



WATSON SEEDS



CASTLE

MIXTURES

• PREMIUM PERFORMANCE SEED •

2009

Personal service in a time of change.

Never has the phrase 'no two farming years are alike' been more applicable than the years we have just experienced. The extraordinary weather pattern and equally fluctuating economic picture has brought mixed fortunes to many involved in the farming industry.

Escalating nitrogen fertiliser prices have further endorsed the fact that young grass fields are the most cost effective food source for our livestock industry, particularly in a grazing situation. We have supplied unprecedented quantities of clover seed across the country as farmers turn to clover based swards in an effort to reduce their dependency on bagged nitrogen.

Our network of sales management, agents and distributors continues to develop with more and more farmers

sowing Castle Mixtures and seeing the benefits of improved animal performance. Our forage trials in collaboration with the Scottish Agricultural College are assisting in the identification of the best forage combinations for enhanced live weight gain.

We are delighted to advise you that Bert Eggo and Sons of Brechin is now part of Watson Seeds. Sandy and Alex Eggo are continuing to serve their customers in the personal manner that has been the hallmark of the Eggo family business for four generations.

May I take this opportunity to thank all our customers for their support, it is not taken for granted.



Below: Johnny Watson and Sandy Eggo at the Winter Fair 2008.



Premium Performance Seeds for Premium Performance Stock



Above: Hereford Champion Baldinnie I Cranmore. John A Cameron & Sons, Balbuthie, Leven.

Below: Ayrshire Champion, Halmyre Louise. L. Davidson & Sons, Halmyre, Castle Douglas.



Watson Seeds are a proud sponsor of the Royal Highland Show



The ultimate in clover coating technology exclusively available from Watson Seeds

CAST

- Additional water for germination and establishment of the seedling.
- Overcomes stress situations.

Humic acids as a part of the seed coating

- Enhanced nutritional uptake.
- Faster germination.
- Quicker establishment.
- Promotes root development.

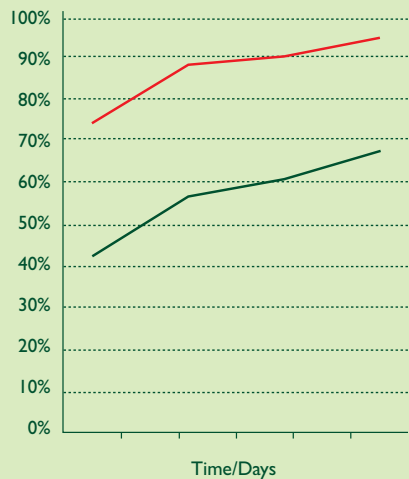
Bacteria

- Rhizobia bacteria for better N-nodulation (red & white clover).
- Mykorrhiza on grass roots for a better nutritional uptake.

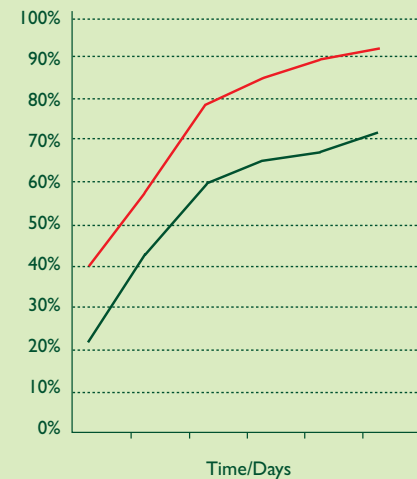
Effects of bio stimulant

- Vitality.
- Healthy seed(ling).
- Lower susceptibility to disease.

Superior Root Development



Superior Germination



■ CAST Clover

■ Untreated Clover

CLOVER BLENDS FOR CASTLE MIXTURES®

With the enormous increase in the price of nitrogen fertiliser and protein feeds there has been a marked interest in the growing of both red and white clover.

At Watson Seeds we have always advocated the use of clover in our grass mixtures for animal performance and nitrogen fixation. Our clover blends, as used in our grass mixtures are all first choice SAC and therefore selected for yield and performance through the growing season.

ROTATIONAL

Designed for swards that will be cut or grazed with cattle and/or sheep. New 'flexible' varieties are ideal because of their ability to adapt to changes in management. Although generally larger leaved varieties give a higher yield under cutting even the smaller leaved varieties in this blend have exceptionally high yield for their leaf size.

Varieties	Leaf type
Crusader	Small
Avoca	Medium
Merwi	Medium
Alice	Large

PERMANENT

Designed to withstand harsh winter conditions coupled with the rigours of hard close grazing, particularly associated with sheep. A high proportion of small leaved varieties are included in the mixture because their dense network of stolons gives them good survival and persistency under hard grazing.

Varieties	Leaf type
Action	Small
Crusader	Small
Avoca	Medium
Merwi	Medium



'I am delighted with the performance of the Organic Castle Mixtures and greatly appreciate the advice and service I receive from Johnny.'
Jim Sutherland, Hillus Farm, Oxtou, The Borders.

Above: Organic red and white clover mixture at Addiston Farm by kind permission of Mrs McKerrow. Established by means of sowing under an organic barley crop. The 40 acre field's first year of production involved spring grazing followed by a heavy ag-bag silage crop. The aftermath successfully fattened 600 lambs over a six week period.



RED CLOVER

In light of the dramatic increase of red clover sown, we have included in this catalogue some technical information on this species.

Red clover is a short lived perennial legume, with a life span of about 2 – 4 years. However new varieties are being bred that will extend this life span.

It has an upright growth habit with a deep taproot. The crown of the red clover is the plant's main food storage area.

Red clover can be grown on its own or with grass and white clover. In utilisation the main aim should be to protect the crown of the plant, as damage will reduce performance or cause the death of the plant.

To protect the crown of the red clover

- Cutting height of all silage cuts should be 7 – 8 cm.
- Optimum grazing height of aftermaths or overwinter is 4 – 6cm.

Benefits of red clover

Nitrogen fixation (as white clover).

High yields (10 – 15 tonnes DM/ha).

Feed value: Protein quality is higher, but not apparent on a feed analysis due to the composition of the proteins.

Typical analysis of red clover/ryegrass silage

ME	9.8 – 11.4 MJ/KG DM
Crude Protein	14 – 19%
PH	4 – 4.5

(Source IGER)

Establishing a red clover sward

- Aim to have 200 plants per square metre before the first frosts.
- April to late July optimum for red clover establishment.
- Soil pH 6 and above.
- Phosphate and potash index 2.
- Nitrogen should not be needed for establishment, except in very low nitrogen indices.

Due to a number of pests and diseases a five to seven year rotation is necessary for the successful growing of red clover. (The main disease is clover rot and the main pest stem eelworm).

Conservation

- Do not cut to low (protects crown).
- In first year graze lightly in the Autumn.
- No nitrogen applications.
- Ensilage at 25 – 28% DM.
- 3 – 4 cuts should be achievable each year.

Be aware

Red clover contains high levels of phyto-oestrogens which can cause a reduction in ovulation rates in ewes. To prevent fertility problems do not graze ewes on red clover 6 weeks before and after tupping.



We only use SAC First Choice Varieties in our Castle Mixtures.

All the grass varieties used by Watson Seeds have been approved by independent trials, conducted by the SAC and DARD. From this data the key factors we consider in variety selection are as follows:

Yield: Annual, seasonal, cutting & grazing.

Persistence: Ability to compete & survive.

Quality: Energy value, mid season D Value. WSC content (sugar).

Winter Hardiness

Disease Resistance

Drought Tolerance

Your 100% guarantee when buying Castle Mixtures:

- ✓ All seed HVS prior to mixing
- ✓ First choice SAC
- ✓ Award winning service
- ✓ Unique traceability
- ✓ High sugar grasses
- ✓ Based & mixed in Scotland

VARIETY ASSESSMENT

		SAC Rating	DARD Approved	Ground Cover	Comparative high sugar rating (5 = high, 1 = low)
Italian					
Meribel	Very high yielding with very good D values and ground cover for an Italian.	I	Yes	A	N/T
Gemini (T)	Capable of producing high D values for first and second cuts. Good yields throughout the season.	I		B	N/T
Hybrid					
Ligunda	Excellent spring growth with high first cut D values.	I	Yes	A	N/T
Aberecho (T)	First high sugar hybrid. Produces high yields of excellent quality and quantity.	I	Yes	A	5
Hymer (T)	Excellent production overall with good spring growth. Very high yields at first cut silage with high 'D' value.	I	Yes	A	N/T

T = Tetraploid

N/T = Not as yet tested

VARIETY ASSESSMENT

		SAC Rating	DARD Approved	Ground Cover	Comparative high sugar rating (5 = high, 1 = low)
Early Perennial					
Kilrea	Produces excellent yields and quality. Useful for cutting and grazing.	I	Yes	B	N/T
Anton (T)	Produces good yields either in a cutting or grazing situation. High second cut D values.	I		B	N/T
Intermediate Perennial					
Aberstar	Very similar to Aberdart, but with even higher WSC (sugar content).	I	Yes	A	5
Bree	One of the best varieties for winter hardiness. Excellent mid and late season growth.	I	Yes	B	N/T
Premium	A winter hardy variety that performs well under both managements.	I		B	3
Eurostar (T)	Excellent spring growth. High first cut yields and quality.	I	Yes	B	3
Calibra (T)	High first cut D value. High yields under grazing management.	I	Yes	C	4
Dunluce (T)	Outstanding under both managements with excellent grazing quality.	I	Yes	C	N/T
Late Perennial					
Aberavon	Outstanding high sugar variety with exceptional yields under grazing management and excellent spring growth.	I	Yes	B	5
Foxtrot	Excellent performance under both cutting or grazing regimes.	I	Yes	B	3
Pastour	Performs well under grazing and cutting with uniform growth pattern.	I	Yes	B	N/T
Delphin (T)	Very high yield first cut with good D value. Excellent spring grazing performance.	I	Yes	C	3
Elgon (T)	High yields for both first and second cuts, combined with startling D values. Excellent early season grazing.	I	Yes	C	4
Cooper (T)	Yields well under conservation with good D values. Excellent for grazing.	I	Yes	C	N/T
Twymax (T)	Good ground cover and mid season digestibility. Well suited to a grazing system.	I		B	4
Timothy					
Comer	Best spring growth of the timothys, with excellent ground cover and autumn performance.	I	Yes	A	N/T
Erecta RvP	Good all round variety.	I	Yes	B	I
Promesse	Exceptional spring growth and ground cover.	I	Yes	A	I

T = Tetraploid

N/T = Not as yet tested

CASTLE MIXTURES® FOR ALL YOUR NEEDS

Mixture	Duration (Years)	Mainly Cutting	Dual Purpose	Intensive Grazing	Extensive Grazing	Sowing rate (Kg/acre)
Balvenie™	1 – 1.5	✓				14 – 15
Tantallon®	2 – 3	✓	✓			14 – 15
Red Tantallon®	2 – 3	✓				14 – 15
Airlie™	3 – 4	✓	✓	✓		14 – 15
Duart™	4 – 7		✓	✓		15 – 16
Greenan™	4 – 7		✓	✓		15 – 16
Carrick™	4 – 7		✓			15 – 16
Edzell®	4 – 7	✓	✓			15 – 16
Dundas®	4 – 7		✓	✓		15 – 16
Hermitage™	4 – 7				✓	15 – 16
Brodie™	7 +		✓		✓	15 – 16
Mingary®	7+		✓	✓	✓	15 – 16
Fyvie™	7+				✓	15 – 16

The proportion of varieties and species used in every Castle Mixture has been determined after the most careful consideration of farming conditions in Scotland.

The duration of a grass mixture is mainly dependent on two factors: the component varieties and the management regime. Varieties giving higher yields can often be less persistent so there is a balance to consider between these two important characteristics.

Our comprehensive range of mixtures covers virtually all situations. However, should you require the addition of, for example, red clover or a nurse crop of hybrid or westerwolds in any Castle Mixture we would be pleased to oblige. Individually prescribed mixtures can also be supplied to suit specific situations.

See the chart above for a guide to mixture selection. However we recommend you consult your distributor, agent or our office for advice on which mixture best suits your needs.

If we are forced to make any substitution of varieties in our Castle Mixtures® owing to demand, we will ensure that we only use the best alternative varieties available.

CASTLE MIXTURES®,

BALVENIE™, TANTALLON®, AIRLIE™, GREENAN™, DUART™, DUNDAS®, MINGARY®, REJUVENATION™, FYVIE™, CARRICK™, BRODIE™, EDZELL®, CAST™.

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BALVENIE™

Very bulky 12 – 18 months mixture for intensive cutting or grazing.

Very good seasonal growth from Meribel.

Clover may be added as required.

Tetraploid content – 29%.

Variety	Type
Meribel	Italian Ryegrass
Ligunda	Hybrid Ryegrass

AIRLIE™

Highly productive 3 – 4 year mixture.

A more persistent version of Tantallon®.

By only using perennial ryegrass we ensure excellent silage quality.

Ideal for very intensive grazing; tetraploids improve mid-season D value and conservation yield.

Contains Cooper; outstanding for grazing.

Available with CAST coated clover blend.

Tetraploid content – 53%.

Variety	Type
Bree	Perennial Ryegrass
Premium	Perennial Ryegrass
Calbra	Perennial Ryegrass (T)
Eurostar	Perennial Ryegrass (T)
Cooper	Perennial Ryegrass (T)
Rotational Clover Blend	White Clover



TANTALLO®

Outstanding 2 – 3 year mixture for intensive cutting or grazing.

Excellent forage quality.

Up to three silage cuts a year.

Excellent aftermath grazing.

Includes the hybrid Hymer and the intermediate Eurostar.

Persistency and compatability of growth are ensured by only combining hybrids with intermediate perennials.

Available with CAST coated clover blend.

Tetraploid content – 32%.

Variety	Type
Hymer	Hybrid Ryegrass (T)
Ligunda	Hybrid Ryegrass
Premium	Perennial Ryegrass
Calibra	Perennial Ryegrass (T)
Eurostar	Perennial Ryegrass (T)
Rotational Clover Blend	White Clover

RED TANTALLO®

High protein 2 – 3 year intensive cutting mixture.

For silage only (big bale or clamp).

Designed to produce high protein silage to replace bought in proteins.

Up to three silage cuts a year.

The clover will reduce bought in nitrogen fertiliser.

Addition of white clover to add persistency to the legume content.

Available with CAST coated clover blend.

Tetraploid content – 57%.

Variety	Type
Hymer	Hybrid Ryegrass (T)
Ligunda	Hybrid Ryegrass
Calibra	Perennial Ryegrass (T)
Eurostar	Perennial Ryegrass (T)
Red Clover Blend	Red Clover



'This red clover mix suits our system to grow high protein forage for the dairy in an effort to minimise bought in proteins.'

Roddy Catto.

Above: Modified Red Tantalloon at Hillhead of Muirton, Whitecairns. Seed supplied by Bryan Harley, dairy specialist, Harbro Ltd.

Below: Well known pedigree dairy breeder Jimmy Hodge, Lemington Farm, Grantshouse, Borders, inspecting his second cut silage crop of Tantalloon.



'Tantalloon is very responsive to slurry and gives us a very good volume of crop with a high 'D' value.'

Jimmy Hodge.

CARRICK™

Highly flexible medium term dual purpose mixture.

Suitable for early cuts of hay and silage.

The inclusion of Foxtrot assists in ground cover, mid-season digestibility and grazing yields.

Early spring growth from Kilrea.

Spread of varieties ensures maximum production throughout the season.

Available with CAST coated clover blend.

Tetraploid content – 28%.

Variety	Type
Kilrea	Perennial Ryegrass
Aberstar	Perennial Ryegrass
Premium	Perennial Ryegrass
Calibra	Perennial Ryegrass (T)
Foxtrot	Perennial Ryegrass
Delphin	Perennial Ryegrass (T)
Erecta	Timothy
Promesse	Timothy
Rotational Clover Blend	White Clover

GREENAN™

The farmers choice for intensive grazing.

Only the very top grazing perennials are included to ensure maximum production over a long season.

The very high percentage of late tetraploids ensures excellent yields of highly palatable grazing maximising intake.

Includes the tetraploid variety Eurostar.

Aberstar – Outstanding high sugar perennial ryegrass.

Available with CAST coated clover blend.

Tetraploid content – 43%.

Variety	Type
Aberstar	Perennial Ryegrass
Premium	Perennial Ryegrass
Eurostar	Perennial Ryegrass (T)
Foxtrot	Perennial Ryegrass
Pastour	Perennial Ryegrass
Elgon	Perennial Ryegrass (T)
Cooper	Perennial Ryegrass (T)
Comer	Timothy
Rotational Clover Blend	White Clover

BRODIE™

A favourite dual purpose mixture designed for the North.

An extremely adaptable mixture designed to withstand the rigours of hard winters and colder growing conditions.

Spread of species ensures maximum production throughout the season.

Aberstar – Outstanding high sugar perennial ryegrass.

Includes the hybrid Ligunda to assist in establishment.

Available with CAST coated clover blend.

Tetraploid content – 18%.

Variety	Type
Ligunda	Hybrid Ryegrass
Kilrea	Perennial Ryegrass
Aberstar	Perennial Ryegrass
Premium	Perennial Ryegrass
Foxtrot	Perennial Ryegrass
Pastour	Perennial Ryegrass
Delphin	Perennial Ryegrass (T)
Cooper	Perennial Ryegrass (T)
Comer	Timothy
Erecta	Timothy
Amba	Cocksfoot
Permanent Clover Blend	White Clover

HERMITAGE™

The supreme long term mixture designed for re-seeding hill ground or reclaiming marginal areas.

Native upland species are included to help maintain sward density under harsher conditions.

Foxtrot improves sward density and overall grazing yield.

Our permanent clover blend ensures excellent livestock performance and assists in sward density as well as improving mineral uptake.

Available with CAST coated clover blend.

Tetraploid content – 24%.

Variety	Type
Ligunda	Hybrid Ryegrass
Kilrea	Perennial Ryegrass
Aberstar	Perennial Ryegrass
Premium	Perennial Ryegrass
Foxtrot	Perennial Ryegrass
Pastour	Perennial Ryegrass
Delphin	Perennial Ryegrass(T)
Cooper	Perennial Ryegrass(T)
Comer	Timothy
Sobra	S S Meadow Grass
Herald	Creeping Red Fescue
Permanent Clover Blend	White Clover



Above: Mr Billy Arrel (right) of W & J Bell Ltd, Ballymena, Northern Ireland, with Mr Wallace Thompson, The Caddy, Randalstown, County Antrim. In the background is Slemish Mountain.



'The Duart grass mixture excels in producing leafy silage and a thick sward.'
Mungo Bryson.



Above left: Mungo Bryson, Boreland of Parton, Castle Douglas, Kirkcudbrightshire. Above right: Stewart Clark, Fineview, Glenluce, Wigtownshire.

EDZELL®

The ultimate intensive medium/long term cutting mixture

Contains the top later heading perennials with a high leaf to stem ratio ensuring high quality silage.

Edzell® is designed to persist over many years and varieties have therefore been selected with good all round winter hardiness and persistency.

Bree will give excellent mid and late season growth.

Available with CAST coated clover blend.

Tetraploid content – 28%.

Variety	Type
Aberstar	Perennial Ryegrass
Bree	Perennial Ryegrass
Foxtrot	Perennial Ryegrass
Pastour	Perennial Ryegrass
Delphin	Perennial Ryegrass (T)
Cooper	Perennial Ryegrass (T)
Comer	Timothy
Rotational Clover Blend	White Clover

DUART™

A specialist all perennial ryegrass mixture for conservation or grazing.

Made up of 100% comparative high sugar perennial ryegrasses.

Varieties have been selected for high D values and late heading characteristics.

Aberatar and Aberavon – Outstanding high sugar pasture perennial ryegrasses.

Excellent ground cover and persistency.

Tetraploid content – 40%.

Variety	Type
Aberstar	Perennial Ryegrass
Aberavon	Perennial Ryegrass
Foxtrot	Perennial Ryegrass
Pastour	Perennial Ryegrass
Delphin	Perennial Ryegrass (T)
Cooper	Perennial Ryegrass (T)
With or without CAST Rotational Clover Blend	

'We were looking for a grass mixture that held a high D-value to the end of May and which produces large quantities of grass. The Duart Mixture ticks all the boxes.'
Stewart Clark.

DUNDAS®

The very best dual purpose medium/long term mixture suitable for both cutting and grazing.

By combining the correct proportions of the very top perennials this mixture produces a dense and highly productive sward.

Using the top intermediates ensures heavy silage cuts.

Rotational clover blend is included to maximise production and livestock performance.

Available with CAST coated clover blend.

Tetraploid content – 43%.

Variety	Type
Aberstar	Perennial Ryegrass
Bree	Perennial Ryegrass
Premium	Perennial Ryegrass
Calibra	Perennial Ryegrass (T)
Eurostar	Perennial Ryegrass (T)
Aberavon	Perennial Ryegrass
Foxtrot	Perennial Ryegrass
Elgon	Perennial Ryegrass (T)
Cooper	Perennial Ryegrass (T)
Comer	Timothy
Rotational Clover Blend	White Clover

What they say about our best selling Castle Mixture:

'We have been using the Castle Mixtures for a number of years now and find Dundas to be ideal for our farming system.'

Ray Fields, Farm Manager, Lilburn Estates.

'My newly reseeded fields of Dundas are delivering an improvement in the quality of our silage and in particular the protein content. We are getting a better response to fertiliser from our young grass fields.'

John Laird.

'This huge crop of hay produced as much off 10 acres as we normally expect from 16 acres. I am delighted with the performance of Dundas. The mixture is ideal for our farming system giving us the flexibility and grass quality that we need.'

David McAlpine.



Above left: The 10,000 tonne silage making operation at Lilburn Estates, Wooler, Northumberland, in full swing, Summer 2008. Seed supplied by John Hogarth Ltd.

Above right: John Laird, Pole Farm, Burray, Orkney, in a highly productive field of Dundas. The photograph was taken during Orkney Show Week in August, and highlights the vigorous regrowth of the mixture after second cut silage. Seed supplied by Billy Tait of J & W Tait, Kirkwall, Orkney.

Below: David McAlpine, JJ & M Dunlop, Mayfield, Reston, Berwickshire, in a superb crop of hay photographed during the only dry week the Borders experienced in the summer of 2008. Photograph by kind permission of David McAlpine, JJ & M Dunlop.



MINGARY®

The long term grazing mixture.

Simply the best permanent mixture available due to its unique balance of grasses.

The high proportion of permanent clover mixture assists in the palatability and density of the sward, improving livestock performance.

Available with CAST coated clover blend.

Tetraploid content – 37%.

‘We are delighted with the performance of the Mingary at Balbuthie. Our cattle are doing exceptionally well on the dense swards and despite the relatively high clover content, bloat has not been an issue.’

Margaret Cameron.

Variety	Type
Aberstar	Perennial Ryegrass
Bree	Perennial Ryegrass
Calibra	Perennial Ryegrass (T)
Foxtrot	Perennial Ryegrass
Pastour	Perennial Ryegrass
Elgon	Perennial Ryegrass (T)
Cooper	Perennial Ryegrass (T)
Cosmolit	Meadow Fescue
Comer	Timothy
Permanent Clover Blend	White Clover

FYVIE™

Specialist grazing mixture with a high clover content.

High tetraploid content ensures very palatable grazing and allows clover to flourish.

Ideal in low N fertiliser situations.

Available with CAST coated clover blend.

Tetraploid content – 53%.

Variety	Type
Aberstar	Perennial Ryegrass
Bree	Perennial Ryegrass
Premium	Perennial Ryegrass
Eurostar	Perennial Ryegrass (T)
Foxtrot	Perennial Ryegrass
Pastour	Perennial Ryegrass
Elgon	Perennial Ryegrass (T)
Cooper	Perennial Ryegrass (T)
Promesse	Timothy
Permanent Clover Blend	White Clover



Above: Much respected pedigree breeder, Margaret Cameron, Balbuthie, Kilconquhar, Leven, Fife, admiring Baldinnie I Cranmore at 30 months old weighing 1180kgs. The bull was Supreme Champion at both the Royal Highland Show and Hereford National Show in 2008.

Below: A superb field of Fyvie with CAST permanent clover blend at Skateraw Farm. The Blaceface tup lambs are from Willie Dunlop's famous Elmscleugh flock.





Above: Mr Alex Shankland, Langdale Farm, Ballantrae, Girvan, Ayrshire. Seed supplied by Harbro Ltd.

Above: Rob Forrest, Preston Farm, Preston, Duns, Berwickshire in a new reseed of Organic Dundas.

REJUVENATION™

The mixture to put new life and vigour into ageing swards.

Variety	Type
Ligunda	Hybrid Ryegrass
Calibra	Perennial Ryegrass (T)
Eurostar	Perennial Ryegrass (T)
Elgon	Perennial Ryegrass (T)
Cooper	Perennial Ryegrass (T)
With or without CAST Permanent Clover Blend	

'I was very keen to improve the sward on our main dairy cow grazing fields, but a complete reseed would have created a tender surface for cow grazing in the spring, so I opted for over seeding. The field was skimmed bare with an old mower, harrowed twice with Opico harrows, aerated and finally harrowed again with 10kg of rejuvenation grass mixture and rolled. This year the grazing performance has been excellent.'

Mr Alex Shankland.

A technical leaflet is available on this subject, please contact the office.

**For a specialist
Aitchison drilling
service, contact:**

Borders:
Billy Rae
T: 01450 860672
M: 07774 163665

S.W. Scotland:
Neil Milligan
M: 07801 447524

Perth, Tay & Stirling:
Ian Lawrie
T: 07885 316692
Jimmy Lawrie
T: 07860 835400

ORGANIC

We have secured excellent stocks of organic perennial ryegrass for inclusion in our Organic Castle Mixtures for 2009. All have an SAC First Choice Rating, i.e. Calibra, Foxtrot, Premium, Pastour and Tivoli.

We would strongly advocate avoiding the inclusion of second choice or untested varieties of organic grass seed

Please note the inclusion rate for organic seed for 2009 is 65%.

Subject to availability we may be in a position to supply individual seed for other crops such as Peas, Vetches, Cereals and other forage crops.

Organic coated clover may be available for 2009. Please contact the office.

'Both our beef and lamb finishing enterprises are benefiting from the exceptional feeding value of this mixture. The high energy levels and protein content are producing exceptional live weight gain figures.'

Rob Forrest.

Organic Castle Mixtures

Tantallon	For intensive cutting or grazing
Airlie	Highly productive 3 – 4 year mixture
Dundas	The very best dual purpose medium/long term mixture suitable for cutting and grazing
Fyvie	Specialist grazing mixture with a high clover content
Mingary	The long term grazing mixture
Rejuvenation	The mixture to put new life and vigour into ageing swards

AMENITY MIXTURES

Universal fine

Non-ryegrass version of Universal Landscape for more ornamental use.

- Fine appearance
- Strong dense turf
- Low maintenance
- Sowing rate 35g/m²

Low Mow

For low maintenance situations in general landscaping, lawns, parklands, housing and industrial estates.

- Outstanding visual merit
- Slow regrowth
- Rapid establishment
- High shoot density
- Sowing rate 35g/m²
- Maintains good winter colour

Universal Landscape

For general landscaping, lawns, parklands, housing and industrial estates.

- Low maintenance
- Strong dense turf
- Rapid establishment
- Wear tolerant
- Sowing rate 35g/m²

Horse & Pony Mixtures

Mixture	Description	Sowing rate (kilos per acre)
PP1	Hay/Grazing mixture, with clover	15
PP2	Grazing only mixture, with clover	15
PP3	Hay/Grazing mixture, no clover	15
PP4	Grazing only mixture, no clover	15
PP5	Herb mixture	1

**Sport, landscaping and turf mixtures are all available.
Contact our office for a dedicated catalogue.**

Below: Kelso Racecourse, The Borders.



Above left: Peter Addie inspecting a game cover crop at Ballathie Estate, Stanley, Perthshire. Photograph by kind permission of John Milligan.

Above right: Wild flower trials, Skateraw, Dunbar.

GAME COVER & CONSERVATION MIXTURES

At Watson Seeds we have the distinct benefit of local knowledge of soil types, growing conditions and climate. We have experienced the difficulties and frustrations of trying to establish the wide variety of mixtures which are available. We only include species and varieties suitable for our northern climate which are robust and cold tolerant. We recommend practical game cover mixtures which avoid disappointment and are approved by Game Conservancy Ltd Advisory Services and FWAG Scotland.

For years we have been observing the relationship between the appropriate companion grasses and wild flowers for the RSS.

Please contact the office for our dedicated booklet on Game Cover & Conservation mixtures or alternatively, visit our website at www.watsonseeds.com.



In association with



For further advice contact Peter Addie, our game cover specialist.

Mobile: 07813 845577

ROOT AND FORAGE CROPS

Rising feed costs have brought about renewed interest in forage crops. We have established a trial site in the Borders to evaluate forage species and varieties with the SAC. The first two years of this trial have already produced very interesting results.

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 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	Dry matter	Crude protein	D value
Stubble Turnips	May – June July – August	8 – 9%	17 – 18%	69
Hybrid Kale/Rape	July – August	12 – 16%	15 – 24%	66
Forage Rape	May – August	12 – 14%	19 – 20%	65
Kale	May – June	14 – 16%	18 – 19%	68
Swedes	May	9 – 13%	10 – 11%	82
Turnips	May – June	8 – 10%	11 – 12%	80
Chicory	May – July	10 – 13%	22 – 26%	78

CHICORY – THE PROS AND CONS

Advantages

- Highly palatable forage, which is favoured by stock.
- Excellent feed source for high livestock growth rates.
- Competitive growth against weeds once established.
- Provides high quality feed through summer.
- Able to produce high quality forage on acid soils.
- Recovers quickly after grazing.
- Does not cause bloat.
- Has worm control properties.

For more detailed information on chicory please call our office for a copy of our chicory leaflet. Check out our website for the results of our 2008 chicory trial in conjunction with the SAC.

Disadvantages

- Chicory must be rotationally grazed.
- Does not fix nitrogen and requires high inputs of fertiliser for maximum growth potential.
- Chicory is best used on deeper and more fertile soils. It won't suit all fields.
- Chemical control of some broadleaf weeds can be very difficult, e.g. thistles.
- Chicory is dormant in winter, and grazing of companion species in winter must be done carefully so as to avoid damage to chicory's crown, especially when wet.
- Can cause milk taint if it comprises over 50% of a dairy cow's daily diet.
- Chicory is not well suited to hay or silage systems.

'After reading about the benefits of chicory I decided to sow a field of Mingary mixed with 1kg of chicory per acre in the spring of 2008. Although the field is still very young, I am pleased with the results so far. A stale seedbed is very important to minimise weed competition.'

Marcus Maxwell & son Murphy, Holme Farm, Balmaclellan, Castle Douglas.



LAMB FINISHING AND EWE WINTERING WITH FORAGE CROPS

Dr John Vipond, SAC

Supporting the
land-based industries
for over a century



Above: Watson Seeds SAC Open Day – 26 September 2008. Forage trial site, Macbiehill, Borders.

Later lambing systems often rely on using forage crops to finish a proportion of lambs. These may also be used to feed ewes over flushing/tupping and early winter. Forage crops have an important role in the establishment of reseeds as they remove weeds and build fertility.

Potential crops are shown in the table below. Decide when quality feed is likely to be short. Choose a crop your farm is good at growing and a field that is suitable then plan the lamb finishing and ewe feeding around this resource.

Forage crops for later born lambs

Crop and situation	Sowing date	Typical varieties	Feed during	Lambs finished (per ha)	DM yield (t/ha)
Forage rape usually sown after grass then resown next year to grass	June – July	Hobson	Oct – Jan	35 – 60	3 – 5
Stubble turnips (after winter barley)	July – Aug	Rondo Barkant Samson	Mid Nov – Feb	20 – 35	3 – 5
Stubble turnips after grass	May – June	Tyfon	Aug – Sept	35 – 60	2 – 7
Kale (Full crop)	May – June	Maris Kestrel	Nov – Mar	50 – 90	5 – 7
Kale (As catch crop)	Mid July	Grampian	Nov – Dec	50 – 90	3 – 5
Swedes	May	Airlie Magres	Nov – Mar	50 – 90	6 – 9

FORAGE BRASSICAS FOR LAMB FINISHING: TRIAL RESULTS

The Great Turnip Race

Rising cereal prices show outdoor finishing systems on forages have a new role but with rising fertiliser costs we need high yields from low cost palatable forage crops that achieve high lamb growth rates and maximise output/ha of crop.

Five 0.33 Ha plots of forage brassicas (kale, rape, stubble turnips, hybrid kale/rape and a rape/turnip mixture) were evaluated in a feeding period from Nov 3rd to December 12th using Blackface X store lambs (32 – 36Kg).

Whilst on the crop lambs had free access to minerals with the correct composition to balance for trace element deficiencies and access to water and an area of grass runback. Prior to slaughter, lambs were belly clipped. Carcass weight and MLC grade for fatness and conformation were recorded in the abattoir. Daily gain between two weights measured 30 days apart and carcass daily gains were estimated.

Results

Crops sown	Fresh yield (t/Ha)	Varieties used (crop yield shown by variety)	Preference shown for	Lamb daily gain (G/D)	Carcass gain (G/D)	Killing out (%)
Forage rapes	40	Hobson (34)	Hobson	185	128	46.7
Stubble turnips	114	Samson (116) Delilah (112)	Samson	209	133	45.4
Hybrids	51	Swift (71) Pulsar (31)	Pulsar	246	143	45.1
Kales	58	Maris Kestrel (68) Caledonian (48)	No preference	210	132	45.7
Rape 2	44	Mixture of Hobson, Stego & Massif Turnip	Within mixture no preference (leaf eaten first)	251	135	44.2

SWEDES

Variety	DM type	Description	Flea beetle treatment
Airlie	Low	Bulky and early. Good resistance to mildew. Potential for the shopping market.	✓
Brora	Medium	A combination of high yields and good club root resistance makes this variety a popular choice.	
Kenmore	Medium	High yielding white fleshed swede with intermediate skin colour.	✓
Marian	Medium	A quick maturing white fleshed swede variety that produces bulky crops.	✓
Ruby	Medium	A purple top with a very high fresh and dry matter yield. Good resistance to mildew.	
Ruta Otofte	Medium	Popular all rounder, capable of large yields.	✓
Virtue	Medium	Outstanding variety bred for the shopping market, it has a dark purple skin.	
Gowrie	Med/High	Very high dry matter yields (highest in SCRI trials). Can be utilised in the autumn or winter. Bred in Scotland by SCRI.	✓
Lomond	Med/High	12 % higher yielding than Ruta Otofte. Can be grazed pre or post Christmas. Mildew and clubroot resistant. Bred in Scotland by SCRI.	✓
Magres	Med/High	Excellent resistance to mildew and splitting. Very popular for the shopping market.	✓
Invitation	High	The best club root resistant variety available. Ideal for utilisation after Christmas. Produces large leaves for extra grazing potential.	✓



Seed Treatments

CCBS

Combicoat®CBS is a broad-spectrum insecticide, which protects seed and young shoots from attack by the cabbage stem flea beetle and other pests such as the swede seed weevil.

ULTRA STRIKE™ has been used very successfully in New Zealand to protect kale, rape and swede crops from flea beetle attack. It has other properties to help plant establishment and development.



Above: Johnny Watson in a field of Rondo stubble turnips at Penston Farm, Macmerry, East Lothian. Photograph by kind permission of Duncan Orr, M Orr and Sons.

STUBBLE TURNIPS

Variety	Description
Carlinda	A tetraploid bulbless variety with the ability to regrow.
Delilah	Has out performed all existing varieties in breeder trials. Ideal for fattening lambs and will produce huge tankard shaped bulbs. Resistant to mildew.
Rondo	A globe shaped type that is very quick establishing, green skinned with good winter hardiness, best variety for post Christmas use.
Samson	Samson can produce huge tankard shaped purple roots, which are very palatable to both sheep and cattle. In trials, Samson has shown to be preferentially grazed which can lead to higher intakes and live weight gains.
Tyfon	A very fast growing hybrid, virtually bulbless.
White Star	A white fleshed globe turnip, suitable for both human and animal consumption, good anchorage.

KALE

Variety	Description	Flea beetle treatment	
		CCBS	U/S
Bittern	A tall high yielding variety, particularly well suited as a game cover crop.		✓
Caledonian	Very high yielding marrow stem type with extra winter hardiness and unique club root resistance.	✓	
Grampian	Bred in Scotland by SCRI. Very high yields with some club root resistance.	✓	
Keeper	Ideal for game cover as very leafy and canopy forming. Good winter hardiness and lodging resistance.	✓	
Maris Kestrel	A good all rounder producing bulky digestible crops. The most popular variety for sheep.		✓
Merlin	From the same breeding programme as Maris Kestrel. Good general purpose variety.	✓	



Above: New for 2009 – Red Start Forage Rape.

FORAGE RAPE

Variety	Description
Hobson	A highly digestible variety with good standing power and mildew resistance.
Interval	A fast establishing winter hardy variety with good mildew resistance.
Red Start	New for 2009. Excellent palatability and winter hardiness. Some regrowth potential.
Stego	Good combination of yield and disease resistance.
Wilma	Earlier type of rape, fast growing for early utilisation.

MAIN CROP TURNIPS

Variety	Dry matter (%)	Skin colour	Flesh colour	Description
Imperial Green Globe	8.2	Green	White	Traditional white fleshed variety, with some winter hardiness.
Massif	9	Green	Yellow	A very high yielding variety of good keeping quality, a replacement for Greentop Scotch.



'I have used this mixture for a number of years and heavily rely on it for feeding my south country cheviot flock.'

Bill Elliot (above), W & F Elliot, Hethpool, Wooler, Northumberland, inspecting the establishment of his Kale mixture in the College valley.



'This forage mixture has given us an extra 15 – 20% yield improvement over the straight Kale crops we grew before. The mixture provides valuable feeding for our twin bearing ewes up to the end of April. Although the crop ties up the land for a long time, it is a better alternative to silage for our farming system.'

Ian Duncan Miller (above), Tirinie, Aberfeldy, Perthshire in a fine crop of Kale/Swede mixture 25th March 2008.

RAPE/KALE HYBRID

A brassica crop that is a cross between rape and kale with superior regrowth ability and good all year round performance. The rape genes give it the ability to grow very fast while the kale genes gives it good winter hardiness.

It is ideally sown in late summer/autumn planted as a winter catch crop, ideal for all stock types, with high animal performance achieved. Utilisation ten weeks after sowing.



'This rape kale hybrid crop was sown on the 10th May 2008 and strip grazing commenced with the dairy herd on 2nd July. The crop was intended as a fresher bite for the cows around second cut silage, but this year because of the weather, it proved very useful as the silage cut was two weeks later than planned.'

Mr M Gaitskell, Highfield, Oustead, Burgh by Sands, Carlisle, Seed supplied by New Breed UK.

FORAGE MIXTURES

- Rape 1** A rape and stubble turnip mixture suitable for early drilling.

- Rape 2** An adaptation of Rape 1 with the inclusion of main crop turnips

- Rape 3** A stubble turnip and rape mix with fast establishment for later use

- Kale 1** A winter hardy mixture containing kale, rape and main crop turnip, ideal for fattening lambs.



'This field of kale mixture was intended for strip grazing beef animals through the winter of 2007/8, but with the high price of sheep concentrate and the uncertain price for fat lamb, I decided to put lambs onto the mixture around Christmas. The results were impressive, with the lambs finishing very quickly.'

Robert Hamilton, Newton Farm, Gatehouse of Fleet, Kirkcudbrightshire, in Kale 1 mix.



'We have been buying our grass seed from Watson Seeds for a number of years and have been especially pleased with the density of the sward and the quality of the silage.'

Keith Davidson.

Above: Mr Keith Davidson (left) and son Colin, with Halmyre Urr Louise, Overall Champion, Ayr Show 2008. Halmyre Farm, Haugh of Urr, Castle Douglas.



CASTLE
MIXTURES

Customer Service

Whether supplied directly by ourselves or through our appointed agents, we are committed to providing you with the highest quality of service and product.

If you wish to discuss any seed requirements that you may have, please contact us.

- Premium performance seed
- The best varieties in the best mixtures
- Award winning performance
- Up to date advice and support
- Efficient speedy delivery service



WATSON SEEDS

Skateraw, Dunbar, East Lothian EH42 1QR

Tel: 01368 840655 Fax: 01368 840677

Email: enquiries@watsonseeds.com

www.watsonseeds.com