



SALTIRE
M I X T U R E S



WATSON SEEDS

2024



FOREWORD

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

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

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

anticipation of this increasingly important part of the farming seed requirements.

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

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

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

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

is greatly appreciated.

Johnny Watson F. R.Ag. S



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



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SPOILT FOR FIRST CHOICE



VARIETY ASSESSMENT

All the grasses varieties used in the Saltire Mixture range have been approved by independent trials conducted by the SRUC. From this data, the key factors we consider in variety selection include the following attributes:

Yield: Annual, seasonal, cutting & grazing

Persistence: Ability to compete & survive

Quality Energy value, mid season D Value & WSC content

Winter Hardiness:

		SRUC 1 st Choice	NIAB	Ground Cover
ITALIAN RYEGRASS				
Alamo	High yielding variety in year of sowing and has excellent ground cover.	✓	✓	A
Messina (T)	Exceptional early season growth and good quality across all its cuts.	✓	✓	C
HYBRID RYEGRASS				
Barclamp	A later heading hybrid combining good ground cover with consistent quality and yield across the season.	✓	✓	A
Astoncrusader (T)	Produces good yields at the first conservation cut and overall.	✓	✓	A
INTERMEDIATE PRG				
Moira	Particularly strong grazing variety especially on the shoulders of the season.	✓	✓	B
Caledon (T)	Good yields under both managements.	✓		C
Fintona (T)	Good spring and autumn growth. Exceptional variety for both cutting & grazing.	✓	✓	C
LATE PRG				
Astonchieftain	Produces good yields under both managements with it being particularly good for its category at first cut.	✓		A

Dundrod	Good conservation yield and particularly strong grazing at the back end of the season.	✓	✓	B
Toddington	A solid all round variety with good quality. Good late season performance.	✓	✓	A
Alfonso (T)	Excellent first cut yield and early season grazing combined with very good ground cover. A good all-round variety.	✓		B
Ballintoy (T)	Heading date is right in the middle between an intermediate and a late and can be utilised as either within our mixtures. It is exceptional especially in the early season under cutting and grazing and has excellent quality.	✓	✓	C
TIMOTHY				
Comer	Best spring growth of the timothys. Softer than others for better palatability.	✓	✓	A
WHITE CLOVER				
AberAce (small)	An extremely small leaved variety that will aid with persistency under grazing.			
Rivendel (small)	Consistent growth across the whole season.			
Hebe (medium)	Good medium leaved variety with strong growth across the season and performs well under both grazing and silage regimes.			
Merwi (medium)	Productive variety better suited to light defoliation.			
Alice (large)	High yielding and good ground cover.			



SALTIRE MIXTURE SELECTION

MIXTURE	DURATION (YEARS)	MAINLY CUTTING	DUAL PURPOSE	INTENSIVE GRAZING	SOWING RATE (KG/ACRE)
SALTIRE 1	1-2	✓			14
SALTIRE 2	2	✓			14
SALTIRE 3	3-5		✓		14
SALTIRE 4	3-5		✓		14
SALTIRE 5	4-6	✓	✓		14
SALTIRE 6	3-6	✓	✓	✓	14
SALTIRE 7	4-10		✓	✓	14
SALTIRE 11	5-7		✓	✓	15
SALTIRE 12	3-6		✓		10
SALTIRE 14	4-10		✓	✓	14

The proportion of varieties and species used in every Saltire 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.

See the chart 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 Saltire Mixtures, owing to demand, we will ensure that we only use the best alternative varieties available.

SALTIRE 1

HIGHLY PRODUCTIVE ITALIAN BASED

- Long growing season
- Produces enormous crops if intensively managed
- The addition of the hybrid assists leafiness and persistency
- Can be sown in spring or autumn to produce large crops of silage

VARIETY	TYPE	%
Alamo Messina (T)	Italian Ryegrass	85.8
Astoncrusader (T)	Hybrid Ryegrass	14.2

TERM TIME (years)	GRAZING SUITABILITY (1-5)	CUTTING SUITABILITY (1-5)	TETRAPLOID (%)
1-2	2	5	57

Andrew Reid, Gyratesmyre, Laurencekirk, with his dogs Nell & Maddie. Saltire 2.



SALTIRE 2

LEAFY MAINLY CUTTING

- Produces high yields of silage
- More persistent than S1 due to the inclusion of late perennials and clover

VARIETY	TYPE	%
Alamo Messina (T)	Italian Ryegrass	34.3
Astoncrusader (T)	Hybrid Ryegrass	35.0
Ballintoy (T)	Late PRG	26.4
Rotational	White Clover Blend	4.3

TERM TIME (years)	GRAZING SUITABILITY (1-5)	CUTTING SUITABILITY (1-5)	TETRAPLOID (%)
2	2	5	81

Alistair & Joanna Forster, Chapel Farm, Melrose with their dogs Amber & Tib. Saltire 2.





SALTIRE 3

DUAL PURPOSE

- Highly productive dual purpose mixture
- Produces bulky cuts of silage
- Produces quality grazing

VARIETY	TYPE	%
Moir Fintona (T)	Intermediate PRG	42.1
Callan Alfonso (T) Ballintoy (T)	Late PRG	41.8
Comer	Timothy	10.7
Rotational	White Clover Blend	5.4

TERM TIME (years)	GRAZING SUITABILITY (1-5)	CUTTING SUITABILITY (1-5)	TETRAPLOID (%)
3-5	3	5	50

SALTIRE 4

DUAL PURPOSE

- Well suited for cuts of hay or silage
- Slightly higher timothy content
- Adaptable to either a cutting or grazing regime

VARIETY	TYPE	%
Moir Fintona (T)	Intermediate PRG	56.1
Callan Alfonso (T)	Late PRG	26.4
Comer	Timothy	12.1
Rotational	White Clover Blend	5.4

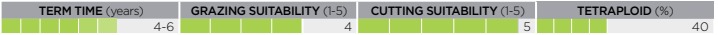
TERM TIME (years)	GRAZING SUITABILITY (1-5)	CUTTING SUITABILITY (1-5)	TETRAPLOID (%)
3-5	4	5	39

SALTIRE 5

DUAL PURPOSE

- Highly versatile dual purpose mixture
- Will produce two large cuts of silage and quality grazing per year

VARIETY	TYPE	%
Moir Fintona (T)	Intermediate PRG	31.7
Callan Alfonso (T) Ballintoy (T)	Late PRG	51.5
Comer	Timothy	11.8
Rotational	White Clover Blend	5.0

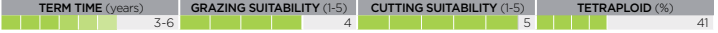


SALTIRE 6

DUAL PURPOSE

- Our most popular Saltire Mixture
- Contains persistent varieties ensuring good yields for cutting and grazing over many years
- Rotational clover blend copes well with frequent cutting producing elevated protein levels

VARIETY	TYPE	%
Moir	Intermediate PRG	20.0
Callan Alfonso (T) Ballintoy (T)	Late PRG	62.1
Comer	Timothy	12.1
Rotational	White Clover Blend	5.8



Eric & Blair Wyness, Midtown of Barras, Stonehaven, with Alex, Saltire 6.



Ewen Simpson, 2 Dounie, Tain, with Euan.
Saltire 7.



SALTIRE 7

INTENSIVE GRAZING

- Excellent grazing mixture for long term performance
- Produces a good, dense sward
- High clover content

VARIETY	TYPE	%
Moirá Caledon (T)	Intermediate PRG	25.1
Callan Dundrod Ballintoy (T)	Late PRG	55.7
Comer	Timothy	12.1
Permanent	White Clover Blend	7.1

TERM TIME (years)	GRAZING SUITABILITY (1-5)	CUTTING SUITABILITY (1-5)	TETRAPLOID (%)
1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	5	4	39



SALTIRE 11

DAIRY SPECIALIST, DUAL PURPOSE

- Designed to produce high D value silage
- Has a dense leafy sward
- Contains no timothy
- Also available with clover

VARIETY	TYPE	%
Moirá	Intermediate PRG	13.3
Callan Dundrod Ballintoy (T)	Late PRG	86.7

TERM TIME (years)	GRAZING SUITABILITY (1-5)	CUTTING SUITABILITY (1-5)	TETRAPLOID (%)
1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
5-7	5	5	27

SALTIRE 12

REJUVENTAION, DUAL PURPOSE

- Suitable for overseeding or direct drilling into old swards
- Improves quality and production
- All tetraploid mixture, designed for fast seedling development
- Also available with clover

VARIETY	TYPE	%
Fintona (T)	Intermediate PRG	10.0
Alfonso (T) Ballintoy (T)	Late PRG	90.0

TERM TIME (years)	GRAZING SUITABILITY (1-5)	CUTTING SUITABILITY (1-5)	TETRAPLOID (%)
3-6	3	4	

Ms E C Robertson, Home Farm, Dalkeith, Midlothian.
Saltire 12



SALTIRE 14

HEAVY/WET SOILS, DUAL PURPOSE

- The all diploid composition of this mixture helps in the creation of a dense persistent sward
- High percentage of late heading diploid ryegrasses assist in reducing sward structure damage through poaching
- Good mixture for wet heavy ground

VARIETY	TYPE	%
Moira	Intermediate PRG	13.3
Callan Dundrod	Late PRG	86.7
Permanent	White Clover Blend	6.4

TERM TIME (years)	GRAZING SUITABILITY (1-5)	CUTTING SUITABILITY (1-5)	TETRAPLOID (%)
4-10	5	5	0



WATSON SEEDS OUT & ABOUT



Royal Highland Show
Ingliston, Edinburgh



Tullamore Show
Co. Offaly, Ireland



Monitor Farm Meeting
Craigens Farm, Islay



Kelso Twp Sales
Kelso, Scottish Borders



East of Scotland Grassland
Society



Ardnamurchan Show
Ardnamurchan



Pasture for Life
Oakwood Mill, Selkirk



Scotland's Beef Event
Dalswinton Estate, Dumfries

AGRI-ENVIRONMENTAL

We offer a wide range of mixtures to suit the AECS & EFA schemes in Scotland and the Countryside Stewardship schemes in England. We have a dedicated guide to our agri-environmental, greening & game cover mixtures.

Please contact us to request a copy or visit our website to download PDF:
www.watsonseeds.com/learn/technical-library/document-downloads

GS4 Multispecies Herbal Ley

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

MIXTURE INFORMATION

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

GS4 mixture provides a vigorous sward, with abundant legumes and herbs, to provide habitat and food for a variety of insects and wildlife and to improve soil structure and water infiltration. It is suitable for productive cattle and sheep.

Proven to provide a hardy, long grazing season for livestock with multiple legume species to fix nitrogen

Includes flowering species, to provide beneficial pollinators feed and shelter

Deep penetrating roots will improve soil structure and have the ability to make the best use of the available soil nutrients, moisture and minerals

Herb and clover leys are designed to bring a range of benefits to livestock health, soil health and soil fertility.





2023 season at Upper Nisbet has again been dominated by the variation in the growing conditions. The 8.4 ha field with 8 individual paddocks of straight perennial ryegrass varieties and mixtures has been grazed over the season with bulling heifers at a stocking rate of 2300kg LW per ha.

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

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

As we entered the 5th year of the trials in September, it was a good

chance to look at persistency in the single stand plots of ryegrass and to reflect on how the mixtures are performing.

Key finding after 4 years of full production:

1 - Persistency has started to show up the cliff edge that certain intermediate varieties show in their productivity. We have scored very noticeable differences in ground scores with more bare earth, weed & moss ingress. With our lower levels of nitrogen application and, particularly in the absence of white clover, this shows up starkly. Intermediate tetraploids are much more open than their diploid neighbours despite us using higher seed rates at establishment to try and achieve similar plant populations. The late varieties are better and some of the diploid material has kept impressive densities.

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

3 - The mixtures never look hungry or stressed with drought and you struggle to identify urine patches from a distance. The single stand species though, without clover, often look hungry and the dung and urine patches are noticeable unless you apply nitrogen to even things up. Weed ingress with docks is more prevalent in the monocultures of perennial ryegrass than in the mixtures with their density and competition.

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

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



OAKWOOD MILL HERB TRIAL

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

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

For the past 3 seasons, Giles & Stuart Henry have managed the field utilising Yearling Luing and AA Steers under a rotational paddock grazing system. Initially the paddocks were 1 ha and then to aid utilisation and lengthen the rotation they were further divided into 0.5 ha paddocks. There are 4 plots of 0.3 ha with Puna II, Punter & Choice chicory mixed at 2.6% inclusion of 37kg/ha. We also included 2.5% of the plantain varieties Tuatara, Hercules, Ecotain & Agritonic.

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

We have monitored the population of chicory and plantain over the

last 3 years and as of October 2023, there are more plants of both species across all the plots than what we originally established in 2021.

The initial findings are that management of the grazing rotation allied with sufficient periods of rest & recovery (28 to 40 days) has allowed both the chicory & plantain to build up root reserves and set seed at points in the season to allow new plants to germinate.

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

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



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