



WATSON SEEDS



2024 CASTLE

MIXTURES

Premium Performance Seed



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COVER PHOTO:

Beef Shorthorn bulling heifers rotationally grazing a five year old adapted Fyvie mixture.

'For as long as I can remember we have used Watson Seeds at Fearn, they have supplied us with high quality grass mixtures and forage crops which suit our style of farming. Over the years we have reduced our artificial fertiliser use on our grass and will continue to do so as the clovers in our MSS come into their own. We expect our stock to perform to optimum levels on a grass and forage diet and enjoy working with the Watsons team to ensure this happens.'

John Scott, J Scott & Partners, Fearn Farm, Tain, Ross-shire.



FOREWORD

I am very pleased to introduce our 2024 seeds catalogue. As we enter another year planning what to sow, we offer some observations of what will suit your needs to enable you to get the best performance from your grass and forage crops.

We spend a great deal of time selecting the right varieties for our Castle Mixtures and we have excellent stocks of high quality seed secured for the season ahead. Our variety assessment pages (6 and 7) highlight our selection of material and includes varieties from a wide range of breeding programmes from plant breeding stations across the world. We appreciate the excellent work conducted by the SRUC team producing the Recommended List which helps us in our selection process, but we are unique in also having our own farm trial sites. The update on our trials at Upper Nisbet and Oakwood Mill can be found on pages 32 and 33.

At the time of this catalogue going to print, we have been advised that the Scottish Government's long awaited announcement of farm support and subsidy structure going forward will be announced in February. We are producing a new agri-environmental booklet in anticipation of

this increasingly important part of the farming seed requirements.

Our ongoing commitment to on farm service has been strengthened by the appointment of two new trainees in the field. Iona Corcoran based in the North East and Cameron McDonald in the Borders will both add enthusiastic, young energy to our team.

The Royal Highland Show last year saw us at our busiest ever and we would encourage you all to come and join us on June 20th - 24th. Earlier in the month we will be supporting Scotsheep at Aikengall on Wednesday 5th June. This will undoubtedly be one of the highlights of the farming calendar in 2024. We are very grateful to James, Charles and Harry for helping us set up a demonstration trial on sward rejuvenation, featured on pages 34 and 35.

We are also proud to provide on going support to RSABI, and now Farmstrong Scotland in recognition of the supportive parts they play in Scotland's farming community.

I do hope you find this publication informative and we look forward to hopefully discussing any seed requirements you may have for the season ahead.

I wish you every success for the year ahead and thank you for your support. It is greatly appreciated.

Johnny Watson F.R.Ag.S

A highly productive field of second year Tantallon photographed on the 21st September at Smailholm Mains (see page 10). The last throws of a tricky spring barley harvest is being completed in the background.



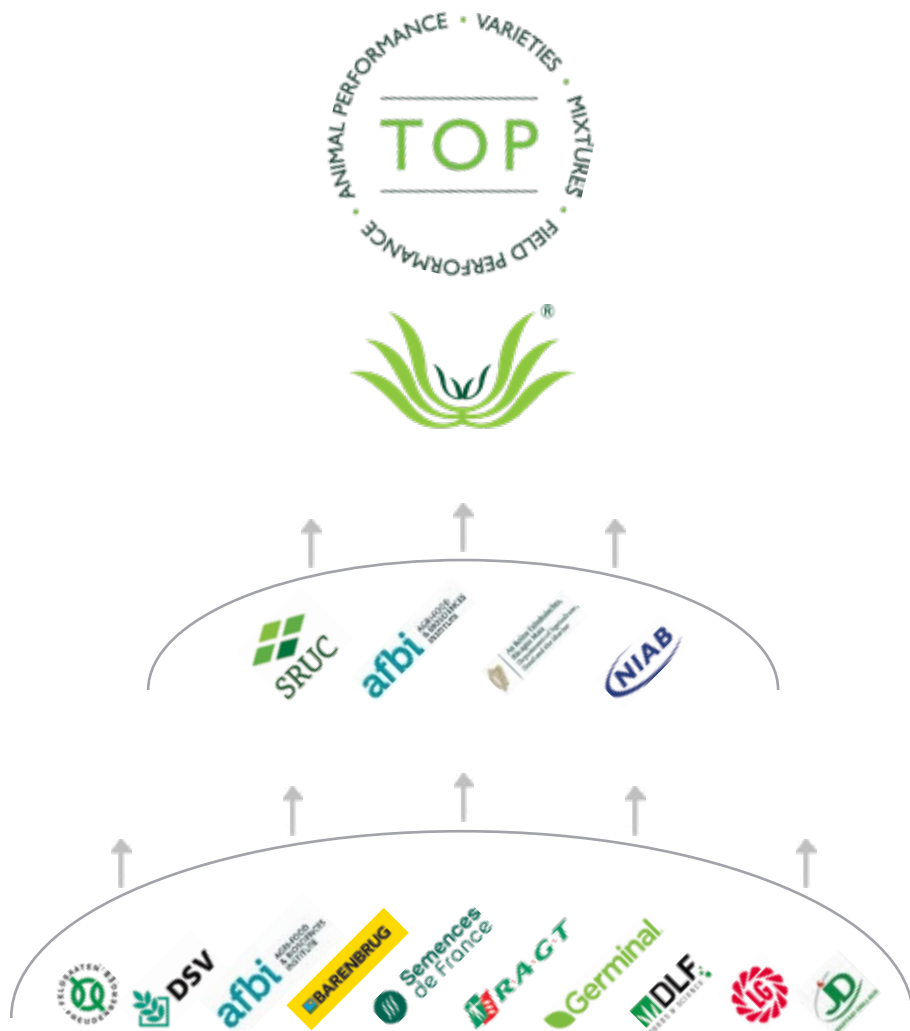
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**TURN TO THE 'BACK' FOR THE
FORAGE & ROOT CROP GUIDE**

SPOILT FOR FIRST CHOICE

We enjoy a very positive relationship with a range of key breeders, across Europe and beyond, that enables us to procure the best varieties possible for our Castle Mixtures.





VARIETY ASSESSMENT

All grass varieties contained in our Castle Mixtures are 'First Choice' as published in the Grass and Clover Varieties for Scotland 2023-2024.

		SRUC 1st Choice	AFBI / PPI Rated	NIAB Recommended	Ground Cover	REE
ITALIAN RYEGRASS						
ALAMO	High yielding variety in year of sowing and has excellent ground cover.	✓		✓	A	34
MESSINA (T)	Exceptional early season growth and good quality across all its cuts.	✓		✓	C	34
HYBRID RYEGRASS						
BARCLAMP	A later heading hybrid combining good ground cover with consistent quality and yield across the season.	✓		✓	A	39
ABEREVE (T)	A good variety with the highest D value in second cut.	✓	✓		A	34
ASTONCRUSADER (T)	Produces good yields at the first conservation cut and overall.	✓	✓	✓	A	32
INTERMEDIATE PERENNIAL RYEGRASS						
ABERGREEN	Excellent mid season D value in second cut and spring growth under grazing.	✓	✓	✓	A	43
ABERMAGIC	A proven variety that is good for cutting but is an exceptional grazing variety providing quality yield into the autumn.	✓	✓	✓	A	42
ABERZEUS	Excellent yields under both managements and offers the highest grazing quality in its category.	✓	✓	✓	A	40
GALGORM	Exceptional yield and quality particularly under grazing. It has excellent mid to late season growth.	✓	✓	✓	B	36
GOSFORD	Good all round yields with particularly good mid to late season grazing productivity.	✓		✓	B	42
GUSTO	Good grazing yields particularly later in the season and provides good quality under conservation.	✓	✓		B	44
MOIRA	Particularly strong grazing variety especially on the shoulders of the season.	✓	✓	✓	B	38
STRANGFORD	Exceptional first cut yield and excellent quality across all the cuts. Consistent grazing across the whole season.	✓			B	35
CALEDON (T)	Good yields under both managements.	✓			C	44
FINTONA (T)	Good spring and autumn growth. Exceptional variety for both cutting and grazing.	✓	✓	✓	C	32
SEAGOE (T)	Offers early season growth giving excellent spring grazing and first cut yield.	✓	✓	✓	C	35

LATE PERENNIAL RYEGRASS						
ABERAVON	Consistent performance across the season with particularly good grazing quality.	✓	✓	✓	B	47
ABERCHOICE	Stand out variety in its category offering exceptional quality at first cut and good growth at the shoulders of the season under grazing.	✓	✓	✓	A	55
ABERLEE	Performs exceptionally well especially under grazing providing high yields and category leading quality.	✓		✓	A	55
BALLYVOY	Overall a good variety for conservation, with good yields throughout the year especially at first cut.	✓	✓	✓	-	47
CALLAN	Good productivity under both managements early on in the season.	✓	✓	✓	B	46
DUNDROD	Good conservation yield, particularly at second cut combined with consistent grazing throughout the season.	✓		✓	B	47
GLENROCK	Good grazing variety, especially mid-season.	✓			B	52
ABERBITE (T)	Very even performance over the grazing season. First cut and grazing yields are excellent.	✓	✓	✓	C	50
ABERPLENTIFUL (T)	Good yields and quality at the first cut and good seasonal growth under grazing particularly at the backend.	✓	✓		C	53
ALFONSO (T)	Excellent first cut yield and early season grazing combined with very good ground cover. A good all-round variety.	✓			B	47
BALLINTOY (T)	Heading date is right in the middle between an intermediate and a late and can be utilised as either within our mixtures. It is exceptional especially in the early season under cutting and grazing and has excellent quality.	✓	✓	✓	C	46
GRACEHILL (T)	Consistent quality throughout the season under both managements with particularly good mid to late season grazing.	✓	✓	✓	C	47
KILLYLEA (T)	Exceptional quality under both cutting and grazing with consistent yield throughout the season.	✓			C	49
TIMOTHY						
BARONAISE	An exciting new timothy with the potential to extend the grazing season with unparalleled growth at the shoulders of the season with it being particularly strong at the back end.	✓		✓	A	58
COMER	Best spring growth of the timothys. Softer than others for better palatability.	✓	✓	✓	A	53
WHITE CLOVER						
ABERPEARL	Highest yielding small leaved clover, good ground cover.				SMALL	
ABERSWAN	A high yielding variety with good consistent growth across the season.				MEDIUM	
HEBE	Good medium leaved variety with strong growth across the season and performs well under both grazing and silage regimes.				MEDIUM	
MERWI	Productive variety better suited to light defoliation.				MEDIUM	
ALICE	High yielding and good ground cover.				LARGE	
RED CLOVER						
GLOBAL	Yields under cutting in years 1, 2 and 3 are very impressive.				EARLY	
ROZETA	A widely used variety that performs well under cutting and grazing and has good persistency.				EARLY	



CASTLE MIXTURES® FOR ALL YOUR NEEDS

Mixture	Duration (Years)	Mainly Cutting	Dual Purpose (mostly cutting)	Dual Purpose (mostly grazing)	Mainly Grazing	Guide Sowing Rate (Kg/Acre)
BALVENIE™	1-2					14
TANTALLON®	2-3					14
RED TANTALLON®	2-3					14
AIRLIE™	3-4					15
DUART™	4-7					15
CARRICK™	4-7					15
EDZELL®	4-7					15
DUNDAS®	4-7					15
HERMITAGE™	4-7					15
HERBAL LEY	4-7					14
GREENAN™	7+					15
MINGARY®	7+					15
FYVIE™	7+					15

- Varieties have been selected from the U.K recommended lists.
- Special mixtures available - for example, extra clover, no clover, addition of cocksfoot or westerwolds.
- Please contact your Watson Seeds representative to help choose the best mixture for your situation.
- If we make any substitutions of varieties in our mixtures, owing to demand, we will ensure that we only use the best alternative available.

Castle Mixtures®

Balvenie™, Tantallon®, Red Tantallon®, Airlie™, Duart™, Duart (NI)™, Greenan™, Carrick™, Edzell®, Dundas®, Hermitage™, Brodie™, Mingary®, Fyvie™

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BALVENIE™

VERY BULKY 1-2 YEAR MIX

VARIETY	TYPE	%
Alamo Messina (T)	Italian Ryegrass	78.6
Barclamp	Hybrid Ryegrass	21.4

- Very bulky over several cuts
- Leafier than straight Italian
- Offers fast establishment



ITALIAN RYEGRASS

It is a high yielding biennial which responds very well to fertiliser. It tillers less than ryegrass and has an upright growth habit which leads it to be better suited to cutting rather than grazing.



HYBRID RYEGRASS

A hybrid ryegrass is a cross between an Italian and perennial ryegrass. Characteristics are taken from both, leading to a grass which is longer lasting, denser, easier to manage and better in quality.

The addition of hybrid ryegrass in the Balvenie adds quality over straight Italian ryegrass. With little impact on the yield the sward will have a greater leaf composition. The hybrid ryegrass will be slower to produce a seed head which helps in maintaining a consistent forage quality across the season.

TERM TIME (years)	GRAZING SUITABILITY (1-5)	CUTTING SUITABILITY (1-5)	TETRAPLOID (%)
1-2	2	5	29



TANTALLON[®]

OUTSTANDING 2-3 YEAR MIX

Johnny admiring the terrific take of clover with Stewart Shaw in the Cover field at Smailholm Mains which was undersown in 2021.

‘The field was grazed firstly with ewes in October then shut off until the following spring when it was grazed by ewes and lambs at 7.5 per ha. In 2023 it was cut for silage twice then grazed with cattle until September. It only received two applications of fertiliser before each cut of silage. We find Tantallon a fantastic all rounder, providing great early grazing in the spring and brilliant silage crops with plenty of clover.’

Stewart Shaw, Smailholm Mains, Kelso, Scottish Borders.

	VARIETY	TYPE	%
3-5 silage cuts per year	Barclamp	Hybrid	21.4
Excellent aftermath grazing	AberEve (T)	Ryegrass	
Careful combination of hybrids and intermediate perennials	Moira	Intermediate	55.0
Persistent growth	Strangford	PRG	
	Fintona (T)		
	Ballintoy (T)	Late PRG	20.0
	Rotational	White Clover Blend	3.6

TERM TIME (years)	GRAZING SUITABILITY (1-5)	CUTTING SUITABILITY (1-5)	TETRAPLOID (%)
2-3	2	5	36



RED TANTALLON®

HIGH PROTEIN 2-3 YEAR MIX

Johnny McCririck seen here in a great field on the banks of the river Tweed in mid September. The field produced three cuts of silage followed by high quality aftermath grazing for fattening lambs. Typical analysis over the years has been 73 D, DM 38% with protein at an impressive 13.9%. The big bales are triple wrapped to help reduce any wastage.

‘We are in our third rotation with Red Tantallon here at Whitmuirhaugh. Last year the red clover content of the mixture kept growing during the long dry spell and after the rain finally arrived, the grass rallied to help produce a tremendous third cut.’

Johnny McCririck, Whitmuirhaugh, Kelso, Scottish Borders.

VARIETY			TYPE	%	High protein silage
Barclamp AberEve (T)			Hybrid Ryegrass	21.4	Up to 3-4 silage cuts per year
Moira Strangford Fintona (T)			Intermediate PRG	35.7	Nitrogen fixing
Ballintoy (T)			Late PRG	18.0	Excellent for fattening lambs
Rotational			White Clover Blend	3.6	High sugar grasses to aid fermentation
Global			Red Clover	21.3	

TERM TIME (years)	GRAZING SUITABILITY (1-5)	CUTTING SUITABILITY (1-5)	TETRAPLOID (%)
2-3	2	5	34



AIRLIE™

INTENSIVE 3-4 YEAR MIX

A fine autumn day in the Borders with Sharplaw in the background. The field produced two great cuts of silage prior to delivering highly nutritious sheep grazing last year despite the dry summer.

‘The sheep are farmed, here at Wester Ulston, in partnership with Neil Sandilands and we are delighted with the performance of the Airlie mixture.’

Steven Withers, Wester Ulston & Upper Huntly, Jedburgh.

VARIETY	TYPE	%	Leafy and dense mixture
Gusto Strangford Seagoe (T)	Intermediate PRG	47.0	Excellent silage quality
Callan Alfonso (T) Ballintoy (T)	Late PRG	49.0	Improved mid season D value
Rotational	White Clover Blend	4.0	Also ideal for intensive grazing

TERM TIME (years)	GRAZING SUITABILITY (1-5)	CUTTING SUITABILITY (1-5)	TETRAPLOID (%)
3-4	4	5	49



CARRICK™

MEDIUM TERM DUAL PURPOSE MIX

'The field of Carrick has performed well since it was sown five years ago. It is used predominantly to supply horse hay in the local area. Crucially, I have found that it produces good quality soft hay with very little fertiliser applied (under 50 units).'

Philip Gray, 4 Broomhill Cottages, Morpeth, Northumberland.

	VARIETY	TYPE	%
Offers early cuts of hay and silage	Gusto Strangford	Intermediate PRG	43.4
Good mid season digestibility and grazing yields	Dundrod Alfonso (T) Ballintoy (T)	Late PRG	45.3
Increased timothy for hay production	Comer	Timothy	8.0
Good ground cover	Rotational	White Clover Blend	3.3

TERM TIME (years)	GRAZING SUITABILITY (1-5)	CUTTING SUITABILITY (1-5)	TETRAPLOID (%)
4-7	4	5	25



DUART™

HIGH ENERGY GRASS MIXTURE

'We are delighted with the performance of the Duart mixture and how it is fitting into our farm rotation. We will tend to have grass down for four years before it goes into wheat and we find there is no reduction in the yield over this period. Quality is key with us aiming to produce three to four cuts of silage with an ME of 12+.'

Brian & Gil Weatherup, Parkend Farm, Cowdenbeath, Fife.

VARIETY	TYPE	%
AberGreen	Intermediate PRG	13.3
AberChoice Ballyvoy Callan AberBite (T) Killylea (T)	Late PRG	86.7

Produces outstanding energy and protein levels

Contains a high number of new generation high sugar grasses

Later heading varieties allow flexibility over cutting dates

Excellent ground cover and persistency

Very high D value

Also available with clover

TERM TIME (years)	GRAZING SUITABILITY (1-5)	CUTTING SUITABILITY (1-5)	TETRAPLOID (%)
4-7	5	5	27



700 cows on 12 acres of a 25 acre field enjoying a sunny day in April 2023. This field was sown in summer of 2022.

'Reseeding with quality varieties, as found in Duart, let us increase stocking rates and therefore output at minimum cost.'

Rodger Callander, Blaiket Mains, Dumfries.



'We established the Duart mixture in early September 2022, have had two cuts of silage and three grazings this season. The grass growth has been fantastic with plenty of clover present in the sward. The silage quality has been excellent.'

Steven Kellett, S J Kellett & Sons, Whitehouse Farm, Hexham.



EDZELL®

DUAL PURPOSE LONG TERM MIX

‘Having used Mingary heavily here at Kinnahaird in the past, I wanted to try out a grass mix, not too different than our usual. I am really pleased with how Edzell has performed in its first year. It grazed sheep in the spring, was cut for silage and now grazing another lot of sheep. This mix was definitely the right choice and I look forward to seeing how it persists.’

Mike Renwick, John P Clark Ltd, Kinnahaird Farm, Contin, Strathpeffer.

VARIETY	TYPE	%
AberGreen Strangford	Intermediate PRG	25.9
Ballyvoy Glenrock AberPlentiful (T) Ballintoy (T)	Late PRG	61.4
Comer	Timothy	8.0
Rotational	White Clover Blend	4.7

High leaf/stem ratio ensures high quality silage

Contains the top late heading varieties

Persistent over many years

Winter hardy

Excellent for beef and sheep

TERM TIME (years)	GRAZING SUITABILITY (1-5)	CUTTING SUITABILITY (1-5)	TETRAPLOID (%)
4-7	5	4	27



GREENAN™

HEAVY/WET SOILS MIX

'Greenan was the obvious choice for this particularly difficult field. It sits at the bottom of a steep hill and can get very wet at either end of the season. The Greenan mix has coped really well and has produced a dense sward which seems to reduce poaching. As well as grazing, we have managed to get two cuts of quality silage off it this year. This is the first time I have used the Greenan mix but it has exceeded expectations, even in such a wet year as this.'

Rhys Anderson, Burnton Farms, Laurencekirk.

Excellent option for rotational grazing

Highly resistant to poaching on heavier ground

Offers exceptional ground cover

High D values

VARIETY	TYPE	%
Gusto Strangford	Intermediate PRG	23.4
Ballyvoy Dundrod Glenrock	Late PRG	70.6
Permanent	White Clover Blend	6.0

TERM TIME (years)	GRAZING SUITABILITY (1-5)	CUTTING SUITABILITY (1-5)	TETRAPLOID (%)
7+	5	5	0



DUNDAS[®]

DUAL PURPOSE MEDIUM/LONG TERM MIX

'Dundas has been my first choice for many years here at Northfield. Our location is dictated by challenging weather conditions and with light soils I need a grass mixture which will perform. Dundas does just this for not only early grazing but it also produces a good sward for silage and hay. It then bounces back to produce excellent tugging ground for ewes in early October with an abundance of clover which, in turn, reduces the need for too much fertiliser.'

Ali Gordon, Northfield Farm, St Abbs, Eyemouth.

VARIETY	TYPE	%
AberMagic Gosford Seagoe (T)	Intermediate PRG	37.5
AberAvon Ballyvoy Dundrod Ballintoy (T) Gracehill (T)	Late PRG	49.2
Comer	Timothy	8.3
Rotational	White Clover Blend	5.0

Dense and highly productive sward

Top intermediates ensure heavy silage cuts

Includes rotational clover blend

Combination of grasses that exploit seasonal growth

New variety Dundrod included

TERM TIME (years)	GRAZING SUITABILITY (1-5)	CUTTING SUITABILITY (1-5)	TETRAPLOID (%)
4-7	5	5	38



'Dundas definitely suits our farm here at Rootfield West where we are looking for a bulky and persistent sward. We farm breeding cattle and ewes and there is a constant need for productive grass and quality silage is imperative. I am really pleased with how the Dundas has performed and is continuing to perform into the backend grazing sheep.'

Kenneth MacKenzie, Rootfield West, Mulbuie, Muir of Ord.



Getting the stock and grass genetics right at Roxburgh Mains. Rawburn in calf heifers enjoying a fine autumn day in a newly sown field of Dundas. The highly nutritious composition of the mixture matched with top Aberdeen Angus genetics delivers for the Elliot family.

'Dundas ensures a constant high level of nutrition that guarantees maximum fertility. Our 15 month old bulling heifers conceived at 96% over a 9 week period with no supplementary feeding.'

Johnny Elliot, Roxburgh Mains, Kelso, Scottish Borders.



MINGARY[®]

LONG TERM MAINLY GRAZING MIX

Dellfield Simmentals enjoying grazing Mingary in June 2023. It was established after a crop of swedes had been used to break up a permanent field of grass. The field lies behind the steading, which is very handy for putting out cows with calves at foot without the need for transporting them on a trailer.

'I'm really happy with how this field has performed. It's always a thought ploughing up a close-by grass field but, from the photo above, the cows and calves look to be happy and content which says it all really.'

Stuart Grant, Druid Temple Farm, Inverness.

VARIETY	TYPE	%	
Galgorm Gusto Seagoe (T)	Intermediate PRG	20.1	Produces very dense swards
AberAvon Ballyvoy Glenrock Ballintoy (T) Gracehill (T)	Late PRG	65.3	Suited to one cut per year
Baronaise	Timothy	8.6	High proportion of clover assists with palatability
Permanent	White Clover Blend	6.0	Our most popular long term mixture
			Introducing new outstanding timothy, Baronaise

TERM TIME (years)	GRAZING SUITABILITY (1-5)	CUTTING SUITABILITY (1-5)	TETRAPLOID (%)
7+	5	4	27



An excellent take of newly sown Mingary at Camas nan Geall on Ardnamurchan Estate, despite the seed sitting for a fortnight last summer waiting for some rain to get it going. A late cut was taken followed by some great autumn growth providing an excellent bite for flushing ewes. The fifteen acres has some of the most fertile soil for miles around and will be cut once a year to help feed the large cattle enterprise on the Estate in the winter months. Further west along the peninsula lies Mingary Castle (the mixtures namesake), the seat of Clan Maclain from the 1300s.

Photograph by kind permission of Donald Houston, Ardnamurchan Estate.



'The priority at Blackadder Mains is to produce high quality grazing leys. We have been using Mingary for a number of years and we're delighted with the performance. It always gives early season growth and the ewes and lambs perform well on it across the season. When they are shut up for silage the yield and quality are very good.'

Neil Harvey Farm, Blackadder Mains, Duns, Berwickshire, Scottish Borders.



HERMITAGE™

MULTISPECIES MIXTURE

'We have been delighted with the performance of the Hermitage mixture since it was sown in the Autumn of 2019. It has provided a robust sward with a more varied rooting depth that has coped well with periods of drought. We generally take one cut of silage per year and have been impressed with the quality and yield it has produced for our suckler herd. It has grazed extremely well and the plantain has stood out for its palatability and its persistency.'

Martin Gribbon, who farms for Janice Laird, St Clements Wells, Wallyford, East Lothian.

Native upland species included

Maintains sward density under harsh winter conditions

Permanent clover blend ensures livestock performance

VARIETY	TYPE	%
Barclamp	Hybrid Ryegrass	6.7
Gosford Strangford	Intermediate PRG	23.3
Ballyvoy Ballintoy (T)	Late PRG	37.8
Comer	Timothy	6.7
Barduke	SS Meadow Grass	2.4
Maxima	C R Fescue	6.7
Diceros	Cocksfoot	6.7
Chicory	Herbs	2.7
Plantain		1.0
Permanent	White Clover Blend	6.0

TERM TIME (years)

GRAZING SUITABILITY (1-5)

CUTTING SUITABILITY (1-5)

TETRAPLOID (%)

4-7

5

2

21



Strathglass commercial herd looking more than content grazing their new Hermitage reseed.

'After a difficult start, having been sown in the droughty period in May, this Hermitage reseed turned out to be a great success. The cows love it and their calves, destined for the sale, look like they have had supplementary feeding.'

Murray Harper, Strathglass Farms, Beauly.



'In May we limed and sprayed off an old 10 acre grass field, then lightly power harrowed before drilling Hermitage with a Guttler drill. Unfortunately, a very dry spell followed, but the ley coped extremely well. We weaned lambs on to it at the end of July and were able to finish 250 lambs off it by the end of October, which we were really pleased with. On the estate there is a desire to improve our grazing whilst using less fertiliser, and Hermitage is helping us to achieve this. Anthelmintic properties, being able to grow multiple species together and drought resistance are other important benefits to the farm.'

Tim Cooke, Netherlaggan, Barwhillanty Estate, Castle Douglas.



HERBAL LEY

MULTISPECIES MIXTURE

'With sheep running on a grass/forage system we are always looking to improve our grazing. We first introduced a herbal ley to our system in 2021. It was undersown in barley which was cut as wholecrop, the aftermath then grazed with lambs. We have been impressed with the growth of this mix and its recovery after grazing. We will continue to use this in future.'

Chris Gilroy, Whitehouse Folly, Alnwick, Northumberland

- Excellent soil improver through varying root depths
- Low input
- Provides extended grazing
- Ideal for paddock rotation
- May be cut occasionally
- Diverse feed for ruminants
- Herbs offer anthelmintic benefits

TYPE		%
Intermediate PRG (T) Late PRG (D) Late PRG (T)	PRG Grasses	40.0
Timothy Cocksfoot Tall Fescue Sheeps Fescue Meadow Fescue	Grasses	30.0
White Clover Blend Red Clover Alsike Yellow Blossom	Clovers	20.0
Chicory Plantain Yarrow Burnet Sheeps Parsley	Herbs	10.0





'This field had been in continuous cropping when we got it. The first reseed failed mainly due to drought and poor soil organic matter. We applied our own compost and the next reseed was this herbal ley from Watsons. It was almost completely choked out with chickweed, so rather than spray it off again, we grazed it heavily with cows and calves. The herbs recovered well, and the benefits are now being seen. Herbal leys suit our regenerative practices, and as an added bonus, attract subsidies through Stewardship!'

Ross McPherson, Castle Hills Farm, Berwick-upon-Tweed.

ESTABLISHMENT & MANAGEMENT OF HERBAL LEYS

With the high percentage of legumes, ensure your soil pH is above 6.0. Make sure your small seeds are sown into warm soils (8-10°C). Do not sow too deep, 1cm max.

Ideally broadcast and roll into a nice firm well consolidated seeded. If direct drilling into a burnt off or existing sward, check discs are not running deeper than 1cm. Consider a cover crop of arable silage or wholecrop for spring sowings to aid in establishment. Autumn sowings may be beneficial if historical broad leaf weed burdens are high. Perennial weeds (docks, thistles, bromes) need to be controlled pre-sowing. Care has to be taken to protect young seedlings post-sowing with a light graze after 6-8 weeks to aid tillering and control weeds.

The key to managing herbal leys is REST AND RECOVERY with rotational grazing. If you set stock or let sheep selectively graze the crowns and young growth, the herbs/red clover will not persist.

If you run conventional perennial ryegrass and clover swards on an 18-21 day rotation, be prepared to plan for 28-40 day rotations depending on seasonal growth.

Leave higher post grazing residuals (6cm) and don't worry if the herbs put up a flower head as this will aid persistency.

Look at utilising smaller paddock sizes or larger groups and more frequent movements to lengthen your rotation.

If topping to tidy up weeds and stems, do not cut too low.

Lay off nitrogen fertiliser and let the red clover do its work.

Graze down by the end of October and rest over winter.



FYVIE™

HIGH CLOVER MIX

'I've used the Fyvie mixture for a good few years now, while noting the individual varieties are being kept up to date. It does both cutting and grazing very well on this farm. While I do put some bagged fertiliser on to replace the high take-off with the two or three cut silage crop, I have not used any additional N on any of the rotational grazing ground. I always have good grass on the silage aftermath for the weaned lambs in early August.'

Ian Duncan Millar, Tirinie, Aberfeldy, Perthshire. Ian with his dog Meg.

VARIETY	TYPE	%
Gosford Strangford Seagoe (T)	Intermediate PRG	26.7
Ballyvoy AberPlentiful (T) Ballintoy (T)	Late PRG	60.0
Comer	Timothy	4.0
Permanent	White Clover Blend	9.3

High tetraploid content ensures high palatability

High clover content ideal for low nitrogen situations

Excellent on lighter soils

Drought tolerance due to deeper rooting grasses

TERM TIME (years)	GRAZING SUITABILITY (1-5)	CUTTING SUITABILITY (1-5)	TETRAPLOID (%)
7+	5	4	47



ORGANIC CASTLE MIXTURES

'When choosing an organic grass mixture, the fundamentals here at Glenrinnies are durability, longevity and productivity. We predominately use two grass mixtures: Organic Mingary and Organic Dundas. Both serving a purpose when it comes to producing good quality fodder, especially the quality of grazing they give the livestock. We farm pedigree Shorthorn cattle, Blackface sheep, as well as a large breeding herd of deer. This photo was taken on a lovely day in early September in an excellent field of Organic Dundas with red clover, which was a direct reseed in 2023.'

Alister Laing, Estate Manager, Glenrinnies Estate, Home Farm, Dufftown, Aberdeenshire

TANTALLON	For intensive cutting or grazing, contains high red clover content
AIRLIE	Highly productive 3 – 4 year mixture
DUART	A specialist all perennial ryegrass mixture for conservation or grazing
DUNDAS	The very best dual purpose medium/long term mixture suitable for cutting and grazing
MINGARY	The long term grazing mixture
FYVIE	Specialist grazing mixture with a high clover content
HERBAL LEY	4-7 year multi-species mixture
REJUVENATION	The mixture to put new life and vigour into ageing swards

For our full range of organic mixtures, please visit our website www.watsonneeds.com.

Mixtures have been developed to suit organic farming requirements.



REJUVENATION™

ALL TETRAPLOID RYEGRASS MIX

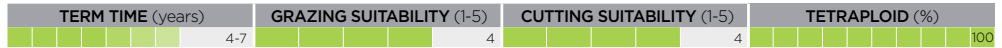
Messrs Robertson, Barnyards with his Erth Agriseeder, with Ben Achaladair in the background.

‘Rejuvenation was the way forward for us at Blackmount Estate, Bridge of Orchy, because we only have 35 acres of ‘arable land’ with the potential of producing good grazing and high yielding silage. We needed something that would inject new life into our swards to help us on our way. Looking forward to seeing the real benefits of this overseeding next year.’

Blackmount Estate, Bridge of Orchy, Oban

- All tetraploid offers good establishment in competitive swards
- Highly palatable
- Puts new life and vigour into ageing swards

VARIETY	TYPE	%
Fintona (T)	Intermediate PRG	35.0
Alfonso (T) Ballintoy (T) Gracehill (T)	Late PRG	65.0





Angus cross cows with calves at foot enjoying the day before the Islay Show in August last year. The Macmillan family’s farm, as with so many on Islay, suffers from a great deal of goose damage to their swards over the winter. They oversow pastures with a special Islay Rejuvenation mixture using their own Aitchison drill. The fields tend to be oversown every 3 to 4 years depending on the individual sward’s condition.

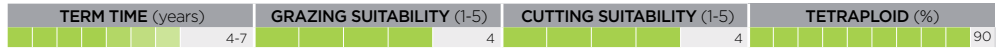
‘We really look forward to seeing Johnny on his visits to Islay when we sit down and discuss the preferred composition of his oversowing mixtures that perform so well here on the island.’

Alan Macmillan, Ballmartin, Ballygrant, Islay.

- All tetraploid offers good establishment in competitive swards
- Highly palatable
- Puts new life and vigour into ageing swards

VARIETY	TYPE	%
Fintona (T)	Intermediate PRG	25.0
Alfonso (T) Ballintoy (T) Gracehill (T)	Late PRG	65.0
Permanent	White Clover Blend	10.0

For more information on making a success of rejuvenating your field, please visit our website.
Special Islay Rejuvena mixtures also available





AMENITY MIXTURES

'We landscaped our customer's garden in the spring and used the groGreen GG1 Universal Landscape mixture. The customer needed a lawn that would be hard wearing and dense. Although the lawn suffered from drought in early summer, it has performed well and is now a good thick turf that will perform for years to come.'

Craig Williamson Landscaping, Castle Douglas, Dumfries.

Our sister company groGreen offer a large range of grass seed mixtures, fertilisers etc. suited to the landscape & amenity sector.

GRASS SEED & WILDFLOWER MIXTURES

FERTILISERS

HERBICIDES

APPLICATION EQUIPMENT

TOP SOILS & COMPOSTS



www.grogreen.co.uk

WATSON SEEDS OUT & ABOUT



Royal Highland Show
Ingliston, Edinburgh



Tullamore Show
Co. Offaly, Ireland



Monitor Farm Meeting
Craigens Farm, Islay



Kelso Top Sales
Kelso, Scottish Borders



East of Scotland Grassland
Society, Mains of Murthly
farm tour



Pasture for Life
Oakwood Mill, Selkirk



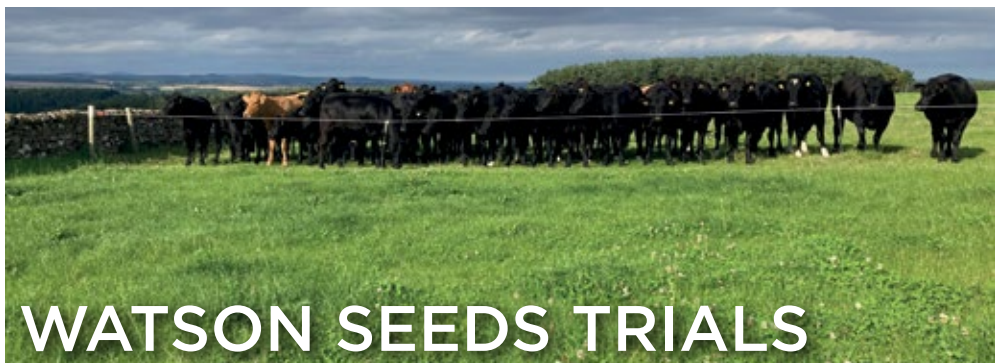
West Ardnamurchan Show
Ardnamurchan



NSA North Sheep
Bradford House Farm,
Belsay



Scotland's Beef Event
Dalswinton Estate, Dumfries



WATSON SEEDS TRIALS

The 2023 season at Upper Nisbet has again been dominated by the variation in the growing conditions. The 8.4 ha field with eight individual paddocks of straight perennial ryegrass varieties and mixtures has been grazed over the season with bulling heifers at a stocking rate of 2300kg LW per ha.

Rainfall was above average in March when 50kg of N + sulphur/ha was applied to the field and good growth built through April and peaked in mid May at over 100kg DM/ha day. Hobkirk series soil does not tend to hold moisture and deficits increased until the 18th June when some rain relieved the high temperatures and soil moisture deficit. The growth in that period had dropped down to 40kg DM/ha and only ever recovered to 60kg in mid August with average rainfall for the month of 64mm and 44mm in September.

The samples of grass we cut on 12th April for analysis had 12.4 average ME and 23.3 CP in the mixtures with clover but DM and quality had fallen away in August. Stock had to work harder to get their intakes with dry matter at an average of 12.5%.

As we entered the 5th year of the trials in September, it was a good chance to look at persistency in the single stand plots of ryegrass and to reflect on how the mixtures are performing.

Key finding after four years of full production:

1 - Persistency has started to show up the cliff edge that certain intermediate varieties show in their productivity. We have scored very noticeable differences in ground scores with more bare earth, weed and moss ingress. With our lower levels of nitrogen application and, particularly in the absence of white clover, this shows up starkly. Intermediate tetraploids are much more open than their diploid neighbours despite us using higher

seed rates at establishment to try and achieve similar plant populations. The late varieties are better and some of the diploid material has kept impressive densities.

2 - We soil sampled the paddocks again in September to monitor for changes in status and used a similar sampling pattern to September 2019. The pH in the single stand paddocks had fallen by an average of 0.3 points to 6.4 and in the mixtures including the multispecies had fallen by only 0.1 to 6.5. Phosphate and potash levels have not fallen but both calcium and magnesium have dropped back by 15%. Organic matter has risen in the multispecies and mixtures to 5.5% from an initial sample at 4.8% on LOI in 2019. This is higher than the James Hutton Institute suggest is typical for this soil series at 20cm cultivated depth.

3 - The mixtures never look hungry or stressed with drought and you struggle to identify urine patches from a distance. The single stand species though, without clover, often look hungry and the dung and urine patches are noticeable unless you apply nitrogen to even things up. Weed ingress with docks is more prevalent in the monocultures of straight ryegrass having flowered and the seed spread by the cattle as they graze. The chicory has declined in population in the multispecies paddock whereas yarrow has increased.

4 - The endrugs on top and bottom had some plantain and chicory established from leftover seed in the hopper from paddock 8. The plantain has now appeared in the paddocks of straight ryegrass having flowered and the seed spread by the cattle as they graze. The chicory has declined in population in the multispecies paddock whereas yarrow has increased.

5 - Palatability between individual varieties is still very noticeable and the better clean outs and lower residuals leads to better quality at the subsequent grazing round.



OAKWOOD MILL HERB TRIAL

The plots were established on 21st April 2021 as part of an Organic Fyvie with added red clover reseed, which was under sown under a mixture of spring oats and forage peas.

The field rises to 250m (810ft) at the top and is an Ettrick Series soil of the Achie Association (brown earth with gentle slopes and rocky outcrops). Land classification 4.2. In essence a good site to look at persistency over winter and resilience in periods of drought.

For the past three seasons, Giles and Stuart Henry have managed the field utilising yearling Luining and AA steers under a rotational paddock grazing system. Initially the paddocks were 1 ha, but to aid utilisation and lengthen the rotation they were further divided into 0.5 ha paddocks. There are four plots of 0.3 ha with Puna II, Punter and Choice chicory mixed at 2.6% inclusion of 37kg/ha. We also included 2.5% of the plantain varieties Tuatara, Hercules, Ecotain and Agritonic.

The field has neither been topped or cut for silage since the wholecrop oats and peas were baled in July 2021. It has also only ever seen cattle; no sheep or lambs have grazed the field!

We have monitored the population of chicory and plantain over the last 3 years and as of October 2023, there are more plants, of both species, across all the plots than we originally established in 2021.

The initial findings are that management of the grazing rotation allied with sufficient periods of rest and recovery (28 to 40 days) has

allowed both the chicory and plantain to build up root reserves and set seed at points in the season to allow new plants to germinate.

Giles and Stuart are leaving higher residuals 2000 to 2200kg DM (6-8cm) after each grazing round and coming back in at higher covers – up to 3500kg DM. The higher covers tend to protect the soils from evaporation and better conserve the limited moisture in periods of high soil moisture deficit (SMD).

The field has good levels of pH, P and K and the rooting mass and soil biology looks very impressive with abundant worm casts, beetle activity and fungal spores all evident. We will continue to monitor the chicory and plantain varieties for persistence, especially with the requirement for early spring growth to give yearling calves a rise in nutritional availability.





AIKENGALL DEMOS

We have set up a demonstration to look at reseeding and rejuvenating an 11 year old silage sward without ploughing out the existing pasture.

The site chosen which will be a stop on the farm tour is a 32 ha field that sits between the 255m and 315m contour (836ft - 1033ft). The soil is predominately Lauder series, a brown soil derived from old red sandstone and is classified as classes 4.1 to 5.2 at the top of the field near Cocklaw Hill.

James Hamilton and his brother Charles and Harry are keen to demonstrate the following:

1 - To show visitors that their integrated farming system with suckler cows and breeding sheep can deliver wider benefits

in soil sequestration and carbon storage on soils that are not easily cultivated, low rainfall, drought prone and exposed to the elements from the east. When ploughed and cultivated these soils tend to have exceptional flushes of fat hen, polygonums and docks which can be problematic in a full reseed.

2 - By using FYM and slurry, produced from their cows and finishing stock, they can grow good quality forage with minimum inputs of artificial fertiliser and bought in feedstuffs.

3 - To demonstrate that by rejuvenating and direct seeding their existing sward, they can hopefully increase the nutritional value and yield of their forage, without the expenditure on steel and diesel by ploughing out their existing pasture and doing a full reseed.



Maintaining the very impressive levels of soil organic matter and carbon that they have built.

4 - To look at 3 different direct drills and compare the establishment of a full reseed into the burnt off sward and rejuvenating the existing sward after a second cut of silage in August 2023. The existing silage sward had been treated with herbicide to control docks so there was no clover present.

5 - The mixtures chosen for the full reseed was based on Dundas with Baronaise timothy, Global red clover and rotational white clover

included. The sowing rate was 15kg/acre. The rejuvenation mixture had 30% intermediates and 60% late tetraploids along with 10% rotational white clover sown at 11kgs/acre.

6 - The field was drilled on 24th and 26th August with the Moore Unidrill, Erth Agriseeder and Vredo Twin Overseeder. The field was left for 10 weeks to get well established before ewes were introduced on to good covers with more than sufficient moisture in September and October.



MOORE UNIDRILL



ERTH AGRISEEDER



VREDO OVERSEEDER



AGRI-ENVIRONMENTAL



We offer a wide range of mixtures to suit the AECS and EFA schemes in Scotland and the Countryside Stewardship schemes in England. We have a dedicated guide to our agri-environmental, greening and game cover mixtures. Please contact us to request a copy or scan the QR code below to view a PDF.



GS4 Multispecies Herbal Ley

Provides a vigorous sward, with abundant legumes and herbs, to provide habitat and food for a variety of insects and wildlife and to improve soil structure and water infiltration. It is suitable for productive cattle and sheep.



MIXTURE INFORMATION

TYPE		%
Late PRG (D) Late PRG (T) Cocksfoot Timothy Meadow Fescue Tall Fescue	Grasses	69.0
Red Clover Birdsfoot Trefoil Alsike Clover Yellow Blossom Sweet Clover	Legumes	23.0
Burnet Sheeps Parsley Chicory Plantain Yarrow	Herbs	8.0



GS4 mixture. J E Baty & Sons North Acomb, Stocksfield- on- Tyne, Northumberland.



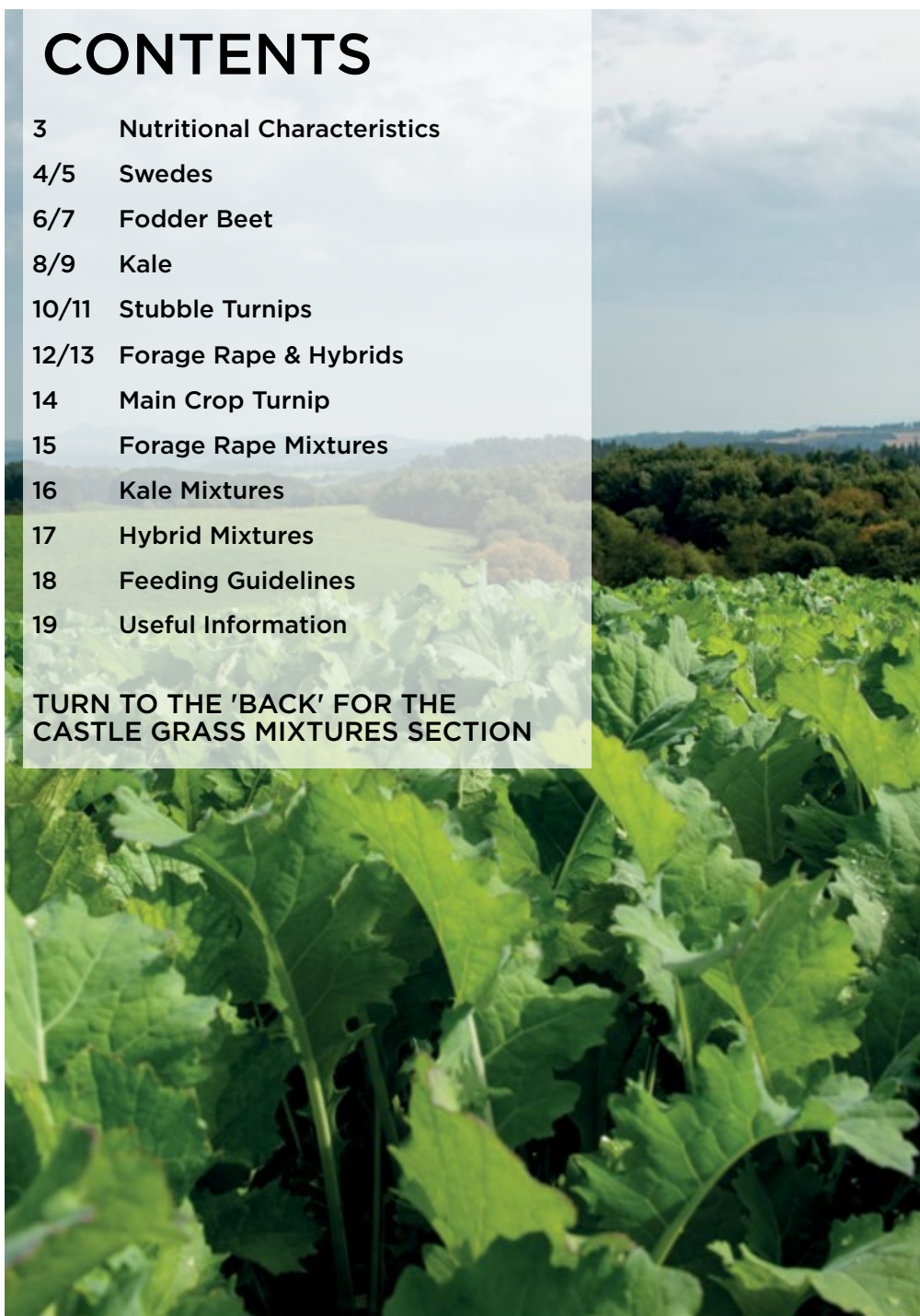
WATSON SEEDS

ROOTS & FORAGE GUIDE

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**TURN TO THE 'BACK' FOR THE
CASTLE GRASS MIXTURES SECTION**





Rising feed costs have brought about renewed interest in forage crops.

Forage crops have the potential to produce very high yields over a short growing season, combined with a flexible sowing window from early summer to the beginning of August. These crops can be fed from ten to fourteen weeks from sowing.

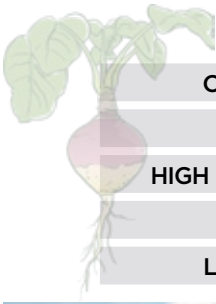
Root and forage crops can be fed to all classes of livestock, either for milk production or live weight gain and are suitable for organic and conventional farming.

These crops demand relatively modest inputs of agrochemicals and fertiliser. With their high dry-matter yields, production costs compare favourably with those for conserved grass, maize and whole-crop cereals.

At Watson Seeds we have selected, from the plant breeders, forage crop varieties which will give our customers a flexible range of crops, thus offering a suitable option for almost every farm situation.

MAIN NUTRITIONAL CHARACTERISTICS OF FORAGE CROPS

CROP	SOWING DATE	TIME TO MATURE	UTILISABLE	SOWING RATE/ACRE	DRY MATTER T/ACRE	CRUDE PROTEIN	D VALUE
FODDER BEET	April - May	24-28 weeks	October to November	40,000 seeds/acre	6.0-7.25	12-13%	78
STUBBLE TURNIP	May to August	12-14 weeks	August to February	2kgs (drilled) 3kgs (broadcast)	1.6-2.25	17-18%	69
RAPE/ KALE HYBRID	July to August	12-14 weeks	September to February	2kgs (drilled) 3kgs (broadcast)	1.4-1.6	15-24%	66
FORAGE RAPE	May to August	10-12 weeks	September to February	3kgs (drilled) 4kgs (broadcast)	1.4-1.6	19-20%	65
KALE	May to June	16-20 weeks	September to March	2kgs (drilled) 3kgs (broadcast)	3.25-4.0	16-17%	70-75
SWEDES	May	20 weeks	September to February	100-325g	2.85-4.0	10-11%	82
MAIN CROP TURNIPS	May to June	12-15 weeks	September to February	0.2-0.3kgs (drilled) 0.75kg (broadcast)	2.2-2.45	17-18%	68-70
CHICORY	May to July	8 weeks	April to October	2kgs	up to 6 (in season)	25%	70-80



SWEDES

CAN BE FED TO SHEEP, DAIRY AND BEEF CATTLE

IDEAL FOR FINISHING LAMBS

HIGH ENERGY WINTER GRAZING, WINTER HARDY, HIGH YIELD

CAN BE SOWN ON A RANGE OF SOIL TYPES

LOW PRODUCTION COSTS AND COST EFFECTIVE



'Triumph has been the favoured choice of swede due to its winter hardiness and yield potential. I winter a few hundred lambs for customers over in the Islands and the west coast and it's imperative that I have a consistent amount of fodder available for them to graze on and, more importantly, thrive. Despite the challenging seasons we keep experiencing, I am delighted with how well the swedes have grown this year.'

Mr Munro, Coul of Fairburn Farm, Marybank, Muir of Ord.

ROW WIDTH	SEED SPACING			
	2" (5cm)	4" (10cm)	6" (15.25cm)	8" (20cm)
20" (50cm)	325	275	225	200
24" (60cm)	300	250	200	150
26" (65cm)	275	225	175	125
28" (70cm)	250	200	150	100

WHICH VARIETY IS BEST FOR YOU?

SWEDES

HIGH (DM%)

Better winter hardiness
& suitable for long keep
systems (Jan-Feb)

INVITATION

MEDIUM (DM%)

Large DM yields &
easily eaten (Nov-Jan)

MAGRES

TRIUMPH

LOMOND

GOWRIE

KENMORE

LOW (DM%)

Earlier to bulk
(Oct-Dec)

AIRLIE

VARIETY	DESCRIPTION	TYPE
KENMORE	Early variety with high yields <small>*only available untreated</small>	Forage
TRIUMPH	Optimum bulb dry matter and good winter leaf retention	Forage
GOWRIE	Excellent yield & disease resistance	Dual Purpose
LOMOND	Big yields & consistent performance	Dual Purpose
INVITATION	Winter hardy with large leaves for extra potential	Forage
AIRLIE	Bulky & early with good resistance to mildew <small>*only available natural, untreated</small>	Dual Purpose
MAGRES	Excellent resistance to mildew & splitting	Culinary



'Swedes are a very important crop for us at Ankerville. I put my finishing lambs on them, as this gives them a head start when getting them ready for the prime market. From the swedes, I then draw any lambs off that are at a suitable weight, then put inside to finish up on home grown cereals. In the photo above, lambs utilising the Lomond swedes on a challenging winter's day. Lomond is the variety that I grow religiously, due to its good consistent yields and winter hardiness.'

Ian Ross, Ankerville, Tain, Ross-shire.



FODDER BEET

ONE OF THE HIGHEST YIELDING FORAGE CROPS

HIGH IN ENERGY, PALATABILITY AND DIGESTIBILITY

CAN BE GRAZED IN SITU OR LIFTED, STORED AND THEN FED WHOLE OR CHOPPED



'Growing fodder beet here at Easter Sheppark Farm has been a relatively new venture. 2021 was when we decided to try growing fodder beet and we haven't looked back since. What stood out to me, was the availability of chemicals that I could use to knock back the brassica weeds enabling a good clean bulky crop, ready for stock to utilise over the winter as well as its projected yield potential. Varieties Geronimo and Lactimo have been the favoured ones so far, as these are varieties that anchor well into the ground, leaving around 40% of the bulb above ground and boasting a good DM % content, which helps in a testing cold hard winter. We strip graze growing cattle on the fodder beet crop, and with it being a high yielder, this keeps the stock well fed and content over the winter months.'

A M MacDonald, Easter Sheppark Farm, Balblair, Dingwall

VARIETY	DESCRIPTION	DM%
ROBBOS	Clean yellow roots, very consistent performance	20
JAMON	High palatability and easily eaten in situ or fed whole or chopped	18
GERONIMO	Very high potential yield and greater bolting resistance	16
LACTIMO	Good seedling vigour and produces very high fresh yields of medium dry matter	16
FELDHERR	Orange roots which grow out of the ground producing huge fresh yields	16
FORTIMO	Produces excellent yields of medium dry matter	15
BRIGADIER	A traditional polyploid, mangel type fodder beet	14
FOSYMA	New variety with a high dry matter content which provide a high energy feed for dairy & beef.	20

Sowing Rates

40,000-48,000 seeds/acre

Sowing Period

April to May

Utilisation Period

October to November

GET THE BEST FROM YOUR FODDER BEET

SOIL

Fodder beet has been grown in a wide range of soils. However, it is best grown in a light to medium soil in a free draining field. A pH of 7 is ideal.

SEEDBED

A firm, fine tilth is ideal with as little moisture loss as possible in the spring. Soil temperature of 5°C is required before sowing. Sowing too early in cold conditions can lead to bolting. Seed should be precision drilled to a depth of 2.5/3cm.

FERTILISER

Nutrition is essential and fodder beet is a demanding crop. Apply two thirds of N with all of P & K to seedbed. Apply one third of N 2 months after sowing. Trace elements are also important to fodder beet especially boron and manganese.

Requirements:

With farmyard slurry: Without farmyard slurry:

N 100 kg/ac
P 50kg/ac
K 50kg/ac

N 125kg/ac
P 75kg/ac
K 150kg/ac

WEED CONTROL, DISEASE AND PESTS

Good weed control is required to achieve the full yield potential. The use of a pre-emergence herbicide should be routine. The seeds are treated with fungicide and insecticide for protection through establishment. The crop can be attacked by several pests and therefore regular monitoring is essential. Major pests are flea beetle, slugs, springtails, symphalids and beet cysts.

HARVESTING

Many of the varieties can be grazed in situ which will give the benefit of utilising the tops as well as the root. If lifting, it is important to remove the tops down to the base of the leaf petioles. Keep soil contamination to a minimum.

FEEDING

If lifted - fodder beet can be fed whole to cattle over 250kg. Otherwise chop before feeding.

If feeding indoors a maximum of 8-10kg of beet/head/day with a readily available source of fibre. The beet would likely make up around 60% of DM intake per day. If grazed a maximum of 70% of DM intake per day.

It is important to introduce fodder beet **gradually** with a starting point of 2kg DM intake per day/head and adding another 1kg DM intake every 2 days/head up to the maximum of 8-10kg.



'We have used Watson Seeds for several years for our beef and sheep farms. This year we decided to grow a trial field of fodder beet, our fieldsman Andy Nelson gave excellent advice throughout, and the results have exceeded expectations. We will plant a larger acreage next year to maximise this high-quality winter forage.'

**Matthew Aspinall, Farm Manager,
Messrs Gilroy, East Kirkcarswell, Kirkcudbright**

FODDER BEET SELLS OUT FAST - PLEASE ORDER EARLY TO ENSURE YOU GET YOUR PREFERRED VARIETY

KALE

BEST FOR LATE UTILISATION

BUFFER FEED FOR DAIRY COWS DURING DRY SUMMERS

USED FOR OUT-WINTERING SYSTEMS

WINTER HARDY

SECOND HIGHEST UTILISABLE YIELD

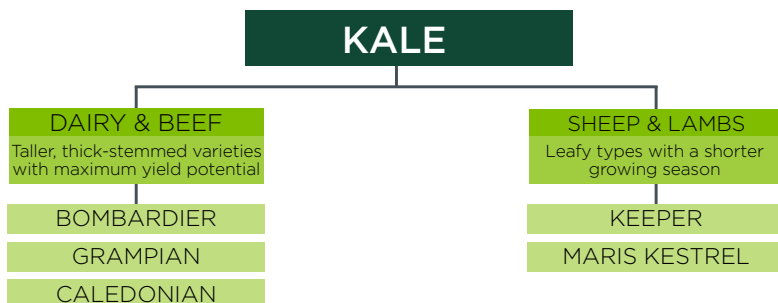
HIGHER YIELDS THAN HYBRID RAPE/KALE



'First time growing kale but it won't be the last time. After ploughing a permanent pasture we looked for something to fill a forage gap for dairy heifers and wintering sheep. I'm really pleased with the crop and will be using it again.'

Alan Alston, Drumchapel Estate Co, Chapelton of Menmuir, Angus. Alex Eggo pictured.

WHICH VARIETY IS BEST FOR YOU?



Sowing Rates

Direct drilled - 2kgs/acre
Broadcast - 3kgs/acre

Sowing Period

May to June

Utilisation Period

September to March

VARIETY	DESCRIPTION
CALEDONIAN	Our highest yielding kale which is club root tolerant. It's high yield and quality makes it an ideal feed for cattle.
BOMBARDIER	A new variety which produces a high dry matter high yielding crop. Club root tolerant. Suitable for sheep and cattle.
BITTERN	High quality and dry matter. Excellent frost tolerance. Suitable for sheep and cattle and good game cover.
KEEPER	Low growing winter hardy variety. Good leaf to stem ratio and high dry matter. Suitable for sheep and cattle. Popular game cover.
MARIS KESTREL	Low growing, high yielding. High dry matter content with good leaf to stem ratio. Suitable for sheep and cattle.



'The Bombardier was a productive crop. It was sown towards the end of May and was heavily challenged by the drought but came away strongly once we got moisture. It grazed 30 cows and 25, year old stirks from the 20th of November. The 10 acre field next door was used as a run back with straw and silage available and it has now become our kale field. The kale has withstood some heavy frosts and provided grazing through until March.'

John Anderson, Smeaton Shaw Farm, Dalkeith, Midlothian.



STUBBLE TURNIPS

SUMMER BUFFER FOR DAIRY COWS

GOOD WINTER FEED FOR SHEEP OR CATTLE

EASY TO ESTABLISH

GOOD RESISTANCE TO BOLTING

PALATABLE AND EASY TO DIGEST

CAN BE SOWN AFTER HARVEST



Kevin Orr in a great crop of a stubble and main crop turnip mix, destined for winter grazing Cheviot and Texel cross lambs. Their large scale mixed farming operation has rotational grass and forage crops delivering great soil health and structure for their 1,000 plus acre cereal and potato enterprises. For example, their fields in the wet autumn of last year were ploughing up dry and made cereal sowing relatively easy. The stubble turnip field will be followed by a crop of potatoes and the potato grower always finds the ground much easier to work than an all arable rotation.

Kevin Orr, Penston, East Lothian.

Sowing Rates

Direct drilled - 2kgs/acre
Broadcast - 3kgs/acre

Sowing Period

May to August

Utilisation Period

August to February

VARIETY	DESCRIPTION
SAMSON	Can produce very large tankard shaped purple bulks. This variety which is tried and tested in the UK has been shown to be preferentially grazed which can lead to higher intakes and live weight gain. Ideal for finishing lambs and grazing cattle.
RONDO	It is a winter hardy variety that has excellent root anchorage that can reduce wastage. It is green skinned and quick to establish with a leafy growth habit. Being frost tolerant it is a viable option for sowing later in the season.
WHITESTAR	Trusted for its winter hardiness and palatability it is an excellent choice for after harvest. It is a white skinned globe type which mostly sits out of the ground but is well anchored. It has a very clean root.
TYFON	A hybrid turnip that is a cross between a stubble turnip and a Chinese cabbage. It produces a very small bulb but massive palatable leaves. It benefits from being spring sown and grazed in the summer and offers regrowth potential. Extremely fast growing and can be utilised in 8-10 weeks.
SKYFALL	A leafy brassica that is ideally suited to grazing. Produces a small bulb but large palatable leaves that are well suited to dairy, beef, or sheep. Deep rooting species that has good regrowth potential.



'We have been using Tyfon for the last three to four years to prepare our tups for sale. It has allowed us to cut down on concentrates and seems to put a better finish on them. The field was sown in May and was ready to graze the week after the Highland Show. It was split into four, with us managing to get three grazings out of it with about a month's rest in between. It grazed forty tups across the season and was then utilised by the tup lambs. The Tyfon is a vital part of our management of the tups and is something that we will continue to grow.'

Andrew Morton, Lochend Farm, Denny, Falkirk.

KALE MIXTURES



'We started improving the ground in 2018 when it was in very tired old grass. It has had six tonnes of lime applied in three applications and the P and K levels rectified. Brassicas have been used for two years to allow the old turf to properly break down with a clubroot tolerant variety selected in the second year. We are delighted with the crop that has been produced this year and around 800 cross ewes carrying twins will be introduced onto it. We will electric fence it into blocks aiming to move the fence about once a week. We are looking forward to getting it back into grass as previous sections we have completed have had their stocking rates tripled.'

Willie Shaw, West Lethans, Dunfermline.

MIXTURE

- KALE 1**
- Careful combination of full season forage crops to provide a large yield potential and excellent winter hardiness
 - Should be sown from May until early June to ensure potential dry matter yield is achieved
 - Provides an ideal feed for fattening lambs
- KALE 2**
- Combination of kale and swedes provides an extremely winter hardy option
 - Kale provides a high protein source where swedes provide excellent energy
 - High cold tolerance and frost resistant
 - Inclusion of the shorter stemmed highly palatable Maris Kestrel makes it an excellent option for finishing lambs

HYBRID MIXTURES



'I have been using Watson Seeds for twenty plus years due to their seed quality, and importantly, I also value their advice and backup. This crop was sown towards the end of July with the 12.12.18 fertiliser going on just before the direct drill. I feel that having the fertiliser available in the slots allows the crop to get a good start and a month later I went on with a further application of nitrogen. I am very pleased with the end results which I will graze in five blocks.'

Alastair Fergusson, Baledmund, Ballinluig, Perthshire.

MIXTURE

- HYBRID 1**
- A rape/kale hybrid, rape and main crop turnip mix.
 - Similar to Kale 1 but can be sown later.

- HYBRID 2**
- Should be sown in July
 - Strong vigour leads to fast establishment and fewer problems in the crop
 - Inclusion of hybrids instead of rape gives greater winter hardiness
 - Highly palatable

- HYBRID 3**
- Large dry matter yield for outwintering sheep and cattle
 - Fast and vigorous growth
 - Winter hardiness
 - Potential for good late season growth
 - Inclusion of highly digestible stubble turnip Samson

MAIN CROP TURNIPS

VERY HIGH FRESH YIELDS

SLOWER GROWTH THAN STUBBLE TURNIPS

SUITABLE FOR LATE SOWING (LATER THAN SWEDES)

CAN BE MIXED WITH KALE, HYBRID OR RAPE TO EXTEND GRAZING DAYS

VARIETY	DESCRIPTION	DM %	SKIN COLOUR	FLESH COLOUR
IMPERIAL GREEN GLOBE	Traditional white fleshed variety, with some winter hardiness.	8.2	Green	White
MASSIF	A very high yielding variety of good keeping quality. A replacement for Greentop Scotch.	9	Green	Yellow

Sowing Rates

Direct drilled - 0.2-0.3kgs/acre

Broadcast - 0.75kgs/acre

Sowing Period

May to June

Utilisation Period

September to February



Massif turnips



FORAGE RAPE MIXTURES

Rape 3 mixture, sown 9th August 2023, photo taken 15th September 2023.

'Sowing a break crop into a sprayed off old ley is a great way to increase soil fertility and break up areas of compaction underneath. This field has been in permanent pasture for a long time, and was getting rough to travel over. I was hesitant to plough, knowing it's a hard, difficult soil type and the fact that if I turned the field over, I'd be burying years of built-up fertility. The process I used to get such a pleasing crop made the job a lot easier to perform and kinder on the pocket. Once the field was sprayed off, a local contractor came in, lightly rotavated the surface, and sowed Rape 3 mixture with a one pass drill. An application of 2cwt of fertiliser was applied and I am delighted with the volume and density of the crop which will be grazed by lambs in November.'

Alasdair McNab, Kildun, Dingwall.

MIXTURE

- | | |
|---------------|--|
| RAPE 1 | <ul style="list-style-type: none">• High percentage of forage rape ensures rapid establishment.• Stubble turnip will provide a good energy source.• Potentially ready to graze within 12 weeks.• Not as winter hardy as other options and best utilised pre-Christmas. |
| RAPE 2 | <ul style="list-style-type: none">• Inclusion of main crop turnip provides a winter hardy aspect to the mixture.• Offers the potential to be grazed later in the season when the rape might have been adversely affected by frost.• Main crop turnips will provide a greater yield than stubble turnips.• Should be sown in June/early July to provide the main crop turnips the opportunity to bulk. |
| RAPE 3 | <ul style="list-style-type: none">• Ideal for sowing later in the season or after winter cereals.• Extremely fast to establish.• Higher inclusion of stubble turnips provides better winter hardiness to graze post-Christmas.• A mixture of stubble turnips with the winter hardy Green Globe, Rondo and purple tankard Samson. |

FORAGE RAPE & HYBRIDS

HARDY, CAN GROW ON POORER SOILS & EXPOSED SITES

IDEAL FOR FATTENING LAMBS OR FLUSHING EWES

CAN ALSO BE LIGHTLY GRAZED BY CATTLE

FLEXIBLE SOWING PERIOD

FAST GROWING



'We direct drill Redstart in August and use it to finish our store lambs. We buy lambs through the autumn and winter and sell good batches of lambs off the Redstart every week. We can fatten large numbers on the 30 acres with high growth rates and a good finish. We are delighted with the performance of lambs finished on Redstart.'

John Barclay, Mid Brocklock, Maybole, Ayrshire.

Sowing Rates

Direct drilled - 2-3kgs/acre
Broadcast - 3-4kgs/acre

Sowing Period

May to August*

Utilisation Period

September to February

*Some varieties don't suit early sowing, speak to your seed specialist to discuss

KEY VARIETIES FOR CONSIDERATION

VARIETY	DESCRIPTION
SWIFT (HYBRID)	A very aggressive growing variety that will present a fast and reliable forage option. Consideration must be taken into sowing and utilisation dates as can become quite fibrous if not grazed on time.
GORILLA (RAPE)	It is a dark green dwarf variety that has a higher than average DM which leads to high total dry matter yields. Its shorter status presents a very palatable crop that is easy to fence for strip grazing. It is a valuable option if clubroot may be an issue as it has good tolerance.
HOBSON (RAPE)	Highly digestible variety with good standing power and mildew resistance.
RAMPART (RAPE)	A newer variety of forage rape that is fast growing and has good yield potential. It is suitable for both dairy and lamb production.
REDSTART (HYBRID)	A winter hardy hybrid offering a high energy protein crop that is ideally suited for cattle and sheep grazing. It combines rapid establishment and growth rates with good winter hardiness. It has regrowth capability when early sown for multi-graze options.
UNICORN (RAPE)	A hybrid variety that is fast to establish and ready to utilise in 12-14 weeks. It produces a high DM yield that is suitable for sheep, beef, and dairy. It is not as winter hardy as some of the other hybrids so would be ideally suited to pre-Christmas grazing.



'Redstart is a vital part of the farming system at Shiplaw. We use it as a pioneer crop to help us break up old grass swards and get them back into production. We were very impressed with how the field came away despite being sown in 30°C and having very little rain for six weeks. Around 450 lambs were introduced to the crop at the start of September and about 200 had finished within three weeks. It helps us give the grass a rest period and we find it a reliable and robust crop.'

Stuart Walker, Shiplaw Farm, Eddleston, Peebles.

FEEDING GUIDELINES

In this short feeding guide we aim to give you a few simple steps to ensure the best performance and utilisation is achieved.

- Recommended inclusion rates should be between 70-80% of total dry matter intake
- Access to straw or hay as well as the forage brassica is important
- Ensure a good water supply
- Occasionally, overfeeding can cause goitre and blood anaemia but access to straw and hay can help reduce risks of this problem

A lot of the forage will be grazed in situ and we hope the guide below helps you calculate your feeding numbers.

CROP	AVERAGE FRESH YIELD T/HA	LESS WASTAGE FACTOR Grazing wastage %	UTILISABLE YIELD T/HA	GRAZING DAYS PER HA		
				SHEEP RATION 7.5kgs per day 10kg per day		DAIRY OR BEEF RATION 22kg/2-3 hour grazing period
KALE	60	25	45	6,000	4,500	2,045
STUBBLE TURNIP	40	25	30	4,000	3,000	1,364
FORAGE RAPE	35	25	26.25	3,500	2,625	1,193
SWEDE	80	25	60	8,000	6,000	2,727

Source: Paul Morgan,Germinal

FEEDING SAFETY

INTRODUCE THEM SLOWLY

Introduce stock to brassicas gradually on full stomachs to avoid digestive upsets. Start with two hours a day, gradually increasing over 7-10 days to unrestricted access.

PROVIDE A RUN-BACK AND PROTECTION

A wide access run-back should have been factored in when the crop was drilled. This could be the grass headland or access to an adjoining field. These run-backs are essential for animal welfare and crop utilisation. Also, always provide shelter, such as a hedge or area they can get out of the wind.

STRIP GRAZE

Long, narrow breaks are best to enable all stock to access the crop at the same time and prevent localised poaching. The fence should be moved daily.

Start grazing at the top of the hill and work your way down to reduce run-off and environmental risk. Double fencing is also advisable. A fence at the feed face can be looped round one end of the field in a U and used to make a second fence line behind.

When stock are moved, the first fence line can simply be wound up. This eases stock movement.

Feed plenty of fibre

Brassicas are generally low in dry matter at about 12-15 % DM so fibre needs to be provided to provide scratch factor and promote rumen function. Fibre should make up about 20% of intakes. Straw will be adequate for dry cows, whilst better quality silage will be needed for growing animals. Bales should be put out ahead of grazing. Avoid driving tractors on to the field during the winter to limit poaching. Always provide drinking water.

Provide appropriate minerals

Brassicas tend to be high in glucosinolates, which can negatively effect iodine and vitamin E uptake. They are also low in copper, iodine, phosphorous and magnesium so it's important to provide these minerals. Bolusing every animal is advisable to ensure they get the right dose. A mineral bag can also be cut open over the top of a silage or straw bale to provide mineral with every bite.

SOWING RATES FOR GRADED SEEDS

SEED SPACING				
ROW WIDTH	2" (5cm)	4" (10cm)	6" (15.25cm)	8" (20cm)
20" (50cm)	325	275	225	200
24" (60cm)	300	250	200	150
26" (65cm)	275	225	175	125
28" (70cm)	250	200	150	100

PRECISION DRILL RECOMMENDATIONS

SEED GRADING	GRADE	SIZE (mm)	STANHAY BELT SIZE	SPRING BASE	CHOKE	WEBBS SELECTOR WHEEL
FODDER BEET PELLETED	Q-U	3.5-4.75	15 or 16	C	A	EP
SWEDE	H	1.75-2.0	8	A	T	B
TURNIP	G	1.5-1.75	7	A	T	A
KALE	J	2.0-2.25	8.5	A	T	C

FERTILISER GUIDELINES FOR FORAGE CROPS

CROPS	NITROGEN (N) (kg/ha)	PHOSPHATE (P) (kg/ha)	POTASH (K) (k/ha)	N APPLIED AT SOWING (% of total)	N APPLIED LATER (% of total)
SWEDES	40-100	45-100	80-215	50%	50% at 10-12 weeks
KALE	40-130	50-80	130-260	50%	50% at 10-12 weeks
STUBBLE TURNIPS	40-100	25-85	20-110	60%	40% at 6-8 weeks
GRAZING TURNIPS	40-100	25-85	20-110	100%	Further N may be applied for regrowth
FORAGE RAPE/RAPE KALE HYBRID	40-100	25-85	20-110	100%	Further N may be applied for regrowth

100kg per ha equals 80 units per acre. (Source: Fertiliser Manual (RB209) - Germinal GB)

Brassicas are also prone to sulphur (S) deficiency which is shown by yellowing of the leaves. If suspected, a tissue analysis is the best guide. 10-30kg S/ha (8-24 units/acre) is recommended depending on deficiency severity.



WATSON SEEDS

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