



SALTIRE  
MIXTURES



WATSON SEEDS

2022



## FOREWORD

As we enter another year of farming, I am pleased to introduce our 2022 seeds catalogue which I trust you will find interesting and useful in considering your sowing options for the season ahead.

I have chosen not to labour on the challenges of living with a global pandemic as at the time of writing I am unsure of it's future and how it may impact on us in the coming year. Our industry has managed to rise to the challenges these last two years and I am confident we will cope again this year with whatever unfolds.

We continued to support the Royal Highland Show last year by sponsoring their Showcase held in June as a live-stream event. We look forward to being part of the show this summer in what will be the 200th year of the event's launch. A cause for celebration indeed. We look forward to seeing you there in the Pentland Pavilion, fingers crossed.

Unfortunately, due to the pandemic, AgriScot was sadly postponed but will hopefully go ahead in February 2022. Andrew Best has been a key figure over the years in making the silage competition such a well run event and our team will have their hands full coping this year with Andrew's well earned retirement (see page 36). We look forward to AgriScot

planned for both February and November this year.

Our grass variety and mixture trial site at Upper Nisbet in the Borders has provided a great opportunity for us to compare performance in a beef grazing platform in what was a challenging year climatically. A highlight was the very positive role white clover plays in mixtures, along with some herbs in certain circumstances. The spike in nitrogen fertiliser prices has focused everyone's minds on nitrogen fixation and the role of clover (see pages 8 & 9). Throughout last year we measured the benefits of grass plots with clover against grass only and the results were very clear. A summary of our general observations is covered on pages 30 & 31 but seeing is believing and I would encourage you to put some time aside, when possible, and arrange a visit to Upper Nisbet with your Watson Seeds team member to get a more detailed insight into what is relevant to your own particular needs.

We plan to produce some of the results of our observations and measurements on our new technically based website which will be launched early this year. We hope it will be a useful tool for you going forward in decision making as a new direction for farming unfolds ahead.

We wish you every success in the year ahead in these challenging times and many thanks for your support, it is greatly appreciated.

Johnny Watson F. R.Ag. S



Johnny & Beth pictured with the Ryeland Champion Fetternear Ailsa at the Royal Highland Showcase 2021 - Raymond & Beth Aitken, Fetternear, Inverurie, Aberdeenshire. Facebook: @Fetternearryelands



WATSON SEEDS

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# VARIETY ASSESSMENT

All the grasses and clover 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 <sup>st</sup> Choice	NIAB	Ground Cover
ITALIAN RYEGRASS				
Meribel	Very high yielding with great D values and ground cover for an Italian.	✓	✓	A
Gemini (T)	Capable of producing high D values for first and second cuts.	✓	✓	B
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 & overall.	✓	✓	A
INTERMEDIATE PRG				
Boyne	Very good early season growth of high quality especially under grazing.	✓	✓	A
Gusto	Good grazing yields particularly later in the season & provides good quality under conservation.	✓		B
Bijou (T)	Very good mid season D value. High yields under conservation.	✓	✓	C
Fintona (T)	Good spring & autumn growth. Exceptional variety for both cutting & grazing.	✓	✓	C



LATE PRG					
AstonChieftain	Produces good yields under both managements.	✓			A
Toddington	Good ground cover and good yields under both management.	✓			A
Ballintoy (T)	Outstanding new addition to our grass mixtures that has really stood out in the trials. It offers high yields in both cutting & grazing.	✓	✓		B
Nashota (T)	Good ground cover with good D values at 1st & 2nd cut.	✓	✓		B
TIMOTHY					
Comer	Best spring growth of the timothys. Softer than others for better palatability.	✓	✓		A

## SALTIRE ROTATIONAL CLOVER BLEND (SRCB)

VARIETIES	LEAF TYPE
Crusader Merwi	Medium
Alice	Large

## SALTIRE PERMANENT CLOVER BLEND (SPCB)

VARIETIES	LEAF TYPE
AberPearl	Small
Crusader Violin Merwi	Medium

# SPOILT FOR FIRST CHOICE





# REINTRODUCING CLOVER INTO A GRASS SWARD

## F How do we get a good strike of white clover?

Soil pH is key. The sweet point is probably between 6.2 and 6.5. The traditional recommended grassland pH of 6.0 will not drive your potential N fixation. The small seed has low endosperm reserve so good seed to soil contact is essential, alongside moisture to promote germination. It should be sown no deeper than 10mm into a firm, well consolidated seed bed. In a stitching in scenario, CAST coating is particularly beneficial as offers better moisture absorption and faster germination within an existing sward.

## F How do we get sufficient clover into a thick sward?

By reducing your nitrogen on the grass sward, it will help the clover compete and not be smothered under a carpet of grass in the high artificial N scenario. Initially the clover needs space, time and a little patience to get it well established.

## F Weed control, how do we deal with problem weeds like chickweed, docks & thistles?

The current lack of clover safe chemistry means we need to devise a strategy, if we think there is likely to be an issue. Leave clover out of the initial reseed and use broad spectrum herbicides, then when tidied up, look at stitching in the clover. Using a cover crop/under sowing allows more competition for weeds and in the direct seeding situation, topping the annual broad-leaved weeds at the optimum stage before they set seed.

## F How much nitrogen does white clover provide?

In a good mixed sward, a 20-30% stand will potentially supply the crop the equivalent of 180kg/N per ha. At Nov 21 prices of £2 - £2.30 kg/N this is worth £360 - £414 per ha annually.

## F What is the actual feed value of clover against grass?

The D value of white clover ranges from 75-83 against perennial ryegrass at 73-78 under grazing. It produces forage with a high protein level and is a richer source of minerals (including calcium, magnesium, cobalt & selenium) than grasses. Livestock find it very palatable and digestible due to the continuous renewal of leaves and stems. Consequently, overall DM intakes are increased helping animal LWG & improved milk production/composition.

## F Will white clover improve my soil health?

The white clover's deep and vigorous taproot system will help tackle soil compaction by causing more gaps between soil particles, which enhances movement of nutrients and water infiltration. Soil biology is improved with the different depths of rooting and transfer of nutrients. This increased rooting and worm activity has been very noticeable in our own mixture plots against single stand ryegrass plots.



## 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 1 - 2 year mix

- 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	%
Meribel Gemini (T)	Italian Ryegrass	85.8
Barclamp	Hybrid Ryegrass	14.2

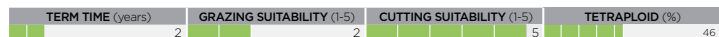


## SALTIRE 2

Leafy mainly cutting, 2 year mix

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

VARIETY	TYPE	%
Meribel Gemini (T)	Italian Ryegrass	34.3
Barclamp	Hybrid Ryegrass	35.0
Bijou (T)	Intermediate PRG	26.4
S RCB	White Clover Blend	4.3

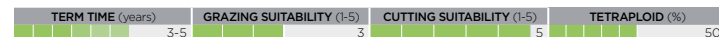


## SALTIRE 3

Dual purpose, 3-5 year mix

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

VARIETY	TYPE	%
Boyne Bijou (T) Fintona (T)	Intermediate PRG	58.2
Toddington Nashota (T)	Late PRG	25.7
Comer	Timothy	10.7
S RCB	White Clover Blend	5.4

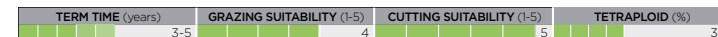


## SALTIRE 4

Dual purpose, 3-5 year mix

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

VARIETY	TYPE	%
Boyne Fintona (T)	Intermediate PRG	56.1
Toddington Nashota (T)	Late PRG	26.4
Comer	Timothy	12.1
S RCB	White Clover Blend	5.4



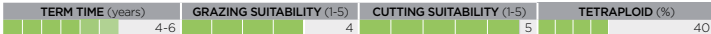


## SALTIRE 5

Dual purpose, 4-6 year mix

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

VARIETY	TYPE	%
Boyne Bijou (T) Fintona (T)	Intermediate PRG	40.7
Toddington Nashota (T)	Late PRG	42.5
Comer	Timothy	11.8
S RCB	White Clover Blend	5.0

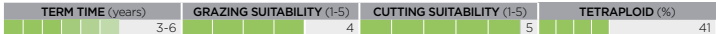


## SALTIRE 6

Dual purpose, 3-6 year mix

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

VARIETY	TYPE	%
Boyne Bijou (T)	Intermediate PRG	40.0
Toddington Nashota (T)	Late PRG	42.1
Comer	Timothy	12.1
S RCB	White Clover Blend	5.8

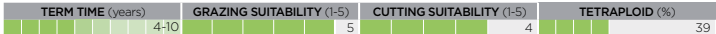


## SALTIRE 7

Intensive grazing, 4-10 year mix

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

VARIETY	TYPE	%
Boyne Fintona (T) Bijou (T)	Intermediate PRG	49.4
AstonChieftain Toddington	Late PRG	31.4
Comer	Timothy	12.1
S RCB	White Clover Blend	7.1

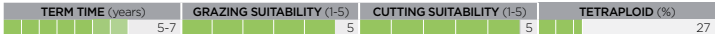


## SALTIRE 11

Dual purpose, 5-7 year mix

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

VARIETY	TYPE	%
Boyne	Intermediate PRG	13.3
AstonChieftain Toddington Nashota (T)	Late PRG	86.7









**SALTIRE 12**  
Dual purpose, 3-6 year mix

- 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



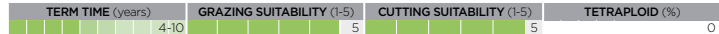
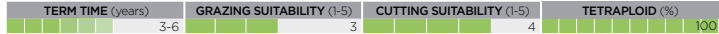


**SALTIRE 14**  
Dual purpose, 4-10 year mix

- 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	%
Fintona (T) Bijou (T)	Intermediate PRG	60.0
Nashota (T)	Late PRG	40.0

VARIETY	TYPE	%
Boyne	Intermediate PRG	14.4
Drumbo Toddington	Late PRG	79.2
S PCB	White Clover Blend	6.4



# WATSON SEEDS OUT & ABOUT



Borders Farming Group visit to our trials at Upper Nisbet



East of Scotland Grassland Society, Golland Farm, Carnbo, Milnathort



Mull & Morvern Agricultural Show



Dingwall Mart Show & Sale



Fearn Farm Ram Sale



Royal Highland Showcase



Ayrshire Farmers Conference at Morwick Farm, Northumberland



Kelso Tup Sales





2021 was the 2nd full grazing season on our trial blocks at Upper Nisbet, Jedburgh. Following on from our initial measurements and observations in 2020, we have looked at how the 30 individual varieties of perennial ryegrass and 15 bespoke mixtures have performed under rotational grazing with a group of bulling heifers. The 8.4 ha field with 8 paddocks has been stocked at 2600kg LW/ha in the early and mid-season and then dropping to 2400kg in September, October & November.

The grazing season at Upper Nisbet has been challenging due to low rainfall in the 6 key months of April-September. Total rainfall was 192mm or 32mm/month on average, whereas March and October were 193mm in total. After getting on with 45kg nitrogen & sulphur in late March, we then had 20 nights of white frost in April that showed us which were the resilient varieties and mixtures. Some of the tetraploid varieties with their higher water content turned blue and went backwards but then compensated during

the dry summer months with their deeper roots hanging in and outperforming the shallower rooting diploids. The mixtures with a range of varieties and species including excellent clover content grew 3.2 tonnes of dry matter per ha more than the average single stand varieties over the season. They also consistently analysed well and in contrast to the monoculture varieties, never looked stressed or lacking in nutrients.

### **KEY MESSAGES FROM THE SEASON**

**1.** Clover mixtures once again are preferentially grazed over straight ryegrass, leading to better DM intakes and cattle being more content and lying for longer periods. The sight of 52 cattle heading straight for the 12 meter end rig and preferentially grazing the clover mixtures over the PRG varieties and cleaning them up seems ample proof.



Pat Lambert & Giles Henry measuring the grass on 25th March

**2.** The diverse combination of PRG varieties alongside timothy, cocksfoot, fescues and smooth stalked meadow grass has increased growth. It is particularly evident early season in colder conditions or under periods of stress, such as drought. These mixtures also analysed very well provided they were grazed at the optimum stage. As soon as moisture and warmth, return the PRG will kick in and move again.

**3.** The 30 single stand varieties have been tested for quality parameters in early, mid & late season. The most palatable varieties, with lowest residual grazing heights, consistently test above average in their paddocks whereas some diploid varieties, with poor clean outs, needed mowed to reset them. Under rotational paddock grazing, this becomes more evident as the season progresses and our quality index on testing is certainly reflecting this. Palatability is a vital factor and it needs animal intervention to identify those varieties and mixtures with this key trait.

**4.** The resilience and soil health under the mixtures is apparent, as we walk the paddocks weekly with a plate meter during the season. The combination of rooting depth and microbes from the clovers and herbs keep the plots green and vigorous. It also makes minerals and trace elements more available in our quality samples. Each individual forage sample is tested for calcium, magnesium, phosphorous, sodium, potassium, sulphur,

chloride, iron, zinc, manganese, copper and aluminium as well as the nutritional data.

**5.** Keeping the grass length at the optimum stage for grazing (no more than 12cm) and allowing rest periods of 21-28 days, allows recovery and the plants to build reserves. As soon as you lose the tight rotation by failing to keep on top of the growth, your quality will also fall away and it becomes difficult to regain unless you increase stocking rates or remove paddocks for silage.

**6.** The peak week of growth in early June saw average rates at over 90kg DM/ha/day, whereas August saw the lowest at 35kg. This calls for some degree of flexibility and adaptability to be built into systems. To maintain high ME you need to be introducing stock when the grass is at or just below the 3 leaf stage, as once the 4th leaf starts to appear, the 1st leaf will die off. Aim to leave residuals at around 1500kg DM/ha (4-5cm).



Collecting a sample to send away for analysis



Pat carrying out worm counts in mixture plots



Preferential grazing



Species rich mixture





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