



agrovista
seeds



Grass seed mixtures for Scotland

2023

*growing through
innovation*

 **techni
sward**
GRASS SEED

2022 was a record-breaking year. Input costs soared to heights never experienced before and the weather throughout most of the country was the driest and hottest on record.

Optimising production from forage has never been more important and quality grass leys are central to the profitability of any ruminant livestock enterprise. The TechniSward range of grass leys are designed to be highly productive and have resilience built in.

They contain only the best varieties from the BSPB/AHDB recommended lists, the SRUC Scottish lists and the Teagasc PPI index. 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.

Agrovista have specialist technical advisors to help you choose the correct grass mixture for your needs. In addition, our agronomists can help ensure your soils and inputs are tailored to obtain maximum return for your investment in grassland.



NIGEL STORER
Forage and Environmental Seeds
Technical Manager

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



Contents

Seed technology	4
Seed quality	5
Why replace your grass swards	5
Over seeding and clover mixtures	6
Mixture selector	9
Standard grass seed mixtures	10
Drought and flood mixtures	20
Herbal grazing mixtures	23
Equine mixtures	24
Forage crops	26
Amenity grass mixtures	29
Silage inoculants	30



The technology behind TechniSward

Combining high sugars and cell wall digestibility

Agrovista works with leading seed breeders to produce seed mixtures that combine the best production and quality traits available.

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 plants' 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.

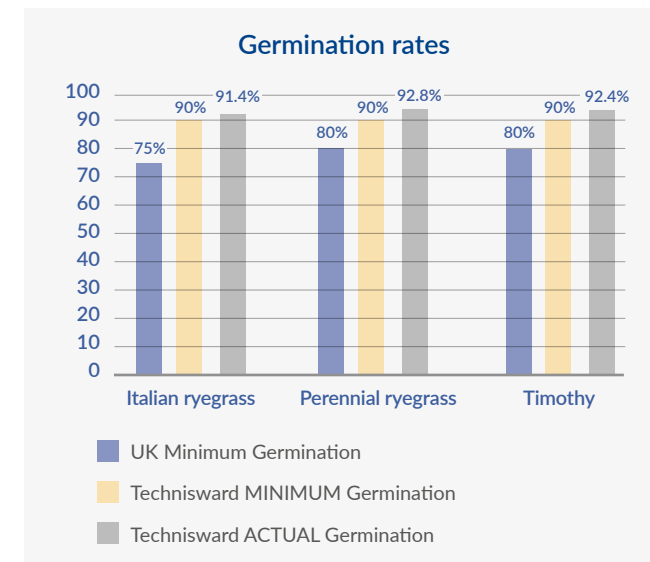
The resulting hybrids demonstrate:

- 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

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 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

Why replace your grass leys

- Over time sown species die off leaving space that is taken up by weed grasses and broad-leaved weeds
- A typical 5-year-old ley contains only 50% of the original sown species
- Reductions in energy yield and energy density add up to an annual loss of c86,400 MJ of energy per hectare. Equivalent to six and a half tonnes of concentrate feed
- New grass leys grow more vigorously and respond better to fertiliser inputs, thus reducing wastage and cost as well as reducing environmental impact
- The addition of clover following effective weed control can also provide up to 250 kg of Nitrogen per hectare annually

Overseeding and clover mixtures

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, 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 loss of production or cost associated with a complete reseed.

Introducing Clover

Clover safe sprays are now virtually non-existent and so 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.

Typically, overseeding white clover at 3.5kg/ha will provide sufficient clover in the established sward to boost protein yield, increase dry matter intakes and provide up to 180kg/ha of nitrogen.

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 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. Livestock can continue to graze after sowing thus reducing competing grasses. Upon seedlings emergence stock must however, be removed or they will take out the emerging seedlings.

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, especially with clover seed. Rolling, ideally with a Cambridge roll is a must with all establishment methods.



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	Tetraploid intermediate perennial ryegrass
Boyne	Intermediate perennial ryegrass
Bijou	Tetraploid late perennial ryegrass
Alfonso	Tetraploid late perennial ryegrass
Cairnsmore	White clover blend



TechniSward Overseeding no clover



Seagoe	Tetraploid intermediate perennial ryegrass
Boyne	Intermediate perennial ryegrass
Bijou	Tetraploid late perennial ryegrass
Alfonso	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	Nithsdale	Cairnsmore
Rivendel (small)	10%	30%
Merwi (medium)	70%	50%
Alice (large)	20%	-
Hebe (med/large)	-	20%

Galloway red clover blend	
Rozeta	25%
Garant	25%
Global	50%

Varieties and percentage inclusion is subject to availability

Mixture selector

		Cutting	Grazing	Duration (years)	Clover options	Organic version	Diploid: Tetraploid ratio
Catch crop	11	✓✓✓✓	✓	1 - 2			50:50
Turbo charge	11	✓✓✓✓		2 - 3	Red 15%		15:85
Multi- Cut Plus	12	✓✓✓✓		3 - 4	Red 25%	✓	0:100
TriStar	12	✓✓✓✓	✓	4 - 5	White 5%	✓	25:75
HS Cutting	13	✓✓✓✓	✓✓	5	White 6%		18:82
Border mixture	14	✓✓✓	✓✓✓✓	6	White 5%	✓	29:71
Calenonian	14	✓✓✓✓	✓✓✓	6	White 4%		52:48
HS dual purpose	15	✓✓✓✓	✓✓✓	5+	White 5%		47:53
Early start	16	✓✓	✓✓✓✓	6+	White 7%		67:33
HS Intensive graze	17	✓✓	✓✓✓✓	6+	White 7%		53:47
Multi-purpose	18	✓✓✓	✓✓✓✓	5+	White 5%		65:35
ScotHay	19	✓✓✓✓	✓✓✓✓	5+	White 5%		73:27
ScotHerb	19	✓	✓✓✓✓	4 - 5	Std		
Drought prone	21	✓✓✓	✓✓✓✓	4 +	Std		
Flood prone	21	✓✓✓	✓✓✓✓	4 +			
Herbal light land	23	✓	✓✓✓✓	4+			
Herbal med-heavy land	23	✓	✓✓✓✓	4 +			
Horse paddock	25	✓	✓✓✓✓	5+			
Herbal horse paddock	25		✓✓✓✓	5+			
Forage crops	26-28		✓✓✓✓				
Amenity mixtures	29			7+			

Std = Included as standard



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



50% Sikem Italian ryegrass

50% Turgo Tetraploid 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)
- 6 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	19th May
Alamo Italian ryegrass	21st May
Perseus Festulolium	25th May
Astoncrusader (T) Hybrid ryegrass	19th May



TechniSward Multi cut plus

3-4
years



High production specialist multi cutting mixture containing 100% ryegrass plus festuloliums

✓	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
- 25% 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



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

TechniSward TriStar

4-5
years



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
- Organic version available with red and white clover as standard



Variety	REE
AberEcho (T) <i>Hybrid ryegrass</i>	27
Astoncrusader (T) <i>Hybrid ryegrass</i>	32
Fintona (T) <i>Intermediate perennial ryegrass</i>	32
Boyne <i>Intermediate perennial ryegrass</i>	33

REE = Relative ear emergence

TechniSward HS Cutting

5
years



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



Variety	REE
AberZeus <i>Intermediate perennial ryegrass</i>	40
AberGreen <i>Intermediate perennial ryegrass</i>	43
AberSpey (T) <i>Intermediate perennial ryegrass</i>	44
AberGain (T) <i>Late perennial ryegrass</i>	49

REE = Relative ear emergence

HS Cutting performance

Mean conservation yield	1st cut D value	Aftermath grazing yield
103%	103%	105%

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

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

- 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
- Available with Westerwolths (sow at 17kgs/acre, 42kgs/ha)
- Organic version available with white clover as standard



Variety	REE
Gosford Intermediate perennial ryegrass	42
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
Aston Chieftain Late perennial ryegrass	52
AberGain (T) Late perennial ryegrass	49
Ballintoy (T) Late perennial ryegrass	46
Scots Timothy	51

REE = Relative ear emergence

TechniSward Caledonian

5+
years



A multi use mixture containing no Timothy

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

- Minimum recommended sowing rate 14kg/acre (35kg/ha)
- Huge yield potential over multiple cuts
- 46% 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
Boyne Intermediate perennial ryegrass	33
Gosford Intermediate perennial ryegrass	42
Caledon (T) Intermediate perennial ryegrass	44
Callan Late perennial ryegrass	46
Bijou (T) Late perennial ryegrass	46
Ballintoy (T) Late perennial ryegrass	46

REE = Relative ear emergence

TechniSward HS Dual Purpose

5+
years



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

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

- The high levels of water-soluble carbohydrates ensure a rapid and 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, balancing protein and promoting a healthy balanced rumen
- SRUC first choice varieties
- Available with Nithsdale white clover blend
- Optimum sowing rate 15kg/acre (37kg/ha)



Variety	REE
AberEcho (T) Hybrid ryegrass	27
AberGreen Intermediate perennial ryegrass	43
AberWolf Intermediate perennial ryegrass	40
Fintona (T) Intermediate perennial ryegrass	32
AberSpey (T) Intermediate perennial ryegrass	44
AberChoice Late perennial ryegrass	55
Toddington Late perennial ryegrass	49
AberBite (T) Late perennial ryegrass	50
Alfonso (T) Late perennial ryegrass	47

REE = Relative ear emergence



TechniSward Early start

6+
years



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

	Intensive cutting	✓	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
- Available with Westerwolths



Variety	REE
Boyne <i>Intermediate perennial ryegrass</i>	33
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
Dunrod <i>Late perennial ryegrass</i>	47
Gracehill (T) <i>Late perennial ryegrass</i>	47
Comer <i>Timothy</i>	53

REE = Relative ear emergence

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

6+
years



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

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

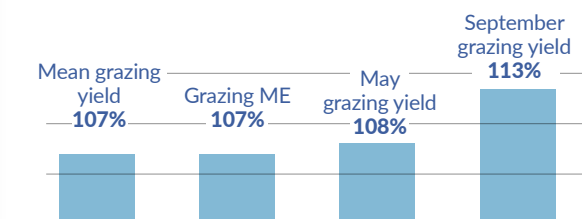
- Minimum recommended sowing rate 15kg/acre (35kg/ha)
- 100% Aber high sugar grasses
- Produces a dense, palatable, and highly digestible sward that produces right through the season
- Paddocks can be shut up to produce excellent quality silage
- White clover option available



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

REE = Relative ear emergence

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 at both ends of the grazing season and include AberGain which is the top performing late tetraploid on both the Teagasc PPI list and the BSPB recommended list

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
Dunrod <i>Late perennial ryegrass</i>	47
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 May onwards

TechniSward ScotHay

5+
years



Variety	REE
Boyne <i>Intermediate perennial ryegrass</i>	33
Gusto <i>Intermediate perennial ryegrass</i>	44
Fintona (T) <i>Intermediate perennial ryegrass</i>	32
Toddington <i>Late perennial ryegrass</i>	49
Astonchieftain <i>Late perennial ryegrass</i>	52
Alfonso (T) <i>Late perennial ryegrass</i>	47
Scots <i>Timothy</i>	51
Fantazja <i>Meadow fescue</i>	N/A

REE = Relative ear emergence

Specialist hay/haylage mixture with a high level of diploid varieties to promote 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

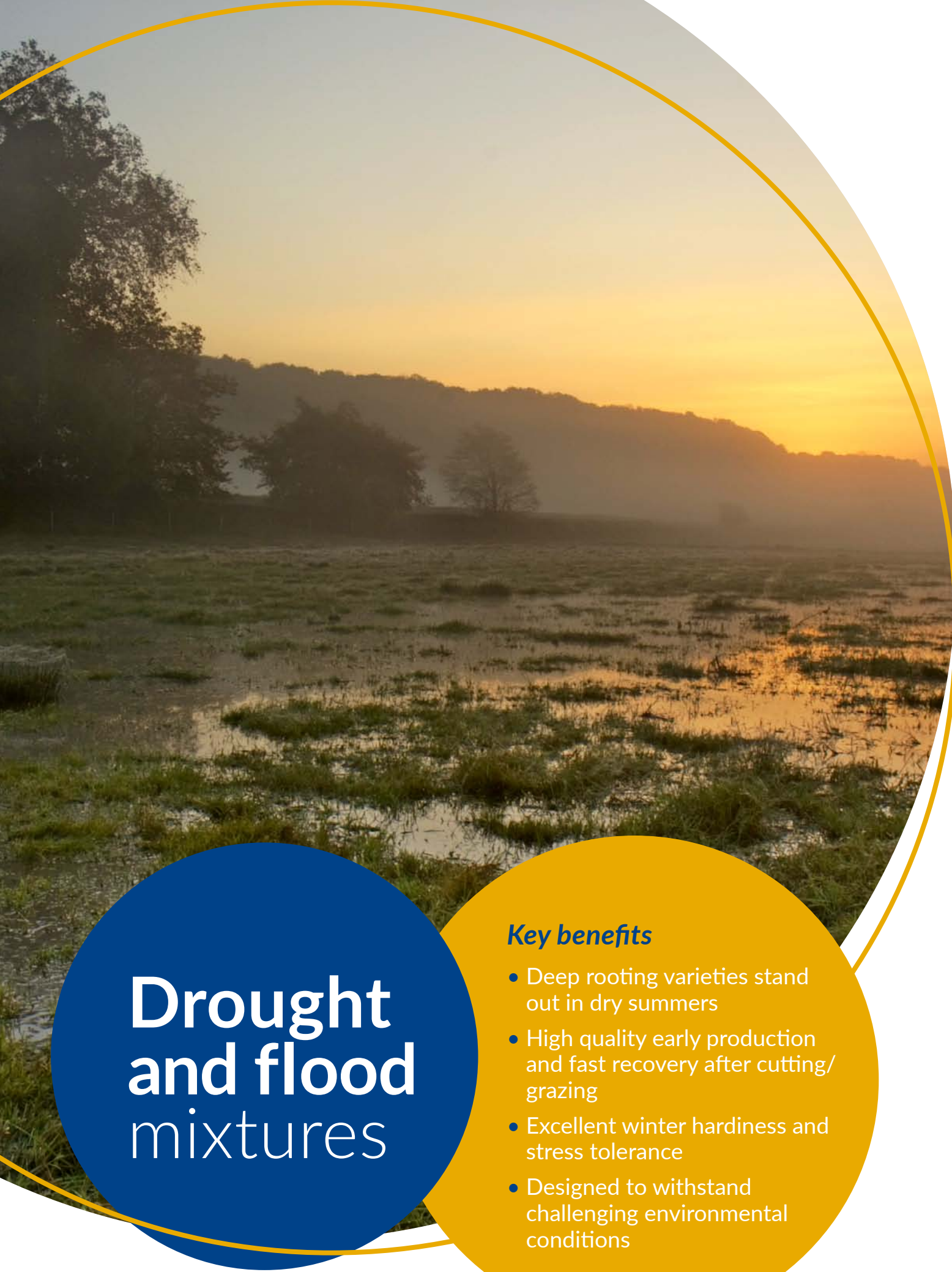


Variety	REE
Boyne <i>Intermediate perennial ryegrass</i>	33
AberGreen <i>Intermediate perennial ryegrass</i>	44
Seagoe (T) <i>Intermediate perennial ryegrass</i>	32
Toddington <i>Late perennial ryegrass</i>	49
AberChoice <i>Late perennial ryegrass</i>	52
Alfonso (T) <i>Late perennial ryegrass</i>	47
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 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

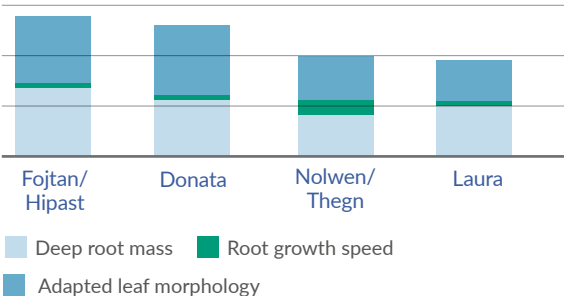
5+ years



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 Fojtan and Hipast tall fescue plus™ festuloliums
- White clover helps maintain ground cover, reducing moisture losses to evaporation

Drought tolerance mechanisms



Fojtan	<i>Festulolium</i>
Hipast	<i>Festulolium</i>
Nolwen	(T) <i>Intermediate perennial ryegrass</i>
Thegn	(T) <i>Late perennial ryegrass</i>
Donata	<i>Soft leaved cocksfoot</i>
Laura	<i>Meadow fescue</i>
Grazing white clover blend	

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 Fojtan and Hipast tall fescue plus™ festuloliums
- Creeping red fescue helps to prevent soil erosion due to its extensive creeping stolons
- All varieties are proven to be winter hardy, give good ground cover and have excellent stress tolerance

Fojtan	<i>Festulolium</i>
Hipast	<i>Festulolium</i>
Dolina	<i>Timothy</i>
Bowie	<i>Late perennial ryegrass</i>
Donata	<i>Soft leaved cocksfoot</i>
Laura	<i>Meadow fescue</i>
Evora	<i>Smooth stalked meadow grass</i>
Maxima	<i>Creeping red fescue</i>

Herbal grazing mixtures

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, losses to methane are also reduced
- Protein losses in conserved forages is reduced meaning there is more available for livestock
- 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

TechniSward Herbal light land

GS4 compliant



20% Fojtan <i>Perennial plus festulolium</i>	4% Lucerne
14% Nolwen (T) I PRG	1.5% Birds foot trefoil
16% Donata <i>Cocksfoot</i>	3.5% Plantain
7% Winnetou <i>Timothy</i>	1% Chicory
4% Laura <i>Meadow fescue</i>	1.75% Sheeps burnet
10% Red clover blend	1% Sheeps parsley
16% Sainfoin	0.25% Yarrow

TechniSward Herbal medium to heavy land

GS4 compliant



25% Lofa <i>Hybrid plus festulolium</i>	3% Birds foot trefoil
22% Nolwen (T) L PRG	4% Plantain
10% Winnetou <i>Timothy</i>	2.5% Sheeps burnet
12% Donata <i>Cocksfoot</i>	1% Chicory
5% Laura <i>Meadow fescue</i>	1% Sheeps parsley
10% Red clover blend	0.25% Yarrow
4% Alsike clover	0.25% Black medick



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% Fojtan	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% Fojtan	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	
2.5% 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® amenity ryegrass 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	



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