



A PRACTICAL GUIDE TO ENVIRONMENTAL,  
COVER CROP, GAME COVER AND FORAGE SEEDS

**HUTCHINSONS**

**20  
24**



# Welcome YOUR COUNTRYSIDE 2024

A warm welcome to all who regularly receive our brochure and to those who are reading it for the first time, we hope you find it informative.

UK Agriculture plays a vital role in providing our sustenance and preserving our biodiversity, maintaining healthy soils, and ensuring water quality. This is achieved by implementing innovative practices such as cover crops, wild bird seed mixtures, diverse forage leys, and nectar-providing crops. These initiatives, supported by agri-environment schemes, aim to create a harmonious and thriving countryside. Our goal is to make 'Your Countryside' a valuable guide that facilitates the successful implementation of these practices, contributing to the overall well-being of our environment. Whatever your requirement for Stewardship, Cover Crops, Game Cover or Forage, we trust that 'Your Countryside 2024' will guide you to easy solutions to your cropping needs.

## RESEARCH AND DEVELOPMENT

We aim to deliver top-quality seed products for successful outcomes in game cover, environmental stewardship mixtures, root crops or cover crops. All our products at DLF Seeds Ltd undergo thorough testing in Gloucestershire and Worcestershire to ensure they perform well in UK conditions. We are a forward-thinking company, heavily investing in research and development, specialising in forage crops and other species. Our Product, Species, and Mixture of the Year are carefully chosen based on customer feedback.

Our main goal is to ensure that our customers receive the best possible product portfolio we can supply for the stewardship schemes and the Your Countryside catalogue continues to offer valuable technical information and advice on a diverse range of game cover, environmental stewardship mixtures, root crops and cover crops products.

Please contact your local technical expert for personalised assistance if you can't find what you need in this catalogue. They are ready to help you find the best solution for your requirements.

We gratefully acknowledge all photographic contributions.

## WE WORK CLOSELY WITH:

Natural England, Campaign for the Farmed Environment, Bumblebee Conservation Trust, RSPB and Game and Wildlife Conservation Trust.



Supporting farmers to help their local wildlife

Farm Wildlife provides farmers and advisers with best practice guidance on helping wildlife on their farms and inspiring them to take action. Farm Wildlife guidance has been produced by a partnership of some of the UK's leading conservation organisations and the farmers they work with.

The 6 point plan to manage arable farms for wildlife provides advice on how to enhance:

1. Existing habitats
2. Field boundaries
3. Flower-rich habitats
4. Wet features
5. Seed-rich habitats
6. Farmed areas



For more information go to [www.farmwildlife.info](http://www.farmwildlife.info)



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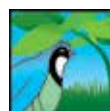
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## ICON GUIDE



COVER



FEED



NECTAR



LIFTING



CATTLE GRAZING



SHEEP GRAZING



COVER CROP



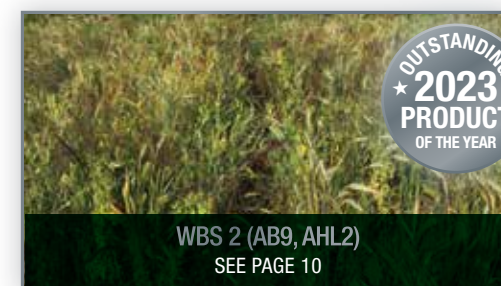
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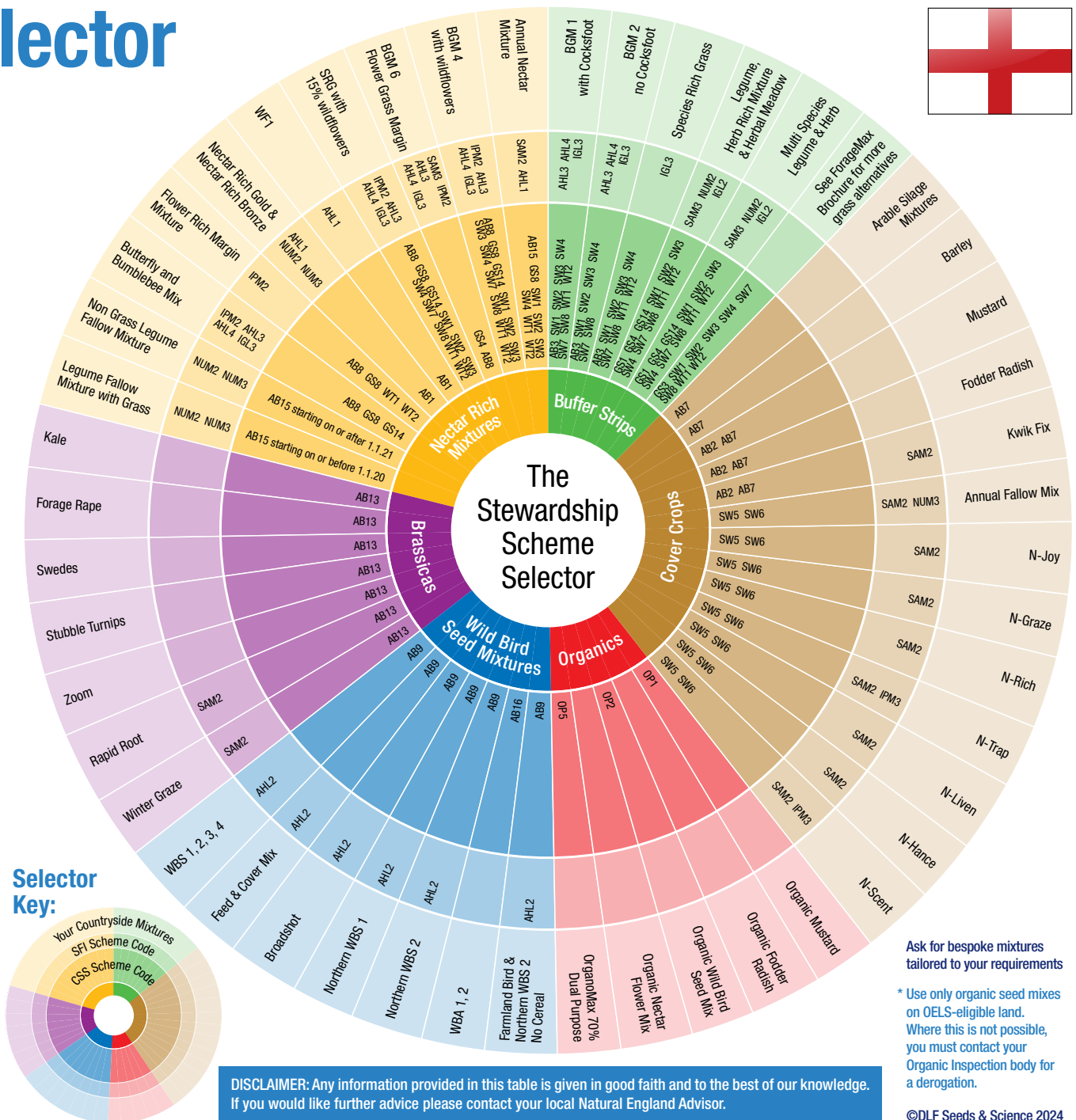
**DISCLAIMER** Any information provided in this catalogue is given in good faith and to the best of our existing knowledge. Any advice should therefore be taken as a general guide only and not relied upon for all conditions and circumstances. We cannot accept any legal liability for information given in this guide. In any instance where there are shortages of specified species we reserve the right to substitute equivalent species.

# Stewardship Selector



Countryside Stewardship Scheme Description			
CSS Higher Tier	CSS Mid Tier	CSS Code	CSS Option Title
<b>Arable</b>			
✓	✓	AB1	Nectar flower mixture
✓	✓	AB2	Basic overwinter stubble
✓	✓	AB3	Beetle banks
✓	✓	AB7	Wholecrop cereals
✓	✓	AB8	Flower-rich margins & plots
✓	✓	AB9	Winter bird food
✓	✓	AB13	Brassica fodder crop
✓	✓	AB15	Two year sown legume fallow
✓	✓	AB16	Autumn sown bumblebird mix
<b>Grassland</b>			
✓	✓	GS1	Take field corners out of field management
✓	✓	GS3	Ryegrass seed-set as winter food for birds
✓	✓	GS4	Legume and herb-rich swards
✓	✓	GS8	Creation of species-rich grassland
✓	✓	GS14	Creation of grassland for target features
<b>Organic</b>			
✓	✓	OP1	Overwintered stubble
✓	✓	OP2	Wild bird seed mixture
✓	✓	OP4	Multi-species ley
✓	✓	OP5	Undersown cereal
<b>Soil and Water</b>			
✓	✓	SW1	4-6m buffer strip on cultivated land
✓	✓	SW2	4-6m buffer strip on intensive grassland
✓	✓	SW3	In-field grass strips
✓	✓	SW4	12-24m watercourse buffer strip on cultivated land
✓	✓	SW5	Enhanced management of maize crops
✓	✓	SW6	Winter cover crops
✓	✓	SW7	Arable reversion to grassland with low fertiliser input
✓	✓	SW8	Management of intensive grassland adjacent to a watercourse
<b>Wetlands</b>			
✓	✓	WT1	Buffering in-field ponds and ditches in improved grassland
✓	✓	WT2	Buffering in-field ponds and ditches in arable land

SFI Scheme Description	
SFI Code	SFI Option Title
<b>SFI Actions for Soils</b>	
SAM2	Multi-Species Winter Cover Crops
SAM3	Herbal Leys
<b>SFI Actions for Integrated Pest Management</b>	
IPM2	Flower-Rich Grass Margins, Blocks or Strips
IPM3	Companion Crop on Arable and Horticultural Land
<b>SFI Actions for Nutrient Management</b>	
NUM2	Legumes on Improved Grassland
NUM3	Legume Fallow
<b>SFI Actions for Farmland Wildlife on Arable and Horticultural Land</b>	
AHL1	Pollen and Nectar Flower Mix
AHL2	Winter Bird Food on Arable and Horticultural Land
AHL3	Grassy Field Corners and Blocks
AHL4	4m to 12m Grass Buffer Strips on Arable and Horticultural Land
<b>SFI Actions for Farmland Wildlife on Improved Grassland</b>	
IGL2	Winter Bird Food on Improved Grassland
IGL3	4m to 12m Grass Buffer Strips on Improved Grassland





# Nectar Rich Mixtures

05

ENVIRONMENTAL

## NECTAR RICH MIXTURES

### WF1 (AB1, AHL1)

- 40% Sainfoin
- 10% Vetch
- 5% Birdsfoot Trefoil
- 5% Alsike Clover
- 5% Yarrow
- 5% Red Clover
- 5% Lucerne (inoculated)
- 5% Black Medick
- 4% Crimson Clover
- 2.25% Corn Cockle (N)
- 2% Oxeye Daisy
- 2% Black Knapweed (N)
- 2% Selfheal (N)
- 1.5% Cornflower (N)
- 1.5% Sheeps Burnet
- 1% Red Campion (N)
- 1% Corn Marigold (N)
- 1% Field Poppy (N)
- 1% Wild Carrot (N)
- 0.5% White Campion (N)
- 0.25% Musk Mallow (N)

100%

Sowing rate 5 - 10kg/ha

Pack size 1kg & 5kg

### Nectar Rich Gold

(AB1, AHL1, NUM2, NUM3)

- 33% Sainfoin
- 25% Vetch
- 10% Red Clover
- 8% Alsike Clover
- 8% Lucerne (inoculated)
- 6.5% Crimson Clover
- 4% Birdsfoot Trefoil
- 4% Black Medick
- 1% Black Knapweed (N)
- 0.5% Yarrow

100%

Sowing rate 15kg/ha

Pack size 15kg

### Nectar Rich Bronze

(AB1, AHL1, NUM2, NUM3)

- 40% Vetch
- 30% Sainfoin
- 12% Crimson Clover
- 7.6% Lucerne (inoculated)
- 6% Altaswede
- 4% Alsike Clover
- 0.2% Yarrow
- 0.2% Black Knapweed (N)

100%

Sowing rate 15kg/ha

Pack size 15kg

### Annual Nectar Mixture

(AHL1, SAM2)

- 25% Buckwheat
- 25% Linseed
- 20% Vetch
- 15% Crimson Clover
- 10% Berseem Clover
- 4.6% Phacelia
- 0.2% Black Knapweed
- 0.2% Ag Yarrow

100%

Sowing rate 20kg/ha

Pack size 20kg

Organic versions available.



## SOLAR MIXTURES

**Our range of Solar Mixtures will cater for most situations.**

We are always pleased to advise. Please call for more information. Specialised mixtures to suit individual requirements can be arranged.

(N) = UK Native Seed

DLF Seeds Ltd. is a leading supplier of native provenance wild flowers. We liaise with selected producers and growers to ensure our seed is sourced to the highest possible standard.

## COLOUR BOOST

WILDFLOWER MIXTURES



View the Colour Boost online digital brochure

[www.bit.ly/ColourBOOST](http://www.bit.ly/ColourBOOST)

## PRO FLORA

NATIVE WILDFLOWER MIXTURES



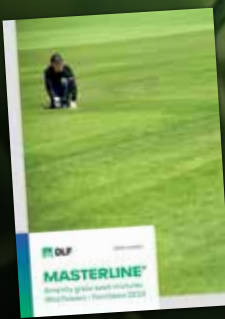
View the Pro Flora online digital brochure


[www.bit.ly/PROflora](http://www.bit.ly/PROflora)

Pro Flora


- 1 Cornfield Annuals (N)
- 2 Acid Soils (N)
- 3 Damp Loamy Soils (N)
- 4 Calcareous Soils (N)
- 5 Wet Loamy Soils (N)
- 6 Dry Loamy Soils (N)
- 7 Hedgerow & Light Shade (N)
- 8 Legacy Country Meadow (N)
- 9 Heritage General Purpose (N)
- 10 General Purpose (N)
- 11 Woodland & Heavy Shade (N)
- 12 Water Margin & Pond Edges (N)
- 13 Species Rich Lawn & Landscape (N)
- 14 Tall Herb & Tussock (N)
- 15 Pollinator (N)
- 16 Coastal (N)
- 110 General Purpose Economy (N)

Pack size 1kg





## MASTERLINE



To view the Masterline brochure scan the QR code or visit  
[www.bit.ly/masterline-dlf](http://www.bit.ly/masterline-dlf)

CONTACT US FOR MORE INFORMATION

SCAN HERE



Flower Rich Grass Margins provide important habitat for invertebrates and birds

# Flower Rich Margins

## FLOWER RICH MARGINS

### Butterfly & Bumblebee Mixture (AB8, IPM2)

15% Creeping Red Fescue  
15% SSMG  
10% Browntop Bent  
10% Hard Fescue  
10% Sheeps Fescue  
6% Lucerne (inoculated)  
5% Yorkshire Fog  
4% Hairy Vetch  
4% Birdsfoot Trefoil  
4% Kidney Vetch (N)  
4% Alsike Clover  
2% Black Knapweed (N)  
1% Plantain  
1% Tufted Hairgrass  
1% Common Agrimony (N)  
1% Phacelia  
1% Red Campion (N)  
1% Musk Mallow (N)  
1% White Campion (N)  
1% Oxeye Daisy  
1% Selfheal (N)  
1% Cornflower (N)  
1% Wild Carrot (N)

100%

Sowing rate 16 - 20kg/ha  
Pack size 1kg & 5kg

**DISCLAIMER:** In any instances where there are shortages of specified species we reserve the right to substitute equivalent species.

### BGM 4 with Wildflowers & Fine Grasses

#### 90% GRASSES, 10% WILD FLOWERS (AB8, IPM2)

45% Creeping Red Fescue  
15% Chewings Fescue  
15% Hard Fescue  
15% SSMG  
2.5% Sainfoin  
2.5% Vetch  
1.5% Red Clover  
1.25% Alsike Clover  
0.75% Plantain  
0.5% Birdsfoot Trefoil  
0.25% Black Knapweed (N)  
0.25% Oxeye Daisy  
0.25% Sheeps Burnet  
0.25% Yarrow

100%

Sowing rate 16 - 20kg/ha  
Pack size 20kg

### BGM 6 Flower Grass Margin Mixture 85% GRASSES, 15% WILD FLOWERS (AB8, GS4, IPM2, SAM3)

45% Creeping Red Fescue  
15% Chewings Fescue  
9% SSMG  
9% Cocksfoot  
6% Hard Fescue  
3.75% Sainfoin  
3.75% Vetch  
3% Lucerne (inoculated)  
1% Alsike Clover  
1% Bentgrass  
1% Plantain  
1% Red Clover  
0.5% Sheeps Burnet  
0.5% Sheeps Parsley  
0.25% Birdsfoot Trefoil  
0.25% Yarrow

100%

Sowing rate 20kg/ha  
Pack size 20kg

### Flower Rich Margin Mixture 80% GRASSES, 20% WILD FLOWERS (AB8, IPM2)

25% Slender Red Fescue  
25% SSMG  
12% Chewings Fescue  
10% Crested Dogstail  
5% Hard Fescue  
3.25% Sainfoin  
3% Vetch  
3% Browntop Bent  
2.5% Birdsfoot Trefoil  
2% Black Medick  
2% Red Clover  
2% Black Knapweed (N)  
1.3% Oxeye Daisy  
1.25% Yarrow  
1% Wild Carrot (N)  
1% Plantain  
0.5% Selfheal (N)  
0.20% Musk Mallow (N)

100%

Sowing rate 16 - 20kg/ha  
Pack size 10kg & 20kg

**Bumblebee Conservation Trust supporting wild pollinators on your land**

Bumblebees and solitary bees are very important pollinators of both commercial agricultural crops and wild flowers. Many UK species have declined in recent years due to habitat loss. Bumblebees rely on flower rich habitats from March to September to provide essential nectar resources for colony growth. They also require undisturbed tussocky grassland for nesting.

There are a number of ways these habitats can be provided on arable and livestock farms, including planting pollen and nectar margins or wildflower buffer strips and implementing a more sensitive management regime; no/very light application of farm-yard manure, no chemical fertilizers, taking a late hay cut (Mid-July to August) allowing wildflowers to set seed and adopting a sensitive grazing regime.

## SPECIES RICH WILD FLOWERS MIXTURES

### Species-Rich Wild Flowers (SRWF)\* Native

18% Black Knapweed (N)  
15% Selfheal (N)  
10% Oxeye Daisy (N)  
10% Red Campion (N)  
10% Ribwort Plantain (N)  
10% White Campion (N)  
10% Yellow Rattle (N)  
4.5% Salad Burnet (N)  
4% Sorrel (N)  
4% Wild Carrot (N)  
2.5% Lady's Bedstraw (N)  
1% Birdsfoot Trefoil (N)  
1% Black Medick (N)

100%

Pack size 1kg

### Species-Rich Grass (SRG)\* (IGL3)

20% Red Fescue  
20% SSMG  
20% Browntop Bent  
10% Meadow Fescue  
10% Sheeps Fescue  
10% Hard Fescue  
10% Crested Dogstail

100%

Pack size 20kg

\* Species-Rich Grass & Species-Rich Wild Flowers are available separately or as a mixture of grasses (SRG) & flowers (SRWF) together in the following ratios:

85% SRG with 15% SRWF | Sowing rate 16kg/ha  
Mixed to Order (AB8, IPM2) | Pack size 20kg



(N) = UK Native Seed

DLF Seeds Ltd. is a leading supplier of native provenance wild flowers. We liaise with selected producers and growers to ensure our seed is sourced to the highest possible standard.

Details on how you may improve your land for bumblebees and other pollinators can be found in our series of land management fact sheets:

[www.bumblebeeconservation.org](http://www.bumblebeeconservation.org)

We can also offer tailored advice in our target areas. Please contact [advice@bumblebeeconservation.org](mailto:advice@bumblebeeconservation.org)





# Buffer Strip Mixtures

07

## BUFFER STRIPS MIXTURES

### BGM 1 with Cocksfoot (AHL3, AHL4, IGL3)

45% Creeping Red Fescue  
20% Cocksfoot  
20% Tall Fescue  
10% SSMG  
5% Timothy

100%

Sowing rate 20kg/ha

Pack size 20kg

### BGM 2 no Cocksfoot (AHL3, AHL4, IGL3)

37% Creeping Red Fescue  
22% Chewings Fescue  
22% Tall Fescue  
12% SSMG  
7% Timothy

100%

Sowing rate 20kg/ha

Pack size 20kg



## LEGUME FALLOW MIXTURES FOR AB15

### Legume Fallow Mixture with Grass - 2 Year (AB15, NUM2, NUM3)

AB15 agreements starting on or before 1st Jan 2020

36% Perennial Ryegrass  
30% Creeping Red Fescue  
10% Crimson Clover  
10% Vetch  
5% Red Clover  
4% Lucerne (inoculated)  
3% Alsike Clover  
1% Birdsfoot Trefoil  
1% Black Medick

100%

Sowing rate 30 - 40kg/ha

Pack size 20kg



### Non Grass Legume Fallow Mixture - 2 Year (AB15, NUM2, NUM3)

AB15 agreements starting on or after 1st Jan 2021

52% Vetch  
12% Alsike Clover  
12% Crimson Clover  
12% Lucerne (inoculated)  
10% Red Clover  
1% Birdsfoot Trefoil  
1% Black Medick

100%

Sowing rate 15 - 20kg/ha

Pack size 20kg



## ANNUAL MIXTURES

### Annual Fallow Mixture (SAM2, NUM3)

38% Vetch  
32% Linseed  
10% Crimson Clover  
5% Gold of Pleasure  
5% Sainfoin  
4% Phacelia  
4% White Mustard  
2% Lucerne (inoculated)

100%

Sowing rate 15 - 20kg/ha

Pack size 20kg



### Annual Nectar Mixture (AHL1, SAM2)

25% Buckwheat  
25% Linseed  
20% Vetch  
15% Crimson Clover  
10% Berseem Clover  
4.6% Phacelia  
0.2% Black Knapweed  
0.2% Ag Yarrow

100%

Sowing rate 20kg/ha

Pack size 20kg





Legume & Herb  
Rich Mixtures  
provide reliable forage  
& beneficial pollinators  
& improve soil  
structure

# Legume & Herb Rich Mixtures

Legume and herb-rich mixtures provide an abundance of productive grazing for livestock whilst providing habitat and food source for invertebrates and pollinators, supporting biodiversity.

Herbal leys develop a beneficial soil structure through the increase of organic matter due to the variety of species used and the length of time they are in the soil. Grasses offer the reliable bulk forage in these mixtures. These leys replace organic matter lost through rotation and also supply a valuable forage crop for livestock grazing or cut for silage.

The Nitrogen fixing ability of legumes, reduces the need for artificial fertilisers, as well as increasing the protein content which directly enhances DLWG or milk production. Deep rooting herbs break through damaged soil structure providing livestock with access to vital nutrients and minerals. Herbs act as a natural anthelmintic, reducing reliance on wormers.

**DISCLAIMER:** Stock should be introduced gradually over a two week period and an area of grassland should be available for animals to return to; water and hay or straw should also be made available. Please contact your supplier for further guidance.

## HERBAL MIXTURES

### Legume & Herb Rich Mixture (GS4, SAM3)

35% Perennial Ryegrass  
25% Creeping Red Fescue  
10% Festulolium  
7% Red Clover  
5.6% Sainfoin  
5% SSMG  
5% Timothy  
3% Alsike Clover  
1.93% Lucerne (inoculated)  
1% Sheeps Burnet  
0.5% Birdsfoot Trefoil  
0.5% Plantain  
0.25% Yarrow  
0.2% Sheeps Parsley  
0.02% Black Knapweed (N)

100%

Sowing rate 30kg/ha  
Pack size 20kg

OUTSTANDING PRODUCT OF THE YEAR

Everyone's  
talking about it!

OUTSTANDING  
★ 2023 ★  
PRODUCT  
OF THE YEAR

### Herbal Meadow (GS4, SAM3)

27% Perennial Ryegrass  
20% Festulolium  
13% Cocksfoot  
10% SSMG  
7% Red Clover  
6% Sainfoin  
5% Timothy  
5% Lucerne (inoculated)  
3% Alsike Clover  
1% Fenugreek  
1% Chicory  
0.7% Plantain  
0.5% Birdsfoot Trefoil  
0.5% Sheeps Burnet  
0.25% Yarrow  
0.05% Sheeps Parsley

100%

Sowing rate 30kg/ha  
Pack size 20kg

Organic multi species mixture OP4 available on request

### Multi Species Legume & Herb Mix (SAM3)

25% Int. Perennial Ryegrass (T)  
25% Late Perennial Ryegrass  
20% Late Perennial Ryegrass (T)  
7% Timothy  
5% White Clover  
4% Plantain  
3% Creeping Red Fescue  
3% Red Clover  
2.5% Chicory  
2% Alsike Clover  
2% Meadow Fescue  
1% Tall Fescue  
0.3% Sheeps Burnet  
0.1% Sheeps Parsley  
0.1% Yarrow

100%

Sowing rate 30 - 35kg/ha  
Pack size 20kg

NEW FOR  
2024

## OVERSEEDING MIXTURES

### SFI

#### Herbal Legume Overseeding Mixture

25% Plantain  
23% Red Clover  
22% White Clover  
5% Alsike Clover  
5% Chicory  
5% Sheeps Burnet  
5% Sheeps Parsley  
5% Timothy  
4% Birdsfoot Trefoil  
1% Yarrow

100%

Sowing rate 7 - 10kg/ha  
Pack size 5kg & 20kg

#### Mixed Herbs

26% Sainfoin  
23% Sheeps Burnet  
20% Plantain  
15% Sheeps Parsley  
13% Chicory  
3% Yarrow

100%

Sowing rate Variable  
Pack size 5kg & 20kg

### SFI No Chicory Herbal Legume

#### Overseeding Mixture

25% Plantain  
23% Red Clover  
22% White Clover  
9.5% Timothy  
5% Alsike Clover  
5% Sheeps Burnet  
5% Sheeps Parsley  
4% Birdsfoot Trefoil  
1% Yarrow  
0.5% Fenugreek

100%

Sowing rate 7 - 10kg/ha  
Pack size 5kg & 20kg

NEW FOR  
2024

### Herbal Max Gold (NUM2)

28% Late Perennial Ryegrass (T)  
15% Int. Perennial Ryegrass  
15% Late Perennial Ryegrass  
12% Red Clover  
9% Ecotain  
8% Chicory  
7% Timothy  
6% White Clover

100%

Sowing rate 30kg/ha  
Pack size 20kg

NEW FOR  
2024

### Herbal Max Silver (NUM2)

70% Int. Perennial Ryegrass (T)  
10% Red Clover  
6% White Clover  
6% Plantain  
6% Timothy  
2% Sheeps Burnet

100%

Sowing rate 30kg/ha  
Pack size 20kg

NEW FOR  
2024





# Herbs and Legumes

09

ENVIRONMENTAL

## PLANTAIN

A perennial herb providing a high mineral forage with a crude protein content of around 20%. Plantain provides all-year round grazing, even in drought conditions. Often mixed with other herbs, this species provides well tillered plants in high density mixtures that will complement the grazing system.

Pack size 5kg & 25kg



## CHICORY

A mineral-rich herb with a long taproot which infiltrates the soil to a great depth and can break through soil compaction. Chicory is a high protein, anthelmintic species that lifts trace elements from within the soil profile that are then made available for intake by livestock. This highly productive species is especially good for fattening lambs. If not well managed, chicory can become tall and woody therefore good management is essential to maintain feed quality.

Pack size 5kg & 25kg

## SHEEPS BURNET

A perennial herb which helps to provide a long grazing season attributable to its early spring growth. A well-established taproot improves drought tolerance within a sward whilst aiding the supply of vital trace elements to livestock.

Pack size 5kg & 25kg

## SHEEPS PARSLEY

Often mixed with other forage herbs, this species has a deep taproot that is able to lift trace elements from great soil depths whilst also aiding drought tolerance. Recognised for its high iron content along with vitamins A and C, Sheeps Parsley can prove a valuable addition to grazing swards.

Pack size 5kg & 25kg

## YARROW

A forage herb with a very deep rooting structure that has been noted to improve circulation and blood flow in livestock. Yarrow is commonly mixed with Sheeps Parsley, Burnet and Plantain although due to its minute seed size, should only be included at a low rate to ensure that it does not dominate the sward.

Pack size 5kg & 25kg



## SAINFOIN

Sainfoin acts as a natural anthelmintic and the condensed tannins this legume contains aids protein absorption thus improving feed conversion efficiency by livestock. Unlike other species, Sainfoin will not cause bloat in livestock and as little as 10% in a sward will offset the risk of bloat created from other legumes. Best suited to light soils, the deep rooting system of Sainfoin provides a drought-resistant forage that requires no nitrogen fertiliser and little phosphate. This legume prefers alkaline soils and although slow to establish, it is a persistent species. Sainfoin also increases biodiversity by attracting an abundance of insects and invertebrates, especially pollinators.

Pack size 5kg & 25kg



## LUCERNE

A persistent, perennial legume that performs particularly well on light, drought prone soils due to its deep, penetrating root system. The roots improve soil structure and aid fertility by fixing atmospheric nitrogen. Above the soil surface, Lucerne produces a high protein, palatable forage crop that is an excellent accompaniment to energy feeds in a ration.

Pack size 20kg

Organic seed available in 25kg packs (Limited)

## BIRDSFOOT TREFOIL

A nitrogen-fixing, anthelmintic species which helps boost soil fertility. Like Sainfoin, this species contains tannins to support the absorption of protein by both sheep and cattle. Birdsfoot Trefoil is continually included in diverse mixtures owing to its contribution of beneficial properties both above and below the soil surface.

Pack size 5kg & 25kg



## RED CLOVER

A high protein, nitrogen-fixing forage legume that can be grown on almost all soil types. When grown as part of a mixture, clover greatly increases the forage yield for both grazing and cutting.

Pack size 2kg & 25kg

Organic seed available in 25kg packs



# Wild Bird Seed Mixtures

## SPRING SOWN MIXTURES

### WBS 1 - 1 Year Spring Sown (AB9, AHL2)

*Attracts Tree Sparrows*

- 40% Spring Triticale
- 28% Spring Barley
- 15% Spring Wheat
- 10% Fodder Radish
- 5% White Millet
- 2% Red Millet

100%

**Sowing rate 40kg/ha**  
**Pack size 20kg**



For Higher Tier & HLS these mixtures must be agreed with the local Natural England Advisor before ordering seed.

Bespoke mixtures can be packed to order.

**Treatment** Some species may be treated

### WBS 2 - 1 to 2 Year Spring Sown (AB9, AHL2)

*Attracts Grey Partridge*

- 45% Spring Triticale
- 20% Spring Barley
- 15% Spring Wheat
- 7% Kale
- 4% Fodder Radish
- 4% White Millet
- 3% Quinoa
- 2% Red Millet

100%

**Sowing rate 40kg/ha**  
**Pack size 20kg**



OUTSTANDING PRODUCT OF THE YEAR

*Everyone's talking about it!*



### WBS 3 - 1 Year Spring Sown (AB9, AHL2)

*Attracts Partridge*

- 50% Spring Triticale
- 20% Spring Barley
- 10% Spring Oats
- 7% Linseed
- 5% Forage Rape
- 4% Gold of Pleasure
- 4% White Mustard

100%

**Sowing rate 40kg/ha**  
**Pack size 20kg**

### WBS 4 - 1 Year Spring Sown (AB9, AHL2)

*Attracts Finches & Buntings*

- 45% Spring Triticale
- 25% Spring Barley
- 8.5% Dwarf Sorghum
- 7% White Millet
- 5% Linseed
- 4% Japanese Reed Millet
- 3% Red Millet
- 2.5% Gold of Pleasure

100%

**Sowing rate 40kg/ha**  
**Pack size 20kg**

WBS 4 - Herbicide tolerant, but please discuss with your agronomist for current specific products and recommendations.

### Feed & Cover Mixture (AB9, AHL2)

- 25% Spring Triticale
- 24% Spring Barley
- 24% Spring Wheat
- 7% Dwarf Sorghum
- 6% White Millet
- 5% Sunflower
- 3% Japanese Reed Millet
- 2.5% Red Millet
- 2.5% Gold of Pleasure
- 1% Quinoa

100%

**Sowing rate 40kg/ha**  
**Pack size 20kg**

## ORGANIC WILD BIRD SEED MIXTURE 1

### 1 Year Spring Sown (OP2)

- 40% Organic Spring Wheat
- 30% Organic Spring Barley
- 13% Spring Triticale
- 10% Fodder Radish
- 5% White Millet
- 2% Red Millet

100%

**Sowing rate 40kg/ha Pack size 20kg**

## ORGANIC WILD BIRD SEED MIXTURE 2

### 1 - 2 Year Spring Sown (OP2)

- 35% Organic Spring Wheat
- 35% Organic Spring Barley
- 10% Spring Triticale
- 7% Kale
- 4% Fodder Radish
- 4% White Millet
- 3% Quinoa
- 2% Red Millet

100%

**Sowing rate 40kg/ha Pack size 20kg**





Wild Bird Seed mixtures provide important food resources for farmland birds & insects

# Wild Bird Seed Mixtures

## NORTHERN SPRING SOWN MIXTURES

### Northern Star Game Mixture (AB9, AHL2)

- 30% Spring Triticale
- 29% Spring Barley
- 20% Spring Wheat
- 5% Forage Rape
- 5% Kale
- 5% Sunflower
- 2% Gold of Pleasure
- 2% Green Fennel
- 2% Quinoa

NEW  
RECIPE  
2024

100%

Sowing rate 40kg/ha  
Pack size 20kg

Treatment Some species may be treated



### Northern WBS 1 - 1 Year Spring Sown (AB9, AHL2)

- 60% Spring Triticale
- 20% Spring Barley
- 10% Linseed
- 5% Forage Rape
- 3% Fodder Radish
- 2% Phacelia

100%

Sowing rate 40kg/ha  
Pack size 20kg

### Northern WBS 2 - 1 Year Spring Sown (AB9, AHL2)

- 50% Spring Triticale
- 12% Spring Barley
- 12% Spring Wheat
- 7% Fodder Radish
- 7% Kale
- 7% Quinoa
- 3% Green Fennel
- 2% Crimson Clover

NEW  
RECIPE  
2024

100%

Sowing rate 40kg/ha  
Pack size 20kg

## NON CEREAL MIXTURES

### Farmland (Wild) Bird Seed Mixture Non Cereal (AB9, AHL2)

- 40% Linseed
- 34% Buckwheat
- 10% Fodder Radish
- 10% White Millet
- 3% Phacelia
- 3% Red Millet

NEW  
RECIPE  
2024

100%

Sowing rate 20kg/ha  
Pack size 20kg

### Northern WBS 2 Non Cereal - 1 Year Spring Sown (AB9, AHL2)

- 35% Linseed
- 30% Buckwheat
- 8% Gold of Pleasure
- 8% White Mustard
- 6% Kale
- 5% Fodder Radish
- 5% Phacelia
- 3% Quinoa

NEW  
RECIPE  
2024

100%

Sowing rate 20kg/ha  
Pack size 20kg

The small seed element of Northern WBS2 and Farmland (Wild) Bird Seed Mixture without cereals have been formulated for those who have access to home grown cereals.

### Broadshot Mixture (AB9, AHL2)

- 34% Buckwheat
- 17% Kale
- 10% Phacelia
- 10% White Millet
- 8% Forage Rape
- 8% Red Millet
- 5% Japanese Reed Millet
- 4% Quinoa
- 4% Gold of Pleasure

100%

Sowing rate 15kg/ha  
Pack size 10kg



## AUTUMN SOWN MIXTURES

### WBA 1 - 2 Year Autumn Sown (AB16)

- 30% Winter Wheat
- 25% Winter Barley
- 15% Winter Triticale
- 6% Vetch
- 5% Fodder Radish
- 5% Forage Rape
- 3% Gold of Pleasure
- 3% Lucerne (inoculated)
- 2% Alsike Clover
- 2% Birdsfoot Trefoil
- 2% Crimson Clover
- 2% Red Clover

100%

Sowing rate 40 - 50kg/ha Pack size 20kg

### WBA 2 Autumn Sown Bumblebird Mixture 2 Year Autumn Sown (AB16)

- 26% Winter Wheat
- 25% Winter Barley
- 15% Winter Triticale
- 8% Fodder Radish
- 6% Vetch
- 5% Crimson Clover
- 5% Kale
- 3.4% Gold of Pleasure
- 3% Lucerne (inoculated)
- 1% Birdsfoot Trefoil
- 1% Phacelia
- 1% Red Clover
- 0.2% Black Knapweed (N)
- 0.2% Oxeye Daisy
- 0.2% Yarrow

100%

Sowing rate 40 - 50kg/ha Pack size 20kg



# Scottish Rural Development

## Agri-Environment Climate Scheme (AECS)



### AECS Options that require Seed

#### Wild Bird seed for Farmland Birds

Pages 10 - 12. Page 11 - Non Cereal Mixtures specifically for those who wish to use their own cereal. Page 12 - Northern WBS 1

#### Forage Brassicas for Farmland Birds

Pages 37 - 43

#### Stubbles followed by green manure in an arable rotation

Pages 12, 16 - 19

#### Creation of Beetle Banks, Water Margins and Grass Strips

Page 12 - BGM 6 Flower Grass Margin Mix

Pages 5, 6, 7 & 8 of this brochure contain many other mixtures designed for herbal meadows, fallow ground, pollen and nectar, nitrogen fixing and wild flowers, many of which suit AECS options.

[www.ruralpayments.org/topics/all-schemes/schemes-overview](http://www.ruralpayments.org/topics/all-schemes/schemes-overview)

\*Disclaimer – The information provided in this catalogue is given in good faith and to the best of our knowledge at the time of printing. Any advice should therefore be taken as a general guide and not relied upon for all conditions and circumstances. We cannot accept any legal liability for information given in this guide.

### Wild Bird Seed Mixtures

Specifically for Scottish conditions

#### Northern WBS 1 - 1 Year Spring Sown (AB9, AHL2)

60% Spring Triticale  
20% Spring Barley  
10% Linseed  
5% Forage Rape  
3% Fodder Radish  
2% Phacelia

100%

Sowing rate 40kg/ha  
Pack size 20kg

#### Forage Brassicas for Farmland Birds

Cannot Graze until 1st March

#### Best to consider

Swedes • Kale • Hardy Turnips • Hardy Hybrids

### AECS Green Cover Crops

Stubbles followed by Green Manure in an arable rotation

Where winter crops are sown after green cover

#### AECS Spring Green Cover Mixture

60% Buckwheat  
30% Crimson Clover  
10% Vetch

100%

Sowing rate 15 - 20kg/ha Pack size 20kg  
Alternative mixtures Annual Nectar Mixture and Kwik Fix

Where spring crops are sown after green cover

#### AECS Over Winter Green Cover Rye Mixture

85% Forage Rye  
15% Red Clover

100%

Sowing rate 35kg/ha Pack size 25kg  
Alternative mixtures N-Rich Cover Mixture

#### AECS Over Winter Green Cover Grass Mixture

85% Italian Ryegrass  
15% Red Clover

100%

Sowing rate 25kg/ha Pack size 25kg  
Alternative mixtures N-Rich Cover Mixture

#### BGM 6 Flower Grass Margin Mixture 85% GRASSES, 15% WILD FLOWERS (AB8, GS4, IPM2, SAM3, AECS)

45% Strong Creeping Red Fescue  
15% Chewings Fescue  
9% SSMG  
9% Cocksfoot  
6% Hard Fescue  
3.75% Sainfoin  
3.75% Vetch  
3% Lucerne (inoculated)  
1% Alsike  
1% Bentgrass  
1% Plantain  
1% Red Clover  
0.5% Sheeps Burnet  
0.5% Sheeps Parsley  
0.25% Birdsfoot trefoil  
0.25% Yarrow

100%

Sowing rate for Scotland 30kg/ha  
Pack size 20kg

### FALLOW LAND MIXTURE

45% Late Perennial Ryegrass (Dip)  
45% Late Perennial Ryegrass (Tet)  
5% Timothy  
5% White Clover

100%

Sowing rate 30 - 35kg/ha  
Pack size 20kg





# BPS Scotland – Greening

## A guide to Ecological Focus Area (EFA) Mixtures



13

### EFA Fallow Land (EFAFAL) Scottish Government Basic Payment Scheme – Greening

Fallow Period 15th January to 15th July. No agricultural production between these dates. Wild Bird Mixtures & Wild Flower mixtures are encouraged and may be sown during the fallow period. After the fallow period is over grass may be cut or grazed. Plan ahead for 2025 and sow a late heading mixture after 16th July 2024.

### EFA Margins (EFAM) Scottish Government Basic Payment Scheme – Greening

Period is 1st January to 31st December. They should be around the margin of a field or split 2 crops within a field. Must be between 1m and 20 m wide. You are allowed to cut for hay or silage after 15th July. If not beside a watercourse it may be grazed. Wild flower, wild bird seed and normal grass mixtures may be established.

### EFA Catch Crops (EFACC) Scottish Government Basic Payment Scheme – Greening

Establish the crop in spring. The only catch crop you can grow will be a cereal nurse crop with undersown grass. **It should be a recognised grass seed mixture.** The catch crop must be retained until at least the 31st December. You may graze the catch crop after harvest of the main crop.

### EFA Green Cover (EFAGC) Scottish Government Basic Payment Scheme – Greening

Establish the green cover crop by 1st November. Maintain the green cover up to 31st December inclusive. Do not graze during the maintenance period 1st November and 31st December. It must be a mixture of 2 or more of only the following: Alfalfa, barley, red clover, white clover, mustard, oats, phacelia, radish, rye, triticale and vetch.

### EFA Nitrogen Fixing Crops (EFA-NFIX) Scottish Government Basic Payment Scheme – Greening

You must ensure that all EFA nitrogen-fixing crops are surrounded by a claimed EFA margin. You cannot harvest before 1st August to protect ground nesting birds. You must grow 2 of the following; Alfalfa, beans, birdsfoot trefoil, chickpea, red and white clover, lentils, lupins, peas and vetch. Mixtures are allowed, but the nitrogen-fixing species must be dominant by weight.

### EFA Hedges (EFAH)

### EFA Agro-Forestry (EFAAF)

These are EFA options for Scotland that do not require any seed.

EFA Weighting 1.0	Fallow Mixture PAGE 12	BGM 1 or 2 PAGE 7	Northern WBS 1 PAGES 11 & 12	Farmland Wild Bird Mixture PAGE 11
EFA Weighting 1.5	Any Grass Mixture	BGM 1 or 2 PAGE 7	BGM 6 PAGE 12	Northern WBS 1 PAGES 11 & 12
EFA Weighting 0.3	Any Recognised Grass Mixture	Italian Catch Crop Mixture		
EFA Weighting 0.3	DLF Red & White Clover Blend PAGES 9 & 18	N-Rich Cover Mix PAGE 19		
EFA Weighting 1.0	DLF Red & White Clover Blend PAGES 9 & 18	Alfalfa PAGE 9	Peas & Beans	Vetch PAGE 18
Various				



# Growing for the Environment



## GROWING FOR THE ENVIRONMENT

Growing for the Environment is a grant scheme available to all eligible farmers in Wales. The scheme supports the growing and utilisation of crops, which can result in improvements in the environmental performance of a farm business.

The scheme objectives are to support farmers to:

- Reduce carbon and greenhouse gas emissions
- Adapt to climate change and build greater resilience into farm businesses
- Improve water quality and reduce flood risks
- Contribute towards a reversal in the decline of Wales' native biodiversity

Crops and activity supported through the Growing for the Environment scheme have been pre-identified as offering clear and quantifiable benefits to the environment and farm business.

Please read the Growing for the Environment rules and guidance document before submitting an Expression of Interest (EoI)

Any changes will be publicised via the Welsh Government website and GWLAD online.

## Cover Crops - WINDOW 3

Establish an unsprayed cover crop following autumn harvesting of cereals, maize or horticultural crop where soil, after harvesting, is ordinarily left bare or stubble retained.

The application window opened on 5th June 2023 and closed on 14th July 2023 - **NOW CLOSED**

Be sure to look for the new application window before these dates in 2024.



**STRAIGHTS  
AND  
MIXTURE  
OPTIONS  
AVAILABLE  
from pages  
17 - 20**

**RULE BOOK LINK** [www.gov.wales/growing-environment-rules-booklet-window-3-html](http://www.gov.wales/growing-environment-rules-booklet-window-3-html)

## Forage Crops - WINDOW 4

- OPTIONS**
1. Mixed leys (Also referred to as multi species or herbal leys)
  2. Red Clover or Lucerne | Straights available on page 9, enquire for mixtures
  3. Protein crops (No weed control)
  4. Unsprayed root or forage crop | Suitable straight and mixtures available on page 9, 37 - 43
  5. Unsprayed spring sown cereals
  6. Unsprayed spring cereals under sown with mixed ley
  7. Unsprayed cereal and protein crop mix | Suitable mixtures - Barley Pro Plus & Oat Pro Plus available on page 43
  8. Unsprayed cereal and protein crop under sown with mixed ley | Suitable mixtures - Barley Pro Plus & Oat Pro Plus available on page 43
  9. Under sowing maize (Spring / summer sown)
  10. Unsprayed spring cereals under sown with Red Clover | Straights available on page 9, enquire for mixtures



Application window was  
6th November 2023 until  
15th December 2023 -  
**NOW CLOSED**

**RULE BOOK LINK** [www.gov.wales/growing-environment-rules-booklet-window-4-html](http://www.gov.wales/growing-environment-rules-booklet-window-4-html)

## CYMRU GFE RED

- 10% Intermediate Perennial Diploid
- 14% Intermediate Perennial Tetraploid
- 10% Perennial Plus Festulolium
- 8% Meadow Fescue
- 10% Soft Leaf Cocksfoot
- 8% Timothy
- 10% Red Clover
- 4% Late Heading Red Clover
- 4% Small Leaf White Clover
- 4% Medium Leaf White Clover
- 8% Alsike Clover
- 3% Chicory
- 3% Sheep's Burnet
- 4% Plantain

**NEW FOR  
2024**

**100%**

**Sowing rate 25kg/ha**

## CYMRU GFE GREEN No Red Clover or Chicory

- 10% Intermediate Perennial Diploid
- 14% Intermediate Perennial Tetraploid
- 10% Perennial Plus Festulolium
- 8% Meadow Fescue
- 10% Soft Leaf Cocksfoot
- 8% Timothy
- 3% Birdsfoot Trefoil
- 7% Yellow Trefoil
- 5% Small Leaf White Clover
- 5% Medium Leaf White Clover
- 10% Alsike Clover
- 2% Sheep's Parsley
- 4% Sheep's Burnet
- 4% Plantain

**NEW FOR  
2024**

**100%**

**Sowing rate 25kg/ha**

**THESE TWO MIXTURES COMPLY WITH OPTION 1, 6 & 8 OF THE SCHEME**

## DRAIG~DRAGON

- 18% Intermediate Perennial Diploid
- 29% Intermediate Perennial Tetraploid
- 16% Late Perennial Diploid
- 17% Late Perennial Tetraploid
- 20% Red Clover

**NEW FOR  
2024**

**100%**

**Sowing rate 37kg/ha**

**THIS MIXTURE COMPLIES WITH  
OPTION 2 & 10 OF THE SCHEME**



Draig~Dragon



Growing a cover crop is a very effective way of controlling nematode populations

# Cover Crops and Soil Health

Cover Crops can bring many advantages to the farmer by adding organic matter to the soil, increasing biological activity, improving soil structure, reducing erosion, increasing the supply of nutrients available to plants (particularly by adding nitrogen to the system by fixation), reducing leaching and encouraging weed suppression.

There are some disadvantages and whilst these are few they should also be noted - lost opportunities for cash cropping, exacerbated pest and disease problems (green bridge effect), and the potential for cover crops to become weeds in their own right. These problems can be overcome with thought and measured usage, and the benefits to future crops can be significant.

## FOR SPRING SOWING & SUMMER INCORPORATION

Spring sown, summer crops are usually annual crops that as a rule do not tolerate frost. They are quick growing and will suppress weeds by light deprivation as well as providing organic material to improve soil structure and organic status. As they are usually fleshy crops and do not contain high proportions of carbon when incorporated into the soil, they do not substantially reduce stocks of soil nitrogen in the breaking down of the plant structure.

## AUTUMN SOWING & SPRING INCORPORATION

Autumn sown crops which go through the winter will scavenge nitrogen from soils thus preventing leaching which is taken much more seriously these days. They can be incorporated in the following spring or can provide a source of forage, prior to incorporation and also help to control erosion especially on late harvested maize stubbles. Certain species can be utilised to provide a nitrogen fixer which is then readily available to a spring sown crop.

## LONGER TERM CROPS

Grass and clover leys for long term fertility building must by their nature form part of the rotation. The increased duration of the sward ensures that the grass element provides a very strong root system valuable for soil aeration. The legumes with their deeper root system will improve water filtration through the soil structure encouraging increased soil nitrogen.

Cover Crops not only improve soil status, composition and nutrient balance but provide a basis for a more environmentally friendly approach to modern farming. We need to focus our minds on the twin problems of high artificial fertiliser prices and the soil's need for basic nutrients with these being available in a more sustainable form.

A wide range of plant species can be used as soil conditioners. Different crops bring different benefits and the final choice is influenced by many considerations. If the most is to be made of soil conditioning crops, it is important that they are carefully integrated into the crop rotation and proper attention paid to their husbandry.

Cover Crops can be categorised as spring sown for summer usage and autumn sown for over-winter usage, intercropping and longer term fertility improvement.

Nitrogen (N) in legumes comes from uptake of soil N and the fixation of N from the atmosphere. The amount of N fixed by different legumes is determined by the inherent capacity of the crop/rhizobium symbiosis to fix N, modified by the crop's growing conditions (e.g. soil, climate, disease), crop management and length of time for which the crop is grown. Consequently, the influence of all these factors means that a wide range of values has been reported by different researchers. The presence of soil mineral N is generally thought to reduce fixation capacity. Factors that will increase the soil mineral N pool include manure application, cutting and mulching, and grazing. Fixation tends to decrease with legume age, mainly because the amount of soil N tends to increase.

Where growth of legumes is affected by nutrient deficiency (or acidity) the potential for soil N build up is reduced. Phosphorus, Sulphur and some trace elements (e.g. Molybdenum) are particularly important. Where there are large off-takes of soil nutrients as in silage crops both Phosphorus and Potash supplies need to be adequate for satisfactory legume growth. These should be replaced as they are essential to the legume to enable it to maximise the fixing of nitrogen.

## NEMATODES IN UK FARMING

### ROOT KNOT NEMATODES

- Produce galls and can severely damage plant health
- Crops most at risk are:- peas, onions, carrots, parsnips, and spring wheat

### CYST NEMATODES

- Beard like objects which grow and live on root surfaces
- Widespread in Europe and many parts of the world
- Crops most at risk are:- potatoes, sugar beet, rape and beetroot

### LESION NEMATODES

- Produce necrotic lesions throughout the cortex of infected roots
- Crops most at risk are carrots, parsnips, maize and legumes

### STUBBY ROOT NEMATODES

- Plant roots have a stunted stubby appearance
- Infected roots become less capable of supplying nutrients
- Crops most at risk:- potatoes, sugar beet, onions, carrots and parsnips

### STEM NEMATODES

- Can cause distortion in the stems in winter beans and necrotic area on the plant leaves
- Crops most at risk :- potatoes, onions and winter beans

## THEIR EFFECT ON AGRICULTURAL CROPPING

Nematodes behave in different ways:

Ectoparasitic forms – feed externally on plant roots and Endoparasitic forms – invade the roots internally. Both forms cause damage, resulting in an overall reduction in yield or affect the marketability of the crop.

**Nematodes, also known as eelworms and roundworms. There are over 28,000 distinguishable species, of which 16,000 are parasitic.**

Approximately 50% are detrimental to plant health. Damage caused by nematodes can emerge differently from crop to crop. But there are a few symptoms which can appear, that are common to all.

- Stunted plants
- Plants wilt and appear to have no vigour
- Stem malformation
- Yellowing
- Root Galls
- Deformed roots and abnormal growth
- Plant death

**Globally, parasitic species can reduce agricultural production by approximately 12%.**



Crop	Pack size	Av sowing rate kg/ha	Treatment type	Sowing dates	Incorporation period	Root type/depth	Soil type	Nitrogen Fixing or Storing Plant	Useful information and growing tips
Short Term Crops      Spring/Summer Sowing & Summer/Autumn Incorporation									
White Mustard	10kg & 25kg	12 - 17	Untreated & Organic	Spring - Early Autumn	8 weeks after sowing	Fibrous root system	All types, best on light, sandy soils	Storing	Fast growing and good weed suppressor. Has biofumigation properties but not to same extent as brown mustard. Produces large quantities of biomass. Excellent scavenger of nitrogen. Requires fine seedbed. Susceptible to club root. Plough in before flowering to prevent self-seeding.
Brown Mustard	5kg & 25kg	5 - 7.5	Untreated	Spring - Autumn	Autumn - Spring	Taproot	All types, prefers moist ground	Storing	As white mustard, but contains high levels of glucosinolate which create biofumigation properties to reduce wireworm infestation. To maximise this benefit, crop must be finely chopped at flowering and thoroughly incorporated into moist soil. Brown mustard is winter hardy so is excellent for reducing soil erosion, water run-off and fertiliser leaching when grown after maize, potatoes & sugar beet.
Phacelia	5kg & 25kg	7.5 - 10	Untreated & Organic	Spring - Summer	10 - 12 weeks after sowing	Shallow, fibrous	Most soil types, will tolerate dry conditions	Storing	Quick to establish and a good weed suppressor. Flowers loved by bees and butterflies. The crop must be incorporated into the soil before setting seed or it may reappear in subsequent crops as a weed. Said to release many minerals into soil as it decomposes, especially P, Ca and Mg.
Buckwheat	10kg & 20kg	50 - 70	Untreated & Organic	Spring - Summer	Summer - Autumn	Shallow, but with good penetration	Tolerates poor, but not wet soils	Storing	Fast growing and quick to mature, not winter hardy. Dislikes wet, heavy or compacted soil. Do not allow to set seed before incorporating into soil. Attractive to beneficial insects especially hoverflies. Good scavenger of phosphate.
Crimson Clover	10kg & 25kg	12.5 - 15	Untreated & Organic	Spring	Summer - Autumn	Taproot with fibrous branch roots	Prefers loam, will tolerate poor soils as long as alkaline and free draining	Fixing	Very attractive to insects. Excellent weed suppressor. Biomass degrades quickly into soil. Will over-winter in Southern England for autumn sowing/spring incorporation. Shade tolerant.
Linseed	25kg	60	Untreated	Spring - Summer	Autumn - Winter	Taproot with fibrous branch roots	Most types	Storing	Easy to establish with thin stems, attractive blue flowers and a thin tap root with fine branches off it. Not frost hardy, but does stand through the Winter.
Camelina / Gold of Pleasure	5kg & 25kg	12	Untreated	Spring - Autumn	Autumn - Spring	Tap and branch roots	Most types	Storing	Fast to establish and mature, can cope with poorer soils. Good resistance to pest & disease incidence and an excellent nectar source for bees. Medium biomass that allows other species room to grow.
Fodder Radish	10kg & 25kg	10 - 20	Untreated & Organic	Summer - Autumn	Autumn - Spring	Deep rooting taproot	Most types	Storing	Good early vigour that gives quick soil coverage, with a large biomas and a large taproot. Excellent Nitrogen scavenger.
Daikon Radish	5kg & 25kg	8 - 10	Untreated	Summer - Autumn	Autumn - Spring	Deep penetrating taproot	Most types	Storing	Fast establishing, big biomas, long large white tubers. Excellent for breaking up compacted soil with its aggressive taproot. An excellent nitrogen scavenger.
Egyptian / Berseem Clover	25kg	10 - 22	Untreated	Spring - Early Summer	Later Summer - Autumn	Taproot with fibrous root network	Needs deep fertile soils (uncompetitive)	Fixing	Annual clover. Grows aggressively throughout the summer and autumn. Likes deep fertile soils with plenty of moisture. Produces large amounts of biomass along with fixing large quantities of nitrogen. A good cover crop to put between two cereal crops.
Black Oats	25kg & 500kg	50 - 75	Untreated	Later Summer - Autumn	Winter - Early Spring	Fibrous root system	Grow in most soil types and conditions	Storing	Grows well under most conditions. Early vigour, quickly producing lots of biomass due to the plant rapidly tillering. Can flower early. The fast establishment helps to suppress weeds. Good at disrupting disease cycles. Not frost hardy.
Over Winter Crops      Autumn Sowing & Spring Incorporation									
Forage Winter Rye	25kg & 500kg	90 - 150	Untreated	Autumn	Spring	Extensive, fibrous root system	Grows well on light, sandy, free-draining soils	Storing	Produces large amounts of green material. Excellent nitrogen scavenger and for the prevention of nitrate leaching during winter months. Do not allow to run to seed as this will 'lock-up' available nitrogen. Very hardy.
Forage Rape	10kg & 25kg	6.5 - 10	Untreated & Organic	Spring - Autumn	Autumn - Spring	Deeply penetrating taproot	Most types, able to tolerate poor soil & exposed sites	Storing	Fast growing. Good alternative to mustard if using high glucosinolate varieties, as decomposition can release chemicals which produce a biofumigation effect if incorporated within 24 hours of cutting. Where club root is a problem, make sure a resistant variety is used.
Vetches	25kg	60 - 90	Untreated & Organic	Spring - Autumn	Autumn - Spring	Taproot	Prefers loams and clay. Will not thrive in wet or waterlogged conditions	Fixing	Good weed suppressor. Ensure a winter hardy variety is used. Due to its large seed size, will establish later than most other legumes. Requires fine, firm seedbed.
Longer Term Crops									
Lucerne Pre-inoculated	20kg	20 - 25	Untreated & Organic	Spring - Early Autumn	Autumn - Spring	Very deep taproot	Light/chalky/free-draining	Fixing	Seed must be inoculated with rhizobium bacteria. Prefers dry growing conditions. Uncompetitive particularly in early stage of development so grow as pure stand or with non-aggressive companion grasses.
White Clover	5kg & 25kg	5 - 7.5	Untreated & Organic	Spring - Early Autumn	Autumn - Spring	Creeping stolons, Shallow rooting	Wide range. Tolerates dry conditions	Fixing	Continued defoliation stimulates root growth and nitrogen fixation. Smaller leaved varieties are more persistent than larger leaved. Good weed suppressor. Shallow sow into fine, firm seedbed.
Red Clover	2kg & 25kg	12.5 - 15	Untreated & Organic	Spring - Early Autumn	Autumn - Spring	Large, strong taproot	Wide range, avoid poorly drained, acid soils	Fixing	Aggressive plant, does not release N until crop is ploughed in. Shorter term than white clover. Good for improving and aerating soil structure & useful weed suppressor. Ensure fine, firm seedbed.
Yellow Blossom Clover	2kg & 25kg	6	Untreated	Spring	Summer - Autumn	Long taproot	Prefers poor soil and dry conditions. Dislikes wet, heavy ground	Fixing	Biennial. Quick to establish and grows vigorously. Improves soil structure. Plough in before flowering and before stems become woody. Attractive to bees and other insects if allowed to flower.



# Cover Crop Species

Cover Crops  
improve soil  
fertility

## PHACELIA

A prolific seeder, very fast to establish and a good weed suppressant due to its root system. It produces a mass of sweet smelling purple flowers providing a good source of nectar, beneficial to a large variety of insects. It is not winter hardy and must be incorporated into the soil before setting seed to prevent self seeding. Mineral rich in items like P, Ca and Mg.

**Sowing rate 7.5 - 10kg/ha**

**Pack size 5kg & 25kg**

**Treatment Untreated**

**Organic seed available in 25kg packs (Limited)**

## BUCKWHEAT

Very fast growing and quick to mature and is easily killed by frost. Can cope with low-fertility soils and is effective at scavenging phosphate and retaining nitrogen due to its fine, fibrous root system. It competes well with weeds and is attractive to all wildlife and insects. Do not allow seed return to the soil and graze with care as it can cause photosensitivity in livestock.

**Sowing rate 50kg/ha**

**Pack size 10kg & 20kg**

**Treatment Untreated**

**Organic seed available in 25kg packs (Limited)**

## BROWN MUSTARD

A fast growing crop with bio fumigation properties i.e. it has the potential to suppress soil borne pests and diseases. It can be sown from March to September and is winter hardy. It can improve soil health by increasing organic matter and acts as an excellent weed suppressant. It also offers soil stabilisation by reducing erosion, leaching and water run off. Susceptible to club root.

**Sowing rate 5 - 7.5kg/ha**

**Pack size 5kg & 25kg**

**Treatment Untreated**

## WHITE MUSTARD

A relatively inexpensive and highly versatile cover crop either sown alone or as a companion to other species. It is ideal for early cover and although killed off by frost, the fallen woody stems will create shelter for the birds below. This is especially useful when sown with seed producing species which alone would provide no cover. Popular as a green manure crop (see green manure section page 16 - 19).

**Sowing rate 6 - 17kg/ha**

**Pack size 10kg & 25kg**

**Treatment Untreated**

**Organic seed available in 25kg packs**

## FODDER RADISH

(Oil Radish)

A fast growing cover crop, its speed of establishment aids weed suppression. Fodder Radish has a long tap root which will improve the soil structure and also has plenty of leaf that produces a large quantity of organic matter. An excellent nitrogen scavenger. Some varieties are nematode resistant.

**Sowing rate 6 - 8kg/ha**

**Pack size 10kg & 25kg**

**Treatment Untreated**

**Organic seed available in 25kg packs (Limited)**



Fodder Radish

## DAIKON (TILLAGE) RADISH

A rapid growing crop that produces a large amount of biomass. Daikon has the ability to reduce nematodes and is also an excellent weed suppressor. Daikon produces a long aggressive taproot that penetrates through many different soil types, improving drainage and air movement through the soil. A major benefit is that Daikon captures and stores nutrients from deep in the soil over the winter period, which are released in the spring for the next crop. Daikon can provide much needed cover throughout the winter months for game birds or can be used as an excellent fast growing, nutrient storing green manure crop.



Club  
Root  
Tolerant

Daikon  
Radish

**Sowing rate 8 - 10kg/ha**

**Pack size 5kg & 25kg**

**Treatment Untreated**

The table on page 16 is given in good faith and intended for general guidance only. Weather, local conditions and crop rotations must always be taken into account.



Cover Crops  
have many  
soil structure  
benefits

# Cover Crop Species

## INCORPORATION OF COVER CROPS

Incorporation is most effective when plants are young and succulent and the crop is cut and chopped to produce a mulch before turning it into the soil. This allows it to decompose quickly and release nutrients to be used by the following crop.

Some crops, however, require nitrogen to be available at a later stage, in which case they will benefit from the cover crop being left to become more mature. Decomposition and the release of nutrients will take longer and will be more likely to be available at the right time in the crop's development.

It is very important not to sow too early because of the allelopathic effect of the decomposing plants on germinating seeds.

### LINSEED

Easy to establish with thin stems, attractive blue flowers and has a thin tap root with fine branches off it. Although not frost hardy, the stem is maintained through the winter and care should be taken when grazing due to cyanogens present in the plant. An excellent soil conditioner and aerator.

**Sowing rate 60kg/ha**  
**Pack size 25kg**  
**Treatment Untreated**

### FORAGE RYE

A cereal crop that produces large amounts of organic matter and suppresses weeds. An excellent nitrogen scavenger that helps the prevention of nitrate leaching during the winter months. Winter hardy. Do not allow Forage Rye to run to seed as this will lock up available nitrogen.

**Sowing rate 125 - 185kg/ha**  
**Pack size 25kg & 500kg**  
**Treatment Untreated**

### JUPITER LEAFY TURNIP

Jupiter is a very leafy turnip that is late flowering, covers the soil very fast and is winter hardy. This variety can be sown in spring or autumn, and for forage production, these leafy turnips can be grazed after just 6-8 weeks. Jupiter also has a very high dry matter yield and excellent resistance to Alternaria.

**Sowing rate 5 - 7.5kg/ha**  
**Pack size 10kg & 25kg**

### CRIMSON CLOVER

This is an annual clover that establishes quickly to aid weed suppression and has a wonderful network of tap and branch roots. It has a crimson flower that attracts many insects and the ability to trap and add Nitrogen to the soil for following crops. The species does have over wintering capabilities and the biomass produced degrades rapidly back into the soil profile.

**Sowing rate 12 - 15kg/ha**  
**Pack size 10kg & 25kg**  
**Treatment Untreated**  
**Organic seed available in 25kg pack**

### COMMON VETCH

A vigorous, scrambling legume that will establish when sown later than most other legumes due to its larger seed size. Growth habit and root activity proves the species a good competitor to weeds. Extremely useful as a Nitrogen fixer, soil conditioner and an enriched food source when needed as a companion crop to distract pests from cash crops.

**Sowing rate 60 - 120kg/ha**  
**Pack size 25kg**  
**Treatment Untreated**  
**Organic seed available in 25kg pack**

### GOLD OF PLEASURE

A brassica that is very fast to establish and mature and can cope with poorer soils. Good resistance to pest and disease attack and an excellent nectar source for bees. A medium level of biomass is produced but the species does have allelopathic properties that may impact on companion species in a mix. Some level of winter tolerance.

**Sowing rate 12kg/ha**  
**Pack size 5kg & 25kg**  
**Treatment Untreated**  
**Organic seed available in 25kg packs**

### BLACK OATS

A rapid growing leafy cereal crop which has early vigour with good weed suppression. It will produce large amounts of organic matter. Destroy before flowering to prevent self-seeding. Not winter hardy.

**Sowing rate 50 - 75kg/ha**  
**Pack size 25kg & 500kg**

### WHITE CLOVER (IPM3)

Really useful fertility aid or 'living mulch', it is an excellent companion crop for many species, especially cereals. Best to surface sow into a firm seed bed where the clover's creeping stolons can infill gaps and the small leaved cultivars have the ability to maintain ground cover, offer weed suppression and aid growth by nitrogen fixation and release. Sowing rates can be halved when used as a companion crop.

**Sowing rate 5 - 7.5kg/ha**  
**Pack size 5kg & 25kg**  
**Treatment Untreated**  
**Organic seed available in 25kg packs**

### BERSEEM CLOVER

Also referred to as Egyptian clover, this is an annual species capable of explosive growth to produce a large biomass very quickly. The larger mass offers greater nitrogen production and return to the soil. The species has no frost tolerance and the large, fleshy plants produced degrade rapidly for ease of incorporation.

**Sowing rate 10 - 22kg/ha**  
**Pack size 25kg**  
**Treatment Untreated**  
**Organic seed available in 25kg packs**

### HAIRY VETCH

This differs from common vetch in that it has better cold tolerance maintaining ground cover through the winter and is more tolerant of wetter soils. It can fix around 220 kilos per ha of atmospheric nitrogen and has the capability to smother weed species due to its sprawling, creeping growth habit. Although vetch is readily grazed, hairy vetch may induce irritation of the mouth.

**Sowing rate 60 - 120kg/ha**  
**Pack size 25kg**  
**Treatment Untreated**



Growing a  
Cover Crop is  
an effective  
way of erosion  
control

# Cover Crop Mixtures

Our range of cover crop mixtures have been specially formulated to help you achieve the best from your soil by protecting and improving soil fertility and health between cash crops. Fast growing species have been chosen to help suppress weed growth and provide excellent cover producing huge quantities of organic matter and a variation of different rooting depths to ensure good soil penetration and utilisation of surplus nutrients. Bespoke mixtures to suit individual, specific requirements can also be arranged.

Caution needs to be taken when grazing some cover crop species.

Seed untreated unless specified otherwise

## N-RICH COVER MIX (SAM2)



The vetch and rye complement each other to provide an excellent cover crop mixture for the winter. Vetches are fast growing and they have a very prolonged growing season, combined with excellent winter hardiness and have the advantage of being able to fix nitrogen at lower temperatures than other legumes. Forage rye is deep rooting which provides a good underground network for the plant to utilize most of the nitrogen left by the previous crop.

80% Forage Rye  
20% Vetch

100%

Sowing rate 50 - 75kg/ha

Pack size 25kg & 500kg

## N-TRAP COVER MIX (SAM2, IPM3)



A combination of fast growing species that act as an alternative food source and distraction to pests that prey on brassica crops. The canopy cover has the potential to slow the progress of flea beetle whilst fixing and releasing nitrogen to companion oilseed rape crops. The cover crop will die back over winter for ease of management.

65% Buckwheat  
35% Egyptian Clover

100%

Sowing rate 10kg/ha

Pack size 25kg

## N-JOY COVER MIX (SAM2)



A combination that provides quality grazing that is high in protein and effective soil conditioning. It is quick to establish and mature, offering a prolonged utilisation period and is winter hardy. The species used provide deep root penetration for soil aeration, nitrogen fixation and weed suppression. Sow by mid September.

70% Vetch  
10% Crimson Clover  
10% White Millet  
5% Forage Rape  
5% Plantain



100%

Sowing rate 22 - 25kg/ha

Pack size 25kg

## N-SCENT COVER MIX (SAM2, IPM3)



Two fast growing species that both have the ability to fix nitrogen and act as a distraction to plant pests and predators. Fenugreek gives off a distinctive aroma that deters flea beetle.

50% Egyptian Clover  
50% Fenugreek

100%

Sowing rate 10kg/ha

Pack size 25kg

## N-LIVEN COVER MIX (SAM2)



The primary role of this seed mix is nitrogen fixation to boost soil fertility between main crops especially two cereal crops. The mix maintains cover well into late winter and provides a range of rooting depth for enhanced soil aeration and drainage. The mix could also be grazed as a means of removal rather than chemical or cultivation methods.

60% Vetch  
30% Crimson Clover  
10% Phacelia

100%

Sowing rate 15kg/ha

Pack size 25kg

## N-HANCE COVER MIX (SAM2)



This mixture will benefit the soil by the use of species that absorb the leaching nutrients and has the added advantage of the useful nitrogen fixing vetch. It produces a huge quantity of organic matter and has the benefit of radish's large roots that can utilise nutrients from the deeper layers of soil.

60% Forage Rye  
30% Vetch  
7% Fodder Radish  
3% White Mustard

100%

Sowing rate 35 - 50kg/ha

Pack size 25kg & 500kg



Cover crops  
reduce  
nutrient loss  
and leaching

# Cover Crop Mixtures

## N-GRAZE COVER MIX (SAM2)



A grass based catch crop with wide nutritional benefits. The grass element helps knit the cover together and keep animals clean whilst providing high nutritive value. N-Graze has high plant vigour for rapid establishment and growth, with high protein production enhanced by carbohydrates and sugars. This mixture provides good weed suppression with good potential regrowth from the grass if required the following spring. Sow from March to mid September.

- 65% Italian Ryegrass (Dip)
- 30% Vetch
- 3% Forage Rape
- 2% Stubble Turnip

NEW FOR  
2024

100%

Sowing rate 30 - 35kg/ha

Pack size 20kg

Caution needs to be taken when grazing some cover crop species.

## N-RETAIN COVER MIX (SAM2)



A balanced mixture that contains fast growing species which produce large amounts of biomass. The species used in the mixture offer a wide range of rooting depths some having a fibrous root system and others producing long tap roots. Both types of roots help to soak up and retain any residual nutrients which may have been left behind by the previous crop.

- 30% Vetch
- 15% Buckwheat
- 15% Crimson Clover
- 12% Fodder Radish
- 10% Daikon Radish
- 10% Egyptian Clover
- 5% White Mustard
- 3% Phacelia

100%

Sowing rate 15 - 25kg/ha

Pack size 25kg & 500kg

## BUSTER COVER MIX (SAM2)



A mixture containing species with aggressive deep roots that will help with difficult compacted soils and producing huge amounts of biomass. During the winter months this mixture can benefit the soil by providing vast quantities of organic matter, prevent nutrients being lost and penetrate through compacted soils.

- 35% Buckwheat
- 15% Linseed
- 15% Daikon Radish
- 12% Crimson Clover
- 12% Fodder Radish
- 6% Gold of Pleasure
- 5% Phacelia

100%

Sowing rate 15 - 25kg/ha

Pack size 25kg & 500kg

## ANNUAL FALLOW MIX (SAM2, NUM3)



- 38% Vetch
- 32% Linseed
- 10% Crimson Clover
- 5% Gold of Pleasure
- 5% Sainfoin
- 4% Phacelia
- 4% White Mustard
- 2% Lucerne (inoculated)

NEW FOR  
2024

100%

Sowing rate 15 - 20kg/ha

Pack size 20kg

## ANNUAL NECTAR MIX (AHL1, SAM2)



- 25% Buckwheat
- 25% Linseed
- 20% Vetch
- 15% Crimson Clover
- 10% Berseem Clover
- 4.6% Phacelia
- 0.2% Black Knapweed
- 0.2% Ag Yarrow

NEW  
RECIPE  
2024

100%

Sowing rate 20kg/ha

Pack size 20kg

## RESCUE MIX (SAM2)



- 50% Buckwheat
- 15% Fodder Radish
- 15% White Mustard
- 10% Gold of Pleasure
- 10% Brassica Carinata

100%

Sowing rate 12kg/ha

Pack size 10kg

## BOOST MIX (SAM2)



- 70% Brassica Carinata
- 10% Spitfire
- 10% Fodder Radish
- 10% Brown Mustard

100%

Sowing rate 6kg/ha

Pack size 10kg

## LATE COVER MIX (SAM2)



- 75% Forage Rape
- 14% White Mustard
- 11% Fodder Radish

100%

Sowing rate 12 - 15kg/ha

Pack size 10kg

## KWIK FIX (SAM2)



- 80% Fodder Radish
- 20% White Mustard

100%

Sowing rate 12 - 15kg/ha

Pack size 10kg



# Establishing Game Cover Crops

Game cover crops will only reach their full potential if they are well managed right from the start. A successfully managed shoot is both profitable and rewarding to landowners and the local community, as it contributes positively to the countryside and the overall environment. It is hoped the following notes will help and guide you to the successful establishment of game cover crops. Any regional or particular soil conditions have not been taken into consideration as it is preferable to take advantage of local knowledge. If you would like more detailed information please contact your local seed specialist, who will be able to give advice for your own particular farm/situation.



DLF Research Trials

## CROP ROTATION

Rotations are essential to help reduce soil-borne diseases such as club root in brassicas. A rotational system will also help to improve soil fertility and structure as each crop can benefit the soil in different ways, each requiring different trace elements. Crop rotation is essential where weeds and/or disease have become a persistent problem.

## CULTIVATIONS

A well prepared seed bed is essential for crop health and development, as a rapidly growing game cover crop has more chance of resisting pest attack. Generally, ploughing and rapid consolidation to conserve moisture is the ideal start for these crops. Ensure the seed bed is fine and firm to help reduce the risk of slug activity.

## SOWING

Where possible we recommend drilling game cover crops. This ensures accurate seed depth and row width and will provide maximum seed to soil contact that will encourage a speedy establishment. Sowing at the correct row width will also improve bird holding and driving capability. Each growing season is completely different, but try not to sow too early to ensure the soil temperature is warm enough to encourage a quick successful germination.



## SOIL TESTS & FERTILISER

Soil testing is essential to determine the soil pH and fertility of the soil, which can then be managed accordingly to maximize its potential. Farmyard manure is an excellent way of improving soil structure and adding fertility. Fertiliser will also be required at the early stages of establishment to maximize the output of your game cover crop. Lime may be required for some acid soils to balance the soil pH.

## WEED CONTROL

The stale seed bed technique is a well proven weed control system and allows early control of weeds. The technique involves spraying, ploughing and cultivating to encourage weed seeds to germinate in a first flush, then re-spraying; this can be repeated as often as necessary to help achieve a clean seed bed. This technique is very useful where mixtures are grown and no herbicide can be recommended. (For chemical weed control see tables on pages 24 and 25).








**DISCLAIMER** These tables are given in good faith and intended for general guidance only. Weather, local conditions and crop rotations must always be taken into account.

# Game Cover Selector

Crop	Organic Option	Page No.	Pack Size	Cover / Feed Crop		Nectar	Average Sowing Rate per Hectare		Sowing Date Guide	Utilisation Period	Duration of the Crop	Average Drill Depth cm	Average Row Width cm	Suggested Guide to Seedbed Fertiliser (kg) ha		
								Broadcast						Drill	N	P
Game Cover Crops																
Maize		27	40,000/50,000 seeds	✓	✓			Precision drill 111,150 - 123,500 seeds/ha	April - June	September - February	1 Season	6	75	80	85	205
Brassicas																
Kale		28	1kg & 5kg	✓			5 - 7.5kg	3 - 5kg	April - June	September - March	1 - 2yr	1 - 2	50	100	50	120
Surefire Kale Blend		28	2kg	✓			5 - 7.5kg	3 - 5kg	April - June	September - March	1 - 2yr	1 - 2	50	100	50	120
Leafy Turnip		29	10kg & 25kg	✓			5 - 7.5kg	3 - 6kg	Spring / Early Autumn	Autumn / Early Winter	1 Season	1 - 2	Various	110	55	55
Brassica Carinata		29	5kg	✓			5 - 7.5kg	6kg	April - August	September - January	1 Season	1 - 2	Various	110	55	55
Forage Rape		29	10kg & 25kg	✓			10kg	6kg	May - end of September	July - December	1 Season	1 - 2.5	15 - 20	20	40	40
Spitfire Brassica		29	10kg & 25kg	✓			10kg	6kg	May - end of September	July - December	1 Season	1 - 2.5	15 - 20	20	40	40
Zoom Brassica Mixture		29 & 36	5kg	✓			6 - 10kg	6kg	Spring / Autumn	September - March	1 Season	1 - 2	Various	110	55	55
Millets / Grasses																
Sorghum - Intermediate & Dwarf		30	10kg	✓				20kg	May - June	September - February	1 Season	2.5 - 4	45 - 50	100	50	120
Millets		31	10kg	✓	✓		12kg	12kg	April - June	September - December	1 Season	1 - 1.5	35-45	60	30	30
Canary Grass (Phalaris aquatica)		34	2.5kg	✓				6kg	April - June	All Year	5 Years+	1.5	70 - 90	55	28	28
Reed Canary Grass (Phalaris arundinacea)		34	2.5kg	✓				6kg	April - June	All Year	5 Years+	1.5	70 - 90	55	28	28



Crop	Organic Option	Page No.	Pack Size	Cover / Feed Crop		Nectar	Average Sowing Rate per Hectare		Sowing Date Guide	Utilisation Period	Duration of the Crop	Average Drill Depth cm	Average Row Width cm	Suggested Guide to Seedbed Fertiliser (kg) ha		
								Broadcast						Drill	N	P
Game Cover Crops																
Sunflowers		32	10kg & 25kg	✓	✓	✓		12kg	April - June	July - November	1 Season	4	75	Ensure adequate P but very little N		
Quinoa		32	5kg & 25kg	✓	✓		5kg+	5kg	April - June	September - December	1 Season	1.5	45	100	50	120
Triticale	✓	32	25kg	✓	✓			125kg	Spring / Autumn	August - February	1 Season	2.5	12 - 16	125	0	0
Borage		32	5kg & 25kg	✓		✓	12kg+	12kg	April - June	Autumn	1 Season	1 - 2	15 - 20			
Gold of Pleasure (Camelina)	✓	33	5kg & 25kg	✓	✓		12kg+	12kg	April - May	September - December	1 Season	1	8 - 18	40	75	65
Phacelia	✓	33	5kg, 10kg & 25kg	✓		✓	7.5 - 10kg		April - August	July - October	1 Season	1 - 2	Various			
Buckwheat	✓	33	10kg & 25kg	✓	✓	✓	50kg+	50kg	April - May	August - December	1 Season	1 - 2.5	20 - 35	35	105	210
White Mustard	✓	33	10kg & 25kg	✓			12 - 17kg	6 - 12kg	Spring - Autumn	August - December	1 Season	1 - 2.5	20 - 35			
Brown Mustard		33	5kg & 25kg	✓			5 - 7.5kg	2.5 - 7.5kg	Spring - Autumn	Autumn / Spring	1 Season	1 - 2.5	20 - 35			
Fodder Radish	✓	33	10kg & 25kg	✓	✓	✓	8kg	6kg	Spring - Autumn	July - December	1 Season	1 - 2.5	25 - 30	40	15	20
Linseed		33	25kg	✓	✓	✓		60kg	April - May	September - February	1 Season	1 - 2	8 - 18	40	75	65
Perennial Chicory		34	5kg & 25kg	✓		✓	5kg+	5kg	Spring or Early Autumn	All Year	5yr+	1	15 - 20	100	50	120
Yellow Blossom Clover		34	2kg & 25kg	✓		✓	6kg+	6kg	April - June	All Year	1 - 2yr	0.5	75	30	0	0
Game Cover Mixtures																
Feed and Cover Mixture		10	20kg	✓	✓	✓		40kg	Spring	September - February	1 Season	1 - 2.5	12 - 16	30	75	75
Northern Star Game Mixture		11	20kg	✓	✓	✓	50kg	50kg	Spring	September - February	1 Season	2.5 - 3	15	75	37	37
Overdrive		28	5kg	✓	✓		6kg+	6kg	April - June	September - February	1 - 2yr	2.5	45 - 50	100	50	120
General Purpose Rearing Pen Mixture		34	20kg	✓			32 - 37kg	32kg+	Spring / Autumn	All Year	5yr+	1	15 - 20			
Broadshot		35	10kg	✓	✓	✓	15kg	15kg	Spring	September - February	1 Season	1 - 2	15 - 25	80	40	96
Sundown Mixture		35	20kg	✓	✓	✓		32kg	April - June	September - February	1 Season	5 - 6	75 - 100	60	60	
Traditional Game Cover Mixture		35	10kg	✓	✓	✓	25kg	25kg	April - June	September - February	1 Season	B/C	B/C	80	40	96
Boost Mixture		20 & 36	10kg	✓			6kg+	6kg	June - September	September - February	1 Season	1 - 2	45 - 50	100	50	50
Late Cover Mixture		20 & 36	10kg	✓			15kg+	12kg	Spring / Autumn	September - February	1 Season	1 - 2	20 - 35	55	28	28
Kwik Fix		20 & 36	10kg	✓			15kg+	12kg	July - End of September	September - December	1 Season	1 - 2	40	Lodging can occur with excess fertiliser		
Rescue Mixture		20 & 36	10kg	✓	✓		12kg+	12kg	June - September	September - December	1 Season	1 - 2	45 - 50	100	50	50



# Game Cover Chemicals

## KEY

Considered 'crop safe' when correctly applied to healthy crop in good condition

Considered to pose a risk to crop health, use with caution

No information available

Rates are based on L/Ha unless otherwise stated. This is not a complete list of products which can be used on these crops. Always consult a BASIS qualified advisor.

The chart below was kindly supplied by Agrovista UK Ltd

	STALE SEEDBED	PRE EMERGENCE HERBICIDES ONLY												POST EMERGENCE HERBICIDES																		
	ROUNDUP VISTA PLUS	ANTHEM (MAPP 15761)	CENTUM 360CS (MAPP 18719)	CIRRUS CS (MAPP 18721)	SPINNAKER (MAPP 18855)	GANT 36 CS (MAPP 18718)	CALLISTO (MAPP 12323)	CRYSTAL (MAPP 13914)	HURRICANE (MAPP 16027)	KERB FLO 2.1 L/HA (MAPP 13716)	BUTISAN S (MAPP 16959)	SPRINGBOK (MAPP 16786)	STOMP AQUA (MAPP 14664)	ALIAS SX (MAPP 18602)	ANTHEM (MAPP 15761)	BASAGRAN SG (MAPP 08360)	BUTISAN S	CALLISTO (MAPP 12323)	CRYSTAL (MAPP 13914)	SPINNAKER (MAPP 18855)	SHIELD PRO (MAPP 20156)	EAGLE (MAPP 20708 or MAPP 18902)	FALCON (MAPP 16459)	HILoad MIRCAM (11930)	HURRICANE (MAPP 16027)	KERB FLO 2.1 L/HA (MAPP 13716)	PEAK (MAPP 16521)	STARANE H-LOAD HL (MAPP 16557)	STOMP AQUA (MAPP 14664)	THISTLEX (MAPP 19876)	VIVEIDI 200 (MAPP 16966)	
Borage	YES	NO	YES	YES		YES		NO			YES		NO		NO	NO	YES		NO		YES	YES		NO			NO	NO	NO	YES	YES	
Buckwheat	YES	NO						2.0 L/HA		1.7 L/HA		YES			NO	NO	YES		2.0 L/HA		YES	YES		NO		YES	NO	NO	NO	YES	YES	
Canary Grass	YES	YES						YES			NO				NO	NO	YES		2.0 L/HA		YES	YES	YES	YES			NO	YES	2.9 L/HA	YES	YES	
Chicory			YES	YES		YES									NO	NO	YES		YES			NO	YES		NO			NO	NO	2.2 L/HA		NO
Fodder Radish	YES	NO	YES	YES		YES		NO		1.7 L/HA			NO		NO	NO	YES		YES		YES	NO		NO		YES	NO	NO	NO	NO	YES	
Gold of Pleasure	YES							2.0 L/HA		1.7 L/HA	YES	YES			NO	NO	YES		YES		YES	NO		NO		YES		NO	YES	NO	YES	
Kale	YES	NO	YES	YES		YES				1.7 L/HA	YES	YES	NO		NO	NO	YES		NO		YES	NO	YES	NO		YES	NO	NO	NO	YES	YES	
Linseed	YES	YES	NO	NO		NO						YES			NO	NO	YES		NO		YES	YES	YES	NO			YES	NO	2.2 L/HA		YES	
Maize	YES	YES	YES	YES		YES	YES		YES		NO	NO	YES		YES	YES	NO	YES			YES	YES	NO	YES		NO	YES	YES	YES	YES	YES	
Red Millet	YES						NO				YES		MAX 2.2		2.9 L/HA	YES	YES	NO	YES		YES	YES		YES		YES	YES	NO	2.9 L/HA	YES	YES	
Reed Millet	YES						NO			YES			NO			YES		NO			YES	YES		YES				NO		YES	YES	
Ambush Millet Mix	YES						NO			1.7 L/HA	YES		MAX 3.3			YES		NO			YES	YES	NO	YES		YES	NO				YES	
White Millet	YES		YES	YES		YES	NO			YES	YES		YES		3.3 L/HA	YES	YES	NO	YES		YES	YES	NO	YES			YES	YES	3.3 L/HA	YES	YES	
Mustard	YES		NO	NO		NO		YES		1.7 L/HA	YES				NO	NO	YES		NO		YES	NO		NO		YES	NO	NO	NO	YES	YES	
Phacelia	YES	NO	YES	YES		YES		NO			NO		NO		NO	NO	YES		NO		YES	YES		NO			NO	NO	NO	YES	YES	
Quinoa	YES	NO	NO	NO		NO		NO		1.7 L/HA	YES	NO	NO		NO	NO	YES		NO		YES	NO		NO		YES	NO	NO	NO	NO	YES	
Sorghum	YES		YES	YES		YES		YES		YES	NO	NO			NO	NO	YES		NO		YES	YES		YES			YES	YES	3.3 L/HA	YES	YES	
Stubble Turnip	YES	NO	NO	NO	NO	NO	NO			1.7 L/HA	YES		NO		NO	NO	YES				NO	NO	YES	NO		YES	NO	NO	NO	YES	YES	
Sunflower	YES	YES	YES	YES		YES	NO			1.7 L/HA					NO	NO	NO		NO		NO	NO	YES	NO		YES	NO	NO			NO	
Sweet Clover	YES		YES	YES		YES		2.0 L/HA		1.7 L/HA	YES				NO	YES			2.0 L/HA			YES			NO		YES	NO	NO	2.2 L/HA		
Brassica Carinata	YES						NO	YES							NO	NO	YES		2.0 L/HA		YES	NO		NO		YES	NO	NO	NO	NO	YES	
Triticale	YES	YES	YES	YES	YES	YES	NO	YES	YES	NO	NO	YES	YES		YES			YES	YES	YES	YES	YES	NO	YES	YES	NO	YES	YES	YES	YES	YES	

DISCLAIMER: In some cases information is based on limited data so should be used with caution. EAMUs (formerly SOLAs) and LTAEU off-label uses are at Growers Own Risk.

Shield Pro, Thistlex & Vivendi contain Clopyralid which can remain in plant residues and affect following crops - ensure full incorporation of crop residues before planting treated areas with susceptible crops. When used on game cover crops the seed or any part of the treated plants must not be used for human or animal food or feed (except game birds).

Agrovista & DLF cannot accept any responsibility for any loss, damage or accident arising from the use of information in this report. Always read the label and the associated EAMU document prior to any application. Products are used entirely at the growers own risk.

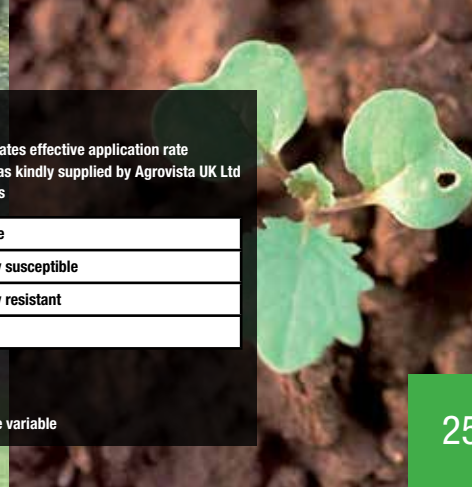




Litre quantity indicates effective application rate  
The chart below was kindly supplied by Agrovista UK Ltd  
( ) = Based on trials

Susceptible
Moderately susceptible
Moderately resistant
Resistant

- ★ @1.5l/ha
- ★★ at full rate
- ★★★ control can be variable

[illegible]

DISCLAIMER Agrovista & DLF cannot accept any responsibility for any loss, damage or accident arising from the use of information in the report.  
Use Pesticides safely and always follow manufacturers guidelines.



# Forage Maize

**DLF** have been strong players in the forage maize market for many years. Our expertise in the grass seed market complements the maize portfolio when discussing total forage needs with our customers.

We are not breeders of maize so we work with breeders, which can have a distinct advantage when securing a well-rounded portfolio to suit all maize requirements.

The biogas sector for maize is growing and our varieties for this sector have performed extremely well this season and we already have some repeat orders for next season.

Comprehensive technical sheets are available for all forage maize varieties available from DLF.

## Very Early

### PEREZ

- Gain higher yields faster
- Proven consistent performance
- Suitable for anaerobic digestion



## Early Maincrop

### MARCAMO

- Fills the clamp!
- Very high yields of dry matter and energy
- Suitable for anaerobic digestion



## Very Early

### DEBALTO

- Push your starch yield... keep your harvest on track!
- Excellent vigour combined with strong dry matter yield and high grain quality



Individual technical sheets available for each variety.

These can be found at [www.dlf.co.uk/maize/dlf-uk/maize/forage-maize](http://www.dlf.co.uk/maize/dlf-uk/maize/forage-maize)





# Game Maize

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**Game Maize** is still one of the most popular crops used for cover and feed. Nearly all maize varieties used for game cover have at some stage been commercial forage or grain varieties. As these varieties are superseded by newer hybrids, stocks of those being replaced diminish and we carefully select the most suitable of these for our game cover purposes.



**N.B.** Height of maize may vary depending on seasonal and management variations. The later the sowing date the later the maturity of the maize.

## RAPID FIRE



Rapid Fire is still our biggest selling brand of maize. Varieties are selected for their good standing ability, early vigour and a low cob carriage.

**Pack size 50,000 seeds**

**Treatment Fungicide & Bird Repellent treated\***



## LATE SHOT



Late Shot is selected for very late maturity and good standing ability. It produces an immature cob that only develops to the 'bright white' stage under normal UK autumn and winter conditions. Due to the late cob formation it tends to be of less interest to rats and badgers that can decimate more mature cobbled varieties through the shooting season.

**Pack size 50,000 seeds**

**Treatment Fungicide & Bird Repellent treated\***



\* Seed treatment may change subject to availability at time of order.



# Kale

**Kale** is still one of the most popular cover crops used today. The main advantage of kale is that it will provide cover for the whole shooting season. Pheasants particularly like the combination of a good canopy and bare ground which allows easy movement in a relatively dry environment.

Kale requires soil with a pH of around 6.5, so it is very important to conduct soil analysis prior to sowing. Kale is a very hungry crop and benefits from the application of farmyard manure/slurry prior to sowing. Care should be taken with continuous kale as the ground can become "brassica sick"; club root (finger and toe) will inhibit or prevent the growth of brassica crops but this can be prevented by growing kale and another crop such as maize in adjacent strips and alternating the strips.

Kale is frequently grown in conjunction with other crops such as quinoa and yellow blossom clover. Selection of any such mixture should take into account the required length of time for which the crop is grown and the potential weed control that may be required.

Flea beetle damage may occur in the early stages of establishment, regular monitoring of the crop is required as action may be needed in the event of heavy attack.

## GOLDENEYE

Club Root Tolerant



Goldeneye is a giant type kale especially bred for the game cover market, selected for the optimum combination of height and leaf production. It has a leafy top, strong stem, good winter hardiness and good field tolerance of disease, making it the ideal choice for game cover usage. Goldeneye achieved a higher vigour score than Caledonian kale and better club root tolerance in a trial conducted at the Scottish Agricultural College in Aberdeen.

**Sowing rate 3 - 7.5kg/ha**  
**Pack size 1kg & 5kg**  
**Treatment Untreated**

## THOUSAND HEAD



A reliable and consistent variety. It's a medium height variety with good winter hardiness providing excellent yields.

**Sowing rate 3 - 7.5kg/ha**  
**Pack size 1kg & 5kg**  
**Treatment Untreated**

## ASTERA



A very productive and leafy variety, characterised by its high yields. It is a very winter hardy variety producing high crude protein yields.

**Sowing rate 3 - 7.5kg/ha**  
**Pack size 1kg & 5kg**  
**Treatment Untreated**

## GRÜNER ANGELITER



A very tall variety with good winter hardiness. Grüner Angeliter is proving to be a significant improvement in the game cover sector and has performed extremely well even in difficult growing conditions. It has a high leaf canopy and a thick strong stem with a branching, umbrella-shaped canopy giving plenty of space for the birds to move about underneath.

**Sowing rate 3 - 7.5kg/ha**  
**Pack size 1kg & 5kg**  
**Treatment Untreated**



## SUREFIRE KALE BLEND



A combination of three excellent game cover kale varieties, to provide a tall varied canopy. This blend will give superb cover over an extended period and will give second year growth with various bolting times. The flowering kale attracts insects and provides shed seed, all helping to draw both game and song birds.

40% Goldeneye  
 30% Grüner Angeliter  
 30% Proteor

100%

**Sowing rate 3 - 7.5kg/ha**  
**Pack size 2kg**  
**Treatment Untreated**

## OVERDRIVE



A superb combination of winter hardy cover provided by the kale and high quality feed provided by the quinoa. This mixture is excellent for holding birds.

50% Quinoa  
 50% Goldeneye Kale

100%

**Sowing rate 6kg/ha**  
**Pack size 5kg**  
**Treatment Untreated**



# Brassicas

29

## ZOOM BRASSICA MIXTURE

Zoom is a blend of Winfred brassica and forage rape. This is a very vigorous and quick growing mixture which is ideal for replacing failed crops or patching spring sown crops. Good seedling vigour gives a reliable establishment of a high leaf to stem ratio crop using carefully selected varieties with good disease and bolting resistance.

**Sowing rate 6 – 10kg/ha**  
**Pack size 5kg**  
**Treatment Untreated**

## JUPITER LEAFY TURNIP

Jupiter is a very leafy turnip that is late flowering, covers the soil very fast and is winter hardy. This variety can be sown in spring or autumn and for forage production these leafy turnips can be grazed after just 6-8 weeks.

**Sowing rate 5 - 7.5kg/ha**  
**Pack size 10kg & 25kg**  
**Treatment Untreated**



## FORAGE RAPE

Forage Rape is particularly useful in that it can be used as a rescue or catch crop, continuing until the New Year when it flowers and goes to seed. A well grown crop with adequate spacing between rows will provide good cover for holding, driving and feeding. It is largely unaffected by frost and wet weather.

**Sowing rate 6 - 10kg/ha**  
**Pack size 10kg & 25kg**  
**Treatment Untreated**

## AVALON LEAFY TURNIP

Avalon is a very leafy turnip that is late flowering, covers the soil very fast and is winter hardy. This variety can be sown in spring or autumn. Avalon has a high dry matter yield and excellent resistance to Alternaria.

**Sowing rate 5 - 7kg/ha**  
**Pack size 10kg & 25kg**  
**Treatment Untreated**



Forage Rape

## SPITFIRE FORAGE BRASSICA



Spitfire is a modern multi-purpose rape which is a good companion to use with other fast establishing brassicas. It is a medium-tall variety with high dry matter, excellent aphid tolerance, good stock palatability and rapid establishment to maturity. It has high growth potential but careful management is required to avoid damaging stems for regrowth. Spitfire is a multiuse rape suitable for planting in spring for excellent summer and autumn feed or in early autumn for quality winter feed. The main strengths of Spitfire are excellent yield, insect tolerance, and a low dry matter (DM%) stem. The very low DM% content of the stem produces a high-quality forage, with good utilisation at grazing without limiting yield ability or regrowth potential.

**Sowing rate 6 - 10kg/ha**  
**Pack size 10kg & 25kg**  
**Treatment Untreated**

OUTSTANDING PRODUCT OF THE YEAR

*Everyone's talking about it!*

## MAINSTAR

Mainstar is a highly palatable modern early maturity rape with quality frost resistance and excellent regrowth potential after grazing, extending grazing time. It is a very versatile brassica with extremely good aphid tolerance. The main strength of Mainstar is the early maturity leading to the potential for earlier grazing which will extend the grazing period for stock. Mainstar is suitable for a wide range of soil fertility and environmental conditions.

**Sowing rate 6 - 10kg/ha**  
**Pack size 10kg & 25kg**  
**Treatment Untreated**

## BRASSICA CARINATA

Brassica Carinata is a fast growing, shiny leaved brassica developed from Ethiopian mustard. They are easy to establish and provide frost hardy cover, producing a broken canopy which is great for flushing birds. Their rapid growth is ideal for suppressing weeds and they are often used as a patching crop when spring crops have failed. Also see Boost mixture on pages 20 & 36.

**Sowing rate 5 - 7.5kg/ha**  
**Pack size 5kg**  
**Treatment Untreated**





# Sorghums

**Sorghum** is a semi-tropical, non-cob producing, maize-like plant which will provide cover throughout the shooting season. It thrives best in warm, sunny growing conditions and therefore is suited to the more southerly regions of the UK. Sorghum is a very slow establishing plant that does not begin to flourish until late July.

## DWARF SORGHUM



Dwarf Sorghum has a short, sturdy, broad-leaved stem and a substantial seed-head, providing birds with warm cover throughout the shooting season. Often sown as a companion to maize with the bulkier, shorter sorghum plants giving protection to the birds below the taller growing maize plants.

Average height 1 - 1.25m under favourable conditions.

Sowing rate 20kg/ha  
Pack size 10kg  
Treatment Untreated



Dwarf Sorghum

## INTERMEDIATE SORGHUM



Intermediate Sorghum is useful as a windbreak around other game cover crops, providing pheasant and partridge with protection from overhead predators. Earlier sown crops have the potential to produce large attractive seed-head with excellent standing ability.

Average height up 1.25m under favourable conditions.

Sowing rate 20kg/ha  
Pack size 10kg  
Treatment Untreated



Intermediate Sorghum

## GIANT SORGHUM



Giant Sorghum is a sorghum x sudan grass hybrid, extremely useful as a windbreak to protect more vulnerable crops. Its deep rooting system enables it to withstand drought conditions. Useful as a flushing crop even though it is prone to lodging later in the season.

Average height 2m under favourable conditions.

Sowing rate 30kg/ha  
Pack size 10kg  
Treatment Untreated



Giant Sorghum

**N.B.** Height of Sorghum may vary depending on seasonal and management variations.



# Millets

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## WHITE MILLET



White Millet is best suited to more southerly regions of the UK as it is a sunshine loving plant and is not frost hardy. It provides warmth, shelter and feed for game birds and will attract wild seed-eating birds such as finches. White millet is particularly attractive to grey and red-legged partridges and if sown alone can be used for early holding cover. When required to last longer into the season it performs well if sown with maize, but will combine well with a variety of other game cover crops.

**Sowing rate 12kg/ha**  
**Pack size 10kg**  
**Treatment Untreated**

## RED MILLET



Red Millet is earlier maturing than white and does not stand well when sown alone. However it is a good partner to use with white millet as it extends the feeding period (see Millgame Millet Mix). As with other millets, it is susceptible to frost.

**Sowing rate 12kg/ha**  
**Pack size 10kg**  
**Treatment Untreated**

## JAPANESE REED MILLET



Japanese Reed Millet is a stronger plant than other members of the millet family and is more winter hardy. When mixed with white and red millet it provides an excellent cover and feed crop (see Ambush Millet Mix).

**Sowing rate 12kg/ha**  
**Pack size 10kg**  
**Treatment Untreated**

## AMBUSH MILLET MIX



Ambush Millet Mix is a combination of white, red and Japanese reed millet. The reed millet being a stronger plant and more winter hardy provides cover while the white and red millet produces plentiful seed to hold the birds in the cover. It is an ideal mixture for use as a wind-proof belt on the outside of a block of maize or as a flushing point at the end of maize.

40% White Millet  
40% Red Millet  
20% Japanese Reed Millet

100%

**Sowing rate 12kg/ha**  
**Pack size 10kg**  
**Treatment Untreated**



White & Red Millet



Japanese Reed Millet



Ambush Millet Mix



# Game Cover Crops

**Sunflowers** are a colourful sight and are of huge benefit to wildlife. Sunflowers provide highly nutritious seed of a high oil content which is loved by all game and song birds and the nectar is of great importance to bees and other insects.

In most situations sunflowers are grown in conjunction with many other game crops such as game maize or kale, either in mixtures or in adjacent blocks. The young seedlings are very vulnerable to spring slug attack and to wireworm in ground that has previously been in grass, so a close eye must be kept on the newly planted crop. Cambridge rolling following drilling into a good seed bed will help to protect against rook damage.

## SUNFLOWER



A variety with good standing ability. Large attractive flowers, with high yield potential. Best 'swiped down' to enable game birds to reach the nutritious seeds. Can be drilled with Maize to brighten up your crop.

**Sowing rate** 12kg/ha  
**Pack size** 10kg & 20kg  
**Treatment** Untreated



Sunflower

## TRITICALE



A wheat/rye hybrid cereal providing good cover and feed in marginal low fertility areas where it will thrive with little input. Useful in situations where maize and millet are not options and where brassica sickness is a problem. Further important advantages are its ability to withstand rabbit attack, winter hardiness and good disease resistance. When sowing in the spring, a true spring type must be used which does not require a period of vernalisation, otherwise the plant will not produce grain.

**Sowing rate** 125kg/ha  
**Pack size** 25kg & 500kg  
**Treatment** Untreated

## BORAGE



Borage, also known as starflower, is a quick growing annual herb, to a height of 2-3 feet with bright blue flowers; there is also a white flowered variation. The crop was traditionally grown for culinary and medicinal uses, although the crop is commercially grown today for its oil content. Borage's star shaped flower attracts bees all summer long. Borage is a self seeding plant and likely to reseed itself for many years to come.

**Sowing rate** 12kg/ha  
**Pack size** 5kg & 25kg  
**Treatment** Untreated



Quinoa

## QUINOA



Quinoa is capable of producing a plentiful amount of seed and therefore is a popular choice of crop for holding partridge and pheasant. Many species of seed-eating song-birds are also attracted to the crop. Commonly grown with kale, quinoa provides cover and feed until it begins to collapse in the first frosts with the kale providing more permanent cover.

**Sowing rate** 5kg/ha  
**Pack size** 5kg & 25kg  
**Treatment** Untreated



# Game Cover Crops

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## PHACELIA



A prolific seeder, very fast to establish and a good weed suppressant. It produces a mass of sweet smelling purple flowers providing a good source of nectar, beneficial to a large variety of insects. It is not winter hardy and therefore for game cover it is best sown as part of a mixture. Phacelia is likely to set seed and reseed itself for many years to come.

**Sowing rate 7.5 - 10kg/ha**

**Pack size 5kg & 25kg**

**Treatment Untreated**

**Organic seed available in 25kg packs (Limited)**

## BUCKWHEAT



A rapidly growing short term crop highly attractive to pheasants, partridge and deer both as cover and feed. The large amount of nectar produced attracts bees and other beneficial insects which in turn provide added interest for game birds. It is a useful component to add to mixtures due to its bulkiness and its ability to continue to provide holding cover and feed after the first frosts when the crop has fallen. Buckwheat thrives in sunny rather than shaded areas.

**Sowing rate 50kg/ha**

**Pack size 10kg & 20kg**

**Treatment Untreated**

**Organic seed available in 25kg packs (Limited)**

## BROWN MUSTARD



A fast growing cover crop easy to establish 50 - 70 day crop that can be sown between April and September. Unlike white mustard, it is winter hardy. It will improve the health of the soil by increasing organic matter and acts as an excellent weed suppressant. It is also especially useful as over-wintering green cover after maize, potatoes and sugar beet crops, reducing soil erosion, fertiliser leaching and water run-off.

**Sowing rate 5 - 7.5kg/ha**

**Pack size 5kg & 25kg**

**Treatment Untreated**

## WHITE MUSTARD



A relatively inexpensive and highly versatile cover crop either sown alone or as a companion to other species. It is ideal for early cover and although killed off by frost, the fallen woody stems will create shelter for the birds below. This is especially useful when sown with seed producing species which alone would provide no cover. Popular as a green manure crop (see green manure section page 15 - 20).

**Sowing rate 12 - 17kg/ha**

**Pack size 10kg & 25kg**

**Treatment Untreated**

**Organic seed available in 25kg packs**

## FODDER RADISH



(Oil Radish)

A fast growing cover crop, its prime usefulness being where brassica sickness is a problem due to its immunity to the disease. Other qualities are its speed of establishment which aids weed suppression and its use as a green manure crop. It is useful as a catch crop in northern regions if sown in July as it will be ready to provide cover within six to eight weeks, just as birds are losing cover from the cereals being combined. Due to its fast growth it is valuable as a replacement for failed crops, and will continue to provide cover right through the season. In addition, it holds its seed in pods which shed in late winter/early spring, thus providing feed during that all important 'hungry gap'.

**Sowing rate 10 - 20kg/ha**

**Pack size 10kg & 25kg**

**Treatment Untreated**

**Organic seed available in 25kg packs (Limited)**



Fodder Radish

## LINSEED



Traditionally grown for its oil, linseed has become popular in recent years as game cover and is particularly attractive to partridge. It is an easy to grow crop and is tolerant of many soil types, performing well on thinner soils e.g. Cotswold Brash. Although not frost hardy it will continue to provide cover and interest well into the winter especially if sown as part of a mixture. It is also another option where brassica sickness has been a problem.

**Sowing rate 60kg/ha**

**Pack size 25kg**

**Treatment Untreated**

## GOLD OF PLEASURE - CAMELINA



Another crop well suited to poorer and nutrient deficient soils. It is a fast maturing, free-branching plant producing a seed very attractive to birds, especially partridge. A useful mixture for exposed areas is produced by combining gold of pleasure with triticale, barley and linseed.

**Sowing rate 12kg/ha**

**Pack size 5kg & 25kg**

**Treatment Untreated**

**Organic seed available in 25kg packs (Limited)**



# Game Cover Crops

Reed Canary Grass & Chicory

## LONGER TERM CROPS

Perennial game cover crops provide valuable year round habitat for game and farmland wildlife. They help reduce workload during busy periods and reduce establishment costs.



Perennial Chicory

### CANARY GRASS

(*Phalaris aquatica*)



Canary Grass provides excellent medium to long term nesting cover for pheasant and partridge and can be used to both hold and drive birds. It is useful in areas where annual planting is not an option, either because it is uneconomic or too difficult and is a good choice to use between tree rows in newly established woods. Care must be taken to drill in wide enough rows to prevent the canary grass becoming too dense and therefore impassable for the birds. Annual management should be undertaken to keep the rows clear and topping is beneficial if the grass becomes too tall, with the debris being removed.

**Sowing rate 6kg/ha**

**Pack size 2.5kg**

**Treatment Untreated (Limited)**

### YELLOW BLOSSOM CLOVER



A biennial plant which can persist for several years due to its self-regenerating properties. Owing to its sweet smell and copious production of nectar it is highly attractive to insects, which in turn attract game birds and wildlife. Sowing with kale will help to provide cover in the first year, with the tall, woody-stemmed clover taking over in the second year. Yellow Blossom Clover can thrive in the poorest of soils and being leguminous and deep rooting it is invaluable for improving soil structure and fertility.

**Sowing rate 6kg/ha**

**Pack size 2kg & 25kg**

**Treatment Untreated**

### REED CANARY GRASS

(*Phalaris arundinacea*)



Reed Canary Grass is similar to *Phalaris aquatica* but is more suitable for use in exposed northern regions as it is a much hardier plant and will tolerate a wide range of soil types. It not only offers nesting and cover to pheasants but also provides wild birds with nesting sites. The crop is purely for cover and does not provide feed so bare patches may be left unplanted or later cut out to provide areas for artificial feeding. As with *Phalaris aquatica* drilling in wide rows is necessary rather than broadcasting or the crop will become too dense. Annual management should be undertaken to keep the rows clear. Topping is beneficial if it becomes too tall, with the debris removed.

**Sowing rate 6kg/ha**

**Pack size 2.5kg**

**Treatment Untreated**

### PERENNIAL CHICORY



Creates tall, dense cover, bolting in its second year to create a 6 - 7ft flowering hedge, useful where a perimeter barrier is required. It has good tolerance to drought, acid soils and major pests (but does not like very wet ground) and has a high mineral content including zinc, potassium and copper.

**Sowing rate 5kg/ha**

**Pack size 5kg & 25kg**

**Treatment Untreated**

### GENERAL PURPOSE REARING PEN MIX

(AHL4, IGL3)



25% Amenity Perennial Ryegrass

23% Late Perennial Ryegrass (Diploid)

20% Creeping Red Fescue

15% Timothy

7% Meadow Fescue

5% Birdsfoot Trefoil

5% White Clover

**100%**

**Sowing rate 32 - 37kg/ha**

**Pack size 20kg**

### GREEN FENNEL



A perennial plant which provides excellent cover for both pheasant and partridge, its distinctive smell makes it highly attractive to both. When sown alongside other species it can create an excellent cover crop.

**Sowing rate 6 - 8kg/ha**

**Pack size 5kg & 25kg**

**Treatment Untreated**



# Game Cover Mixtures

Our range of game cover mixtures are specially formulated to ensure you will be able to achieve the best from your cover crops. Combining different species into a mixture can extend the utilisation period, help to attract and hold specific types of game and provide feed and cover where both are required.

However, there are sometimes instances when none of the above will fit the bill for one reason or another. In these cases, specialised mixtures to suit individual specific requirements can be arranged.

For Wild Bird Mixtures see pages 10 & 11  
Northern Sown Mixtures see page 11

## SUNDOWN MIXTURE



A carefully blended mixture of game cover maize, sorghum and sunflowers that combine fantastic feeding and cover potential of the species. This mixture provides full season cover and feed. It is not recommended for marginal areas.

55% Game Maize  
25% Sunflower  
20% Sorghum

100%

Sowing rate 32kg/ha

Pack size 20kg

Treatment Untreated



Sundown Mixture

## BROADSHOT MIXTURE (AB9, AHL2)



A combination of species selected to provide feed and cover. This mixture can be left to regenerate for a second year. Species selected to facilitate economical weed control with chemicals such as Clopyralid.

34% Buckwheat  
17% Kale  
10% Phacelia  
10% White Millet  
8% Forage Rape  
8% Red Millet  
5% Japanese Reed Millet  
4% Quinoa  
4% Gold of Pleasure

100%

Sowing rate 15kg/ha

Pack size 10kg

Treatment Untreated



## TRADITIONAL GAME COVER MIXTURE



A traditional mixture of species especially selected for their feed and cover qualities. This mixture is designed for a full season of cover that will provide holding, feed and cover for all game birds. The sunflowers add an attractive splash of colour. Due to the variance in seed size broadcast to achieve optimum establishment. Ensure that treated seed is covered by harrowing and rolling.

17.5% White Millet  
15% Game Maize  
15% Red Millet  
14% Buckwheat  
12% Intermediate Sorghum  
10.5% Sunflower  
9.5% Kale  
2.5% White Mustard  
2.5% Forage Rape  
1% Gold of Pleasure  
0.5% Phacelia

100%

Sowing rate 25kg/ha

Pack size 10kg

Treatment Various treatments





# Game Cover Mixtures

Fast growing crops that have potential to provide cover & seed quickly

## LATE COVER AND RESCUE MIXTURES



### BOOST MIXTURE (SAM2)

A fast growing, quick to establish, frost hardy crop. Ideal to sow in late summer or early autumn to provide cover that will last throughout the winter. Excellent as a 'rescue' mixture for patching failed crops or when a later sown crop is required.

- 70% Brassica Carinata
- 10% Spitfire
- 10% Fodder Radish
- 10% Brown Mustard

100%

Sowing rate 6 - 10kg/ha  
Pack size 10kg  
Treatment Untreated

### LATE COVER MIXTURE (SAM2)

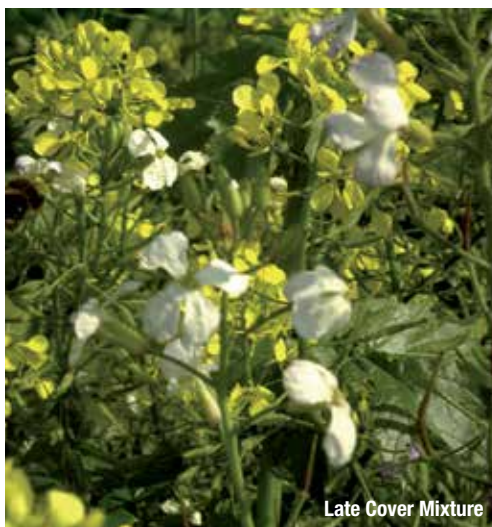


A rapidly establishing and maturing mixture providing winter cover to the height of 2 - 3 feet. It is often used as a patching crop where spring crops have failed. This mixture will tolerate drought conditions.

- 75% Forage Rape
- 14% White Mustard
- 11% Fodder Radish

100%

Sowing rate 12 - 15kg/ha  
Pack size 10kg  
Treatment Untreated



Late Cover Mixture

### KWIK FIX (SAM2)



This is a flexible cover crop which can be used to patch failed spring game covers. Mustard increases the cover element and fodder radish prolongs the cover period. This mixture will not provide full season cover, but it is more winter hardy than straight mustard.

- 80% Fodder Radish
- 20% White Mustard

100%

Sowing rate 12 - 15kg/ha  
Pack size 10kg  
Treatment Untreated

### RESCUE MIXTURE (SAM2)



A rapid establishing and maturing mixture providing cover and potentially seeds in 16 weeks from sowing. Excellent as a rescue mixture for patching failed crops or where a later sown crop is required.

- 50% Buckwheat
- 15% Fodder Radish
- 15% White Mustard
- 10% Gold of Pleasure
- 10% Brassica Carinata

100%

Sowing rate 12kg/ha  
Pack size 10kg  
Treatment Untreated

### ZOOM BRASSICA MIXTURE



Zoom is a mixture of Winfred brassica and forage rape. This is a very vigorous and quick growing mixture which is ideal for replacing failed crops or patching spring sown crops. High seedling vigour gives a reliable establishment of a high leaf to stem ratio crop with carefully selected varieties that have good disease and bolting resistance.

Sowing rate 6 - 10kg/ha  
Pack size 5kg  
Treatment Untreated



Zoom Brassica Mixture



# Forage Crops Selector

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FORAGE CROPS

Forage crops provide an extremely cost effective way of supplementing livestock rations during times when fodder may be scarce, during dry spells in summer and the cold winter months. They will supply substantial quantities of palatable material at relatively low production costs, balancing the amount of bought-in feed required.

## ICON KEY



LIFTING



CATTLE  
GRAZING



SHEEP  
GRAZING



CULINARY  
USE

Stock should be introduced gradually over a two week period and an area of grassland should be available for animals to return to. Water and hay or straw should also be made available. Please contact your supplier for further guidance.

Crop	Page No.	Pack Size	Average Sowing Rate kg / Hectare		Sowing Date Guide	Utilisation Period	Average Drill Depth cm	Average Row Width cm	Suggested Guide to Seedbed Fertiliser (kg) ha			Days Sowing to Grazing	No of possible Grazings	Dry Matter (%)	Digestibility (D-Value)	CP (% DM)	ME (MJ/Jkg DM)
			Broadcast	Direct Drill					N	P	K						
Stubble Turnip	38	10kg & 25kg	7.5	5	Apr-mid Sept	Jun-Jan	1-2	n/a	75	40	40	60-100	1	12-15	70	17-18	10-11
Main Crop Turnip	38	5kg	5	2.5 - 3.5	May-Jul	Oct-Jan	1-2	n/a	75	80	100	60-100	1	12-15	80	17-18	10-11
Forage Rape	39	10kg & 25kg	10	6	May-end Sept	Jun-Jan	1-2	n/a	75	40	40	90-100	2	10-12	70	19-20	10-11
Fodder Beet	40	50,000 seeds	-	Precision drill 100,000/ha	Mar-May	Oct-Mar	2.5-3	50-60	110	50	140	-	-	12-19	78	12-13	12-12.5
Swede	41	500g & 1kg	2.5 - 5	Precision drill 370-865 kg/ha grade H Direct Drill 1	Apr-June	Aug-Mar	1-2	45-70 graded 40 natural	110	80	100	170-250	1	17-20	82	10-11	12-13
Kale	42	1kg & 5kg	7.5	2.5 - 5	Apr-Jul	Sept-Mar	1-2	50	100	50	120	150-220	1	15-17	68	14-17	10-11
Spitfire	39	10kg & 25kg	10	6	May-end Sept	Jul-Dec	1-2.5	15-20	100	40	40	90-110	2	12-15	70	18-19	10-11
Zoom	39	5kg	10	6	April-Sept	Sept-Jan	1-2	various	100	55	55	90-110	2	12-15	70	18-19	10-11
Rapid Root Mixture	43	10kg	8.5	6	mid Apr-mid Sept	Jul-Dec	1-2	n/a	75	50	50	-	-	-	-	-	-
Winter Graze Mixture	43	10kg	8.5	6	mid Jul-mid Sept	Post Christmas	1-2	n/a	75	50	50	-	-	-	-	-	-

Source: NIAB

**DISCLAIMER** These tables are given in good faith and intended for general guidance only. Weather, local conditions and crop rotations must always be taken into account. Always consult a FACTS qualified advisor.



# Turnips

**Stubble Turnips** are a fast growing catch crop, popular with livestock farmers. They may be sown after first cut silage for summer grazing or after winter cereals for autumn usage. When planting a large acreage it is advisable to stagger sowing dates, increasing the seed rate in dry conditions. If being used for dairy cow grazing it is important to take into consideration the distance between the field and the milking parlour. Strip grazing is advisable if possible to limit wastage. There are two types of stubble turnip: bulbing (see Marco and Vollenda) and non bulbing (see Tyfon and Jupiter).

Stubble Turnips Yield and Feed Quality	
Average Dry Matter Yield	3.5 - 4.5 tonnes/ha
Average Fresh Yields	38 - 45 tonnes/ha
Crude Protein	17 - 18% (mainly leaves)
Digestibility Value	68 - 70%
Dry Matter	8 - 9%
Metabolisable Energy	11MJ/kg DM
Sugars in DM	55%

## Bulbing Types

### MARCO

Marco is a fast establishing, high yielding, large bulb and high bulb to leaf ratio. An early maturing turnip, only 55-65 days from sowing to grazing, with excellent bolting resistance and high club root resistance. Marco is a tetraploid turnip with high metabolisable energy and digestibility.

Sowing rate 5 - 7.5kg/ha  
Pack sizes 10kg & 25kg  
Treatment Untreated (Limited)



### VOLLEND (Tetraploid)

A large leafed, highly digestible variety with good early vigour and good disease resistance. It retains its palatability throughout the season, and is noted for its yield, speed of growth and bolting resistance.

Sowing rate 5 - 7.5kg/ha  
Pack sizes 10kg & 25kg  
Treatment Untreated (Limited)

Variety	Barkant	Vollenda(T)	Tyfon
Relative Yield of Dry Matter	104	102	102
Dry Matter Content (%)	9.5	9.7	8.9
Root Size (9=large 1=small)	4	5	2
Root Anchorage (9=good 1=poor)	5	4	6
Bolting Resistance (early sown) (9=good 1=poor)	6	9	3
Winter Hardiness (9=good 1=poor)	7	7	5
Club Root (9=good 1=poor)	7	8	5
Powdery Mildew Resistance (9=good 1=poor)	5	5	3

Source: NIAB

## Non Bulbing Types

### TYFON

A leafy, fast growing cross between Chinese cabbage and stubble turnip. It exhibits high frost resistance and can be utilised within eight to ten weeks after sowing. There is potential for regrowth.

Sowing rate 5 - 7.5kg/ha  
Pack size 5kg  
Treatment Untreated

### JUPITER LEAFY TURNIP

Jupiter is a very leafy turnip that can be sown in spring or autumn for forage production these leafy turnips can be grazed after just 6-8 weeks. Jupiter also has a very high dry matter yield.

Sowing rate 5 - 7.5kg/ha  
Pack size 10kg & 25kg  
Treatment Untreated

## Main Crop Turnip

Later maturing than stubble turnips and with higher dry matter, higher yields and better winter hardiness. They have a growing period of 12 – 15 weeks and provide excellent autumn and early winter feed for sheep and cattle.

### GREEN GLOBE

Green Globe turnips produce soft, easily eaten roots that are well anchored into the ground, suitable for grazing by all types of stock. They will provide a very high fresh yield from large bulbs and are utilised between October and January, preferably strip grazed to reduce waste.

Sowing rate Drill 2.5 - 3.5kg/ha Broadcast 5kg/ha  
Pack size 5kg  
Treatment Untreated  
Sow Late May to July

Variety	GREEN GLOBE 100% = Tonnes/ha
Total Dry Matter Yield (%)	(5.7t/ha) 100
Total Fresh Yield (%)	(70.6 t/ha ) 100
Dry Matter (%)	8.2
Powdery Mildew Resistance (9 = Best)	4
Root Shape (9 = Best)	6

Source: Advanta & SCRI trials



# Forage Rape

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FORAGE CROPS

**Forage Rape** has the advantage of being a very fast growing crop suitable for grazing by sheep or cattle. It is an ideal catch crop for boosting midsummer forage production for livestock farmers when planted in the spring, it is also suitable for fattening lambs in the autumn/winter. Forage rape extends the grazing season in the autumn and is superb for flushing ewes. It is better to strip graze to avoid excessive wastage.

Forage Rape can be mixed with stubble turnips and kale to combine the many benefits of these crops (see page 43 for root mixtures).

## Forage Rape Yield and Feed Quality

Average dry matter yield	3.5 - 4 tonnes/ha
Average fresh yields	24 - 35 tonnes/ha
Crude protein	19 - 20% (mainly leaves)
Digestibility value	65D
Dry matter	12 - 14%
Metabolisable energy	10 - 11 MJ/kg DM

## EMERALD



Emerald is a proven, well known variety producing rapidly establishing, medium to tall leafy plants maturing in 10-12 weeks after sowing. It is fast growing with average dry matter yields and good general disease resistance. Importantly, it has very good feeding quality, being high in protein and easily digestible, remaining palatable well into the winter. An added benefit is its widely branched root system for improvement of soil structure.

**Sowing rate** 6 - 10kg/ha

**Pack size** 10kg & 25kg

**Treatment** Untreated

## ZOOM BRASSICA MIXTURE



Zoom is a blend of Winfred hybrid brassica and forage rape. This is a very vigorous and quick growing mixture which is ideal for replacing failed crops or patching spring sown crops. High seedling vigour gives a reliable establishment of a high leaf to stem ratio crop with carefully selected varieties that have good disease and bolting resistance.

**Sowing rate** 6 - 10kg/ha

**Pack size** 5kg

**Treatment** Untreated

Stock should be introduced gradually over a two week period and an area of grassland should be available for animals to return to; water and hay or straw should also be made available. Please contact your supplier for further guidance.

## MAINSTAR



Mainstar is a highly palatable modern early maturity rape with quality frost resistance and excellent regrowth potential after grazing. It is a very versatile brassica with extremely good aphid tolerance. The main strength of Mainstar is the early maturity leading to the potential for earlier grazing which will extend the grazing period for stock. Mainstar is suitable for a wide range of soil fertility and environmental conditions.

**Sowing rate** 6 - 10kg/ha

**Pack size** 10kg & 25kg

**Treatment** Untreated



## SPITFIRE FORAGE BRASSICA



Spitfire is a modern multi-purpose rape which is a good companion to use with other fast establishing brassicas. It is a medium-tall variety with high dry matter, excellent aphid tolerance, good stock palatability and rapid establishment to maturity. It has high growth potential but careful management is required to avoid damaging stems for regrowth. Spitfire is a multiuse rape suitable for planting in spring for excellent summer and autumn feed or in early autumn for quality winter feed. The main strengths of Spitfire are excellent yield, insect tolerance, and a low dry matter (DM%) stem. The very low DM% content of the stem produces a high-quality forage, with good utilisation at grazing without limiting yield ability or regrowth potential.

**Sowing rate** 6 - 10kg/ha

**Pack size** 10kg & 25kg

**Treatment** Untreated



OUTSTANDING PRODUCT OF THE YEAR

*Everyone's talking about it!*



# Fodder Beet

**Fodder Beet** is grown as a main root crop. It can produce substantial yields of high quality fodder and is an excellent supplement to grass silage. The roots are very palatable to stock and have superb feed quality. Specialist harvesting equipment is required to lift the roots and storage is required unless they are strip grazed in situ.

Medium dry matter varieties tend to have a higher percentage of root above ground and can be lifted with a top lifter and therefore have a relatively low dirt tare. These highly palatable roots can be fed whole to stock. High dry matter varieties tend to sit further in the ground and require a sugar beet harvester to lift them. Due to the higher dirt tare and hardness of the root, these varieties may need to be chopped and washed before feeding.

Pack size - 50,000 seeds per acre

**SEED TREATMENT - Force 10/Tachigaren Pelleted Untreated Seed (Limited)**

Variety		Fresh Yield		DM	DM Yield		Root in Ground	Bolters
		tonne/ hectare	% Enermax	%	tonne/ hectare	% Enermax	%	#/10m <sup>2</sup>
BANGOR	Yellow	111.45	110.1%	18.6%	20.52	96.1%	51%	0.29
DELICANTE	White	116.40	114.9%	19.1%	22.23	104.1%	56%	0.00
ENERMAX	White	101.26	100.0%	21.4%	21.35	100.0%	72%	0.00
JAMON	Orange	105.71	104.4%	18.1%	19.10	89.5%	51%	0.07
MAGNUM	White	100.96	99.7%	22.2%	22.12	103.6%	62%	0.07
MONRO	Red	101.07	99.8%	15.9%	15.98	74.8%	49%	0.39

## DELICANTE



Delicante is a white skinned variety with good fresh and dry matter yields. Clean roots with healthy foliage which has good resistance to rust and mildew. Delicante is excellent for fresh feeding and grazing, with a good tolerance to bolting.



Delicante

## MONRO



An ideal variety for grazing with its low dry matter of 14.6%. It has exceptional high fresh yields from red roots that are mostly above ground.

## JAMON



A very consistent variety producing a clean highly palatable orange root with average dry matter yields. It has good resistance to leaf disease and bolting. Jamon benefits from large top size and has 33% of its root above the ground which allows for easy lifting.

## MAGNUM



Magnum has a consistent root size and reliable high dry matter yields. It is a very palatable variety therefore increasing appetite and dry matter intake in all stock. Higher dry matter fodder beet has been shown to increase milk yield and daily live weight gain. Due to its high dry matter content it is more frost resistant than other varieties with a high proportion of clean, white root in the ground.

## BANGOR



Bangor is an improvement on the illustrious/ long-time-acknowledged varieties Kyros and Troya – resulting in a yield increase and uniform roots. Bangor is easily lifted on all soil types, due to the regular shape of the root and its high position above the ground. With a medium DM in the root it results in a very high yield of 105%.



Bangor

## ENERMAX



An exciting dual purpose variety for both fodder and bio-energy production. High yielding with a low dirt tare.

Enermax has a clean, white, smooth-skinned root and is shallow rooting, resulting in a cleaner end product particularly important for the bio-fuel market.

It has a higher root yield when compared with the well-known and popular variety Magnum. Official variety testing (Denmark 2010 - 2011), has shown that Enermax can produce 21 tonnes/DM/ha from the root only, with the beet tops adding approximately 5 tonnes DM/ha.

Enermax has the additional benefit of being Rhizomania tolerant and so is suitable for growing in the east of the country where sugarbeet is a widely grown crop, as well as in the west and other areas.



Enermax



# Swedes

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FORAGE CROPS

**Swedes** are a full season root crop which are mainly fed in situ, but can also be lifted and stored in a clamp. They are an excellent high energy winter feed. It is advisable to use an electric fence to reduce wastage. They do best in areas of high rainfall, so are generally grown in the more northerly and western areas of the UK. Swedes can be grown in a wide range of soil types with good drainage as they are sensitive to compaction and poor drainage; they do best in soils with a pH of approximately 6.5. The majority of swede crops are now sown with precision drills which require a level seed bed. Varieties are generally classed as fodder or culinary types; however there are some dual purpose types.

All natural seed is packed in 1 kg packs Untreated

All graded seed is packed in 0.5 kg packs Untreated

## AIRLIE



Airlie is a low to medium dry matter variety with a very high fresh yield and good disease resistance. It is a dual purpose variety suitable for fodder and culinary use with purple skin and creamy white flesh. Airlie is an early to intermediate use variety.

## GOWRIE (Limited)



Gowrie is a uniform, medium dry matter variety with some club root tolerance and good mildew. It is a dual purpose variety suitable for fodder and culinary use, with purple skin and yellow flesh.

## KENMORE (Limited)



Kenmore is an early maturing variety with medium dry matter, best suited as stock feed not culinary use. It has good winter hardiness which means it has a very wide utilisation window. Kenmore has bronze skin with white flesh.

## MARIAN (Limited)



Marian is a medium dry matter variety with moderate resistance to club root. It is a dual purpose variety suitable for fodder and culinary use with yellow coloured flesh and purple skin.

Variety	Airlie	Gowrie	Kenmore	Marian
Fodder	✓	✓	✓	✓
Culinary	✓	✓		✓
Root shape (9=globe 1=tankard)	6	4	5	4
Skin colour	Light purple	Purple	Bronze	Purple
Flesh colour	Creamy white	Yellow	White	Yellow

## Seed Rate Calculator Guide - No. of Seeds X 1000

Spacings	Row Width					
	18"	20"	22"	24"	26"	28"
Spacings 2"	174	157	143	131	121	112
Spacings 3"	116	105	95	87	80	75
Spacings 4"	87	78	71	65	60	56
Spacings 5"	70	63	57	52	48	45
Spacings 6"	58	52	48	44	40	37

(For seed size grade H (1.75 - 2.00mm) 1000 seed weight grade H approx 3.2g)

Swede Yield and Feed Quality	
Average dry matter yield	7 - 10 tonnes/ha
Average fresh yields	70 - 80 tonnes/ha
Crude protein	10 - 11%
Digestibility value	82D
Dry matter	9 - 13%
Metabolisable energy	12.8 - 13.1 MJ/kg DM
Sugars in DM	59%



# Kale

**Kale** is a brassica traditionally grown for grazing in the autumn and winter. Kale is very useful as it can extend the grazing season. This crop is best strip grazed to avoid excessive wastage and ensure both leaf and stem are eaten. It is advisable to stagger sowing dates to ensure it does not over-mature. It is very adaptable and can grow on most sites throughout the UK. Kale can also be used as game cover (See page 28).

## Kale Yield and Feed Quality

Average dry matter yield	8 - 10 tonnes/ha
Average fresh yields	60 – 65 tonnes/ha
Crude protein	16 - 17% fresh, 19 - 25% ensiled
Digestibility value	68D
Dry matter	14 - 16%
Metabolisable energy	10 - 11 MJ/kg DM
Sugars in DM	17%

## GRÜNER ANGELITER



A very high yielding variety with good winter hardiness and excellent feeding quality with fresh yields 15% higher than Caledonian kale and 10% higher than Bittern in German trials. Grüner Angeliter has been the mainstay forage variety of kale in New Zealand for many years and since its introduction to the UK has become equally popular over here. Its high yields make it ideal for utilisation by dairy and beef cattle and as winter feed for sheep.

**Sowing rate 2.5 - 7.5kg/ha**

**Pack size 1kg & 5kg**

**Treatment Untreated**

## THOUSAND HEAD



Thousand Head kale is a reliable, consistent, medium tall kale with good standing ability. With good winter hardiness Thousand Head provides excellent yields.

**Sowing rate 2.5 - 7.5kg/ha**

**Pack size 1kg & 5kg**

**Treatment Untreated**



## PROTEOR



An excellent leafy variety with high leaf to stem ratio, therefore increasing palatability and stock utilisation. Proteor is a high yielding, medium height kale with winter hardiness and good disease resistance.

**Sowing rate 2.5 - 7.5kg/ha**

**Pack size 1kg & 5kg**

**Treatment Untreated**

## ASTERA



A very productive and leafy variety, characterised by its high yields. It is a very winter hardy variety producing high crude protein yields.

**Sowing rate 2.5 - 7.5kg/ha**

**Pack size 1kg & 5kg**

**Treatment Untreated**





# Root Mixtures & Arable Silage

## Root Mixtures

The following two catch crop mixtures combine the benefits of stubble turnips and forage rape, excellent for fattening lambs during autumn and winter providing winter keep for all stock. These mixtures have been in great demand over recent years and the results from stock utilisation have been excellent.

### RAPID ROOT (SAM2)



The forage rape element of this mixture ensures quick establishment and high protein yields, whilst the stubble turnips provide energy and stockholding capacity. The mixture is ideal for fattening stock.

Sow mid April - mid September.

65% Forage Rape  
30% Stubble Turnip  
5% Kale

100%

Sowing rate 6 - 8.5kg/ha  
Pack size 10kg  
Treatment Untreated

### WINTER GRAZE (SAM2)



A mixture of palatable, proven varieties exhibiting very good winter hardiness, which is improved by the addition of the kale.

Sow mid July - mid September.

60% Stubble Turnip  
35% Forage Rape  
5% Kale

100%

Sowing rate 6 - 8.5kg/ha  
Pack size 10kg  
Treatment Untreated

To comply with SAM2, cover crop grazing guidelines must be observed.

Stock should be introduced gradually over a two week period and an area of grassland should be available for animals to return to. Water, hay or straw should also be made available. Please contact your supplier for further guidance.

**Arable Silage Mixtures** offer an alternative or additional feed to grass or maize silage and are particularly suitable for farmers wishing to increase their levels of home-produced protein and reduce their reliance on purchased feed and fertiliser. They produce a cost-effective, high quality forage of consistent quality and palatability, with high yields of dry matter even in dry seasons and cold weather. They can be self-fed from the silage-face or as bales and their early harvest allows for earlier drilling of other autumn combinable crops or reseeded of grass.

## CONVENTIONAL MIXTURES

**Pea & Barley No.1**  
66% Spring Peas  
34% Spring Barley

**Barley Pro Plus No.2**  
50% Spring Barley  
20% Maple Peas  
20% Spring Peas  
10% Spring Vetch

**Oat Pro Plus No.3**  
50% Spring Peas  
25% Spring Barley  
25% Spring Oats

## ORGANIC MIXTURES

**Organic Pea & Barley No.1**  
35% Organic Spring Barley  
35% Organic Spring Peas  
30% Spring Peas

**Organic Barley Pro Plus No.2**  
50% Organic Spring Barley  
20% Organic Spring Peas  
20% Spring Peas or Bluetooth Peas  
10% Spring Vetch

**Organic Oat Pro Plus No.3**  
50% Spring Peas  
30% Spring Oats  
20% Spring Barley

## STRAIGHTS

Rather than grow a mixture, some growers prefer to grow a single crop on it's own. We can offer Vetch and Lucerne for these situations.

**Vetch**  
Packed in 25kg bags

**Organic Vetch**  
Packed in 25kg bags

**Lucerne (inoculated)**  
Packed in 25kg bags

**Organic Lucerne (inoculated)**  
Packed in 25kg bags

Contact us  
for more  
information

All mixtures are available packed in 500kg bags. Treatment: Various and Organic Untreated  
The suggested sowing rate for all mixtures is 150kg - 225kg per hectare. **Book early to avoid disappointment.**





A PRACTICAL GUIDE TO ENVIRONMENTAL, COVER CROP, GAME COVER AND FORAGE SEEDS 2024

# HUTCHINSONS

**Peter Brundle** Seeds Manager South • M: 07774 707494 E: [peter.brundle@hlhlt.co.uk](mailto:peter.brundle@hlhlt.co.uk)

**Stewart Macintyre** Seeds Manager North • M: 07834 933890 E: [stewart.macintyre@hlhlt.co.uk](mailto:stewart.macintyre@hlhlt.co.uk)

**David Bouch** Seeds Manager Hutchinson Group • T: 01526 831306 M: 07802 630107 E: [david.bouch@hlhlt.co.uk](mailto:david.bouch@hlhlt.co.uk)