ACT wessex ANIMAL HEALTH

ACTION FORAGE SEED GUIDE **2020**

Grass Seed Mixtures • Forage Maize • Root & Fodder Crops • Cover Crop Mixtures

FORAGE MAIZE

Selecting your maize variety comes down to deciding whether you need early harvest, high quality or high total yield. We have selected a range of proven varieties that suit each criteria and have a track record of performing in the major maize growing areas in the UK.

Emmerson

Ideal where early harvest or later drilling options is required making it the variety of choice for earliness in all situations

- Good early vigour
- Early maturing cobs
- Excellent standing power
- Very high starch %

Maturity Class	12 (FAO 140) Ultra Early
Early Vigour	7.0 Good
Relative DM Yield	95%
Starch Yield t/ha	6.0
Starch	36.3%

Activate

High Energy Yield

- Very early maturing (MC10) delivering an excellent result in a short growing season
- Excellent stay green up to harvest reducing the risk of Fusarium infection
- Highest ME content of all varieties available on the UK List
- Ideal for feeding to dairy, beef or as a feedstock in AD systems
- Has high starch content and produces energy dense maize, reducing bought in feed costs

Maturity Class	11 (FAO 150) Very Early
Early Vigour	6.8 Good
Relative DM Yield	94%
Starch Yield t/ha	5.8
Starch	35.3%

Perez

Combining excellent early vigour and high starch yield

- Excellent early vigour
- High DM yields of starch & ME
- Early maturity for flexible drilling
- Excellent standing power
- Very high starch %

Maturity Class	10 (FAO 160) Very Early
Early Vigour	7.6 Excellent
Relative DM Yield	101%
Starch Yield t/ha	6.0
Starch	34.1%

Glory

For starch production

- Excellent starch producer in UK growing conditions over the last 5 years
- Very early maturity, group 10
- Good resistance to Eyespot
- Good cell wall digestibility
- One of the top ME producers
- Excellent early vigour
- Consistent performer up and down the UK

Maturity Class	10 (FAO 160) Very Early
Early Vigour	7.3 Excellent
Relative DM Yield	100%
Starch Yield t/ha	6.0
Starch	34.4%

Autens

For very high DM yields

- A new leading high yielder from KWS
- High DM yields without the penalty of later maturity
- One of the higher ME producing maize varieties
- Excellent early vigour
- Decent eyespot rating
- Above average combined Starch/ME production
- Similar maturity to Ambition but with higher DM yield

Maturity Class	9 (FAO 170) Early
Early Vigour	7.4 Excellent
Relative DM Yield	104%
Starch Yield t/ha	5.9
Starch	32.6%

Ambition

The UK's top selling variety

- Ambition has one of the top total crop ME yields
- High dry matter yields of quality maize
- Excellent early vigour for a good start
- Flexible, reliable and performs well under plastic
- Very good eyespot tolerance

Maturity Class	9 (FAO 170) Early
Early Vigour	7.4 Excellent
Relative DM Yield	102%
Starch Yield t/ha	6.0
Starch	33.5%

Echo

NEW

Maturity Class	11 (FAO 150) Very Early	Relative DM Yield	106%

Echo is a new Very Early variety from Limagrain – Maturity Class 11.

It has shown to have excellent yields of high starch silage with the potential for the very high ME Yield and has the high cell wall digestibility expected from LG. Early vigour, standing power and disease resistance are all excellent. Echo is destined to be the high yielding Very Early variety.

Exelon KWS

NEW

New high yielding Early variety – Maturity Class 10.

New high yielding variety from KWS that in trials has shown to have both outstanding early vigour and standing power. With exceptional yields of energy dense silage Exelon is an impressive performer. High grain to starch ratio. Low ear insertion means excellent field stability.

Maturity Class	10 (FAO 160) Early
Early Vigour	7.6 Excellent

DM Yield DMT/ha	18.8
Starch	36.2%
ME content Mj/kg	12.24

Maize for Anaerobic Digesters

Keops

Maturity Class	5 (FAO 220) maincrop
Relative Energy Yield	104%
Yield DM t/ha	104%

Ambrosini

Maturity Class	5 (FAO 220) maincrop
Relative Energy Yield	101%
Yield DM t/ha	102%

Amaverde

Maturity Class	5 (FAO 220) maincrop
Relative Energy Yield	104%
Yield DM t/ha	104%

Fodder and Energy Beet Varieties

GRAZING
Low to Medium Dry Matter

Monro
Ideal for grazing

- An outstanding red rooted beet of low dry matter (DM) (14.6%) that is ideal for grazing as most of root is above ground.
- Very high fresh yield.
- Suitable for sheep and cattle grazing.

Feldherr
A resurgent old favourite

- One of the highest yielding fresh weights from a fodder beet.
- Ideal for grazing in-situ due to its lower DM content.
- Very low dirt contamination when lifted.
- Ideal for sheep or cattle.

Jamon
Very palatable grazing variety

- Another orange rooted grazing fodder beet.
- High fresh yields of very clean beet.
- Excellent establishment.

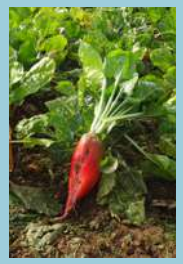
GRAZING & LIFTING
Medium Dry Matter

Bangor
Best new variety available

- A new yellow skinned beet with high yields of 18% dry matter beet - capable of producing 21t DM/ha.
- High proportion of beet above ground and has very uniform smooth beet making it a very flexible grazing and lifting type.
- Suitable for beef or dairy cows.

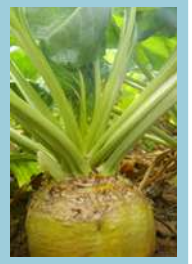
Rimbabelle
New red beet

- A new red skinned beet that very clean characteristics making it suitable for dairy cows.
- High yields of medium dry matter.
- High proportion of roots above ground making it suitable to be lifted or grazed in situ.
- Very good bolting so suitable for early drilling.



Robbos
A true all rounder

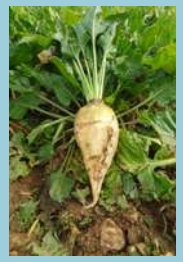
- Very high yields of medium DM beet.
- Large leaved for ease of lifting.
- Very clean rooted.
- Suitable for dairy or beef cattle.



LIFTING
High to Very High Dry Matter

Blizzard
High yield and high DM

- The highest DM variety available.
- Deep rooted with a white sugar beet type skin.
- Ideal for harvesting with sugar beet machinery.



Magnum
A reliable variety

- Remains a popular choice as it's a consistent performer.
- Uniform sized, white-roots of high DM content – 19-20%.
- Good resistance to rust.

Brick
Very high clean yields

- Dairy, beef and anaerobic digestion.
- Produces very high DM yields at around 24%.
- A true fodder beet with a smooth skin to reduce dirt tare.

Enermax
An excellent dual-purpose variety

- A true dual-purpose beet ideal for both AD and forage production.
- Gives high yields of smooth, clean roots of high dry matter %.
- Also shows good disease resistance making it suitable for top lifting.

Tarine
Coloured high dry matter beet

- A newly bred, pink rooted variety especially selected for growers looking for high DM yields with flexible harvest period.
- Easy to harvest, with high DM%.

Tadorne LG
A high yielding AD beet

- A variety bred especially for AD.
- A white rooted variety with very high DM yields.
- A high DM content reduces clamp losses and enables the beet to be stored for a longer period of time. Rhizomania resistant.

WHOLECROP ARABLE SILAGE

Wholecrop arable silage is a widely grown alernative forage which gives high protein and energy dense forage for dairy cow or beef cattle finishing well. Wholecrop is an excellent break crop between grass re-seeds giving perfect conditions with little additional cultivations required.

Yields of 24 tonnes/ha of fresh crop can be expected if you get the crop established well.

- ➔ Arable silage can be ready to harvest in 12-14 weeks
- ➔ An excellent break crop if you are planning on a full re-seed
- ➔ The addition of peas to the mixture increased protein by 50%,
- ➔ Addition of peas has the potential to add 70+kg of residual nitrogen per hectare.

It's important to choose the right combination of appropriately maturing crops for your situation.We can supply a range of arable silage mixtures with varying amounts of spring barley and peas – we can also include spring oats should you require a bulkier crop.

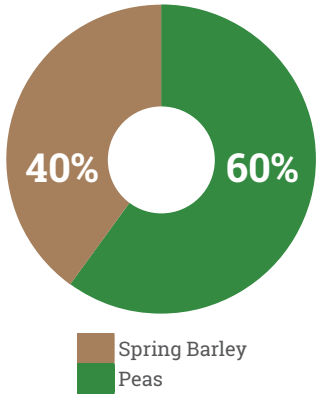
Can be undersown with a competitive grass mixture – however the arable silage must be at a reduced sowing rate.

Both conventional and organic versions are available. Sowing rate 75 kg/acre or 55 kg/acre if undersowing with grass mixture.

CONVENTIONAL

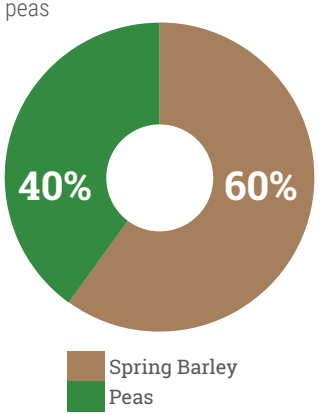
MIXTURE NO.1

A pea rich mixture designed to produce a bulky crop with a high crude protein content.



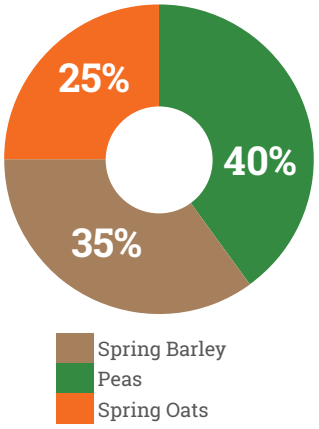
MIXTURE NO.2

A mixture with more emphasis on the bulk and starch of barley but well supported with the protein and starch production of the peas



MIXTURE NO.3

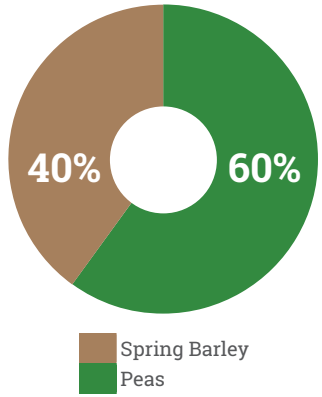
A traditional wholecrop mixture based on a barley/oat/pea mixture giving good palatability as well as reasonable protein.



ORGANIC

MIXTURE NO.1

A mixture designed to produce a bulky crop with a high crude protein content.



We strive to offer you the best available varieties within the ACT Action Mixture range, and we are delighted to introduce several new high performing perennial ryegrasses into our mixtures:

Nifty

Dense variety with exceptional grazing yield

An exciting variety in its fourth year of commercial availability. Nifty is recommended throughout the UK. Superb grazing and exceptionally dense variety, Nifty is very high yielding under grazing and has excellent mid and late season growth.
Nifty is also classified as a Fiber Energy and High Sugar variety.

Triwarwic

High Sugar variety

A true cutting and grazing variety that gives you good grazing performance but also gives excellent cutting yields of highly digestible high ME grass. Classed as a High Energy and high sugar variety. Very good disease ratings especially at 8.1 for crown rust.

Nashota

Very dense high performing variety

Good early spring growth under grazing and good quality, especially at the first conservation cut. Nashota has exceptional ground cover for a tetraploid – better than all but a few diploids.

Has performed very well in Teagasc PPI trials.

Thegn

Good under grazing, and good quality silage

New for 2020, Thegn displays excellent grazing yields and D value with exceptional back end growth.

Evocative

A true cut and graze variety

Evocative has exceptional D-value and yield throughout the growing season in either a grazing or cutting management situation. Evocative also has a very late ear emergence date as is an exceptional addition to the ACT portfolio

Listed on the Scottish RL where it has performed very well. Good overall conservation and grazing yields with good herbage quality under conservation making it perfect for a dual purpose mixture

Smile

All rounder with exceptional summer grazing

A variety showing good, consistent yields under both cutting and grazing. Quality is good under cutting.

Smile has excellent yields especially in the 2nd cut with exceptional quality from early summer onwards.

Seed Quality

	Italian Ryegrass		Perennial Ryegrass	
	Purity	Germination	Purity	Germination
UK Minimum	96%	75%	96%	80%
ACT 2019	99.7%	93%	99.3%	92%

All ACTion seed ley mixtures are of a high standard of purity and germination.

There is a legal minimum standard for all grass and clover seed bought and sold in the European Community, referred to as the EC Standard.

Prior to the UK being part of the European Community there were local standards in this country which were higher than those adopted by the EC. These standards have been retained and are known as HVS (Higher Voluntary Standard).

ACT aims to provide seed of a quality at least as high as HVS and higher wherever possible. The % figures shown in the charts refer to ACT's Ryegrass Seed for 2015.

ACTive8™ Seed Treatment for better establishment

ACTive8™ is a natural, bacterial seed treatment which stimulates the embryo into speedier activity, encouraging more vigorous root growth and ultimately, faster and better plant development. This treatment has been shown to reduce the need to re-sow pastures on farms in many areas of the UK and is proven to increase speed of seedling establishment.

ACTive8™ will help to:

- ➔ Stimulate embryo activity
- ➔ Develop root growth
- ➔ Promote cell division and lateral rooting
- ➔ Improve overall plant hardiness
- ➔ Improve absorption of essential nutrients
- ➔ Provide healthier plants
- ➔ Speed up crop utilisation
- ➔ Increase first cut yield

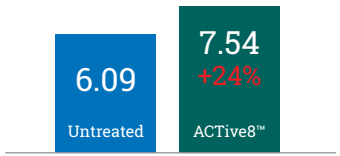
All our major grass mixtures come **ACTive8™** treated as standard.

Speedier seedling growth

Seed cost
only £0.21p/kg

Extra crop value
£200-£360 per acre
(£500-£900 per ha)

Increased yield, first cut



DM Yield (tonne/ha) first cut

The digestibility of cellulose and hemicellulose depends, among other factors, on cutting time, weather and fertilisation, but we have also seen a difference between grass varieties, when they are compared under the same growing conditions.

We test all varieties for feeding quality, and those showing to be high above average concerning digestibility of NDF are marked with our cell wall logo.

NEW GRASS VARIETIES & FIBER ENERGY

HERBAGE MIXTURES

ACT can supply you with a wide range of herbage mixtures for all situations.

Whether it is a short term catch crop to be sown after maize, a medium term dual purpose cutting and grazing mixture or a long term grazing mixture we have the mixture to suit your needs.

Many of our mixtures are available with or without clover depending on your requirements. Or you could consider the clover overseeding mixture to improve an existing sward.

Which mixture should we choose?

This question is best answered by considering the following?

a. **What is the intended utilisation of the crop?** Cutting, grazing or both? Grazing mixtures generally are also good for cutting – the reverse is not always true.

b. **How long do I want the mixture to last?** Too often we underestimate how long a field will be kept down for – in which case go for a longer ley.

	Cutting	Dual Purpose	Grazing	Overseeding
Catch Crop 6-18 months	Rye	Rye	Rye	Rye
	ClampBuster	ClampBuster	ClampBuster	ClampBuster
	After Maize	After Maize	After Maize	After Maize
	Rapid Grass	Rapid Grass	Rapid Grass	Rapid Grass
Short Term 2-3 years	No 8 Silage Maker	No 8 Silage Maker		No 8 Silage Maker
	No 10 High Protein			Pasture Restorer + RC
Medium Term 3-5 years	No 23 Heavy Silage	No 23 Heavy Silage	No 59 Sweet Grazer*	Pasture Restorer*
	No 56 Long Term Cutter	No 37 Double Profit*		No 10 High Protein†
		No 50 Quality Long Term*		
Long Term 5 years+	No 57 Quality Cutter*	No 50 Quality Long Term*	No 59 Sweet Grazer*	No 57 Quality Cutter*
	No 56 Long Term Cutter	No 62 Cut & Graze*	No 60 Long Term Grazer*	No 59 Sweet Grazer *
		No 57 Quality Cutter*		
		No 58 Permanent Pasture*	No 63 Intensive Grazer *	
		No 65 Durable Pasture	No 67 Upland Grazer	

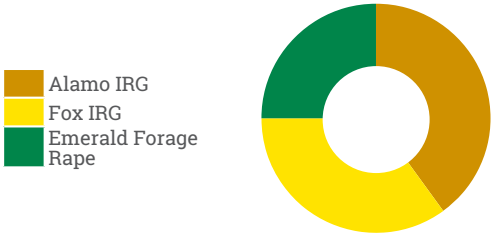
*Mixtures available with White Clover. † Sown at lower rate 7-10kg /acre.

Extendagraze

NEW

New grazing catch crop mixture

- A new product in the ACT range
- ExtendaGraze is a blend of IRG and forage rape
- Ideal for summer or extended grazing through the autumn
- Potential for 2 x grazings of grass and rape
- IRG can be left for overwintering, spring grazing or an early spring cut



IRG	75%	Forage Rape	25%

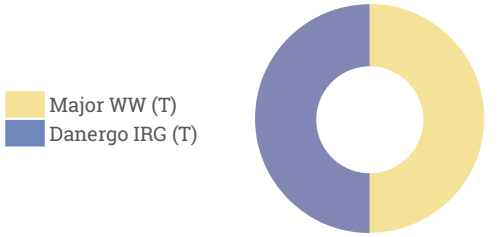
Seeds per m²	Pack size	Suggested sowing rate
0,000†	20kg	10 kg/acre or 25 kg/ha

Rapid Grass

ACTive8 Treated

6-9 month ley

- A blend of Italian Ryegrass and Westerwolds Ryegrass
- Speedily produces big yields of high quality forage in good growing conditions
- Faster out of the ground than straight Italian Ryegrass
- Use for a short term solution to forage shortages
- Ideal mixture to sow in spring after winter damage to silage ground



Tetraploid	100%	Diploid	0%

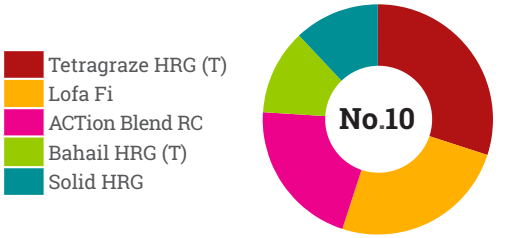
Seeds per m²	Pack size	Suggested sowing rate
1,100†	20kg	12.5 kg/acre or 30 kg/ha

High Protein

ACTive8 Treated

Short term mixture

- Blend of Hybrid Ryegrasses, Festulolium and Red Clover
- Capable of producing over 20 tonnes per acre with 17-18% protein
- Excellent spring growth and quick recovery gives flexibility to take 2 or 3 cuts or grazing a number of times



Tetraploid	42%	Diploid	12%

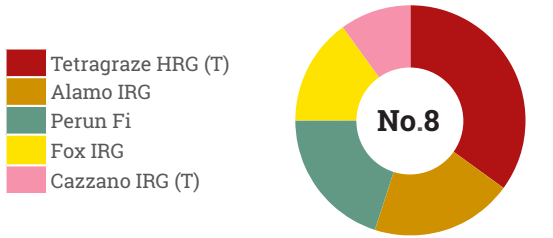
Seeds per m²	Pack size	Suggested sowing rate
1,810†	20kg	12 kg/acre or 30 kg/ha

Silage Maker

ACTive8 Treated

Short term silage

- Very high yielding 2/3 year ley with fast spring growth and regrowth
- Can produce 4/5 cuts per year with fresh yields around 30 tonnes per acre
- Use to extend the grazing season in very early spring and late autumn



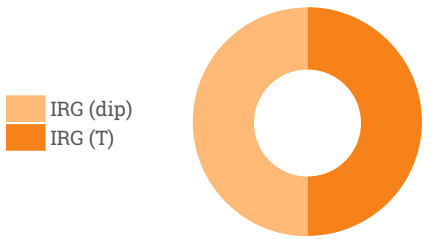
Tetraploid	65%	Diploid	35%

Seeds per m²	Pack size	Suggested sowing rate
1,400†	20kg	13 kg/acre or 32 kg/ha

Clamp Buster/After Maize

6 month - 2 year ley

- A blend of Diploid and Tetraploid Italian Ryegrasses
- Suitable for a range of short term uses
- Ideal for sowing after a crop of maize harvested to produce a bumper crop in early spring for early grazing or for silaging prior to establishing another maize crop.
- Alternatively can be left for further cropping during that summer – autumn



Tetraploid	50%	Diploid	50%

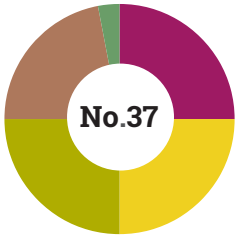
Seeds per m²	Pack size	Suggested sowing rate
1,370†	20kg	12.5 kg/acre or 30 kg/ha

Double Profit

4-5 year ley

- Early growing, high yielding flexible mixture
- Use for early grazing followed by 1 or 2 cuts of silage or take early cut of silage followed by palatable aftermath grazing
- A dual purpose ley which responds to intensive or extensive systems
- Also available without clover

Genesis EPRG
Premium IPRG
Solas LPRG (T)
Glenstal IPRG (T)
Rivendel WC



Tetraploid	47%	Diploid	50%

Seeds per m²	Pack size	Suggested sowing rate
1,450†	20kg	13 kg/acre or 32 kg/ha

Heavy Silage

ACTive8 Treated

3-4 year cutting mixture

- Medium term silage mixture with potential for aftermath grazing
- Designed to give at least two good silage cuts per year
- The chosen grass varieties have close cutting dates for optimum quality
- Inclusion of hybrid ryegrass ensures early spring growth and fast recovery

Tetragraze HRG (T)
Lofa Fi
Boyne IPRG
Seagoe IPRG (T)
Aston Crusader HRG

Tetraploid	45%	Diploid	35%

Seeds per m²	Pack size	Suggested sowing rate
1,420†	20kg	14 kg/acre or 35 kg/ha

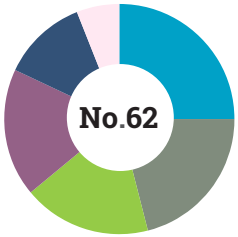
Cut & Graze

ACTive8 Treated

Long term dual purpose

- Reliable mixture that thrives on lower, more fertile land where Timothy not required
- Predominantly a grazing ley suitable for sheep and cattle
- Can produce high yields of high D Value silage
- SAC 1st Choice varieties
- Also available without clover

Aspect LPRG (T)
Diwan IPRG (T)
Nifty IPRG
Toddington LPRG
Seagoe IPRG (T)
ACTion Dual Purpose Blend WC



Tetraploid	58%	Diploid	36%

Seeds per m²	Pack size	Suggested sowing rate
1,570†	20kg	14 kg/acre or 35 kg/ha

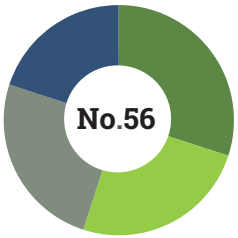
Long Term Cutter

ACTive8 Treated

Long term silage

- Persistent silage mixture with good spring growth to suit the early silage producer wanting 3 quality cuts a year.
- Excellent silage fermentation from the high sugar tetraploids which also give palatable aftermath grazing

Boyne IPRG
Nifty IPRG
Diwan IPRG (T)
Seagoe IPRG (T)



Tetraploid	45%	Diploid	55%

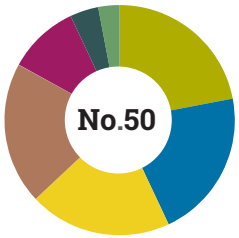
Seeds per m²	Pack size	Suggested sowing rate
1,490†	20kg	14 kg/acre or 35 kg/ha

Quality Long Term

Dual purpose ley

- Wide range of ryegrasses and inclusion of Timothy gives a good spread of growth across the whole season
- Most suitable for cattle grazing with the opportunity of hay and silage cuts
- Also available without clover

Solas LPRG (T)
Majestic LPRG
Premium IPRG
Glenstal IPRG (T)
Genesis EPRG
Winnetou Tim
Rivendel WC



Tetraploid	42%	Diploid	51%

Seeds per m²	Pack size	Suggested sowing rate
1,740†	20kg	14 kg/acre or 35 kg/ha

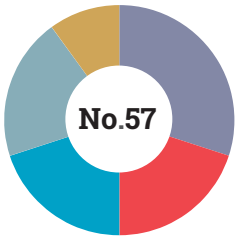
Quality Cutter

ACTive8 Treated

For proven quality silage

- Long term silage mixture capable of producing quality silage plus excellent aftermath grazing over 5 years+
- Fresh yields could be as high as 13 tonnes/acre at 67D from first cut
- High quality, leafy, aftermath grazing
- Also available with Cutting Blend White Clover
- ACT top selling mixture for several years

Nashota LPRG (T)
Smile LPRG
Aspect LPRG (T)
Cancan LPRG
Thegn LPRG (T)



Tetraploid	60%	Diploid	40%

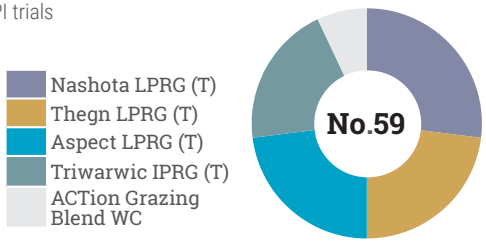
Seeds per m²	Pack size	Suggested sowing rate
1,420†	20kg	14 kg/acre or 35 kg/ha

Sweet Grazer

ACTive8 Treated

High sugar mixture for dairy grazing

- This high sugar mixture is made up of highly digestible Tetraploid Ryegrasses
- The varieties have been updated to increase grazing yield in the shoulders of the year and maintain summer growth
- Now includes Nashota which has performed well in Teagasc PPI trials
- Sweet Grazer shows to have good disease resistance, especially against Crown Rust
- The deeper rooted nature of tetraploid grasses has proven them to be more tolerant of dry conditions
- Also available without White Clover



Tetraploid	100%	Diploid	0%

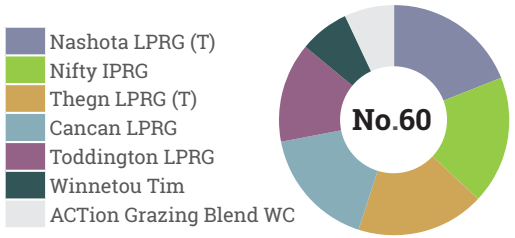
Seeds per m²	Pack size	Suggested sowing rate
1,420†	20kg	14 kg/acre or 35 kg/ha

Long Term Grazer

ACTive8 Treated

For beef cattle & sheep grazing

- Good summer and autumn growth, often used to complement earlier growing swards
- New varieties increases growth through the shoulders of the year
- Inclusion of tetraploid ryegrasses and Timothy gives superior palatability for a long term ley
- Establishes into a dense sward, suitable for sheep, giving good intakes and impressive live weight gains
- Also available without White Clover



Tetraploid	37%	Diploid	51%

Seeds per m²	Pack size	Suggested sowing rate
2,210†	20kg	13 kg/acre or 32 kg/ha

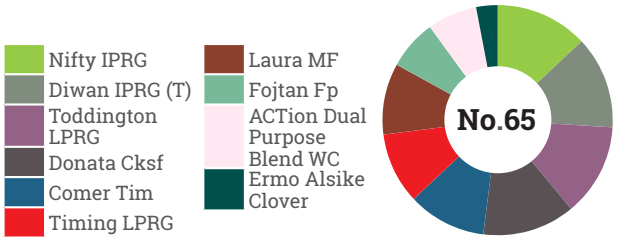
Durable Pasture

NEW

ACTive8 Treated

For wet conditions & high rainfall

- Long term mixture with species selected to withstand high rainfall and water tables
- Produces a dense and persistent sward that has the potential to withstand harsh conditions longer than most mixtures
- Includes high performing grass species and clovers to withstand extreme conditions
- Needs to be well established before ground conditions are waterlogged



Tetraploid	13%	Diploid	87%

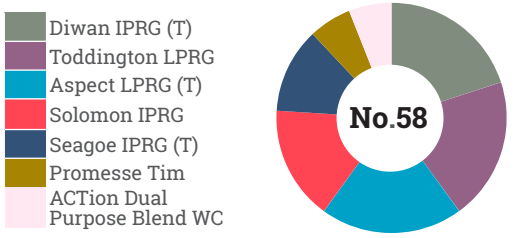
Seeds per m²	Pack size	Suggested sowing rate
1,345†	20kg	14 kg/acre or 35 kg/ha

Permanent Pasture

ACTive8 Treated

Long term mixture

- Good quality grazing and cutting over a number of years
- Good ground cover - ideal for sheep and beef production
- Ryegrass varieties selected for persistence and palatability – including SAC 1st Choice varieties
- Also available without clover



Tetraploid	52%	Diploid	36%

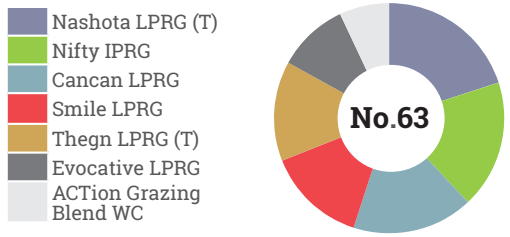
Seeds per m²	Pack size	Suggested sowing rate
2,030†	20kg	14 kg/acre or 35 kg/ha

Intensive Grazer

ACTive8 Treated

The ultimate grazing mixture

- New varieties increase grazing in the shoulders of the year whilst maintaining summer growth
- Now includes Nashota which has performed well in Tegasc PPI Trials
- High sugar grasses encourage high intakes and quick regrowth which increases profitability by reducing costs
- The inclusion of late heading perennial ryegrasses means better mid-summer grazing in carefully managed swards
- Also available without White Clover



Tetraploid	34%	Diploid	59%

Seeds per m²	Pack size	Suggested sowing rate
1,720†	20kg	12.5 kg/acre or 35 kg/ha

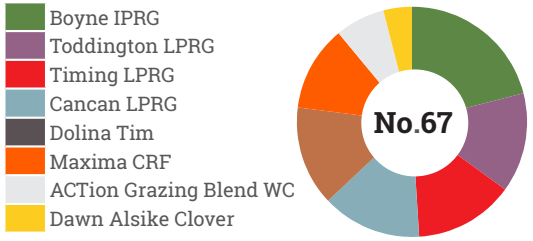
Upland Grazer

NEW

100% diploid

Specialist mixture for extreme conditions

- Mixture specially selected for use in upland areas and higher rainfall areas
- Produces a very dense sward that has excellent persistence chracteristics
- Includes Timothy and Creeping Red Fescue to increase the biodiversity and maintain growth in difficult conditions



Diploid	100%

Seeds per m²	Pack size	Suggested sowing rate
1,450†	20kg	14 kg/acre or 35 kg/ha

ORGANIC LEYS

Organic livestock have the same requirements for energy, protein, minerals and vitamins as those on conventional systems but, because of restrictions on the use of bought-in feeds, much more of this needs to come from home-grown forage.

At the same time restrictions on the use of artificial fertilisers mean that a higher proportion of clover's need to be included in grass leys to provide a natural source of nitrogen to stimulate grass growth and increase the protein and mineral content of the sward. The following mixtures have been specifically formulated to produce high yields of high quality forage under organic production systems. All ACTion organic mixtures contain at least 70% organically produced seed.

Fertility Builder

Organic

- High yielding 2-3 year ley with a large proportion of Red Clover to enhance Dry Matter and protein yields
- Possibility of taking 1-3 cuts of silage starting at the end of May/early June before aftermath grazing

Organic Festulolium*
Organic Hybrid Ryegrass*
ACTion Blend RC

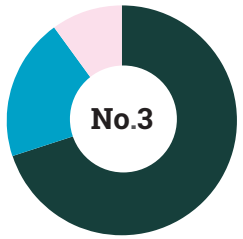
Seeds per m²	Pack size	Suggested sowing rate
2,110†	20kg	14 kg/acre or 35 kg/ha

Cutting Mixture

Medium to long term organic grazing

- Designed to produce high quality silage
- The varieties chosen have a close range of cutting dates which can produce higher ME levels than general purpose leys
- Primarily designed for cutting
- White Clover contributes to nitrogen fixation in the soil

Organic IPRG (D)*
Aspect LPRG (T)
Action Cutting Blend WC



Seeds per m²	Pack size	Suggested sowing rate
2,020†	20kg	15 kg/acre or 37 kg/ha

Organic Seed will be in short supply this season and the organic proportion has been reduced by Defra from 70% to 50% for 2020. ACT will have the ability to supply appropriate mixtures. Unfortunately we cannot give named varieties but we will have seed of the appropriate type to create your mixtures.

Grazing Mixture

Medium to long term organic grazing

- Similar to No.60 Long Term Grazer
- The use of late heading grasses with a high percentage of tetraploid cultivars gives increased palatability and drought tolerance
- Resultant ley gives medium to long term organic grazing
- White Clover Blend helps to maintain soil fertility

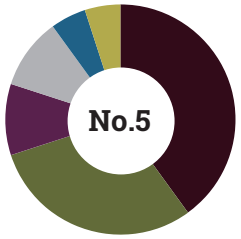
Organic Late PRG (D)*
Organic Late PRG (T)*
Toddington LPRG
Action Cutting Blend WC

Seeds per m²	Pack size	Suggested sowing rate
1,960†	20kg	15 kg/acre or 37 kg/ha

Herbal Grazing Mixture

A mixture in the ACT range based on our No. 2 grazing mixture but enhanced with chicory and plantain.

Organic Late PRG (T)*
Organic Late PRG (D)*
Tonic Plantain
Action White Clover Blend
Comer Tim
Choice Chicory



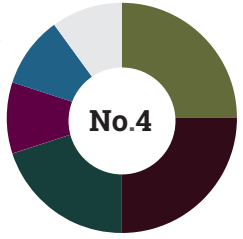
Seeds per m²	Pack size	Suggested sowing rate
2,400†	20kg	15 kg/acre or 37 kg/ha

General Purpose Mixture

Quality organic grazing and conservation

- The range of varieties helps provide a successive pattern of growth from early spring into the autumn
- High level of White Clover adds to sward growth and digestibility
- Designed for high quality organic grazing and conservation
- Timothy improves mid-summer production

Organic Late PRG (D)*
Organic Late PRG (T)*
Organic IPRG (D)*
EPRG (D)
Comer Tim
Action Grazing Blend WC



Seeds per m²	Pack size	Suggested sowing rate
2,730†	20kg	15 kg/acre or 37 kg/ha

Varieties with '*' are organically produced seed.

ProNitro® & Overseeding

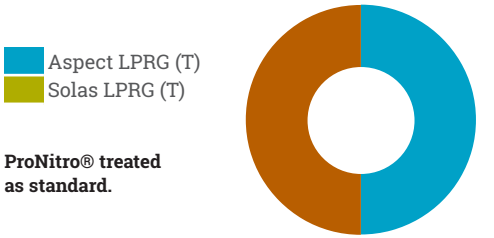
Re-seeding is the most effective method to get more from grassland, following some of the methods below and using the products suggested can improve production significantly.

Maintaining a high level of productive species in your sward is crucial if you want to get the most out of your grass ley. Introducing new 'production' grasses into a tired or open sward is possible as long as you follow some basic husbandry principles:

- Identify the % of productive species present
- Identify the weeds species present
- Assess soils structure
- Ensure pH and nutrient status correct
- Consider June sowing to reduce pests
- Select the correct machine for the job
- Reduce competition by grazing or topping
- Sow the correct mixture for your situation

Pasture Restorer

- A carefully balanced blend of fast to establish and persistent ryegrasses
- Capable of improving production for up to 3 years
- Sow late March/early April



ProNitro® treated as standard.

Late PRG	100%

Tetraploid	100%
Diploid	0%

Pack size 20kg

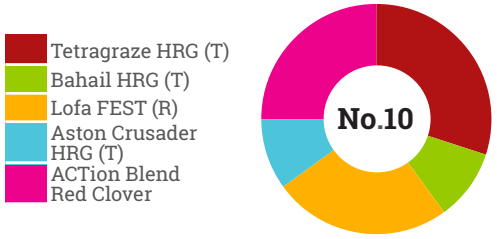
Over-seeding sowing rates 10 kg/acre or 25 kg/ha

High Protein

ACTive8 Treated

Short term mixture

- Blend of Hybrid Ryegrasses, Advanced Hybrid Ryegrasses and Red Clover
- Capable of producing over 20 tonnes per acre with 17-18% protein
- Excellent spring growth and quick recovery gives flexibility to take 2 or 3 cuts or grazing a number of times



Hybrid RG	50%
Festulolium	25%
Red Clover	25%

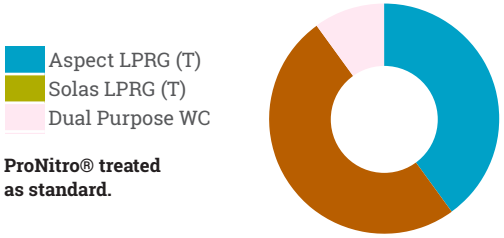
Tetraploid	50%
Diploid	0%

Pack size 20kg

Over-seeding sowing rates 12 kg/acre or 30 kg/ha

Pasture Restorer + White Clover

- A carefully balanced blend of ryegrasses to improve swards quickly
- Addition of White Clover to aid protein levels and release nitrogen in the soil



ProNitro® treated as standard.

Late PRG	90%
White Clover	10%

Tetraploid	100%
Diploid	0%

Pack size 20kg

Over-seeding sowing rates 10 kg/acre or 25 kg/ha

Our pasture restorer seeds are coated with ProNitro® seed coating for faster and stronger establishment. This replaces the need for additional fertiliser as each seedling receives the extra nutrient and not the established grasses.

If you are looking to reintroduce red clover use a low rate of No. 10 High Protein mixture as a cost effective alternative.

Overseeding an old sward can increase your production by:

Yield increase 0.5kg dm/acre
Increase M.E. from 10.5 - 11.0
= extra 1415 litres of milk
= extra 214kg lwg

Protein rich legumes can produce large tonnages of forage for silage or grazing usually at a lower cost per unit of protein than bought in feeds.

Lucerne

Soil Type

Lucerne performs well on a range of soil types so long as they are free draining and non-acidic at depth. Lucerne is most suited to the in drier areas and lighter soils. Leaf disease can limit yield and quality in high rainfall areas especially at 1st cut.

Establishment - Sowing

Lucerne needs to be well established before the onset of winter so sowing in late spring or early summer is ideal. The latest safe sowing date would normally be mid- August.

Sowing Options

Whether under sowing or direct seeding, lack of weed control options result in a weeds competing with the establishing Lucerne plants. It is recommend you undertake 'Stale Seedbed' techniques to limit weeds.

Successful establishment and high forage yields in the year of sowing can be achieved by under-sowing Lucerne into a spring cereal crop. Because of the later sowing requirement of Lucerne, Spring Barley is most appropriate choice. Following an April sowing this will be harvested as mixed cereal/Lucerne forage in July/ August.

Though reliant on adequate soil moisture, Lucerne can be successfully sown after 1st or 2nd cut silage. Sowing following wholecrop cereals is ideal. Avoid sowing post winter barley as a grain crop as there can be problems with volunteer barley smothering the Lucerne before the crop is established.

Normally inoculant is mixed with before drilling. Some seed comes pre-inoculated.

Varieties

There are different types of Lucerne the Mediterranean type are not suited to Northern Europe as their dormancy is not low enough and so winter hardiness is inappropriate for our colder climate. The ideal dormancy is at 4.0.

Mezzo	Marshall
The top-rated variety in France with a dormancy rating of 3.6 making it worth considering for more northerly areas of the UK. Exceptionally fast growth rate and outstandingly high yields of protein rich forage. High resistance to all the main diseases and nematodes.	This variety can produce very high dry matter yields. It is well adapted to UK conditions and can be harvested for either silage or hay. Marshal has thinner stems and is therefore very palatable.

Red Clover

Red Clover sown on its own is capable of up to 5.5 tonnes of DM per acre in its first year, with yields of 2.0 tonnes at first cut.

Care should be taken when grazing breeding ewes on Red Clover at tupping time.

Varieties available:

AMOS A tetraploid red clover with high protein % and very good 1st cut DM yields in the 1st harvest year with good ground cover.

MAGELLAN tetraploid red clover that has high total annual yields combined with excellent protein content. It is noted for its outstanding total DM yields and ground cover in the second harvest year.

SANGRIA Excellent total yields throughout the year especially first cut. Good resistance overall and especially Sclerotinia giving it great persistence.

ACTion Red Clover Blends

A equal blend of the varieties Amos, Magellan and Sangrid.

ACTion White Clover Blends

DUAL PURPOSE BLEND
Rivendel, Buddy, Iona, Violin, Brianna

CUTTING BLEND
Iona, Buddy, Violin, Brianna

GRAZING BLEND
Rivendel, Iona, Buddy, Violin

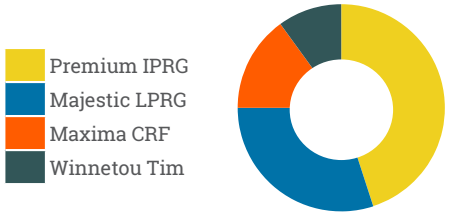
Equine Mixtures

ACT can supply a range of mixtures for grazing, or hay and haylage for the equine market.

Horse Pasture

A hard wearing, persistant sward designed for horses

- Ryegrasses selected for top sward density ratings.
- Formulated with attractive but low sugar forage to avoid laminitis.
- Creeping Red Fescue binds the sward and helps repair poaching.
- High Timothy content for grazing horses and to boost haymaking if required.



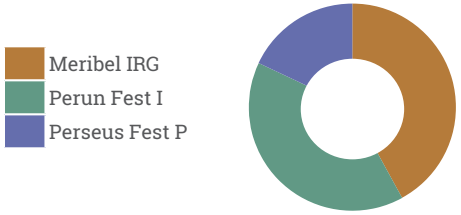
Seeds per m²	Pack size	Suggested sowing rate
2,590†	10kg	14 kg/acre or 35 kg/ha

Haylage Plus ST

NEW

Quick establishing with high yields.

- Quality hay or haylage from diploid IRG and Festuloliums.
- Will provide very heavy crops of high quality haylage.
- A short-term mixture specially developed for hay or haylage production.
- Does not contain Timothy



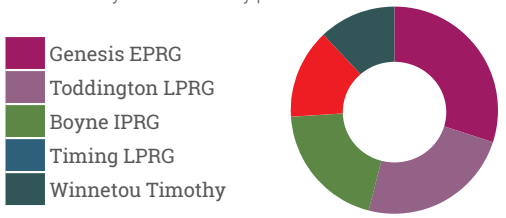
Seeds per m²	Pack size	Suggested sowing rate
1,241†	20kg	14 kg/acre or 35 kg/ha

Haylage Pro LT

NEW

Long term quality haylage with Timothy.

- A mixture for hay or haylage production for 5+ years.
- Based on all diploid species and provides high quality haylage or hay.
- A longer term mixture that produces finer forage than Haylage Pro ST.
- New long term haylage mixture with Timothy
- Inclusion of Timothy makes this very palatable.



Seeds per m²	Pack size	Suggested sowing rate
2,939†	20kg	14 kg/acre or 35 kg/ha

Herbal Grazing Mixtures

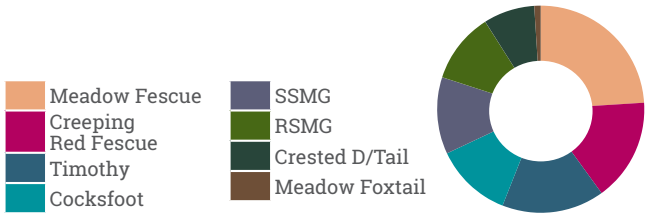
We have carefully selected a few core herbal mixtures which can be added to any grazing seed mixture, or we can create bespoke mixtures to your specifications. Ask your area manager or call the sales team at Shrewsbury.

MeadowMax

NEW

A diverse mixture of native grass species

- Can be grazed or cut for hay.
- Will suit extensive livestock management.
- A mixture that will tolerate wet and cold conditions.
- A very dense sward which is also very hard wearing.
- Will tolerate low fertiliser input and lower pH soils.



Seeds per m²	Pack size	Suggested sowing rate
6,863†	20kg	14 kg/acre or 35 kg/ha

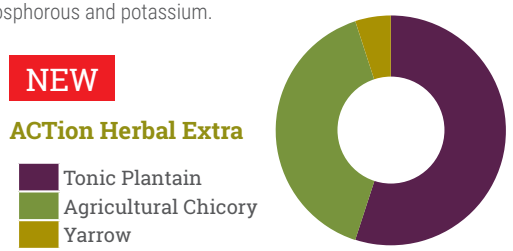
Herbal Grazing Options

Herbs to be added to any grass mixture

- Adding herbs to any grazing pasture is an excellent means of increasing the mineral uptake of the animals.
- These deep rooted species will improve soil structure and drainage and also enhance the availability of minerals such as calcium, magnesium, phosphorous and potassium.

NEW

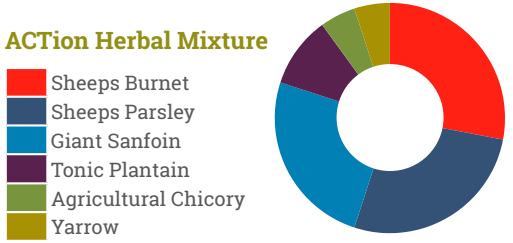
ACTion Herbal Extra



Seeds per m²	Pack size	Suggested sowing rate
409†	5kg	5-10% of grass mixture

- Can be added to any standard grazing mixture to provide cover across the whole area
- Alternatively sow in strips along headlands in fields that are likely to be foraged

ACTion Herbal Mixture



Seeds per m²	Pack size	Suggested sowing rate
225†	5kg	5-10% of grass mixture

Spring Sown Forage Crops - Sowing & Grazing

	Sowing rate kg/acre		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
Forage Rape	B	1.5 - 2.5	Approx 75 days to grazing										
	DD	1.0 - 2.0											
Kale x Rape Hybrid	B	1.5 - 2.5	Approx 80 days to grazing										
	DD	1.0 - 2.0											
Stubble Turnip	B	1.5 - 2.5	Approx 70 days to grazing										
	DD	1.0 - 2.0											
Autumn Keep	B	1.5 - 2.5	Approx 70 days to grazing										
	DD	1.0 - 2.0											
Kale	B	1.5 - 2.5	Approx 115 days to grazing										
	DD	0.8 - 2.5											
Extenda-Graze	B	8.0 - 10.0	Approx 60 days to grazing + 30 days repeat grazing										
	DD												

Sowing Grazing

Main Season Forage Crops - Sowing & Utilisation Timings

	Sowing rate kg/acre		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
Forage Rape	B	1.5 - 2.5	Approx 115 days to grazing										
	DD	1.0 - 2.0											
Kale x Rape Hybrid	B	1.5 - 2.5	Approx 125 days to grazing										
	DD	1.0 - 2.0											
Stubble Turnip	B	1.5 - 2.5	Approx 90 days to grazing										
	DD	1.0 - 2.0											
Autumn Keep/ Rapid Root	B	1.5 - 2.5	Approx 90 days to grazing										
	DD	1.0 - 2.0											
Meatmaker/ WinterGraze/Zoom	B	1.5 - 2.5	Approx 125 days to grazing										
	DD	1.0 - 2.0											
Extenda-Graze	B	8.0 - 10.0	Approx 60 days to grazing + 30 days repeat grazing										
	DD												
Fodder Beet	42,000 - 50,000		Approx 170 days to maturity										
Kale	B	1.5 - 2.5	Approx 160 days to grazing										
	DD	0.8 - 2.5											
Swede	B	0.75 - 1.25	Approx 160 days to grazing										
	DD	0.5 - 1.0											
Maincrop Turnip	B	0.75 - 1.25	Approx 120 days to grazing										
	DD	0.5 - 1.0											
Mustard	B	5.0 - 6.0	Approx 60 days to grazing										
	DD	4.0 - 5.0											
Forage Rye	50 - 60		Approx 55 days to grazing										

Sowing Grazing

B - Broadcast **DD** – Direct Drilled

Achieving maximum yields from your grazing brassicas relies on getting it away quickly, which means sowing it at the optimum time and at the right sowing rate.

The use of seed stimulants can help to get the crop established quickly and away from the threat of weeds, pests and diseases.

New innovative seed treatment available on selected species of our grazing forage crops

Start-uP®

Advanced seed treatment to promote early root development

- ➔ More even establishment
- ➔ Increased vigour & early rooting
- ➔ Insurance for your crop at vulnerable stage

Contains:

Nitrogen (ureic N)	4.0% N
Phosphorus pentoxide (P_2O_5)	8.7% P
Potassium oxide (K_2O)	5.0% K

Needs to be well established before ground conditions are waterlogged.

Stubble Turnips

The most widely grown of all grazing brassica forage crops with a yield potential over 4 tonnes DM/ha – equivalent to 3500 lamb grazing days per ha. Soil management and nutrition is crucial if you want to achieve the expected results. Sow by mid August to get the maximum growth available.

Hay or straw should be on offer prior to each grazing, particularly in the case of dairy cows and it is advisable to introduce animals to the crop gradually.

Seed Treatments – Untreated or Treated with + StartUp.

Sowing & Utilisation

Drill	1.0-2.0kg/acre (2.5 - 5kg/ha)
Broadcast	1.5kg / acre (3.7-6.0kg/ha)
Optimum Sowing Period	Mid June-Mid August
Utilisation	80-100 days (Late September-December)
Average Dry Matter Yield	3.5-4.0 tonnes

Average Fresh Yields	38-45 tonnes/ha
Dry Matter	8-9%
Cost per ha	£305/ha (£124/acre)
Cost per tonne utilised dry matter	£66
Cost per tonne fresh weight	£5

Vollenda Best all rounder variety

- A highly palatable all rounder suitable for summer, autumn or winter grazing.
- High yields of a large pink tankard shaped roots.
- Bolting resistance is good so can be sown spring for summer grazing
- **Untreated –** Pack size 10kg and 25kg

Rondo The choice for winter grazing

- A green skinned variety for sheep or cattle.
- Leafy habit with excellent disease resistance and so very good for winter grazing up to February.
- **Untreated –** Pack size 5kg
- **Treated –** Pack size 2kg

Samson Sweet Tetraploid tankard shaped roots

- Produces large tankard shaped roots which are palatable for cows and sheep.
- Shown to be a prefential grazer leading to higher intake and growth rates.
- **Untreated –** Pack size 5kg and 25kg
- **Treated –** Pack size 2kg

Skyfall A new leafy brassica

- Bred for fast leafy grazing and is ideal for strip grazing by dairy or beef cattle in the summer months – ideal as a gap filler.
- Regrowth potential, as long as not overgrazed.
- **Untreated –** Pack size 5kg
- **Treated –** Pack size 2kg

Barkant A proven and reliable stubble turnip

- A very winter hardy turnip.
- High yields of purple tankard shaped roots that is palatable by both sheep and cattle.
- **Untreated –** Pack size 10kg and 25kg

Delilah Ideal for finishing lambs

- Huge white tankard shaped bulbs with very high dry matter yields and good root to leaf ratio.
- Disease resistance is very good
- **Untreated –** Pack size 5kg
- **Treated –** Pack size 2kg

Tyfon Fast growing leafy brassica

- A variety undergoing a resurgence as it can be ready for grazing after 8-10 weeks.
- A cross between Chinese cabbage and stubble turnip, it has very good frost resistance.
- **Treated –** Pack size 5kg

Avalon Leafy Turnip Fast growing leafy brassica

- Avalon is a very leafy brassica that can be sown in spring or autumn and is ready for grazing in just 6-8 weeks.
- Pack Size 10kg and 25kg
- **Untreated –** Pack size 10kg and 25kg

Forage Rape – Kale/Rape Hybrids

Rape and hybrids have the advantage of being very fast growing crop suitable for grazing by sheep or cows. Both are an ideal catch crop for boosting mid summer forage production when planted in the spring and are also suitable for fattening lambs in the autumn/winter. Forage rape extends the grazing season in the autumn and is superb for flushing ewes. Ideally strip graze to avoid excessive wastage.

Stock should be transitioned gradually over a two week period and an area of grassland should be available for animals to return to with water and hay or straw should also be made available.

Seed Treatments – Untreated or Treated with + StartUp.

Sowing & Utilisation

Drill	1.0-2.0kg/acre (2.5-5kg/ha)
Broadcast	1.5kg-2.5kg / acre (3.7-6.0kg/ha
Optimum Sowing Period	Mid June-Mid August
Utilisation	80-100 days (Late September-January)
Average Dry Matter Yield	3.5-4.0 tonnes

Average Fresh Yields	24-35 tonnes/ha
Dry Matter	11-12 %
Cost per ha	£408/ha (£166/acre)
Cost per tonne utilised dry matter	£107
Cost per tonne fresh weight	£5

Emerald

A fast maturing forage rape

- Ready to graze after 10-12 weeks with good dry matter yields and disease resistance.
- It has very good feeding quality, being high in protein and easily digestible, remaining palatable well into the winter.
- **Untreated–** Pack size 10kg and 25kg

Rampart

High feed quality and grazing flexibility

- Bred with feed quality enhancements and high yield potential.
- Excellent winter hardiness giving flexibility when grazing crops.
- **Untreated –** Pack size 5kg and 25kg
- **Treated Sepiret + StartUp**– 2kg

Hobson

Ideal for finishing lambs

- Fully proven on livestock farms throughout the UK.
- Ideal for finishing lambs with good winter-hardiness and disease resistance
- **Untreated –** Pack size 5kg and 25kg
- **Treated** – Pack size 2kg

Interval

Ideal for finishing lambs

- Has been proven to grow the highest dry matter yield of rape/kale hybrids which helps to reduce feed costs.
- Very fast establishing and ready to graze in 12 weeks.
- **Untreated –** Pack size 5kg and 25kg
- **Treated** – Pack size 2kg

Unicorn

High quality kale/rape hybrid

- A new rape/kale hybrid which can provide palatable forage for autumn and winter grazing.
- Regrowth potential, as long as it is not grazed too tight, providing additional grazing opportunities.
- **Untreated –** Pack size 5kg and 25kg
- **Treated** – Pack size 2kg

Spitfire

Versatile kale/rape hybrid

- A good companion to use with other fast establishing brassicas.
- Rapid growing brassica that can be used as a rescue or catch crop that can also provide good cover for holding, driving and feeding game birds
- **Untreated –** Pack size 10kg and 25kg

Catch Crop Mixtures

Sowing a combination of stubble turnip and forage rape has two benefits; it improves the protein content of the crop and the forage rape also improves winter hardiness and extends the utilisation period. A small amount of Kale has to be included due to legislation.

Stock should be transitioned gradually over a two week period and an area of grassland should be available for animals to return to with water and hay or straw should also be made available.

Seed Treatments – Untreated or Treated with + StartUp.

Sowing & Utilisation

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Rapid Root

A fast establishing forage rape based catch crop mixture

- Produces a crop ready for grazing in 12 weeks.
- Stubble turnips maintain the feed once the leafy rape and tops have been grazed.
- Sow at 2kg per acre
- Contains:
  60% Forage Rape
  35% Stubble Turnip
  5% Kale
- **Untreated –** Pack size 5kg

Autumn Keep

A quality crop with good disease resistance

- Very fast establishment for autumn use.
- Autumn Keep will produce quality grazing in 10-12 weeks
- Sow at 2-2.5kg per acre
- Contains:
  40% Forage Rape
  20% Stubble Turnip Samson
  30% Stubble Turnip Rondo
  10% Kale
- **Untreated –** Pack size 2.5kg
- **Treated** – 2.5kg

Extenda-Graze

A versatile catch crop for sheep or cattle

- A mixture of Italian Ryegrass and Forage Rape
- Used for grazing in the summer/ autumn, followed by either spring grazing and/or a silage cut.
- IRG will not head in 1st year will give quality grazing of leafy lush grass.
- Sow at 8-10kg per acre
- Contains:
  25% Fox Italian Ryegrass
  50% Alamo IRG
  25% Forage Rape
- **Untreated –** Pack size 20 kg

Zoom

Vigorous and quick growing mixture

- Blend of Winfred hybrid brassica and forage rape.
- Ideal for replacing failed crops or patching spring sown crops.
- High leaf to stem ratio crop using carefully selected varieties with good disease and bolting resistance.
- **Untreated –** Pack size 5kg

Winter Graze

A blend of stubble turnips and Forage Rape designed for grazing into the winter

- Needs to be established by mid -August to get the full benefit.
- The forage rape helps to protect the stubble turnips during a frost.
- Sow at 2kg per acre
- Contains:
  60% Stubble Turnip
  35% Forage Rape
  5% Kale
- **Untreated –** Pack size 5kg

Meatmaker

An excellent blend designed to produce autumn or winter keep with minimal effort.

- The higher inclusion of forage rape helps protect the turnips if crops are to be used later.
- Sow at 2kg per acre
- Contains:
  65% Forage Rape Rampart
  25% Stubble Turnip Rondo
  10% Kale
- **Untreated –** Pack size 2kg
- **Treated** – 2kg

GREEN MANURING MIXTURES

The range of green manure mixtures on this page have been specially formulated to help protect soils as well as improving soil health and fertility. Those marked EFA are suitable for use in the new Ecological Focus areas required under the latest CAP proposals.

EFA Catch Crops	EFA Cover Crops
➔ Made up of at least **one** cereal and **one** non-cereal ➔ Must be established by 20th August ➔ Must be retained until at least 14th October	➔ Made up of at least **one** cereal and **one** non-cereal ➔ Must be established by 1st October ➔ Must be retained until at least 15th January
➔ No restriction on use of these crops outside these periods so do not need to be destroyed and can be grazed. **England only**.	
Cereal Crops • Rye • Barley • Oats	**Non Cereal Crops** • Vetch • Phacelia • Mustard • Lucerne • Oilseed radish
➔ Grass can be counted as long as it as undersown in previous crop and is suitably established.	

Mixture Species	Uses and scenarios
EFA **Rye + Vetch**	Quick to establish and prolific tillering gives excellent winter cover and weed control. The Vetch fixes nitrogen through the life of the crop and Rye holds the nutrients making it available for following crops. Deep rooting habit helps penetrate into tight soils. assive biomass production to increase soil organic matter. Can also be grazed in winter or left for a silage cut in early spring.
EFA **Rye + Vetch + Mustard**	Addition of mustard increases the biomass and autumn ground cover. Excellent winter grazing potential.
EFA **Oats + Vetch**	Similar characteristics to Rye + Vetch however can be used where Take-all an issue. Rapid establishment and very good cover and weed suppressant.
EFA **Rye + Vetch + Phacelia + Oil Radish**	Large biomass for maximum organic matter incorporation potential. This rapidly establishing mixture gives very good weed suppression. Differing rooting depths and growth habits make this a superb cover crop. Grazing potential is also good.
Oil Radish + Kale Mustard Hybrid + Mustard	Mixture specifically designed for biofumigation prior to potatoes and contains species with high levels of isothiocyanates. Very fast to establish and easily chopped and incorporated. Different rooting depths help penetrate tight soils.
Brown Mustard + Tillage Radish	Another biofumigation mixture ideal for using in front of a potato crop.
EFA **Oats + Mustard + Oil Radish + Phacelia**	True multi-species mixture with differing rooting depths and growth habits which helps penetrate tight soils. High biomass potential for increasing organic matter production and weed suppressing.
IRG + Red Clover	Grass + Red Clover has been a staple in fertility building for centuries, this mixture is a modern variant on that. High biomass production from the IRG with nitrogen fixing from the clover. Will help stabilise soil surfaces once established. Mixture can be undersown into a cereal crop and so EFA compliant in that scenario. Can be incorporated, grazed or taken as a silage cut.

Our standard range of Cover and Catch Crops and their suggested uses is below, however we can create bespoke mixtures using any of the species listed on the page opposite and several more not listed. Please ask your ACT Area manager for details.

Top Green
80% Rye + 20% Vetch
Sow at 50kg/ha

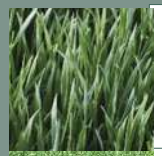
Sow Green
80% Oats + 20% Vetch
Sow at 50kg/ha

Cover Green
60% Rye + 30% Vetch + 10% Mustard
Sow at 40-50kg/ha

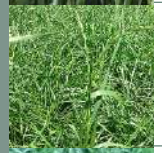
Soil Plus
70% Rye + 20% Vetch + 10% Oilseed Radish
Sow at 40-50kg/ha

MaizeOn
70% Forage Rye + 15% Vetch + 10% Tillage Radish + 5% Phacelia
Sow at 40-50kg/ha

Pretato
80% Brown Mustard + 20% Tillage Radish
Sow at 7-10kg/ha



Forage Rye
Excellent weed suppression and high biomass. N and K lift and hold. Increase organic matter in soil. Quick to establish so can be sown later. Often sown with Vetch as a cost effective cover crop.
Sow at 60kg/ha

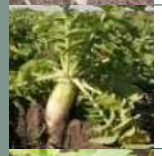


Italian Rye Grass
Excellent biomass production above and below ground. IRG is quick to establish with weed suppressing qualities. Long term soil improvement characteristics which can be grazed or silage.
Sow at 25kg/ha

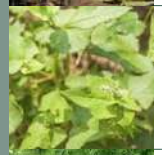
Black Oats
Very quick establishment for good weed suppress as also alleopathic. N and K lift and hold/ Variable frost susceptibility/Increases organic matter.
Sow at 40kg/ha

Brown Mustard
Very strong early vigour for weed suppression. Produces isothiocyanate for biocidal effects. Active against PCNs. Some frost tolerance. Increases organic matter and traps N and K. Suitable for grazing. Can be sown later than most crops.
Sow at 5kg/ha

Oil Radish Standard
Deep root soil conditioner, plus high biomass so increases soil organic content and good weed suppressant. Traps N and K. Produces high levels of isothiocyante for biofumigation + some nematode control. Most oilseed radish exhibit club root resistance.
Sow at 12kg/ha



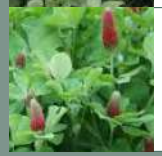
Tillage Radish
Longer tap root for deeper soil conditioning. Also traps N and K. Produces isothiocyanates for biofumigation. Significant control of beet cyst nematode as well as other nematodes.
Sow at 12kg/ha



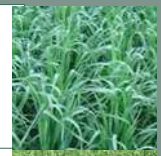
Buckwheat
Raises nutrients N and P lift and hold as buckwheat is an excellent phosphate trapper. Very quick growing with large biomass. Insect attractant. Can be very susceptible to frost kill so a short catch crop.
Sow at 50kg/ha

Vetch
Excellent nitrogen fixer especially if drilled early, very compatible with rye/oats. Spring and Winter vetch options are available.
Sow at 40kg/ha

Berseem/Alexandria/Egyptian Clover
Annual legume for nitrogen fixing. Quick establishment but variable frost susceptibility. Single cut type with no regrowth habit also available.
Sow at 12kg/ha



Crimson Clover
Grows at lower temperatures than other annual legumes. Quick establishment with upright growth habit/Weed suppressant/Degrades into soil very quickly
Sow at 12kg/ha



Oats
Excellent weed suppression due to Allelopathy. NandK lift and hold and increases organic matter in soil. Can be sown with vetch. Use winter types to last overwinter, spring if you want it to die off in frost.
Sow at 50kg/ha

Westerwold Ryegrass
Excellent biomass production above and below ground. IRG is quick to establish with weed suppressing qualities. Medium term (6 -9 months) soil improvement characteristics which can be grazed or silage.
Sow at 25kg/ha

White Mustard
Excellent biomass and so increases organic matter Superior weed suppression. Also traps N and K in growing crop. Produces isothiocyanate giving biocidal effects against weeds and pests. Some nematode activity.
Sow at 12kg/ha

Kale/Mustard Hybrid
Very quick to establish for excellent weed suppression. Traps N, P and K. Is frost tolerant. Can provide excellent game bird cover over winter. e.g. Carbon.
Sow at 5kg/ha

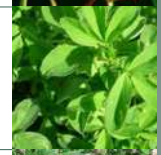
Oil Radish Class 1
Offers the best of beet cyst nematode control

Oil Radish Class 2
Significantly reduces beet cyst nematodes.

Phacelia
Excellent disease break crop/ insect attractant, hover flies eat aphids. Breaks down quickly for C, P, K and Mg.
Sow at 6kg/ha

Linseed
Easy to establish and is good at helping lift Nitrogen in soil. Branching tap root for soil conditioning. Not as attractive to slugs as some other species.
Sow at 30kg/ha

Red Vetch
Quick growing high biomass option. A more frost susceptible vetch option.
Sow at 40kg/ha



Lucerne
Can be slow to establish but capable of fixing nitrogen.
Not ideal for late drilling.
Sow at 20/kg/ha

Red Clover
Historically used as a nutrient restorer and should not be forgotten. Great nitrogen fixer but needs to be drilled early. Winter hardy perennial.
Sow at 12kg/ha

ACTION FORAGE SEEDS GUIDE 2020

ACT operates throughout England, Scotland and Wales from Shetland to the Scilly Isles

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