen and provide high quality protein and health benefits

| | | | |
|---|-----|---------------------------|-------|
| Hipast <i>Perennial plus festulolium</i> | 20% | Lucerne | 4% |
| Nolwen (T) L PRG | 14% | Birds foot trefoil | 0.5% |
| Donata Cocksfoot | 16% | Plantain | 3.5% |
| Winnetou Timothy | 7% | Chicory | 1% |
| Laura Meadow fescue | 4% | Sheeps burnet | 1.75% |
| Altaswede Red clover | 10% | Sheeps parsley | 1% |
| Sainfoin | 17% | Yarrow | 0.25% |

TechniSward Herbal medium to heavy land



- TechniSward herbal medium to heavy land is designed to work across a wide range of growing and soil conditions
- The grasses and legumes have been selected to provide optimum performance in both grazing and cutting scenarios
- Chicory is included at a low level to reduce the issues associated with ensiling whilst still taking advantage of its animal health and soil improving benefits

| | | | |
|-------------------------------------|-----|---------------------------|-------|
| Lofa Hybrid plus festulolium | 25% | Birds foot trefoil | 0.5% |
| Nolwen (T) L PRG | 24% | Plantain | 4% |
| Winnetou Timothy | 10% | Sheeps burnet | 2.5% |
| Donata Cocksfoot | 12% | Chicory | 1% |
| Laura Meadow fescue | 5% | Sheeps parsley | 1.5% |
| Red clover blend | 10% | Yarrow | 0.25% |
| Alsike clover | 4% | Black medick | 0.25% |

For more herbal leys including herbal overseeding mixtures please see our [guide to environmental and cover crop seeds](#).

TechniSward MeadowMax



| | |
|-------------------------------------|-----|
| Laura Meadow fescue | 20% |
| Maxima Creeping red fescue | 20% |
| Coma timothy | 16% |
| Donata Soft leaved cocksfoot | 17% |
| Hipast Grazing festulolium | 17% |
| Tower Tall fescue | 10% |

MeadowMax is a mixture of traditional noncompetitive grasses designed to work in extensive farming systems

| | | |
|-------------------|---|-------------------|
| Intensive cutting | ✓ | Beef grazing |
| ✓ Cutting | ✓ | Sheep grazing |
| Dairy grazing | ✓ | Aftermath grazing |

- MeadowMax brings together traditional native grasses and modern genetics to produce a sward that is long lasting, hard wearing and environmentally sustainable
- This mixture works well in parkland scenarios where its long growing season makes it suitable for early grazing followed by a cut of hay and then more grazing well into the autumn
- The tussocky nature of MeadowMax when left uncut makes it perfect for use as a field margin or wildlife friendly buffer strip
- Sow at 13 to 15 kg/acre (32–37kg/ha)

“

The tussocky nature of MeadowMax when left uncut makes it perfect for use as a field margin or wildlife friendly buffer strip





Equine mixtures

Key benefits

- Lower sugar, no ryegrass mixtures
- Highly palatable
- Dense and hard wearing
- Drought tolerant
- Long growing season

TechniSward Horse paddock



A persistent and hard-wearing, ryegrass free paddock mixture that is low in the plant sugars that can cause laminitis in horses

- Though slower to establish than mixtures containing ryegrasses, this mixture will be incredibly dense and resilient once established and will be more drought tolerant than ryegrass mixtures, reducing the need for supplementary feeding during dry summers
- The relatively small seed size of these grasses means that a sowing rate of 14kg/acre will provide a sufficient plant density in most situations. Jumping paddocks and other high traffic areas should be sown at 17-20kg/acre

| | |
|--------------|------------------------------|
| 26% Hipast | Tall fescue plus festulolium |
| 14% Winnetou | Timothy |
| 16% Donata | Soft leaved cocksfoot |
| 21% Evora | Smooth stalked meadow grass |
| 15% Maximan | Creeping red fescue |
| 8% Laura | Meadow fescue |

TechniSward Herbal horse paddock



A mixture of traditional grasses, herbs and legumes designed for competition horses and brood mares

- The addition of beneficial herbs and the bioactive legume Birdsfoot trefoil have been shown to improve health and performance in competition horses. Diverse herb rich swards supply essential minerals such as copper via Yarrow. Copper deficiency in pregnant mares during the third trimester has been linked to Developmental Orthopaedic Disease
- Sow at 14kg/acre
- This mixture may not be suitable for overweight horses and ponies.

| | |
|-------------------------|------------------------------|
| 26% Hipast | Tall fescue plus festulolium |
| 14% Winnetou | Timothy |
| 12% Donata | Soft leaved cocksfoot |
| 20% Evora | Smooth stalked meadow grass |
| 12% Maximan | Creeping red fescue |
| 8% Laura | Meadow fescue |
| 2% Ribwort plantain | |
| 0.5% Birds foot trefoil | |
| 1.75% Sheeps burnet | |
| 1.5% Sheeps parsley | |
| 0.25% Yarrow | |



Forage crops

Key benefits

- Economical to grow
- Reduces bought in feed costs
- Provides a break in cropping

Rapid Root (for autumn use)

The forage rape element of this mixture ensures a rapid establishment and high protein yields, whilst the stubble turnips are high in energy and improve the stock holding capacity. Sow mid-April to mid-September

| | | |
|--------------------|-------------|-------------|
| 60% Forage rape | Sowing rate | 6-8.5 kg/ha |
| 35% Stubble turnip | Pack size | 5 kg |
| 5% Kale | Treatment | Untreated |

Winter graze (for use December onwards)

This mixture is ideal for sowing after winter cereals to provide grazing from December onwards, winter hardiness is excellent. Sow from mid-July to mid-September.

| | | |
|--------------------|-------------|-------------|
| 35% Forage rape | Sowing rate | 6-8.5 kg/ha |
| 60% Stubble turnip | Pack size | 5 kg |
| 5% Kale | Treatment | Untreated |

Stubble turnips



- Extremely versatile crop that can be grown for either summer or autumn/winter use for grazing in situ
- Bulbing and leafy varieties are available

| Dry matter yield (t/ha) | Dry matter content (%) | Crude protein | D-value | ME (MJ / kg DM) |
|-------------------------|------------------------|---------------|---------|-----------------|
| 4-4.5 | 9-12 | 17-18 | 70 | 10.5-11 |

Fodder beet



- Grown as a main crop rather than a break crop, Fodder beet has similar inputs to sugar beet. The roots are very palatable with a high energy value
- Fodder beet can be lifted and stored or grazed in situ

| Dry matter yield (t/ha) | Dry matter content (%) | Crude protein | D-value | ME (MJ / kg DM) |
|-------------------------|------------------------|---------------|---------|-----------------|
| 18-22 | 12-19 | 12-13 | 78 | 12.5-13.5 |

Extended Graze



- Extended graze is a mixture of Italian ryegrass and hybrid forage brassica
- Sown in late summer or early autumn at a rate of 20-25kg/ha, this mixture can be grazed within 6-8 weeks of sowing and will go on to produce quality forage for up to 12 months
- The forage brassica element will provide a second grazing providing a residual stubble height of 4-6 inches is left following the first grazing
- Adding berseem clover to this mixture can lift protein yield, fix nitrogen for the following crop and improve soil structure

| Dry matter yield (t/ha) | Dry matter content (%) | Crude protein | D-value | ME (MJ / kg DM) |
|-------------------------|------------------------|---------------|---------|-----------------|
| 15 | 12-15 | 13-15 | 68 | 10-11 |

Spitfire hybrid brassica



- Spitfire is a kale/rape hybrid brassica, capable of very high yields with excellent feed value
- A medium tall variety with a low dry matter stem which boosts utilisation, Spitfire can provide up to three grazing periods
- Spitfire demonstrates high vigour, establishing quickly and providing a utilisable crop within 9 weeks of sowing

| Dry matter yield (t/ha) | Dry matter content (%) | Crude protein | D-value | ME (MJ / kg DM) |
|-------------------------|------------------------|---------------|---------|-----------------|
| 7-9 | 12-15 | 17-19 | 70 | 10.5-11.5 |

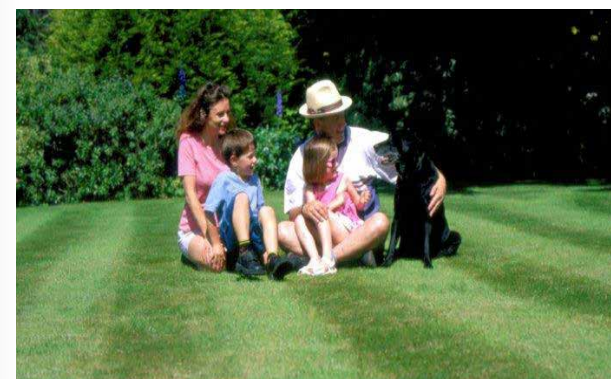
Amenity grass mixtures

TechniSward multi purpose landscaper



- Extremely hard-wearing land scaping mixture perfectly suited for use in caravan/camping sites and event car parks
- 50:50 mixture of amenity ryegrass and creeping red fescue

TechniSward Pro Master 51



- Hard wearing lawn with ryegrass that will establish quickly
- Ideal for general purpose lawns. Contains Double 4turf® for improved colour and increased drought tolerance

TechniSward Pro Master 52



- An economical and hard wearing fine lawn mixture containing only fescues for ease of management
- Suited to cutting with a cylinder mower



Silage inoculants

Key benefits

- Enhances the natural fermentation process
- Rapid pH drop
- Reduced dry matter losses
- Optimal nutrient retention

Giving nature a helping hand

Conserved forages form the bulk of most ruminant livestock's daily dry matter intake for much of the year, and as such, the quality of that forage is a major pre-determinant of enterprise efficiency.

In essence silage making is a straightforward process; cut and chop the crop, clamp, or bale it, exclude air, and let the bacteria in the clamp do the rest...simple!

However, much can go wrong, even when best practice is observed, and the knock-on effect on animal performance and farm profitability can be huge.

There are two critical points at which things can go wrong.

Ensiling

The principal objective of silage making is to achieve a rapid pH drop down to a safe and stable level. The more rapid the acidification is, the more we are able to preserve nutrients and reduce dry matter losses.

Feed-out

Once the clamp has been opened and exposed to oxygen, spoilage organisms such as yeasts and moulds will quickly become active, resulting in heating of the clamp and losses of both nutrients and dry matter.

Using an inoculant containing crop specific microorganisms influences and enhances the natural fermentation process and maintains aerobic stability in the presence of oxygen. The result is optimal preservation of dry matter and nutrients, meaning improved animal health and performance.

No matter how good you are at making silage, the results are almost always better when an inoculant is used.



| Product | Crop type | Benefits |
|---------------------------|--|--|
| Pioneer 1188 | Grass below 25% DM | <ul style="list-style-type: none"> • Fermentation • Animal performance |
| | Grass and clover below 30% DM | |
| Pioneer 11A44 | Grass above 35% DM with good digestibility | <ul style="list-style-type: none"> • Significantly improves aerobic stability |
| | Cereal silages | |
| Pioneer 11G22 Rapid React | Grass or grass and clover 25% DM and above with good digestibility | <ul style="list-style-type: none"> • Fermentation • Animal performance • Aerobic stability in as little as 7 days |
| | Grass or grass and clover 25% DM or above with poor digestibility | |
| | Arable silages | |
| Pioneer 11GFT | Grass and clover 25% DM and above with poor digestibility | <ul style="list-style-type: none"> • Fermentation • Animal performance • Fibre digestibility • Aerobic stability |
| | Cereal silages | |



Agrovista UK Limited

Rutherford House
Nottingham Science
& Technology Park
University Boulevard
Nottingham
NG7 2PZ

enquiries@agrovista.co.uk



@AgrovistaUK

agrovista.co.uk

Use plant protection products safely. Always read the label and product information before use.