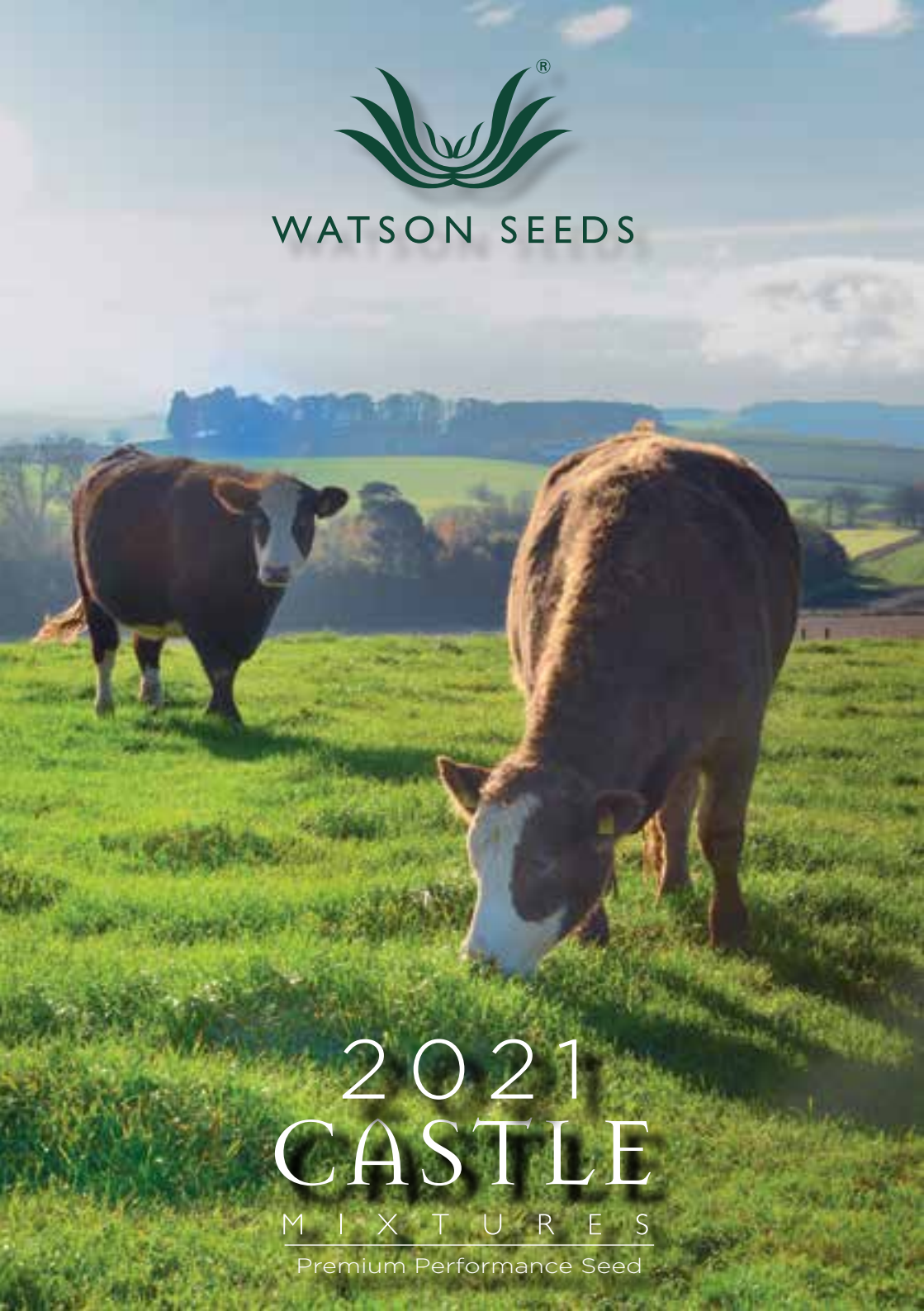




WATSON SEEDS



2021  
CASTLE  
MIXTURES  
Premium Performance Seed

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Front Cover - A fine autumn scene in the Borders (see page 11).  
Photograph by kind permission of Jim and Tommy Clark, Kerchesters, Kelso.  
Thanks to Glyn Satterley for contributing photographs to the catalogue.

Who would have predicted that 2020 would turn out to be such a game changing year across the world as it tried to deal with a global health crisis.

Agriculture has had its fair share of challenges in the past, but with the pandemic we have to feel a considerable amount of sympathy for other commercial sectors that have been harder hit. Governments across the world, including our own, encouraged the farming industry to keep going and that's what we did, albeit in a different way.

For our part, we found it particularly difficult not to call on you, our clients, and look over fields first hand but often the health risks were too great for all concerned.

The cancellation of the Royal Highland Show and all the local shows across the country was a crushing blow for all concerned. The Agriscot team, chaired by Robert Neill, held a virtual event and we were delighted to get so many entries for the silage competition that we sponsored.

We look forward to a time when normal service resumes.

One result of the consequences of a reduction in our team travelling the country was an increase in the use of digital communication. We'll all have to get used to that now.

The first year of our exciting new demonstration trial site in the Borders is already delivering some important mixture and varietal distinctions, which is covered later in this catalogue. We are getting the



animals to play a key role in telling us what really performs well. Preferential grazing is central to the field evaluation, along with mechanically measuring yield and key nutritional quality traits.

The data is already helping us identify varieties best suited for our Castle Mixtures and we would heartily recommend a visit to walk over the trial site when restrictions are lifted.

The final report on the Suckler Beef Climate Scheme was published in October and I had the opportunity to talk to Jim Walker's team just before lockdown on the important role pasture management has in helping deliver swards that are not only optimising livestock performance but are also making an important contribution to reducing our carbon footprint.

Where appropriate in the future, I feel the grass fed narrative needs to change to PASTURE FED as we move into a position of less synthetic fertiliser and more mixture diversity, with a focus on legumes and herbs. These mixtures will produce more roots, which will lead to increased carbon storage

In summary, we have an exciting opportunity ahead in delivering a reduction in the carbon footprint of livestock farming. We will achieve this only by embracing the technology and innovation unfolding in the industry. This will require extensive collaboration and Government support to deliver a prosperous future for our farming industry.

Change is afoot and at Watson Seeds we look forward to responding to the challenges ahead for the benefit of our many customers across the country - Pastures New!

Many thanks to you, the customer, for all your support, it is greatly appreciated.



Johnny Watson F.R.Ag.S



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TURN TO THE 'BACK' FOR THE Forage & Root Crop Guide



# AGRISCOT 2020



We were delighted to organise the silage competition for the 19th time and enjoyed being part of the virtual AgriScot event. We were grateful to all the staff at the Crichton Royal for their help and especially Hugh McClymont for his excellent judging. In a year where coronavirus has cancelled many events, we were pleased with the enthusiasm for the silage competition, with record entries from all over Scotland, England & Northern Ireland.

The 2020 silage season presented considerable challenges especially with a drought across many areas in the spring, leading to grass growth rates falling to around 50% of their long-term averages. Grass was under pressure and silage cuts needed to be taken early to avoid premature heading. Better growing conditions later in the season allowed 2nd and 3rd cuts to bulk well, although high rainfall generally led to lower dry matter. It is a credit to the farming community that silage stores are full and that the quality has proven to be excellent. It once again demonstrates the potential of grass to provide a quality feed that reduces the need for expensive bought concentrates.

DAIRY CLAMP		Dry Matter	ME	D Value	Crude Protein
1st	Thomas Ralston Killkivan Farm Campbeltown	33.4	12.3	76.9	16.9
2nd	Craig Stalker Ratten Castle Farm, Cumbria	36.1	12.2	75.9	14.8
3rd	Robert Murdoch High Park Farm Ayrshire	30.9	12.1	75.9	17.7

BIG BALE		Dry Matter	ME	D Value	Crude Protein
1st	Jamie MacDonald Achvarasdal Caithness	42.6	12.9	80.9	13.1
2nd	Rednock Estate Rednock House Stirlingshire	84.2	11.8	73.9	15.8
3rd	W & S Thomson Bordlands Peeblesshire	20.3	12.1	75.8	13.9

BEEF CLAMP		Dry Matter	ME	D Value	Crude Protein
1st	R Black Drochil Castle Farm, Peeblesshire	30.6	12.3	77.0	15.0
2nd	Graham Lofthouse Bankhouse Farm The Borders	22.5	12.1	75.7	18.3
3rd	Ally Martin Garguston Farm Ross-shire	34.5	11.9	74.3	13.7

YF DAIRY		Dry Matter	ME	D Value	Crude Protein
1st	Sjoerd Van der Spruit Challoch Farm Wigtownshire	36.6	11.9	74.2	18.5
2nd	Andrew Gemmell Turnerhill Farm Ayrshire	26.0	12.0	75.0	13.5
3rd	Fraser Thomson Bordlands Farm Peeblesshire	30.7	12.1	75.8	13.9

YF BEEF		Dry Matter	ME	D Value	Crude Protein
1st	Andrew Neill Upper Nisbet The Borders	28.7	11.4	71.5	12.6
2nd	Craig Marshall Auchenleck Stewarty	35.4	11.0	68.7	12.6
3rd	Rebecca Brown Low Glengyre Wigtownshire	32.7	11.1	69.6	12.8



# VARIETY ASSESSMENT

All varieties contained in our Castle Mixtures are 'First Choice' as published in the Grass and Clover Varieties for Scotland 2020-2021.

		SRUC 1st Choice	AFBI / PPI Rated	NIAB Recommended	Ground Cover	REE
<b>ITALIAN RYEGRASS</b>						
<b>MERIBEL</b>	Very high yielding with great D values and ground cover for an Italian.	✓	✓	✓	A	32
<b>GEMINI (T)</b>	Capable of producing high D values for first and second cuts.	✓		✓	B	30
<b>HYBRID RYEGRASS</b>						
<b>ABEREDGE (T)</b>	A high sugar hybrid with particularly good D value in the second cut.	✓			B	34
<b>ASTONCRUSADER (T)</b>	Produces good yields at the first conservation cut and overall.	✓	✓		A	32
<b>INTERMEDIATE PERENNIAL RYEGRASS</b>						
<b>ABERGREEN</b>	Excellent mid season D value in second cut and spring growth under grazing.	✓	✓	✓	A	43
<b>ABERMAGIC</b>	A proven variety that is good for cutting, but is an exceptional grazing variety providing quality yield into the autumn.	✓	✓	✓	A	42
<b>ABERWOLF</b>	A high sugar variety that really excels from mid-season giving quality and yield.	✓	✓	✓	A	40
<b>ABERZEUS</b>	Excellent yields under both managements and offers the highest grazing quality in its category.	✓	✓	✓	A	40
<b>GLENARIFF</b>	Good ground cover and yields well under both managements later in the season.	✓		✓	B	39
<b>GOSFORD</b>	Good all round yields with particularly good mid to late season grazing productivity.	✓		✓	B	42
<b>GUSTO</b>	Good grazing yields particularly later in the season and provides good quality under conservation.	✓	✓		B	44
<b>NIFTY</b>	Good grazing yields combined with excellent ground cover makes it an outstanding grazing variety.	✓	✓	✓	A	38
<b>CALEDON (T)</b>	Good yields under both managements.	✓		✓	C	44
<b>DIWAN (T)</b>	Very good mid season D value. High yields under conservation.	✓		✓	C	43
<b>SEAGOE (T)</b>	Offers early season growth giving excellent spring grazing and first cut yield.	✓	✓	✓	C	35

## LATE PERENNIAL RYEGRASS

<b>ABERAVON</b>	Consistent performance across the season with particularly good grazing quality.	✓	✓	✓	B	47
<b>ABERCHOICE</b>	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
<b>ABERLEE</b>	Performs exceptionally well especially under grazing providing high yields and category leading quality.	✓		✓	A	55
<b>ASTONCHIEFTAIN</b>	Produces good yields under both managements with it being particularly good for its category at first cut.	✓			A	52
<b>CALLAN</b>	Good productivity under both managements early on in the season.	✓	✓	✓	B	46
<b>DRUMBO</b>	Excellent grazing variety that is also of the highest quality when cutting.	✓	✓	✓	B	50
<b>GLENROCK</b>	Good grazing variety, especially mid-season.	✓			B	52
<b>TODDINGTON</b>	A solid all round variety with good quality. Good late season performance.	✓		✓	A	49
<b>ABERGAIN (T)</b>	Performs very well under both managements with excellent early season growth giving good first cut yields and early grass for grazing.	✓	✓	✓	C	49
<b>ABERPLENTIFUL (T)</b>	Good yields and quality at the first cut and good seasonal growth under grazing.	✓	✓	✓	C	53
<b>ALFONSO (T)</b>	Great early season growth for a late variety. Good ground cover for a tetraploid.	✓	✓	✓	B	47
<b>ASPECT (T)</b>	Silage quality is good at both cuts and good grazing performance.	✓	✓	✓	C	49
<b>BALLINTOY (T)</b>	Outstanding new addition to our grass mixtures that has really stood out in the trials. It offers high yields in both cutting and grazing.	✓	✓	✓	C	46
<b>BIJOU (T)</b>	Good first cut yields due to early spring growth. Good yields under both managements.	✓		✓	C	46
<b>TIMOTHY</b>						
<b>COMER</b>	Best spring growth of the timothys. Softer than others for better palatability.	✓	✓	✓	A	53

## WHITE CLOVER

<b>PERMANENT</b>	<b>ABERPEARL</b>	Small	Highest yielding small leaved clover, good ground cover.
	<b>CRUSADER</b>	Medium	Good performance both early and late in the season.
	<b>MERWI</b>	Medium	Productive variety better suited to light defoliation.
	<b>ALICE</b>	Large	High yielding and good ground cover.
<b>ROTATIONAL</b>			

## RED CLOVER

<b>ABERCLARET</b>	Early	Persistency and yields in the third harvest year are very good.
<b>GLOBAL</b>	Early	Yields under cutting in years 1, 2 & 3 are very impressive.

# 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.



We have had to move with the times and, owing to legislation, reduce the weight of our 30kg seed bag to 20kgs.

Our new re-usable bags come in two sizes - 10kgs and 20kgs.



Michael Walker seen here with our new seed bags at Drumbuie Farm, Sanquhar, Dumfriesshire.

# CASTLE MIXTURES® FOR ALL YOUR NEEDS

Mixture	Duration (Years)	Mainly Cutting	Dual Purpose	Intensive Grazing	Extensive Grazing	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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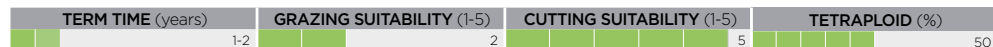
# BALVENIE™

VERY BULKY 1-2 YEAR MIX

'We establish the Balvenie mixture after fallow which gives us some good backend grazing. We make the grass work hard and it provides two cuts of silage and grazing for the next two years, before we take first cut in the final season and it goes down to forage rape. We find the quality and longevity of the mixture far better than straight Italian.'

**Richard Bancroft, J W Ogilvie & Partners, The Broom, Jedburgh, Scottish Borders.**

VARIETY	TYPE	%	
Meribel Gemini (T)	Italian Ryegrass	78.6	Very bulky over several cuts
Astoncrusader (T)	Hybrid Ryegrass	21.4	Leafier than straight Italian
			Offers fast establishment



Johnny seen here with Tommy Clark in a highly productive field of Tantallon

# TANTALLON®

OUTSTANDING 2-3 YEAR MIX

'Kerchesters is cropped in the majority with cereals and oilseed rape; grass is an important break crop to feed the sucklers and finishing cattle. The grass and muck produced are essential to maintaining and building organic matter in our soils, making our soils more resilient to the extremes of weather. We have relied on Johnny's Castle Mixtures for our rotational grass fields since the early days of Watson Seeds.'

**Jim & Tommy Clark, Kerchesters Farm, Kelso, Scottish Borders.**

	VARIETY	TYPE	%
3-4 silage cuts per year	AberEdge (T) Astoncrusader (T)	Hybrid Ryegrass	21.4
Excellent aftermath grazing	Glenariff Nifty Caledon (T) Seagoe (T)	Intermediate PRG	75.0
Careful combination of hybrids & intermediate perennials	Rotational	White Clover Blend	3.6
Persistent growth			







# RED TANTALLON<sup>®</sup>

HIGH PROTEIN 2-3 YEAR MIX

'The Red Tantallon has now done 2 years and continues to yield well having been cut 4 times this year. We have grown 50 acres to provide high protein silage (up to 19.8%P) which when incorporated in the milking cows diet raises the overall protein level of our forage. This allows us to keep the protein level down in the blend we purchase, consequently saving us money. It also provides quality grazing for fattening lambs late in the season.'

**Steven & Tracey Roan, Boreland of Colvend, Dalbeattie.**

Typical silage analysis - DM 38.5%, Protein 19.8%, DV 65.2%, pH 4.4, ME 10.4.

VARIETY	TYPE	%	
AberEdge (T) Astoncrusader (T)	Hybrid Ryegrass	21.4	High protein silage
Glenariff Caledon (T) Diwan (T)	Intermediate PRG	53.7	Up to 3-4 silage cuts per year
Rotational	White Clover Blend	3.6	Nitrogen fixing
Global	Red Clover	21.3	Excellent for fattening lambs
			High sugar grasses to aid fermentation

TERM TIME (years)	GRAZING SUITABILITY (1-5)	CUTTING SUITABILITY (1-5)	TETRAPLOID (%)
2-3	2	5	48



# RED CLOVER

Red Clover is a fantastic way to produce a high protein feed while fixing nitrogen and improving soil conditions through a deep taproot. Red clover can be sown alone, however, it would more commonly be sown along with ryegrass in a mixture such as Red Tantallon.

### DURABILITY

2-4 years. Some new varieties may last longer.

### BENEFITS

- Nitrogen fixation - Up to 400kg N per ha. 75-100kg N per ha transferred to grass.
- High Yields - 10 to 15T DM/ha
- High Protein - CP 14-19
- Cuts per year - 3 - 4

### ESTABLISHMENT

- Sown - April to late July
- Ideal pH - 6 and above
- Phosphate - Index 2
- Potash - Index 2
- Nitrogen - Only required in very low nitrogen indices.

### TYPICAL SILAGE ANALYSIS

ME	9.8 - 11.4 MJ/kg
CRUDE PROTEIN	14 - 19%
PH	4 - 4.5

(Source IGER)

Ensilage at 25 - 28%

### THINGS TO KNOW

- Cut silage above 7cm to protect crown.
- Don't graze aftermath below 4cm.
- Contains high levels of phyto-estrogens.
- Do not graze ewes for 6 weeks pre or post tupping.
- 5 - 7 year rotation.





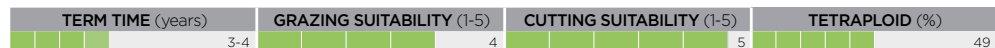
# AIRLIE™

INTENSIVE 3-4 YEAR MIX

'Our adapted Airlie mixture was established in August direct into wholecrop stubble. With our 4 cut system, we are targeting total yield of 20 tonnes of dry matter per Ha of high quality silage for our dairy herd. The mixture of varieties gives a dense sward with good mid and late season ME and D value.'

**Robert McDonald, Kelloe Mains, Duns, Berwickshire.**

VARIETY	TYPE	%	
Glenariff Gosford Caledon (T) Diwan (T)	Intermediate PRG	71.0	Leafy and dense mixture Excellent silage quality
Callan Ballintoy (T)	Late PRG	25.0	Improved mid season D value
Rotational	White Clover Blend	4.0	Also ideal for intensive grazing



# CARRICK™

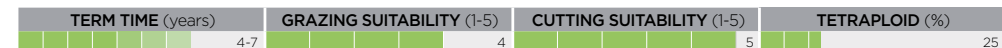
MEDIUM TERM DUAL PURPOSE MIX

'Carrick suits my farm and my dry-stock farming system well. Its blend of perennial ryegrasses provides a reliable long lasting grass mixture which is ideal for grazing or frequent silage cutting'.

**John Dineen, Bantry, Co. Cork.**  
John is pictured here with a group of his spring born calves on a recently reseeded Carrick sward.

Offers early cuts of hay & silage			
Good mid season digestibility & grazing yields			
Increased timothy for hay production			
Good ground cover			

VARIETY	TYPE	%
Glenariff Gosford Caledon (T)	Intermediate PRG	56.7
Drumbo Ballintoy (T)	Late PRG	32.0
Comer	Timothy	8.0
Rotational	White Clover Blend	3.3





Angus in a field of Duart plus CAST clover during first cut at the end of May.



# DUART™

## HIGH ENERGY GRASS MIXTURE

'I have used the Duart mixture for many years and like it for its flexibility of cutting date, which is due to the high percentage of late perennials. This in turn, means silage with a high ME, which is the main priority for our A.D. plant.'

**Angus Brown, Farm Manager, H & K Farms, Charlesfield, Annan, Dumfries & Galloway.**

VARIETY	TYPE	%
Gosford	Intermediate PRG	13.3
AberLee Callan Drumbo AberGain (T) Ballintoy (T)	Late PRG	86.7

Produces outstanding energy & protein levels

Contains a high number of new generation high sugar grasses

Later heading varieties allow flexibility over cutting dates

Excellent ground cover & 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

Rowing up Duart for a quality first cut silage, 2 June 2020



'We have used the Duart mixture for a number of years and like it for its density of sward and quality. The first cut analysis for this year was a ME of 11.2, DM 26.9 and CP of 13.3. At the moment (November 2020) we are delighted with the way the silage is performing in the ration for the dairy cows.'

**Jim & James McMillan, Over Airies, Newton Stewart.**

'This field of Duart was sown in September of 2019, under pressure from my father in law, Andrew Best. So far grass yield and quality have been excellent.'

**Peter Wilson, Boreland of Balmagie, Castle Douglas, Dumfries & Galloway.**



Harry, Rosie & Poppy Wilson



Reidin Murphy, Area Manager, Southern Fuels with Gordon Jones.



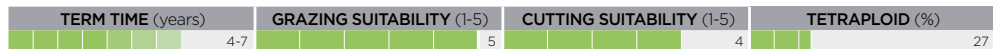
# EDZELL<sup>®</sup>

DUAL PURPOSE LONG TERM MIX

'Our 220 Cow Holstein Friesian Herd is managed on a spring and autumn calving system. Quality grass swards are vital to our dairy business both for silage and for grazing. Grass silage is the major ingredient of our winter diet along with fodder beet. Edzell is used for our silage swards as it consistently delivers up to three cuts of dense quality silage each season.'

**Gordon Jones, Carrignavar, Co. Cork.**

VARIETY	TYPE	%	High leaf/stem ratio ensures high quality silage
AberWolf Glenariff	Intermediate PRG	25.9	Contains the top late heading varieties
Callan Drumbo AberGain (T) Ballintoy (T)	Late PRG	61.4	Persistent over many years
Comer	Timothy	8.0	Winter hardy
Rotational	White Clover Blend	4.7	Excellent for beef & sheep



# GREENAN<sup>™</sup>

HEAVY/WET SOILS MIX

'The Greenan mixture went into one of our hardest fields sitting north facing at 1000ft. We are delighted with how well it has established in 2019 and it has provided a dense, quality ley for sheep grazing throughout the whole season.'

**Willie Goldie, Collielaw Farm, Lauder, Berwickshire.**

Excellent option for rotational grazing	VARIETY	TYPE	%
Highly resistant to poaching on heavier ground	Glenariff Gosford	Intermediate PRG	23.4
Offers exceptional ground cover	Callan Drumbo Toddington	Late PRG	70.6
High D values	Permanent	White Clover Blend	6.0







# DUNDAS<sup>®</sup>

DUAL PURPOSE MEDIUM/LONG TERM MIX

'We have used Dundas for many years now on the estate. The grass comes away early in the season which is essential for us as we have a slower spring than most due to location. Dundas has produced excellent cuts for silage and also offers a very dense sward for grazing. We get good growth throughout the year which helps us extend our season on grass. The field shown above had no nitrogen applied as the clover establishment was so successful and provided adequate nutrition.'

**Alistair Fergusson, Baledmund Estate, Pitfourie House, Pitlochry, Perthshire.**

VARIETY	TYPE	%	
AberZeus Gusto Caledon (T) Diwan (T)	Intermediate PRG	37.5	Dense and highly productive sward Top intermediates ensure heavy silage cuts Includes rotational clover blend
AberChoice Drumbo AberGain (T) Ballintoy (T)	Late PRG	49.2	Combination of grasses that exploit seasonal growth
Comer	Timothy	8.3	Outstanding variety AberZeus included
Rotational	White Clover blend	5.0	

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



Cheviots enjoying a fine September day on the Isle of Muck with Rum in the background. The field was well limed and sown in May with Dundas, along with some triple super phosphate. Lawrence and Colin MacEwen think that it's very important to keep on top of soil health on the island and reseed annually with a Castle Mixture.

'After a dry start in the summer the field rallied and is now tremendous with a good clover content.'

**Lawrence & Colin MacEwen, Isle of Muck Farm, Mallaig.**

'We have been using Dundas for several years now and we are happy with the performance it has given us. The structure and varieties selected suit our farming system, giving us two good cuts of silage and backend grazing.'

**Robert Walker, Blackburn Farm, Grantshouse, Berwickshire.**







# MINGARY®

LONG TERM MAINLY GRAZING MIX

Fattening lambs, early September, in a seven-acre field of Mingary sown at 16kgs per acre. This was a modified version of Mingary with the addition of 1kg per acre of red clover and Dicerus cocksfoot. Church Farm is located on the East Fell side of Cumbria, lying between 600 to 2000 feet above sea level.

'Pleasantly surprised how well this field has performed since it was sown in May 2019. This year, 2020, the lambs have done very well, finishing earlier than usual. Regarding the inclusion of red clover and ewe fertility, this field has only been used in rotation for fattening lambs. However, other fields which have a similar mixture, ewe fertility has not been an issue.'

**George & Hannah Morton, Church Farm, Penrith**

VARIETY	TYPE	%	
Glenariff Gosford Seagoe (T)	Intermediate PRG	20.1	Produces very dense swards
Drumbo Glenrock Ballintoy (T)	Late PRG	65.2	Suited to one cut per year
Comer	Timothy	8.7	High proportion of clover assists with palatability
Permanent	White Clover Blend	6.0	Our most popular long term mixture
			Special mixture with added cocksfoot is available

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



Gerald Joyce with Euan Campbell

'I chose Mingary as my main aim was to find a grazing grass mixture that would give me the option of a large cut of hay or silage. I sowed out Mingary on 20th June and after three weeks I was able to give the field a light graze with my ewes and lambs. Since then the field has been a great asset, with vigorous growth habits giving me great mid-term and backend grazing for when the lambs were weaned and then flushing my stock ewes for tugging.'

**Gerald Joyce, Balavil Estate Services, Kingussie, Inverness-shire.**

A dense field of Mingary bulking up for a big cut of silage, with Mingary Castle in the background in September. The crop will be fed to the suckler beef operation consisting of 400 Blue Greys and Simmental Cross cows and calves at Ardnamurchan Estates.

Mingary was the ancient seat of the Clan Maclain of Ardnamurchan and was magnificently restored recently by the present laird Donald Houston - enquiries@mingarycastle.com

**Ardnamurchan Estates, Kilchoan, Ardnamurchan.**





Viewfield Romney ewe and lamb, grazing a lush field of Hermitage grass mixture in early April



# HERMITAGE™

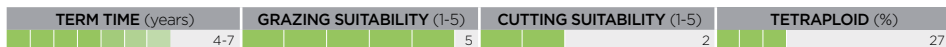
MULTISPECIES MIXTURE

'This field, the Duck Pond, was established in 2019. It was a change to our usual Watson Seeds grass mixture, Duart. I was interested to see how the different species would perform. To date, I have been impressed with the total seasonal performance.'

**Marcus & Kate Maxwell, Holme, Castle Douglas, Kirkcudbrightshire.**

- Native upland species included
- Maintains sward density under harsh winter conditions
- Also available without plantain
- Permanent clover blend ensures livestock performance

VARIETY	TYPE	%
Astoncrusader (T)	Hybrid Ryegrass	6.7
Glenariff Gosford	Intermediate PRG	23.3
Drumbo Ballintoy (T)	Late PRG	37.9
Comer	Timothy	6.7
Miracle	SS Meadow Grass	2.4
Puna	Chicory	2.7
Maxima	C R Fescue	6.7
Diceros	Cocksfoot	6.7
Tonic	Plantain	1.0
Permanent	White Clover Blend	6.0



Andrew John Best



# CASTLE HERBAL LEY

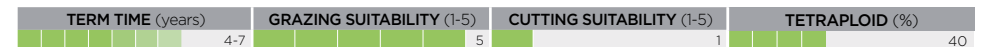
MULTISPECIES MIXTURE

'We are focused on a regenerative approach to agriculture at Castlehills and view the multispecies ley as a key part of this. They will allow us to farm with less inputs and the deeper rooting depth will have the dual benefit of picking up more trace elements and making us drought tolerant. I am pleased with the establishment and the diversity within the sward that will provide us with quality sheep grazing going forward.'

**Donald McPherson, Castlehills Farm, Berwick-upon-Tweed.**

- 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)	White Clover Blend
Late PRG (D)	Red Clover
Late PRG (T)	Alsike
Comer	Yellow Blossom
Cocksfoot	Plantain
Chicory	Yarrow
Tall Fescue	Burnet
Sheeps Fescue	Sheeps Parsley
Meadow Fescue	

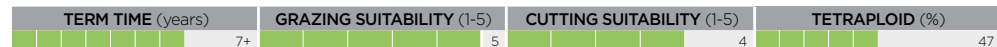




'Fyvie is well suited to our light soil conditions and its high clover content aided us in our ongoing organic conversion. After being sown at the end of last summer and with no nitrogen applied in the spring, our first cut of silage was taken on the 4th June. The sward produced an excellent bulk (as can be seen in photo) and the aftermath has been excellent for finishing lambs on until September and is now sustaining 550 tupping ewes after a short rest period.'

**Stephen Whiteford, Castle Craig Farms, Ross-shire.**

VARIETY	TYPE	%	High tetraploid content ensures high palatability
Glenariff Gosford	Intermediate PRG	20.0	High clover content ideal for low nitrogen situations
Drumbo AberPlentiful (T) Ballintoy (T) Bijou (T)	Late PRG	66.7	Excellent on lighter soils
Comer	Timothy	4.0	Drought tolerance due to deeper rooting grasses
Permanent	White Clover Blend	9.3	

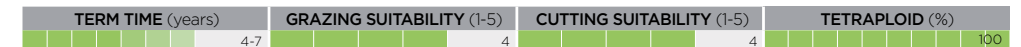


'We have worked with Watson Seeds on our full reseeds and have transformed once unproductive land into grass/clover swards with high feed values. Seeing the benefit that good quality grass cultivars have offered, we are now rejuvenating land that isn't suitable for ploughing. The new grass within these swards will increase the feed value and allow us to utilise it within our rotation.'

**Gavin Ross, Ross Brothers, Wardhead Farm, Fraserburgh**

VARIETY	TYPE	%
Diwan (T)	Intermediate PRG	30.0
Alfonso (T) Ballintoy (T) Bijou (T)	Late PRG	70.0

- All tetraploid offers good establishment in competitive swards
- Highly palatable
- Puts new life and vigour into ageing swards
- Also available with CAST clover blend





# CAST

## THE ULTIMATE IN SEED COATING TECHNOLOGY EXCLUSIVELY AVAILABLE FROM WATSON SEEDS

### Benefits of CAST coated clover

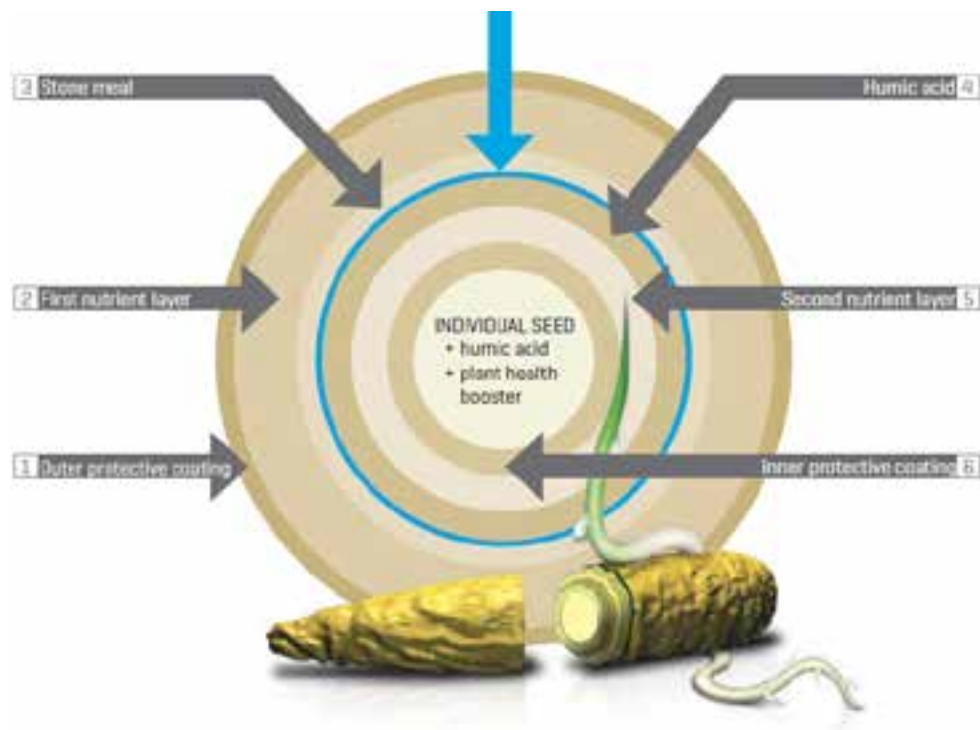
CAST coated seed contains a moisture absorber in addition to the "Classic" active ingredients

Superior performance, particularly during dry periods

Outstanding benefits in times of heat and drought

Increased water retention capacity by a factor of 100

Unique on the market



Mariella, Emilia & Louis Petrucci in a fine field of Organic Duart taken in late October



'We have been using Organic Duart for over 10 years and are delighted with the product. As an organic farm, we require a grass and clover mixture that establishes quickly and densely so weeds cannot take hold.'

As a spring calving dairy farm, grass is without doubt the most important asset we have. We measure grass weekly and take grass samples monthly throughout the growing season. Organic Duart has proven its worth year after year.'

**Leo Petrucci, A Petrucci, Outer Blair, Stranraer, Wigtownshire.**

<b>SHORT TERM</b>	Intensive cutting mixture with inclusion of red clover
<b>TANTALLON</b>	For intensive cutting or grazing, contains high red clover content
<b>AIRLIE</b>	Highly productive 3 - 4 year mixture
<b>DUART</b>	A specialist all perennial ryegrass mixture for conservation or grazing
<b>DUNDAS</b>	The very best dual purpose medium/long term mixture suitable for cutting & grazing
<b>MINGARY</b>	The long term grazing mixture
<b>FYVIE</b>	Specialist grazing mixture with a high clover content
<b>REJUVENATION</b>	The mixture to put new life and vigour into ageing swards

Mixtures have been developed to suit organic farming requirements.

By kind permission of Robert and Jaq Neill

# WATSON SEEDS DEMONSTRATION PLOTS

## Background

The field at Upper Nisbet, in the Scottish Borders, is 8.4 Ha and lies between 150-160 metres (490-525 ft) above sea level and has a north facing aspect. It is a free draining loam (Hobkirk Series) and is remarkably even across the field which is a rectangular 560 metres long by 150 metres wide.

We have divided up the field into 47 plots, each 12m x 140m long. The field is being managed on a paddock grazing system with each 1.08 Ha paddock containing 6 of the individual plots. The top and bottom headlands are sown in the farm's standard grazing mixture.

The first 5 paddocks are sown with single stand varieties of intermediate and late perennial ryegrass. These varieties are all grouped by heading date (Relative Ear Emergence) so we go from 35 days in the first plot to 55 days in plot 30. Diploid and tetraploid varieties are sown alongside one another.

Paddocks 6-8 are sown with Watson Seeds bespoke mixtures and contain a wide variety of materials including multispecies mixtures with herbs.

2020 has been an enlightening first year for our trial site. The main challenge at the start of the year was to ensure that the initial establishment and long-term persistency was not compromised by overstocking or poaching if ground conditions became challenging. We need not have worried as April & May only recorded 5mm and June, July & August were all between 50mm-60mm per month, September 20mm & October 81mm. Consequently, all the plots have had a great year to get rooted and thicken out with the rotational grazing in paddocks. The whole field had an application of 50Kg N/ha with Sulphur in early April and a 2nd 50kg N/ha with Sulphur in July.

## Main observations & take-home messages from our initial year.

1. Grazing mixtures with white clover and legumes contribute hugely to overall production and palatability during drought periods over straight ryegrass swards.
2. The 5 paddocks of 30 single stand ryegrass varieties will need higher levels of nitrogen to optimise productivity as soil reserves are low after the cropping rotation. In 2021, we will be looking at using little and often and some foliar nutrition if we are in a dry period.
3. Palatability and grazing efficiency. The cattle have shown us that certain varieties are grazed to much lower residual heights after each rotation. We knew from studies in Ireland that tetraploid varieties were generally leaving lower post grazing heights than diploids. However, we have identified diploids that have been preferentially grazed alongside tetraploids. We have also seen some diploid material that would need topping after the cattle have moved to maintain quality.
4. The testing of individual varieties and the mixtures for quality parameters at different points in the season. It is still too early in the process to quantify an overall quality index, but we are building a very useful dataset that corroborates what the animals are showing us on the ground with their performance. Within each individual paddock of six varieties or mixtures we are establishing a league table that could lead to promotion or potentially relegation.
5. Soil health and monitoring of biological activity. Having carried out an initial soil health survey alongside the mineral status of the field at establishment, we are monitoring the changes to soil health. Our testing of the mixtures is also looking at mineral status of the forage samples and we will be able to ascertain if the inclusion of deeper rooting herbs is making a contribution to animal health and performance. Early indications show that the multispecies mixtures have been well grazed without material being trampled and rejected.







There is an increased focus on the environmental contribution the agricultural sector can make. Utilising land and sowing mixtures to comply with government schemes is a good way of generating income, improve biodiversity and soil conditions while fitting into a rotation.



The current schemes available are Ecological Focus Areas (EFA) and Agri-Environment Climate Scheme (AECS).



As an independent seed merchant, we have the benefit of offering bespoke mixtures to comply with the various schemes while offering the maximum benefit to the client and environment.

# MAIN SCHEMES

## AECS - Scotland

- Species Rich Grassland
- Wild Bird Seed for Farmland Birds
- Forage Brassica for Farmland Birds
- Stubbles followed by Green Manure in Arable Rotation
- Green Manure
- Grass Strips in Arable Fields
- Beetlebank
- Water Margins in Grassland Fields

## EFA

- EFA Fallow (EFAFAL)
- EFA Nitrogen Fixer (EFA-NFIX)
- EFA Greencover(EFAGC)

For more information please visit our website or speak to an adviser

[www.watsonseeds.com](http://www.watsonseeds.com)







# AGRI-ENVIRONMENTAL MIXTURES

We offer a range of mixtures to suit all agri-environmental schemes. These schemes have become more popular in the past few years and will continue to be a valuable source of income to the agricultural sector. We have listed below our most popular mixtures. However, we can produce mixtures to suit any scheme or specific requirements.

## SPECIES RICH GRASSLAND

Mixture containing 15% native Scottish flowers and sympathetic grass species for recreating a species rich grassland. Available as a flower only option.



## WILD BIRD SEED (FOR FARMLAND BIRDS)

Where establishment of Wild Bird Seed mixtures are permitted, our mixture offers hardy winter cover and winter feed that supports our wild bird populations. Mixtures must include 3 small seed bearing plants, to include a cereal and an oil rich plant eg, oats, triticale, barley, quinoa, linseed, millet, mustard or oilseed radish.



## BEETLEBANK/FIELD MARGINS

Mixtures that have been designed to create wildlife habitats within farming environments. The mixture must include one tussocky grass species and at least one flowering species.



**CUSTOMERS MUST ENSURE THEY ARE SATISFIED THAT THE MIXTURES PROPOSED MEET THE CRITERIA FOR THE SCHEME THEY ARE INTENDED FOR.**



# GREEN MANURE COVER CROPS

Our standard green cover mixtures have been developed through field experience and our Skateraw trials. For our very short post harvest growing season, these mixtures contain the correct proportions of species to produce optimum growth and therefore, soil benefit. Variations and straight species are available from stock.

## MIX 1 (CC1)

Black oats/spring oats  
Vetch



## MIX 2 (CC2)

Black oats/spring oats  
Fodder radish



## MIX 3 (CC3)

Mustard  
Fodder radish



**MIXTURES FOR ALL AGRI-ENVIRONMENT SCHEMES ARE AVAILABLE**



Robert & Caroline Dalrymple in a plot of GG90 Heritage Wildflower Mixture, July 2020.



'I have been incredibly pleased with the results of this wildflower mixture. It was sown into quite a barren area of ground in July 2019 and with minimal work has established into an eye-catching display.'

Caroline Dalrymple, Crailoch, Ballantrae, Ayrshire.

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

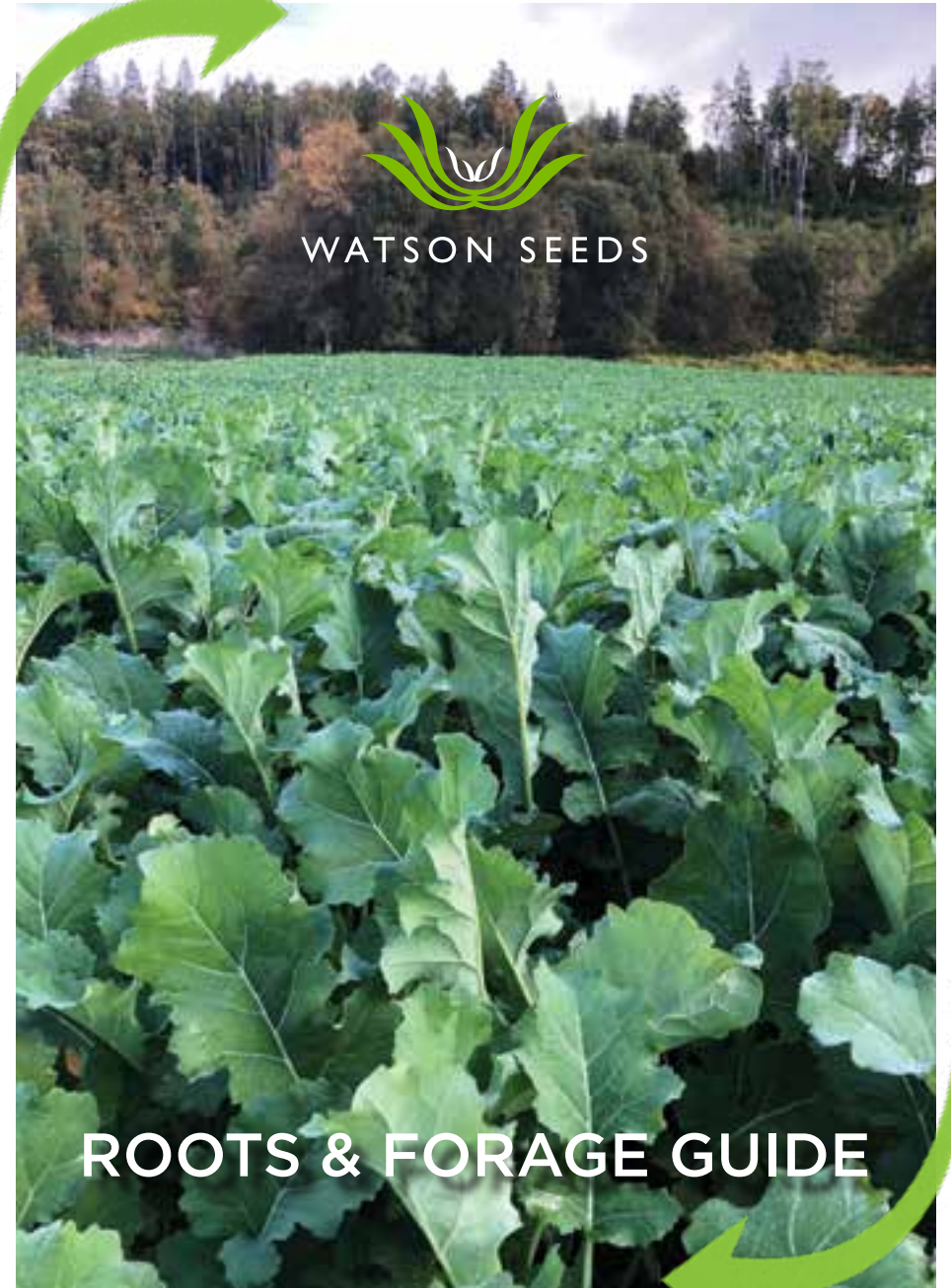
TOP SOILS & COMPOSTS

PRODUCT GUIDE

groGreen

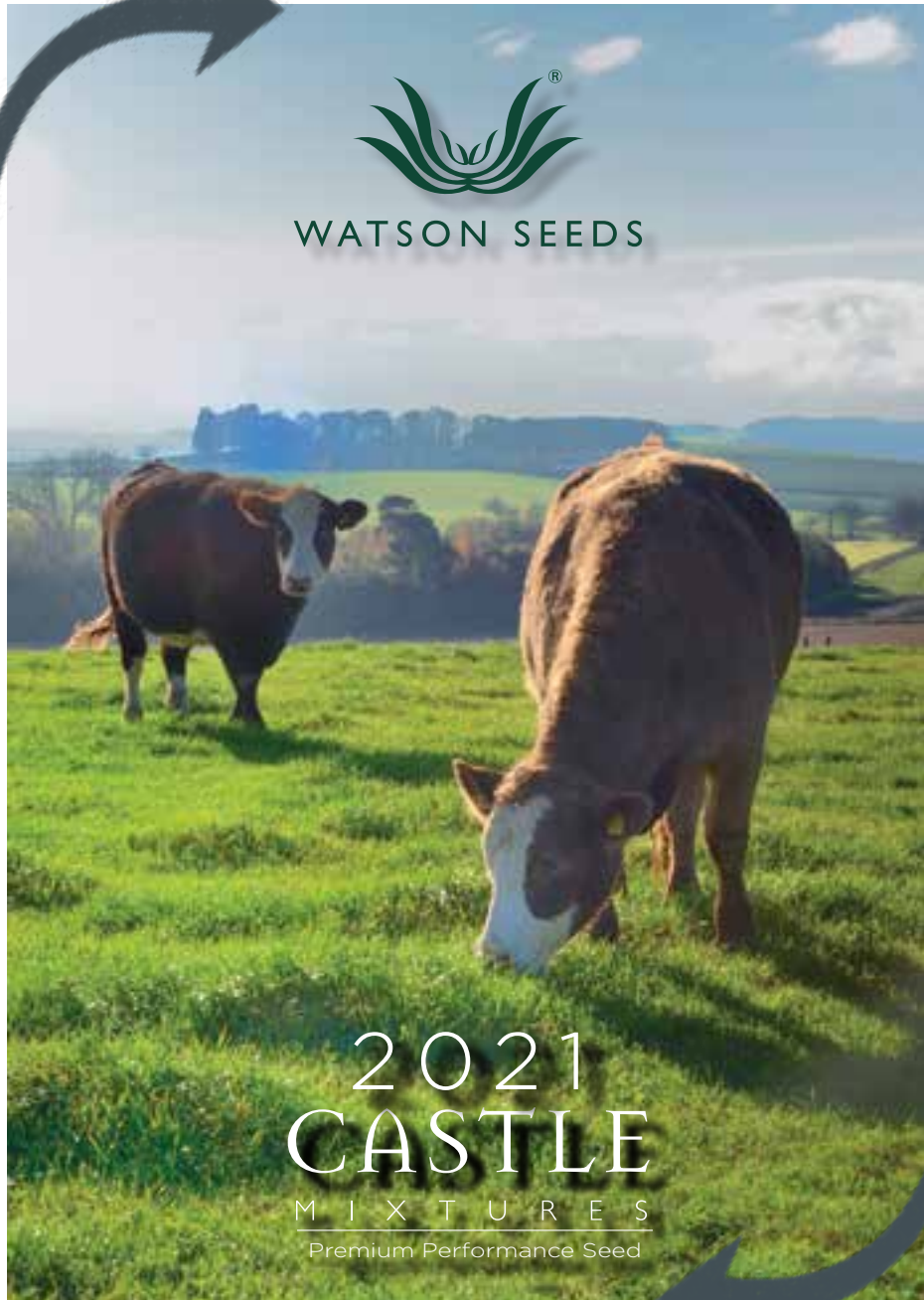


TURN OVER & FLIP TO THE 'BACK'





TURN OVER & FLIP TO THE 'BACK'



## GAME COVER MIXTURES



Producing a game cover crop requires the same attention to detail as other agricultural crops. Therefore, pH, seedbed preparation and fertiliser inputs should all be considered before sowing. Please speak to your Watson Seeds contact to discuss these requirements.

When selecting an ideal mixture we look at soil conditions, height of crop required and climatic conditions. This is why we have a large selection of mixtures to choose from. Our most popular ones are listed below. Other popular mixtures such as Setter, Spaniel and Magnet are also available.

These mixtures contain a range of species; kale, quinoa, linseed and mustard to name but a few and are mixed in a ratio to give the best results on site.

### GAME COVER MIX 1 (GC1)

Offers food and shelter for wild birds and game in year 1 and 2.

#### MIXTURE FORMULATION

Kale  
Quinoa



### GAME COVER MIX 3 (GC3)

Cover and food for wild birds and game in year 1 and 2.

#### MIXTURE FORMULATION

Spring Triticale  
Kale  
Quinoa



### LABRADOR

Labrador will tolerate low pH and difficult soil types, whilst providing quality cover.

#### MIXTURE FORMULATION

Spring Triticale  
Mustard  
Kale  
Linseed  
Quinoa





# 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
<b>KALE</b>	60	25	45	6,000	4,500	2,045
<b>STUBBLE TURNIP</b>	40	25	30	4,000	3,000	1,364
<b>FORAGE RAPE</b>	35	25	26.25	3,500	2,625	1,193
<b>SWEDE</b>	80	25	60	8,000	6,000	2,727

# 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

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

# PRECISION DRILL RECOMMENDATIONS

SEED GRADING	GRADE	SIZE (mm)	STANHAY BELT SIZE	SPRING BASE	CHOKE	WEBBS SELECTOR WHEEL
<b>FODDER BEET PELLETTED</b>	Q-U	3.5-4.75	15 or 16	C	A	EP
<b>SWEDE</b>	H	1.75-2.0	8	A	T	B
<b>TURNIP</b>	G	1.5-1.75	7	A	T	A
<b>KALE</b>	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)
<b>SWEDES</b>	40-100	45-100	80-215	50%	50% at 10-12 weeks
<b>KALE</b>	40-130	50-80	130-260	50%	50% at 10-12 weeks
<b>STUBBLE TURNIPS</b>	40-100	25-85	20-110	60%	40% at 6-8 weeks
<b>GRAZING TURNIPS</b>	40-100	25-85	20-110	100%	Futher N may be applied for regrowth
<b>FORAGE RAPE/RAPE KALE HYBRID</b>	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.

# 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



Robert Neill, Upper Nisbet Farm, Jedburgh, Scottish Borders A multi species forage trial is being carried out at Upper Nisbet, with Massif main crop turnip being sown as part of a special forage mixture. We will be assessing yield, quality and animal utilisation and look forward to sharing our results in the future.

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

\* limited availability

## Sowing Rates

Direct drilled - 0.2-0.3kgs/acre  
Broadcast - 0.75kgs/acre

## Sowing Period

May to June

## Utilisation Period

September to February



# FORAGE MIXTURES

Euan Campbell



'After spraying off an existing grass ley, I direct drilled Watson's Rape 3 mixture of stubble turnips and rape using a Vaderstadt drill in early July. I then applied 100 weight of Triple 16 fertiliser and as a result the field achieved a rather impressive crop which will be utilised by 150 wintering lambs. This is great way to break up the soil underneath, ready for a full reseed spring 2021.'

Ian Mackenzie, Fodderty Farm, Dingwall.

MIXTURES	DESCRIPTION
<b>RAPE 1</b>	A rape and stubble turnip mixture suitable for early drilling.
<b>RAPE 2</b>	An adaptation of Rape 1 with the inclusion of main crop turnips.
<b>RAPE 3</b>	A stubble turnip and rape mix with fast establishment for later use.
<b>KALE 1</b>	A winter hardy mixture containing kale, rape and main crop turnip, ideal for fattening lambs.
<b>KALE 2</b>	A unique combination of kale and swede for later utilisation.

# HYBRID MIXTURES

MIXTURES	DESCRIPTION
<b>HYBRID 1</b>	A rape/kale hybrid, rape and main crop turnip mix similar to Kale 1, but can be sown later.
<b>HYBRID 2</b>	A rape/kale hybrid and stubble turnip mix similar to Rape 1. However, the vegetative yield from the hybrid should extend the grazing days.



# 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**



'The field of Gorilla was sown at the start of July and was ready for grazing by the end of September. It has fattened 350 lambs from that point. It is a variety we have used for a few years and always proves to be fast growing and palatable with very little not utilised.'

**Richard Bancroft, J W Ogilvie & Partners, The Broom, Jedburgh, Scottish Borders.**

## Sowing Rates

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

## Sowing Period

May to August\*

## Utilisation Period

September to February

## KEY VARIETIES FOR CONSIDERATION

VARIETY	DESCRIPTION
<b>SWIFT (HYBRID)</b>	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.
<b>GORILLA (RAPE)</b>	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.
<b>RAMPART (RAPE)</b>	A newer variety of forage rape that is fast growing and has good yield potential. It is suitable for both dairy and lamb production.
<b>REDSTART (HYBRID)</b>	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.
<b>UNICORN (RAPE)</b>	A new 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.



Gorilla resists early senescing compared to older varieties. The lower 2 leaves of the control variety are clearly senescing whilst the leaves on Gorilla remain healthy and appetising



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



# 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**

<u>Sowing Rates</u>	<u>Sowing Period</u>	<u>Utilisation Period</u>
Direct drilled - 2kgs/acre Broadcast - 3kgs/acre	May to August	August to February

VARIETY		TYPE	RELATIVE DM YIELD %	RELATIVE FRESH YIELD %	RELATIVE ROOT DM YIELD %	RELATIVE LEAF DM YIELD %
100%=Tonnes/ha		Control variety - Barkant	5.52	51.8		
<b>SAMSON</b>	Shown to be preferentially grazed which can lead to higher intakes and live weight gains	Purple Tankard	103	108	119	83
<b>DELILAH</b>	Ideal for fattening lambs and will produce huge tankard shaped bulbs	White Tankard	100	101	118	77
<b>RONDO</b>	Very quick establishing, green skinned with good winter hardiness	Green Globe	94	88	96	91
<b>SKYFALL</b>	Skyfall is a hybrid brassica which provides a palatable leafy feed	Leafy	87	70	42	141
<b>WHITESTAR</b>	Customers have been impressed with the winter hardiness and palatability of this turnip	White Globe	84	81	78	91
<b>TYFON</b>	A very fast growing hybrid, virtually bulbless	Leafy	79	75	57	105

Data Source: Limagrain UK Trials 1993 - 2018



Renowned Aberdeen Angus breeder John Elliot seen here with Johnny on a fine Autumn day

'Sowing stubble turnips after harvesting winter barley allows us to maximise output and greatly reduce our straw usage. By adjusting their daily allowance we can maintain the cattle at their optimum body condition pre-calving without any additional concentrates.'

**John & Johnny Elliot, Upper Huntlywood, Earlston, Berwickshire.**



Johnny at Upper Nisbet showing off a great example of Rondo's white bulb.



Upper Huntlywood, Earlston, Berwickshire.



# KALE

**BEST FOR LATE UTILISATION**

**BUFFER FEED FOR DAIRY COWS DURING DRY SUMMERS**

**USED FOR OUT-WINTERING SYSTEMS**

**WINTER HARDY**

**SECOND HIGHEST UTILISABLE YIELD**

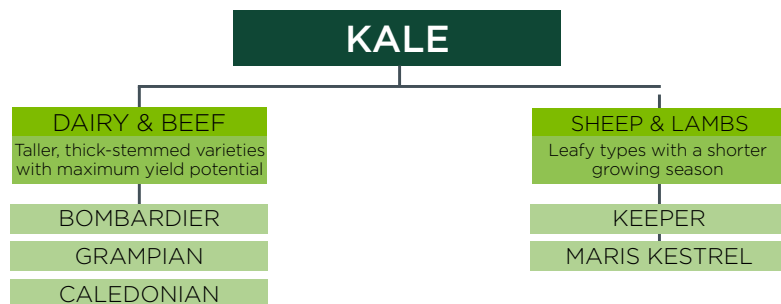
**HIGHER YIELDS THAN HYBRID RAPE/KALE**



'2 years of Caledonian/Grampian kale has been a great break crop ahead of renewing grass leys. It provides high yield & longevity, allowing us to carry all our ewe hoggs from Aikengall and Nunraw through the winter as well as finishing all store lambs. The 2 years gives us plenty of chance to clean up, address lime and drainage of fields while building fertility to establish strong (Watson Seeds!) grass leys afterwards.'

Harry Hamilton, Nunraw, East Lothian.

## WHICH VARIETY IS BEST FOR YOU?



<u>Sowing Rates</u>		<u>Sowing Period</u>		<u>Utilisation Period</u>			
Direct drilled - 2kgs/acre Broadcast - 3kgs/acre		May to June		September to March			
VARIETY	TYPE	RELATIVE DM YIELD %	RELATIVE FRESH YIELD %	DM CONTENT %	LEAF : STEM RATIO (HIGH = LEAFY)	PLANT HEIGHT (CM)	WINTER HARDINESS (9=BEST)
100%=TONNES/HA	Control variety	11.5	80				
<b>CALEDONIAN</b>	Marrow Stem	103	107	13.8	0.6	105	5
<b>BOMBARDIER</b>	Marrow Stem	100	105	13.5	0.5	102	5
<b>GRAMPIAN</b> *	Marrow Stem	97	100	14.1	0.6	101	4
<b>BITTERN</b>	Intermediate	95	89	15.5	0.8	94	-
<b>KEEPER</b>	Short	90	82	15.7	1.2	85	5
<b>MARIS KESTREL</b>	Short	100	100	13.9	1.1	74	4

\* limited availability



'We have fattened 1700 Shetland lambs off 45 acres of Maris Kestrel from the end of September to the start of December and will then graze 300 ewe lambs for 4-6 weeks over the remaining stubble. We are delighted with an average yield of 10t DM/ha and have found it to be well utilised with both leaf and stem very palatable.'

Jamie Halbert, Farm Manager, Bordlands & Halmyre Mains Farm, Peeblesshire.

# 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

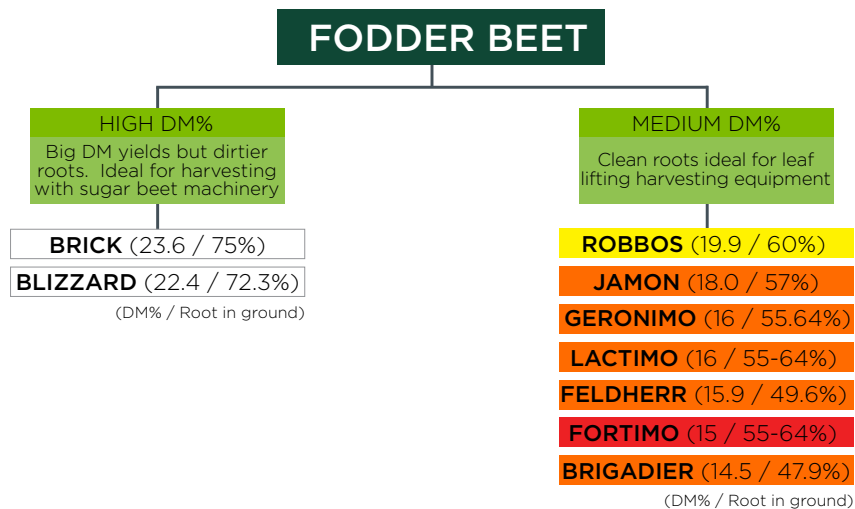


Alex Eggo with her dog Roxy.

'I'm very pleased with this fodder beet variety Robbos. It is lifting well with impressive yield.'

Tulloch Farms, Laurencekirk.

## WHICH VARIETY IS BEST FOR YOU?



### Sowing Rates

40,000 seeds/acre

### Sowing Period

April to May

### Utilisation Period

October to November

VARIETY	DESCRIPTION
<b>ROBBOS</b>	Clean yellow roots, very consistent performance
<b>JAMON</b>	High palatability and easily eaten in situ or fed whole or chopped
<b>GERONIMO</b>	Very high potential yield and greater bolting resistance
<b>LACTIMO</b>	Good seedling vigour and produces very high fresh yields of medium dry matter
<b>FELDHERR</b>	Orange roots which grow out of the ground producing huge fresh yields
<b>FORTIMO</b>	Produces excellent yields of medium dry matter
<b>BRIGADIER</b>	A traditional polyploid, mangel type fodder beet

## 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 and 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	N 125kg/ac
P 50kg/ac	P 75kg/ac
K 50kg/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.

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



# 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

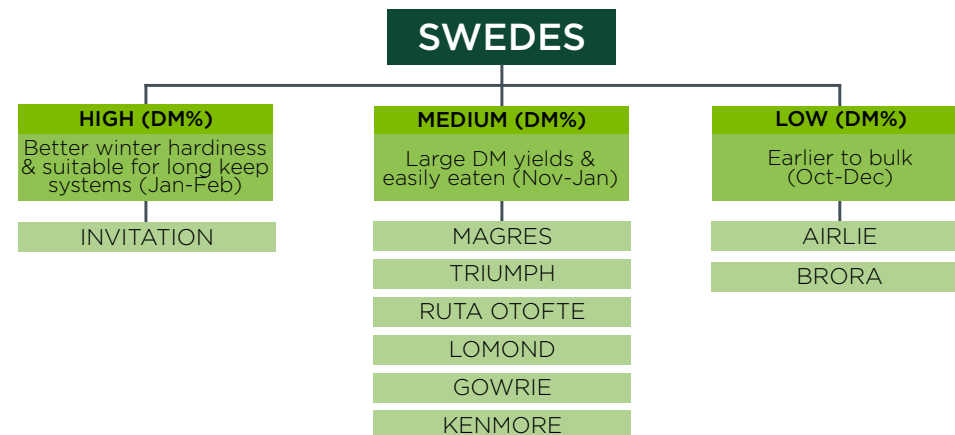


'I sowed out Lomond and Magres on 19th May, along with 500 weight of 13:13:22 + sulphur + boron. The combined average of tonnes per acre fresh weight was 58 tonnes, with the swedes handpicked for supplying to local butchers and shops. Swedes which do not make the grade will be utilised by 200 wintering lambs. Really impressed with how well Lomond and Magres have performed.'

John Fraser, 11 Ferintosh, Conon Bridge.

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?



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



Skateraw, Dunbar, East Lothian



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



# ROOTS & FORAGE GUIDE



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
<b>FODDER BEET</b>	April - May	24-28 weeks	October to November	40,000 seeds/acre	6.0-7.25	12-13%	78
<b>STUBBLE TURNIP</b>	May to August	12-14 weeks	August to February	2kgs (drilled) 3kgs (broadcast)	1.6-2.25	17-18%	69
<b>RAPE/KALE HYBRID</b>	July to August	12-14 weeks	September to February	2kgs (drilled) 3kgs (broadcast)	1.4-1.6	15-24%	66
<b>FORAGE RAPE</b>	May to August	10-12 weeks	September to February	3kgs (drilled) 4kgs (broadcast)	1.4-1.6	19-20%	65
<b>KALE</b>	May to June	16-20 weeks	September to March	2kgs (drilled) 3kgs (broadcast)	3.25-4.0	16-17%	70-75
<b>SWEDES</b>	May	20 weeks	September to February	100-325g	2.85-4.0	10-11%	82
<b>MAIN CROP TURNIPS</b>	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
<b>CHICORY</b>	May to July	8 weeks	April to October	2kgs	up to 6 (in season)	25%	70-80





WATSON SEEDS

**ROOTS & FORAGE GUIDE**