

# ***HORIZON SEEDS***



## **Agricultural Seed Guide 2017**

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## Introduction

Welcome to our new 2017 Horizon Agricultural Seed Guide and may the team wish you a successful year ahead.

We hope you find our catalogue both informative and useful. Our product range offers you a comprehensive range of seeds and associated products, which are guaranteed to help you achieve the best possible crops.

Our dedicated team here in Suffolk pride themselves in their fast efficient service complimented with a friendly helpful and informative sales team.

Horizon seeds have been supplying the farming community for over 250 years and takes pride in its longevity and hold on passionately to its core values.

We offer a nationwide service through our network of knowledgeable sales agents and distributors supported by our enthusiastic team here in Suffolk.

Our technical team constantly, through trials, evaluate our products allowing us



**Jim Juby, Horizon Brand Manager**

to choose the best the market has to offer. We are able to assist you in your product selection based on trials data gathered over many years throughout the United Kingdom and Europe.

Horizon also works closely with its key suppliers making sure they understand and address farmers needs throughout the UK.

### TRADE ASSOCIATION MEMBERSHIP



**HORIZON SEEDS**

# Horizon Seeds Team



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*Managing Director*



Neil Groom  
*Technical Director*



Rod Clarke  
*Arable & Forage Specialist*



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# TRIUMPH

## Choose Triumph Leys

### Why Choose Triumph Grass Leys

**Our mixtures are blended using the latest varietal information from RGCL, the Scottish Colleges (SRUC) and AFBINI. The emphasis is on productivity with D values very much in mind. The aim is to produce a highly productive ley with excellent digestibility, high disease resistance and the required persistence.**

### Grass Varietal Choice and Quality

The herbage varieties chosen and specifically formulated in the following Triumph Cutting, Triumph Grazing, Triumph Dual Purpose and Triumph Specific Use Ley ranges consist of those consistently producing abundant yields of forage for that specific requirement. Being an independent seed house we have no restrictions on choice and the following factors, apart from the obvious pre-requisite of a high yield in the category required, which is vital, mean the varieties chosen must also have high values in as many of the following criteria as possible:-



D value or DOMD%, is a measure of digestibility being the content of the digestible organic matter in the dry matter – an important measure of herbage quality. High D value means high ME (Metabolisable Energy) levels. These ME levels are the

energy available for metabolism in animals for maintenance of body functions and for the production of growth. High D value forage gives increased dry matter intakes which means more milk or meat. Small differences in D values are significant and can have a pronounced effect upon animal intake and subsequent consequences in production and live weight gains. An improvement in D value by one unit can raise animal output by roughly 5%.

WSC – Water Soluble Carbohydrates – are sugars, and grass varieties high in WSC have important attributes under both cutting and grazing regimes. These sugars, inside the plant cells, are readily available as an energy source to allow better utilisation of protein leading to potentially increased dry matter intakes, higher milk yields and improved live weight gains to the grazing animal. Swards appear to have greater stock-carrying capacity and added benefits in reducing nitrogen excretions are also evident. High sugar grasses have for some time also been known to play an important role in silage making as the high sugar content stimulates lactic acid fermentation resulting in rapid pH reduction aiding better storage stability. WSC is highly correlated with ME and in most cases ME is a better indication of animal performance.

Good crude protein levels are an essential animal need to maintain body tissue and for production of milk/meat.

Low NDF (Neutral Detergent Fibre – leaf cell wall content) and high DNDF (digestibility of cell wall) figures which define the influence of nutrients and their rate of degradation which affects dry matter intake.

Other characteristics notably leaf weight, total area index and tensile strength have given useful morphological traits in actual animal grazing trials and hopefully when HVG recommence animal grazing preference trials we can progress further.

Good disease resistance to mildew, rhynchosporium, drechslera and crown rust. Not only can these diseases suppress yield but as importantly the infected grass is far less attractive to stock. Crown rust and drechslera are serious disease problems and an increasingly northerly regional spread is becoming much more evident – the Yorkshire NIAB trial site in late Autumn 2010 had 25% leaf area infected with crown rust and the same site recorded its highest levels of drechslera. A not uncommon 20% crown rust sward infection can reduce D value and lower WSC content by almost 4 units (% in dry matter) significantly reducing animal production.

## Triumph Leys

**“The green shoots of success”**

**Please note** – We Reserve the right to substitute a variety with a suitable alternative should it become unavailable. Any alteration to a mixture will be clearly shown on the bag label. Horizon Seeds standard terms and conditions apply.

**HORIZON SEEDS**

T R I U M P H   L E Y S



# TRIUMPH

## Triumph Clover Guide



### Red Clover

Red Clover is a high protein legume crop providing 15 - 21%, highly digestible forage. Its upright growth habit is well suited to cutting and rotational grazing. It provides high yields, typically 12-15t DM/ha per annum when grown with companion ryegrasses, and persists for up to four years. Using Italian and tetraploid ryegrasses high in WSC as companions helps alleviate the problems associated with ensiling low sugar content red clover.

### Sowing, Establishment and Management

- Red Clover grows on a wide range of soil conditions.
- Soil pH 6.0 or above and P and K indices at 2 or above to maximise growth.
- Sow April to early August. Spring sowings can be undersown with spring cereal at reduced seed rates, for grain or wholecrop, preferably the latter.
- Shallow sow into fine, firm tilth and roll well. A small amount of N is beneficial in getting the crop started and to sustain grass seedlings.
- 2-4 cuts for conservation can be taken late May/early June, after bud development, or 2 cuts followed by rotational grazing. Avoid cutting too low, Ensilage at 25-30 DM to minimise wilting losses.
- For improved root development, N fixation and longevity leave cutting in establishment year until after full flowering or if sown in Summer lightly graze in Autumn with lambs or young cattle.
- Yearly fertiliser applications of 100-150kg/ha phosphate and 200-300kg/ha potash, split between two applications.

### Advantages of Red Clover Leys

- Utilisation of fixed nitrogen by companion grass reducing the need for bagged fertilizer.
- Reduces the need for concentrate feeds. Typical red clover/ryegrass silage analysis:-Crude Protein 14-19%; ME 10-11 MJ/kg DM; pH 4.0-4.5
- The feed intake for cattle and sheep is higher for red clover/grass silage compared to grass only silage.
- Red clover/grass silage compared to grass only silage results in increased milk production in dairy cows and faster liveweight gains in beef cattle and lambs.
- Red Clover Leys improves soil fertility and structure with beneficial effects for subsequent crops.

### Care Management

Red Clover presents risks of bloat and management procedures to reduce or minimise this risk include:-

- Limiting access/grazing times to stock at introduction
- Avoid grazing in wet conditions
- Feed high dry matter forage like hay or straw before turning out.

### Oestrogen

High levels of phyto-oestrogen, particularly formononetin, are found in red clover and can cause ovulation problems in ewes. Avoid ewes grazing red clover pre and post tupping or even consuming ryegrass/red clover silage during this period

### White Clover

White Clover can significantly improve both the nutritional quality of the sward and its palatability. White Clover is high in protein; it enhances mineral levels and is invaluable when grasses are at their poorest. These attributes encourage increased forage intake with consequent improvements in livestock performance. The other benefits that are often forgotten are the "nitrogen fixing" capabilities of clover. Clover provides nitrogen to the companion grasses and to following crops as well as improving soil structure.

Some years ago we introduced two White Clover blends which have proved extremely popular. Both blends are constantly updated and combine the best characteristics of the leading varieties of White Clover, helping to achieve higher yields, improved persistence and excellent all round disease resistance all aimed at achieving a more reliable performance

### Triumph Premier Blend

This blend of large and medium leaved varieties is ideal for grassland systems where the principal need is for a clover that complements the requirements of conservation management. It is also the ideal choice for those situations where the sward may be grazed as well as conserved.

**35% Grasslands Bounty**

**20% Violin**

**30% Merwi**

**15% Alice**

### Triumph Prime Blend

This White Clover mixture is aimed at situations where hard defoliation is likely, for example, under regular sheep grazing. The mixture therefore contains a higher percentage of small leaved varieties.

**5% Crusader**

**50% Grasslands Bounty**

**15% Grasslands Demand**

**10% Saracen**

**20% Violin**

There will be a selection of the above varieties depending on the ley choice.

**HORIZON SEEDS**

TRIUMPH CLOVER





# TRIUMPH

## Triumph Grass Ley Selection Guide

MIXTURE	Page	Cutting Leys	Grazing Leys	Dual Purpose Leys	Specific Use Leys	Optimum production time	Clover content	Cutting Date*	kg per Acre
Clamp Filler	6					2 Years	Nil	12/05	14
2 Year Red Clover	6					2 Years	Red	12/05	12
Organic 2 Year Red Clover	6					2 Years	Red	14/05	12
Super Four	6					4 Years	Nil	13/05	14
Super Four Plus Clover	7					4 Years	White	13/05	12
4 Year Red Clover	7					4 Years	Red	15/05	14
Persistent Cut	7					6 Years	Nil	23/05	13
Persistent Cut With Timothy	7					6 Years	Nil	22/05	13
Early Graze	8					3 Years	White	n/a	13
Matrix 40	8					4 Years	White	n/a	12.5
Hard Grazer - Early	8					6 Years Plus	White	n/a	13
Hard Grazer - Late	9					6 Years Plus	White	n/a	13
Fine Horizon	9					6 Years Plus	White	n/a	13
Fine Horizon (No Clover)	9					6 Years Plus	Nil	n/a	13
Mow Graze	10					4 Years	White	18/05	14
Multi Purpose (No Clover)	10					4 Years	Nil	18/05	13
Organic Medium Term	10					4 Years	Red/White	22/05	13
Foremost	11					6 Years	White	20/05	13.75
Foremost (No Clover)	11					6 Years	Nil	20/05	13
Broad Horizon	11					6 Years	White	24/05	13.5
Prolific	12					6 Years Plus	Red/White	28/05	14
Organic Prolific	12					6 Years Plus	Red/White	28/05	13.5
Haymaker	13					2 Years	Red	10/05	10
Abundance	13					6 Years	Red/White	22/05	13
Organic Abundance	13					6 Years	Red/White	22/05	13
Horse Paddock	14					6 Years	Nil	n/a	13
Horse Paddock With Herbs	14					6 Years	Nil	n/a	13
Poultry & Smallstock	15					6 Years	White	n/a	15
Haylage	15					4 Years	Nil	18/05	14
Italian Ryegrass Blend	16					2 Years	Nil	12/05	12.5
Westerwolds	16					1 Year	Nil	n/a	12.5
Drought Star	16					4 Years	Nil	23/05	14
Short Term Overseeding	17					2 Years	Nil	20/05	10
Long Term Overseeding	17					4 Years	Nil	20/05	10

\* Cutting dates are approximate and may vary either way depending on location in the UK by up to 7 days.

**HORIZON SEEDS**

TRIUMPH LEYS



# TRIUMPH

## Triumph Cutting Leys



### TRIUMPH CLAMP FILLER

**2 YEARS OPTIMUM PRODUCTION  
14KG/ACRE PACK**

2.00kg	Gemini	Italian Ryegrass (Tet)
3.00kg	Udine	Italian Ryegrass (Tet)
4.00kg	Davinci	Italian Ryegrass
2.00kg	Belluna	Italian Ryegrass
3.00kg	Hymmer	Hybrid Ryegrass (Tet)

**14.00kg/Acre**

**Triumph Clamp Filler is our best selling short term conservation ley and offers:**

- Two full years of massive yields.
- Close range of D value dates for precise planning of the first silage cut.
- High quality silage yields
- Excellent Water Soluble Carbohydrate levels
- Udine (tetraploid) is the highest yielding Italian Ryegrass (113% of controls) in the year of sowing with an excellent disease resistance package and good winter hardiness.



### TRIUMPH 2 YEAR RED CLOVER LEY

**2 YEARS HIGH PROTEIN PRODUCTION  
12KG/ACRE PACK**

4.00kg	Udine	Italian Ryegrass (Tet)
2.50kg	Davinci	Italian Ryegrass
2.50kg	Belluna	Italian Ryegrass
3.00kg	Merviot	Red Clover

**Increase protein levels in your silage by using this ley:**

- Typically 12-15 tonnes DM/ha per annum
- Ideal where Summer drought can restrict herbage growth
- Merviot red clover shows good resistance to sclerotinia.
- Can be rotationally grazed in tandem with cutting regime,
- Management may be required to avoid bloat, and ewes should not graze pre or post tugging.

### ORGANIC 2 YEAR RED CLOVER LEY

**2 YEARS OPTIMUM PRODUCTION  
12KG/ACRE PACK**

0.6kg	Belluna	Italian Ryegrass	
5.4kg	Multimo	Italian Ryegrass	<b>ORGANIC</b>
3.0kg	Enduro	Hybrid Ryegrass	
3.0kg	Rajah	Red Clover	<b>ORGANIC</b>



#### 70% Organic inclusion

- A two year intensive silage and grazing ley
- High protein from the red clover.
- Excellent aftermath grazing or quick re-growth from the Italian and Hybrid Ryegrass content.

### TRIUMPH SUPER FOUR

**4 YEARS OPTIMUM PRODUCTION  
14KG/ACRE PACK**

5.00kg	Barsilo	Hybrid Ryegrass
3.00kg	Novial	Hybrid Ryegrass (Tet)
3.00kg	Astoncrusader	Hybrid Ryegrass (Tet)
3.00kg	Kirial	Hybrid Ryegrass (Tet)

**Triumph Super Four: a blend of unique characteristics**

- Yields comparable to Italian Ryegrass leys and significantly greater over the next 3 years!
- High percentage of tetraploid varieties produce a very palatable grass mixture.

### TRIUMPH SUPER FOUR PLUS CLOVER

Now available as above but, with the addition of either ½ kg and 1kg of Triumph Premier Blend White Clover.\*

\* For a more in depth description of Triumph Prime Blend White Clover see page 4



## HORIZON SEEDS

CUTTING LEYS



## Triumph Cutting Leys

### TRIUMPH 4 YEAR RED CLOVER LEY

#### 4 YEARS OPTIMUM PRODUCTION

##### 12KG/ACRE PACK

2.50kg	Amalgam	Hybrid Ryegrass (Tet)
2.00kg	Enduro	Hybrid Ryegrass (Tet)
1.50kg	Trintella	Inter Perennial Ryegrass (Tet)
1.50kg	Eurostar	Inter Perennial Ryegrass (Tet)
1.50kg	Twymax	Late Perennial Ryegrass (Tet)
1.50kg	Merviot	Broad Red Clover
1.50kg	Maro	Broad Red Clover (Tet)

#### There is no better mixture for medium term grass & clover production:

- Ideal for high protein grass & clover production.
- High tetraploid grass content and red clover inclusion makes this sward very drought tolerant.
- Maro & Merviot exhibit very high protein levels.
- Lower nitrogen requirement and excellent fertility builder.
- Can be rotationally grazed in tandem with cutting regime, but careful management may be required to avoid bloat, and ewes should not graze pre or post tugging as oestrogen in red clover can affect fertility.



A newly sown ley in Cumbria with red clover showing prominently

### TRIUMPH PERSISTENT CUT

#### 6 YEARS OPTIMUM PRODUCTION

##### 13KG /ACRE PACK

3.00kg	Copeland	Inter Perennial Ryegrass
2.00kg	Pensel	Inter Perennial Ryegrass (Tet)
2.25kg	Drift	Late Perennial Ryegrass (Tet)
2.00kg	Denver	Late Perennial Ryegrass
1.25kg	Drunbo	Late Perennial Ryegrass
1.25kg	Aspect	Late Perennial Ryegrass (Tet)
1.25kg	Pastour	Late Perennial Ryegrass

#### Triumph Persistent Cut is the ultimate medium/long term choice for intensive cutting all season long:

- Spread of heading dates to facilitate repeated cutting and giving high quality silage over several years.
- Repeated quality re-growth throughout the season from a selected very high yielding intermediates together with late Perennial Ryegrass varieties.
- High sugar content to improve fermentation and clamp energy.



### TRIUMPH PERSISTENT CUT - WITH TIMOTHY

Available with Timothy Comer preventing swards lodging and for colder areas with late Springs where it can make a useful contribution.

#### 6 YEARS OPTIMUM PRODUCTION

##### 13KG /ACRE PACK

3.00kg	Copeland	Inter Perennial Ryegrass
2.00kg	Pensel	Inter Perennial Ryegrass (Tet)
2.25kg	Drift	Late Perennial Ryegrass (Tet)
1.00kg	Denver	Late Perennial Ryegrass
1.25kg	Drunbo	Late Perennial Ryegrass
1.25kg	Aspect	Late Perennial Ryegrass (Tet)
1.25kg	Pastour	Late Perennial Ryegrass
1.00kg	Comtal	Timothy

**HORIZON SEEDS**

C U T T I N G   L E Y S

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## Triumph Grazing Leys

### TRIUMPH EARLY GRAZE

#### 3 YEARS OPTIMUM PRODUCTION

##### 13KG/ACRE PACK

1.75kg	Davinci	Italian Ryegrass
1.50kg	Belluna	Italian Ryegrass
2.00kg	Amalgam	Hybrid Ryegrass (Tet)
1.75kg	Moyola	Early Perennial Ryegrass
1.00kg	Kimber	Early Perennial Ryegrass
2.00kg	Trintella	Inter Perennial Ryegrass (Tet)
2.40kg	Novello	Late Perennial Ryegrass (Tet)
0.60kg	Triumph	Prime Blend* White Clover

#### Triumph Early Graze ideal for early ewes and lambs

- Combats the shortage of grass at critical times of the year- Spring and late Summer/Autumn therefore extending the grazing season.
- Amalgam Hybrid Ryegrass has exceptional yields and a strong disease package.
- Excellent early bite from high quality early Italian ryegrass varieties followed by leafy Hybrids and specifically chosen highly digestible Perennials.

### TRIUMPH MATRIX 40

#### 4 YEARS OPTIMUM PRODUCTION

##### 12.5KG/ACRE PACKED IN 25 KG BAGS

40%	Matrix	Festulolium Ryegrass (Tet)
35%	Twymax	Late Perennial Ryegrass (Tet)
7.5%	Cancan	Late Perennial Ryegrass
7.5%	Romark Late	Perennial Ryegrass
10%	Ensign	White Clover



Matrix 40 provides an extended grazing period. It contains 40% Matrix enhanced ryegrass which was developed by Cropmark® in New Zealand and it is a complex inter-genetic hybrid consisting of about 80% diploid pasture perennial ryegrass and 20% New Zealand Meadow Fescue.

- Matrix 40 provides an extended grazing season and very rapid re-growth.
- Especially suited to paddock management or rotational grazing systems, but it can also be used for set stocking.
- Grows at lower temperatures than ryegrass giving up to 3 weeks extra growth in the spring and an extra 3 weeks at the end of the season.
- Very rapid regrowth particularly when defoliated at the 3 leaves per tiller stage.
- Very dense fine leaved disease free sward resists poaching and treading.
- Complex genetic make up enhances forage quality and digestibility. High ME content and high digestibility giving stock preference. Low aftermath heading.
- For best results graze when there are 3 leaves per tiller.



### TRIUMPH HARD GRAZER – EARLY

#### HIGH CLOVER CONTENT LEY

##### LONG TERM

##### 13KG /ACRE PACK

2.00kg	Moyola	Early Perennial Ryegrass
1.25kg	Solomon	Inter Perennial Ryegrass
1.25kg	Copland	Inter Perennial Ryegrass
1.25kg	Pensel	Intermediate Perennial Ryegrass (Tet)
1.00kg	Twymax	Late Perennial Ryegrass (Tet)
2.50kg	Novello	Late Perennial Ryegrass (Tet)
1.25kg	Cancan	Late Perennial Ryegrass
0.50kg	Comer	Timothy
0.50kg	Comtal	Timothy
1.50kg	Triumph	Prime Blend* White Clover

#### Long term grazing with early season production:

- Persistent, long term grazing ley.
- High clover content of diverse clover varieties – covering small and medium types.
- Prime Clover has excellent ground cover and yield scores (top rated A for both light and hard defoliation).
- Suiting both sheep and cattle grazing.
- Now includes the new high yielding perennial ryegrass Pensel, chosen for its seasonal distribution of grazing capability, as well as its high digestibility and excellent disease resistance.
- Contains mainly cultivars either with proven acceptability in animal intake variety trials, or those having very good aftermath digestibility.
- High Grazing D values for maximum conversion to milk and meat.

\* For a more in depth description of Triumph Prime Blend White Clover see page 4

## HORIZON SEEDS

G R A Z I N G L E Y S



## Triumph Grazing Leys

### TRIUMPH HARD GRAZER – LATE

#### HIGH CLOVER CONTENT LEY

##### LONG TERM

##### 13KG /ACRE PACK

1.75kg	Solomon	Inter Perennial Ryegrass
1.50kg	Dunluce	Inter Perennial Ryegrass (Tet)
2.00kg	Drumbo	Late Perennial Ryegrass
1.50kg	Novello	Late Perennial Ryegrass (Tet)
2.00kg	Cancan	Late Perennial Ryegrass
1.75kg	Xenon	Late Perennial Ryegrass (Tet)
0.50kg	Comer	Timothy
0.50kg	Comtal	Timothy
1.50kg	Triumph Prime Blend*	White Clover

#### Long Term Grazing with late season production:

- Winter hardy, persistent, long term grazing ley.
- High clover content of diverse clover varieties – covering small and medium types for enhanced voluntary intake, suiting both sheep and cattle grazing.
- Contains the new nutritious variety Xenon (the best sward density score of all Tetraploids combined with one of the highest quality D value scores) good bottomed sward with very fast recovery capabilities.
- Mixture will produce a high sugar content, highly digestible grass sward, giving excellent meat or milk conversion ratios.



### TRIUMPH FINE HORIZON

#### LONG TERM

##### 13KG /ACRE PACK

3.00kg	Drumbo	Late Perennial Ryegrass
3.00kg	Clanrye	Late Perennial Ryegrass
2.00kg	Dundrum	Late Perennial Ryegrass (Tet)
2.00kg	Ideal Late	Perennial Ryegrass (Tet)
2.00kg	Bijou	Late Perennial Ryegrass (Tet)
1.00kg	Triumph Prime Blend*	White Clover



#### Triumph Fine Horizon – our premier grazing ley

- Produces a persistent dense Winter hardy sward – huge grass yields with capability of rapid re-growth.
- Varied seasonal growth pattern but close heading date spread of only 7 days for enhanced quality.
- Excellent mid-season digestibility.
- Good Spring growth and best attainable grazing yields in that critical July/August period with the added benefit of excellent crown rust resistance.
- Enables maximum grazing without poaching.

### TRIUMPH FINE HORIZON – NO CLOVER

#### LONG TERM

##### 13KG/ACRE PACK

3.50kg	Drumbo	Late Perennial Ryegrass
3.00kg	Clanrye	Late Perennial Ryegrass
2.00kg	Dundrum	Late Perennial Ryegrass (Tet)
2.50kg	Ideal Late	Perennial Ryegrass (Tet)
2.00kg	Bijou Late	Perennial Ryegrass (Tet)

\* For a more in depth description of Triumph Prime Blend White Clover see page 4

**HORIZON SEEDS**

G R A Z I N G L E Y S





## Dual Purpose Leys

### TRIUMPH MOW GRAZE

4 YEARS OPTIMUM PRODUCTION

#### 14KG/ACRE PACK

2.00kg Kirial	Hybrid Ryegrass (Tet)
2.00kg Astoncrusader	Hybrid Ryegrass (Tet)
2.75kg Moira	Inter Perennial Ryegrass
2.00kg Seagoe	Inter Perennial Ryegrass (Tet)
1.50kg Fintonna	Inter Perennial Ryegrass (Tet)
3.00kg Clanrye	Late Perennial Ryegrass
0.75kg White Clover Triumph Premier Blend*	

**Triumph Mow Graze designed for flexibility is ideal for grazing or cutting as the need arises**

- High quality, easy management are the key attributers of this mixture.
- Includes Amalgam for improved yields and higher disease resistance.
- Designed for early grazing and heavy silage cuts followed by good leafy aftermath grazing during late Summer and Autumn.
- The high tetraploid content ensures efficient silage fermentation and provides very palatable grazing with improved dry-matter intakes.
- Reasonable drought tolerance.



### TRIUMPH MULTI PURPOSE - NO CLOVER

4 YEARS OPTIMUM PRODUCTION

#### 13KG/ACRE PACK

2.00kg Amalgam	Hybrid Ryegrass (Tet)
2.50kg Solomon	Inter Perennial Ryegrass
2.50kg Trintella	Inter Perennial Ryegrass (Tet)
1.85kg Eurostar	Inter Perennial Ryegrass (Tet)
1.50kg Cancan	Late Perennial Ryegrass
1.65kg Pastour	Late Perennial Ryegrass
1.00kg Comer	Timothy

**Triumph Multi Purpose fulfils a range of production options without compromising either yield or quality**

- Fully flexible over a prolonged season early spring grazing plus heavy, high D value cuts and quality aftermath grazing from varieties that maintain D value well.
- A quality multi-use ley, excluding early heading perennial ryegrass, that will adapt and yield well to varied farmer requirements.
- Option for farmers requiring mixture without clover.

### Organic Medium Term Dual Purpose

1.6kg Bree Perennial Ryegrass (PRG)	
2.1kg Calibra (PRG)	<b>ORGANIC</b>
2.1kg Premium (PRG)	<b>ORGANIC</b>
2.1kg Trintella (PRG)	<b>ORGANIC</b>
2.8kg Foxtrot (PRG)	<b>ORGANIC</b>
0.8kg Merviot Red Clover	
0.75kg Grasslands Bounty White clover	
0.75kg Alice White Clover	



#### 13 kg/ac

#### 70% Organic inclusion

A clover rich mixture for 4 years optimum production. This ley has more than twice the clover content of a comparable conventional ley.

\* For a more in depth description of Triumph Prime Blend White Clover see page 4

**HORIZON SEEDS**

DUAL USE LEYS



# TRIUMPH

## Dual Purpose Leys



### TRIUMPH FOREMOST

6 YEARS OPTIMUM PRODUCTION

13.75KG/ACRE PACK

2.00kg	Dunluce	Inter Perennial Ryegrass (Tet)
1.50kg	Soloman	Inter Perennial Ryegrass
1.75kg	Pensel	Inter Perennial Ryegrass (Tet)
2.00kg	Drift	Late Perennial Ryegrass (Tet)
2.50kg	Drumbo	Late Perennial Ryegrass
1.00kg	Twymax	Late Perennial Ryegrass (Tet)
2.25kg	Cancan	Late Perennial Ryegrass
0.75kg	Triumph Premier Blend*	White Clover

#### A superb ley for heavy cutting yields and quality grazing.

- The perfect balance of high quality cultivars for the discerning farmer.
- Now includes the new **Pensel Perennial Ryegrass** for its impressive first cut potential and exceptional disease resistance package which includes a score of 9 against crown rust. Also exhibits a good seasonal distribution of grazing yields.
- All three diploids are high yielding dual purpose quality varieties no more so than the variety **Drumbo** high in WSC with high yields and exuding quality. Will provide good ground cover.
- Good Spring growth without early heading.
- **Clover Blend includes highly rated medium and large leaved varieties which will compliment mixed management perfectly.**

### TRIUMPH FOREMOST – NO CLOVER

6 YEARS OPTIMUM PRODUCTION

13KG/ACRE PACK

As above minus Premier Clover Blend

### TRIUMPH BROAD HORIZON

6 YEARS OPTIMUM PRODUCTION

13.5KG/ACRE PACK

2.00kg	AberClyde	Inter Perennial Ryegrass (Tet)
1.50kg	AberDart	Inter Perennial Ryegrass
1.50kg	AberWolf	Inter Perennial Ryegrass
1.00kg	AberGreen	Inter Perennial Ryegrass
2.00kg	AberAvon	Late Perennial Ryegrass
3.50kg	AberGain	Late Perennial Ryegrass (Tet)
1.00kg	Presto	Timothy
1.00kg	Triumph Premier Blend *	White Clover



**Triumph Broad Horizon a true blockbuster of a mixture! This ley has been one of Horizon Seeds premier leys for many years.**

- The best of varieties available including IBERS Aber High Sugar grasses ensuring forage of both high yield and quality.
- High yielding with high sugar content for cutting and grazing regimes.
- High herbage intakes are guaranteed with the inclusion of the proven very high quality late cultivars AberAvon and AstonPrincess with their excellent Grazing D value scores.
- Will produce an abundance of top quality grazing from early Spring to late Autumn with excellent palatability and high digestibility.
- Has a close D value range allowing for planned and effective grassland management - whatever the system
- Both AberGreen(2015) and AberDart are NIAB Variety Cup Winners.



\* For a more in depth description of Triumph Prime Blend White Clover see page 4

## HORIZON SEEDS

DUAL USE LEYS



# TRIUMPH

## Dual Purpose Leys



### TRIUMPH PROLIFIC

#### LONG TERM

#### 14KG/ACRE PACK

2.25kg	Pensel	Inter Perennial Ryegrass (Tet)
1.25kg	Solomon	Inter Perennial Ryegrass
2.00kg	Drift	Late Perennial Ryegrass (Tet)
2.00kg	Drumbo	Late Perennial Ryegrass
2.00kg	Twymax	Late Perennial Ryegrass (Tet)
1.25kg	Cancan	Late Perennial Ryegrass
1.00kg	Comer	Timothy
1.00kg	Comtal	Timothy
0.50kg	Merviot	Red Clover
0.25kg	Grasslands Demand	White Clover
0.50kg	Triumph Premier Blend*	White Clover

**Triumph Prolific is an excellent winter hardy ley and so remains our best selling mixture, popular throughout the whole of the UK**

- High quality grazing and high cutting yields.
- The high Timothy content enhances winter hardiness, gives good mid-season production and palatability as well as providing valuable early spring growth on colder sites.
- The perennial ryegrass varieties have been specifically chosen for their combined attributes of high yields, good sward density and palatability. Drift and Twymax ensure very high 2nd Cut silage yields with the late perennial content, particularly Drumbo and Cancan providing superb quality later grazing.
- Triumph Prolific has been blended to provide one or even two heavy silage cut yields and quality grazing.
- Well suited to heavier more fertile soils.
- Clover balance compliments the sward perfectly.

\* For a more in depth description of Triumph Prime Blend White Clover see page 4



### ORGANIC PROLIFIC LEY

1.8kg	Calibra (PRG)	<b>ORGANIC</b>
1.6kg	Premium (PRG)	<b>ORGANIC</b>
1.1kg	Foxtrot (PRG)	<b>ORGANIC</b>
1.35kg	Asturion (PRG)	<b>ORGANIC</b>
2.0kg	Polim (PRG)	<b>ORGANIC</b>
1.6kg	Trintella (PRG)	<b>ORGANIC</b>
2.05kg	Erecta Timothy	
0.5kg	Merviot Red Clover	
0.75kg	Grasslands Bounty White Clover	
0.75kg	Alice White Clover	

#### 70% Organic inclusion

A clover rich Prolific type mixture for long term cutting and grazing.



**HORIZON SEEDS**

DUAL USE LEYS



## Specific Use Leys

### TRIUMPH HAYMAKER

#### 2 YRS OPTIMUM PRODUCTION 10KG/ACRE PACK

4.00kg	Davinci	Italian Ryegrass
2.00kg	Belluna	Italian Ryegrass
2.00kg	Moyola	Early Perennial Ryegrass
2.00kg	Merviot	Red Clover

#### A specialist hay mix – as suggested by the name.

- Red Clover increases the protein content of the forage and provides good aftermath grazing – particularly useful for fattening lambs.
- Carefully chosen Italian and Perennial content for both yield and quality.
- High diploid content to endure clean, fibrous hay production.
- Moyola has the highest grazing yields of all varieties in the early range coupled with a high grazing D value score.
- Excellent benefits to soil fertility and subsequent crops reducing the required amounts of expensive bagged fertiliser.
- Rapid re-growth after cutting or grazing and very tolerant of Summer drought conditions.
- **Triumph Haymaker** is the only choice for high yielding hay with excellent quality.



### TRIUMPH ABUNDANCE

#### 6 YEARS OPTIMUM PRODUCTION 13KG/ACRE PACK

1.50kg	Enduro	Hybrid Ryegrass(Tet)
1.50kg	Trintella	Intermediate Perennial Ryegrass(Tet)
1.00kg	Eurostar	Intermediate Perennial Ryegrass(Tet)
1.50kg	Solomon	Intermediate Perennial Ryegrass
1.50kg	Pastour	Late Perennial Ryegrass
2.00kg	Twymax	Late Perennial Ryegrass(Tet)
1.50kg	Bolide	Cocksfoot
0.50kg	Comer	Timothy

0.50kg	Comtal	Timothy
0.50kg	Merviot	Red Clover
1.00kg	Triumph Prime Blend*	White Clover

#### Triumph Abundance is a modern “Cockle Park” type mixture.

- Containing a wide range of species for even production of very palatable forage throughout the season and is suitable for cutting or grazing.
- Now includes Amalgam for improved yields and improved disease resistance.
- Bolide Cocksfoot, a French bred drought tolerant variety, has very good cutting yields, good ground cover and very good spring grazing yields. Its soft leaf qualities, good disease resistance and proven animal acceptance provides improved quality and intake benefits.
- Hybrid content gives a boost to yields in early years and gives some early production in late areas but **Triumph Abundance** is primarily based on later heading intermediate and late perennial ryegrass.
- High content of tetraploid varieties are included for their better resistance to drought and their high sugar content to alleviate the lower WSC content of the Cocksfoot.
- Triumph Prime Blend White Clover enhances the feed value of the sward, palatability and soil fertility.



### ORGANIC Abundance Type Ley

#### 13KG /ACRE PACK

1.2kg	Enduro	Hybrid Ryegrass	
2.6kg	Trintella (PRG)		<b>ORGANIC</b>
1.6kg	Premium (PRG)		<b>ORGANIC</b>
1.25kg	Foxtrot (PRG)		<b>ORGANIC</b>
2.1kg	Polim (PRG)		<b>ORGANIC</b>
1.05kg	Comer	Timothy	<b>ORGANIC</b>
1.2kg	Prairial	Cocksfoot	
0.5kg	Rajah	Red Clover	<b>ORGANIC</b>
0.75kg	Grasslands bounty	White Clover	
0.75kg	Alice	White Clover	

#### 70% Organic inclusion

An organic version of a modern “Cockle Park Mixture” with a high clover content.



# HORIZON SEEDS

S P E C I F I C L E Y S



# TRIUMPH

## Specific Use Leys

### TRIUMPH HORSE Paddock

LONG TERM – 6 YEARS PLUS

13KG/ACRE PACK

2.00kg	Copland	Inter Perennial Ryegrass
2.00kg	Matiz	Late Perennial Ryegrass
2.00kg	Pastour	Late Perennial Ryegrass
3.00kg	Romark	Late Perennial Ryegrass
1.50kg	Comer	Timothy
2.00kg	Heidrun	Creeping Red Fescue
0.50kg	Geronimo	Smooth Stalked Meadow Grass



### TRIUMPH HORSE Paddock HERBS

#### Mixture Information

Available in 1kg packs  
Sow at 250-500g/Acre



#### Mixture Formulation

0.35kg	Chicory
0.25kg	Burnet
0.10kg	Ribgrass
0.30kg	Sheep's Parsley

**Specially developed for horses and ponies, Triumph Horse Paddock Herbs includes deep rooting and nutritious species.**

- Our mixed herbs can be added to our Triumph Horse Paddock Mixture (250 – 500gm per acre)
- It is also possible to sow the Herb Mixture in strips within the field which may often provide better establishment.
- Provides a good source of minerals and trace elements.

#### A high yielding horse grazing mixture

- Triumph Horse Paddock is based on leafy varieties with high grazing yields and very good ground cover. This provides a durable “bottom” and is essential for a good horse paddock.
- A quality Horse Paddock mixture with no “fillers” as is often the case with competitors comparative mixtures.
- The Mixture will provide high early Summer growth as well as late Summer grazing and Autumn yields, ensuring a high intake of palatable grass throughout the year.
- Ideal for hay production if required with plenty of fibrous and low sugar species.
- The Creeping Red Fescue and Smooth Stalked Meadow Grass content contributes to a dense sward and their creeping habit gives rapid recovery from any turf damage.



**HORIZON SEEDS**

S P E C I F I C L E Y S



## Specific Use Leys



### TRIUMPH HAYLAGE

**4 YEARS OPTIMUM PRODUCTION**

**14KG/ACRE PACK**

2.00kg	Enduro	Hybrid Ryegrass (Tet)
2.00kg	Amalgam	Hybrid Ryegrass (Tet)
2.00kg	Pensel	Intermediate Perennial Ryegrass (Tet)
2.00kg	Solomon	Intermediate Perennial Ryegrass
3.00kg	Copeland	Intermediate Perennial Ryegrass
2.00kg	Matiz	Late Perennial Ryegrass
1.00kg	Comtal	Timothy

#### A high quality horse haylage mixture.

- Triumph Haylage is designed specifically to give up to 4 years of quality haylage production.
- The varieties have been carefully selected for their disease resistance, to give a clean sward and thus a clean end product.
- Triumph Haylage ley can be grazed for ease of management.
- The inclusion of Comtal Timothy, a variety with very high yields in the 1st harvest year and over a 3 year mean, will enhance the "nose" or aroma, which is a must in any haylage mixture.

### TRIUMPH POULTRY & SMALLSTOCK

**6 YEARS OPTIMUM PRODUCTION**



**15KG/ACRE PACK**

2.25kg	Premium	Mid-Season Perennial Ryegrass
2.25kg	Portstewart	Late Perennial Ryegrass
1.20kg	Elgon	Late Perennial Ryegrass (tet)
3.00kg	Mondial	Amenity Perennial Ryegrass
2.25kg	Cosmolit	Meadow Fescue
2.25kg	VNS	Creeping Red Fescue
1.05kg	Erecta	Timothy
0.75kg	Grasslands Bounty	White Clover

#### A blend of dense and hard wearing grasses suitable for all classes of stock, including pigs and poultry.

- Triumph Poultry & Smallstock Ley will offer good consistent long season grazing over a number of years.
- If the area is closed off a high quality hay cut can also be achieved.
- This ley is ideal for pigs and poultry or for low stocking rates of sheep and cattle so is ideal for smallholders.
- Includes white clover for nitrogen fixation.
- A fail-safe mixture designed especially for low input systems.



Do you have a specific grass seed ley requirement that isn't covered in our listings?

Contact your local agent or our office and we will do our best to meet your needs

**HORIZON SEEDS**

S P E C I F I C L E Y S





## Specific Use Leys

### TRIUMPH ITALIAN RYEGRASS BLEND

**2 YEARS OPTIMUM PRODUCTION**

**25KG/2 ACRE PACK**

12.5kg Italian Ryegrass (Tet)

12.5kg Italian Ryegrass (Dip)

- Fast growing and quick establishing
- Ideal for undersowing
- Autumn or spring sow for high yields of quality Autumn, Winter and Spring feed.
- High digestibility and high yields.



### TRIUMPH WESTERWOLDS

**1 YEAR OPTIMUM PRODUCTION**

**25KG/2ACRE PACK**

Westerwolds is an annual type of Italian Ryegrass and is the fastest growing grass. Westerwolds are ideal for use when high production is required within 3-6 months after sowing. Modern Westerwold varieties are bred to be more winter hardy than the original strains.

- Suitable for silage, hay production and zero grazing.
- Ideal catch crop after maize harvest for very early Spring growth.
- Also useful as a companion grass for slower establishing species.

### TRIUMPH DROUGHT STAR

CONTAINS FESTULOLIUM

**4 YEARS OPTIMUM PRODUCTION**

**14KG/ACRE PACK**

5.00kg Lofa Festulolium Ryegrass (Tet)

2.00kg Amalgam Hybrid Ryegrass (Tet)

2.00kg Copland Inter Perennial Ryegrass

2.00kg Drift Late Perennial Ryegrass (Tet)

1.00kg Comtal Timothy

2.00kg Bolide Cocksfoot

**This is a new deep rooting mixture suitable for mainly cutting in drought prone areas for silage or haylage production.**

- Contains Lofa Festulolium, a relatively new variety which is an Italian Ryegrass crossed with a tall fescue, but selection has been from ryegrass type plants giving it the performance of an improved hybrid.
- Lofa is extremely drought tolerant as is Bolide Cocksfoot, so can provide a solution to extreme conditions.
- Mixture will provide early spring growth and maintain high yields.
- Phosphate and potash levels need to be maintained to ensure good rooting and general plant health.
- Sward can be grazed, and management of sward to keep the cocksfoot from going too 'stemmy' is recommended.

### Horizon Organic Straight Red clover

**4.6 kg/Acre pack**

3.22kg Rajah Red Clover

1.38kg Corvus Red Clover

70% Organic inclusion

Red clover for fertility building, natural atmospheric nitrogen is fixed through the root nodules. A good start for following cereal crops.



**HORIZON SEEDS**

S P E C I F I C L E Y S



FULL OVERSEEDING GUIDELINES ARE AVAILABLE UPON REQUEST — PLEASE CALL THE HORIZON SEEDS OFFICE FOR MORE INFORMATION.

## Overseeding

### Overseeding Guidelines

#### Timing

Obviously aim for when the sward is at its lowest height, immediately after a silage cut or very hard grazing, preferably after first cut silage or late in the year as there is not only more opportunity for favourable weather to give the required moisture but your loss of production is minimal.

#### Sowing

The cheapest and simplest form of establishing overseeding is **broadcasting** by fertiliser spreader followed by harrowing and rolling. More expensive but giving better results are **slot seeding** (preferably by machines specifically designed for that purpose ~ not cereal drills) and **harrowing and seeding**, again purpose built machines giving accuracy and good results

Sow your Selected Triumph Overseeding Mixture at 10kg per acre ~ up rates to 12kg per acre for severely thin or damaged areas.

#### Fertiliser and Use

Do not apply fertiliser until 2 to 3 weeks after sowing. As in newly seeded leys a short period should be left before a light graze by young stock or sheep when growth is 4 inches high or so. This will help to encourage tillering in your new growth.

**Dramatically increase your yields from thin or damaged open swards without the cost or loss of use of a full re-seed through rejuvenation by OVERSEEDING.**

### OVERSEEDING MIXTURES

Large seeded tetraploid varieties with vigour are quick to establish and will give lasting improvement in both silage yields and grazing performance. As well as having good drought tolerance and winter hardiness these chosen tetraploid cultivars will give an excellent conservation performance together with improved forage intake.

#### Triumph Short Term Overseeding

2.50kg Fabio	Italian Ryegrass (Tet)
2.50kg Kirial	Hybrid Ryegrass (Tet)
2.50kg Malone	Intermediate Perennial Ryegrass (Tet)
2.50kg Ideal	Late Perennial Ryegrass (Tet)

#### 10.00kg/acre pack

#### Triumph Longer Term Overseeding

2.50kg Kirial	Hybrid Ryegrass (Tet)
2.50kg Bijou	Late Perennial Ryegrass (Tet)
2.50kg Malone	Intermediate Perennial Ryegrass (Tet)
2.50kg Ideal	Late Perennial Ryegrass (Tet)

#### 10.00kg/acre pack



The picture shows a Carre Prairial machine which is an ideal tool for grass regeneration without using the plough!

**HORIZON SEEDS**

O V E R S E E D I N G

Tel: 01379 873377

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# LUCERNE – ANOTHER HIGH PROTEIN SILAGE OPTION

## Why grow Lucerne

Drought tolerant–deep rooted Lucerne (Alfalfa) thrives in drought conditions with excellent yields particularly in dry seasons.

High protein content around 20–22% makes a valuable contribution to any mixed forage diet. Mainly silage cutting, big baled or clamped, with some aftermath grazing. Three to four silage cuts per year, cut at 6–8 week intervals. Yields up to 15 tonne DM/ ha per annum. Typical Dry Matter 60–62% and ME 10–11 MJ/kg D. Improves soil fertility and benefits future cropping. Usually lasts 4 years.

## Soil type

- Requires deep, free-draining soils where a firm, fine seedbed can be prepared. Useless on unfissured rock or where pans exist and will not tolerate waterlogging where it can die out rapidly.
- Needs a pH of at least 6.5 to 7.0 in the topsoil, and a subsoil minimum pH of 6.0 to at least 30cm deep. Lucerne cannot tolerate acid conditions but thrives on chalk and limestone.



## Sowing

- Lucerne seed needs to be inoculated with a suitable strain of rhizobia bacteria just before being sown. **Our varieties are now mainly pre-treated with inoculant.**
- Can be sown alone to allow chemical treatment of weed grasses, or with a non-aggressive companion grass which can smother weeds and also help with silage fermentation.

- Suggested companion grasses include meadow fescue and timothy, although the higher sugars in a tetraploid intermediate perennial ryegrass could be helpful in ensiling.
- Suggested seed rates are 8kg/acre lucerne alone or 6kg/acre lucerne drilled 10–12mm deep in rows 100–180mm apart, with 2kg/acre companion grass cross drilled to avoid close competition with the young lucerne plants. Can also be sown with red clover as companion.
- Sow between late April and mid July. Seedlings need to start winter well established as winter kill can reduce plant population in late sown slow developing crops. Best sown in spring in the North and Midlands and during the summer in the South. Can be undersown with 40kgs/acre (half rate) of spring barley to be cut for silage.

## Crop Management

Established stands should be allowed to develop a large bulk before cutting, with first cut taken around mid May as soon as flower buds appear. Subsequent cuts should be taken not later than the opening of the first flowers (6 weeks). Delayed cutting will give a more fibrous material seriously reducing digestibility. Cutting too early can weaken the stand and over frequent cutting can kill it. The crop needs to be cut leaving an approx 8cm stubble.

Lucerne has a low soluble carbohydrate level and on ensiling one needs to be aware of possible fermentation problems. Use an approved additive.

Autumn management is critical. The crop should be rested for 8 weeks from the end of August to the end of October to allow a buildup of root reserves. Crops can then be grazed or cut, or allowed to die back.

Seedbed fertiliser treatment will depend on soil index, but N is only worthwhile on N index 0 or where a companion grass is used.

Maintenance fertiliser will again depend on soil index, with a P and K requirement of up to 60kg/ha per annum.



**HORIZON SEEDS**

L U C E R N E



# LUCERNE

## Neptune

Provides a high protein content (18-20%) silage for up to 4 years with 4 cuts per year. It has very good disease resistance to pests and diseases including; nematodes, verticillium and anthracnose. The silage can be clamped or big baled.

## Daisy

Daisy is a Flemish dormant type with medium thick stems. Daisy has a medium early Spring growth, early flowering and a very vigorous growth in Summer and Autumn.

## Gea

Versatile variety with good cold tolerance. High yielding producing a quality forage with a high leaf/stem ratio. Strong root growth and fast regrowth make this a very desirable variety. Gea is noted for its high percentage of digestible protein.

## Marshall

A reliable variety that has been grown successfully in the UK for a number of years. It's high DM yields, persistency and good drought tolerance makes the variety ideally suited to UK conditions.

## Tango

Very high yielding semi-dormant variety. Can be used for hay, haylage or silage. High resistance to pests and diseases. Performs well in the UK climate.



# SAINFOIN



## Hunter River (Organic)

Hunter River, requires alkaline to neutral soils, well drained and high fertility, Spring, Summer growing. Sow Autumn Winter and in temperate areas, Spring.

## GalaxyMax (Mixture)

High performance varieties giving high yields with excellent protein levels and good disease resistance.



## Sainfoin

High Protein four year ley ideal for finishing lambs. Sainfoin also has good medicinal benefits for all types of stock. Tannin content gives improved utilisation of protein by the animal, and acts as a natural wormer, reducing worm population both in the stock and in the field. Tannins help prevent bloat. With very deep roots sainfoin is very drought tolerant suiting dry, free draining soil. Sainfoin makes high quality hay and can also be ensiled or grazed.

A sainfoin ley should be managed carefully. Sainfoin produces a cut of silage in early June. Hay may be taken if preferred. Sainfoin should be cut during early flowering but may be delayed without much loss of feed value if needed. Re-growth is less than for the first cut and may be cut again or grazed. Grazing should be light and quick to avoid damage to the plant. Never set stock or it will become thin. Sainfoin seed can be undersown to spring cereals or direct drilled in April or May at around 30mm. (If undersown the cereal sowing rate should be reduced to 40 kg per acre.)

Sainfoin can be used as part of farmers greening measures, as a 'pasture legume' or a 'nitrogen fixing crop' option.



# ARABLE SILAGE MIXTURES

Arable silage offers a cost-effective, high quality, alternative or additional feed to grass or maize silage, cereals in particular are versatile as they can be grown anywhere in the UK under a wide range of conditions and will produce consistently high yields of dry matter, even in dry seasons and cold weather. Arable silage mixtures provide a useful source of home produced protein!

Because whole crop cereals are in the ground for a short time(12-14 weeks), their early harvest allows earlier reseeded or drilling of other autumn combinable crops.

They also provide the opportunity to be used as a cover crop for establishing an under-sown grass crop; when using this option the cover crop seed rate should be reduced. The mixture should be drilled as normal and the grass broadcast immediately afterwards, followed by a light Cambridge roll.

Harvesting should ideally take place when the pods are about to fill and flowering remains to the top of the plant.

## BIP MIX

60% Spring Peas

40% Spring Barley

**Sowing rate: 75kg per acre**

**50kg per acre if undersown with grass**

Excellent protein rich wholecrop with the added benefit of residual nitrogen fixed by the peas for the following crop. Ready in 12 to 14 weeks. If undersowing drill cereals in normal way then broadcast grass on top and light Cambridge roll.



**Can't see the Silage Mixture you are looking for?  
Please contact us and we will be only to pleased to help**

## PIB MIX

60% Spring Barley

40% Spring Peas

**Sowing rate: 75kg per acre**

**50kg per acre if undersown with grass**

A Barley rich mixture proving very popular.



## BOP MIX

40% Spring Barley

40% Spring Peas

20% Spring Oats

**Sowing rate: 75kg per acre**

**50kg per acre if undersown with grass**

A traditional wholecrop mixture with Oats included.

**We also produce mixtures with Triticale and Vetch.**

**ORGANIC mixtures are also available**

Adding Peas to your wholecrop silage can increase protein by 40 - 60%. Yields can often be 23 to 25 tonnes per hectare of fresh crop of high protein forage suitable for dairy cow or beef cattle finishing systems.

**Typical wholecrop analysis – fermented:**

Dry matter	30 - 40%
ME	9 - 11MJ/kg
Crude Protein	9 - 11%
pH	4.0 - 4.6

**HORIZON SEEDS**

S I L A G E M I X E S

# FODDER CROPS GUIDE

## Why Grow your own Fodder?

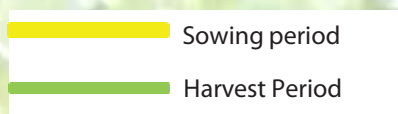
- Economical to grow
- Fully traceable feed
- Reduced reliance on buying in feed
- Ideal break crops
- Crop flexibility
- Ideal components of a mixed forage diet

The use of various seed treatments on fodder crops is worth a mention here. Many varieties of many species will come as Treated seed this dressing would be to counter "damping off". Fodder beet is often available with Gaucho which is a treatment against wireworm attack, a new wireworm dressing called Nuprid will be available this year.

Neonicotinoids have received an EU wide ban for two years in an attempt to help the bee population. Cruiser will however be available on some varieties of Kale and Swede as they do not "flower" during the year of use. For protection against flea beetle attack on other crops you will need to consult your agronomist.

**If you do not see the variety you are looking for this does not mean we do not supply it but rather it is impossible to put everything in a catalogue and still be able to carry it around. If you would like variety information sheets please just ask.**

Species	Avg DM Yield tonnes/ha	Avg Fresh Yield tonnes/ha	Dry Matter	Crude Protein	D Value (Digestibility)	Metabolisable Energy MJ/kg DM
Chicory	13 to 15			25%	70-80D	
Fodder Beet	13 to 15	80 to 90	12-19%	12-13%	78D	12.5-13.5
Stubble Turnip	3.5 to 4	38 to 40	8-9%	17-18%	68-70D	11
Kale	8 to 10	60 to 65	14-16%	14-16%	68D	10-11
Swede	7 to 10	70 to 80	9-13%	10-11%	82D	12.8-13.1
Forage Rape	3.5	24 to 35	12-14%	19-20%	65D	10-11
Forage Rye	5 to 6	20 to 30	25%	11-12%	67D	10



# CHICORY

# CATCH CROP MIXES

## Why grow chicory?

- Highly palatable
- Summer production
- Drought tolerant
- Quick recovery after grazing
- No bloat problems
- Grown on its own or mixed with grass ley mixtures
- Rich source of trace elements and minerals

## Sowing Information

Sowing dates: April - September

Sowing rate: Drilled straight 5kg/ha (2kg/acre)

Included in grass ley 2.5kg/ha (1kg/acre)

Chicory is a perennial forage herb that is capable of producing very high quality feed from early spring through to late autumn. The plant needs approximately 14 - 16 weeks growth before full production is achieved. The plant will produce leafy top growth with a deep tap root. As the plant becomes dormant once the soil temperature drops below 10°C late drilling is not advisable.

Best rotationally grazed your crop is ready for grazing when it reaches around 8 inches 22cm. Try to avoid the plant flowering by maintaining your grazing throughout the season, do not graze too tight, as these can both make the crown vulnerable to damage. A late flowering in autumn may help the plant with winter hardiness.

Introducing chicory into a grass ley when reseeding should be at a rate of no more than 2.5kg/hectare (1kg/acre). Triumph Fine Horizon from our Grazing Range is an excellent long term grazing ley that has been used successfully with chicory.

Chicory also forms part of the Lamb Tonic Catch Crop Mixture where it is blended with Plantain Tonic. This concept introduced from New Zealand is a popular method of increasing natural mineral intake.

Catch crop mixtures are becoming increasingly popular as a way of providing quality feed for finishing lambs or maintaining ewes. Most of these new concepts involve the blending of species such as stubble turnips, forage rapes, kales and Italian ryegrass.



## Lamb Tonic

1.50kg Plantain Tonic

1.50kg Chicory

## 3.0kg/acre

A new concept developed in New Zealand. The use of plantain provides additional mineral content and faster finishing. The crop has the ability to re-grow after initial grazing.

## Autumn Keep

1.00kg Forage rape Hobson

0.50kg Stubble turnip Samson

0.75kg Stubble turnip Rondo

0.25kg Kale Keeper

## 2.0kg/acre

Very fast establishment for Autumn use. Autumn Keep will produce a quality crop with good disease resistance.

## Meat Maker

1.3kg Forage rape Hobson

0.5kg Stubble turnip Rondo

0.2kg Kale Pinfold

## 2.0kg/acre

An excellent blend designed to produce Autumn or Winter keep from minimal effort.

## Late Lamb

1.0kg Forage rape Interval

1.0kg Stubble turnip Rondo

5.0kg Italian Ryegrass

## 7.0kg/acre

The inclusion of varieties with improved winter hardiness makes this mixture ideal for later use. Perennial Ryegrass ensures the crop has improved density to help prevent dirty animals.

## ORGANIC Speedy Feed

0.4kg Forage rape Interval

0.2kg Kale Pinfold

1.4kg Stubble turnip Dynamo **ORGANIC**

## 2.0kg/acre

An excellent choice for the Organic farmer looking for a catch crop mix.



# HORIZON SEEDS

F O D D E R C R O P S



# FODDER BEET

Variety	Colour	Rhizomania Resistance	Graze in situ	Lifter	Suited to Sheep	AD	Dry Matter
Blaze	Red		✓	Leaf			High
Blizzard	White			Sugar beet		✓	High
Cagnotte	Yellow	✓	✓	Both			High
Feldherr	Orange		✓	Leaf	✓		Medium
Geronimo	Orange	✓	✓	Both	✓		Medium
Jamon	Orange		✓	Both	✓		Med/High
Merville	Red		✓	Both	✓		Medium
Ribondo	Yellow	✓	✓	Both	✓		High
Robbos	Yellow		✓	Leaf	✓		High
Splendide	Yellow		✓	Both	✓		Med/High
Starmon	Yellow	✓	✓	Both	✓		Medium
Tarine	Pink	✓		Leaf	✓		High

## Why grow fodder beet?

- Huge palatable yields
- Ideal replacement for cereals
- High energy feed
- Clamp and store overwinter
- Improved milk yields
- Palatable & nutritious
- Can be grazed in situ for outwintering systems

## Sowing information

Sowing dates: Late March – End April

Sowing rate: Precision drill only 100,000 seeds/ha 50,000 seeds/acre

Seed sold in one acre packs (50,000 seed units)

The figures above relate to roots only. Tops may also be fed after wilting and will add a further 3-4 tonnes dry matter.

## Soil Type

The crop can thrive on a wide range of soils, a light to medium, free draining soil is ideal. Soil pH 7 is the ideal.

## Blaze

Bright red roots that boast a very high dry matter combined with a clean root. Blaze is best suited to leaf lifting equipment and can be fed whole.

## Blizzard

A white skinned variety which has the ability to be harvested later than many other varieties. Ideal for harvesting with sugar beet machinery and high dry matter content allows growers extra harvesting flexibility. It will produce a very palatable feed, best fed to dairy or beef animals because of the high dry matter content. Also suited for AD usage.

## Cagnotte

Yellow skinned high dry matter variety with a good resistance to Rhizomania. Good fresh beet yields. Good grazing in situ potential due to good above ground percentage. High dry matter makes Cagnotte less suited to sheep but is highly palatable for beef and dairy.

## Feldherr

Feldherr has the ability to produce high fresh yields from its orange roots which grow out of the ground. Feldherr is comparable with traditional mangolds which makes it suitable as a feed for young livestock due to its low dry matter. Feldherr allows growers to achieve a highly productive crop from monogerm seed.



**HORIZON SEEDS**

F O D D E R B E E T

# FODDER BEET



## **Geronimo**

Large top variety that is suited to both grazing and lifting. Excellent bolting resistance as well as mildew, ramularia and rhizomania resistance. Very consistent good performance in UK trials and early signs are good for this variety.

## **Jamon**

Orange rooted, consistent performer with average dry matter yields. Good disease and bolting resistance. One third of Jamon's root is above ground and there is a large amount of top allowing for easy lifting of this variety.

## **Merveille**

Red rooted variety with medium dry matter. Strong early vigour allows for good establishment and weed suppression. Good very palatable fresh beet yields.

## **Ribondo**

Ribondo is a Rhizomania resistant variety that has very erect leaves, ideal for harvesting with either leaf lifting or sugar beet equipment. Clean orange roots, ease of harvest and high digestibility makes Ribondo a good choice.



## **Robbos**

A relatively new variety with very high dry matter yields. Performed very well in trials. Very clean smooth yellow roots suited to dairy and beef production. Well suited to grazing in situ.

## **Splendide**

Excellent all round variety with a high root yield and fresh beet yields combined with high root to leaf ratio.

## **Starmon**

Resistant to Rhizomania. Has a good dry matter content (17.9%) and produces dry matter yields similar to Jamon and Kyros. Beet are clean and easily harvestable with approx 60% of root in ground.

## **Tarine**

A relatively new variety bred for very high dry matter yields, combined with a flexible harvesting period. Tarine is a pink rooted variety and has shown in UK trials to be suited for livestock farmers looking to increase their forage production.

## **ENERGY BEET**

### **Enermax**

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 biofuel market. Enermax has the additional benefit of being Rhizomania tolerant and so is suitable for growing in the east of the country where sugar-beet is a widely grown crop.

### **Zemis**

Bred in the UK for UK conditions. Zemis has very high dry matter content with high dry matter yields for higher gas output ratio. Good bolting resistance, conical root shape for cleaner beet and good resistance to standard strains of Rhizomania. High dry matter enables better storage capacity. Seed is pelleted and treated with Cruiser Force as standard.



***HORIZON SEEDS***

F O D D E R B E E T



# STUBBLE TURNIPS

Variety	Type	Season	Suited to Sheep	Zero Graze
Appin	Leafy	Summer**		✓
Barkant	Tankard	Winter	✓	
Delilah	Tankard	Autumn	✓	
Dynamo*	Round	Autumn	✓	
Rondo	Round	Winter	✓	
Tyfon	Leafy	Summer**		✓
Samson	Tankard	Autumn	✓	
Vollenda	Round	Winter	✓	

\* Organic Variety \*\*With Regrowth

## Why grow stubble turnip?

- Huge palatable yields
- Ideal replacement for cereals
- High energy feed
- Clamp and store overwinter
- Improved milk yields
- Palatable & nutritious
- Can be grazed in situ for out-wintering systems

## Sowing information

Sowing dates: (1st) May – June (2nd) July - August

Sowing rate: Direct Drill 5kg/ha (2kg/acre) Natural seed  
Broadcast 8kg/ha (3kg/acre) Natural seed

As most crops are grazed in situ a free draining light loam or brash with a pH of 6.5 is ideal.

## Appin

A fast growing, leafy grazing turnip providing a rapid source of palatable, easy to digest fodder for sheep and cattle. Multi-crowned with good regrowth potential. Sow 8-10 weeks before feed is required.

## Barkant

Barkant produces large palatable roots suitable for both cattle and sheep. Good resistance to bolting and highly digestible variety. Very hardy variety suited to late grazing.

## Delilah

Extremely large rooted variety with good resistance to mildew. Consistent trials results suggest this is a good safe choice. Very high dry matter yields coupled with high fresh yields.



## Dynamo (ORGANIC)

Dynamo is a consistent well known variety suited to Organic regimes. Consistent performance, high yielding with good tolerance to a range of diseases make this a good choice.



## Rondo

Green skinned variety for both sheep and cattle very good winter hardiness and excellent leafy growth habit. Can be utilised from September through to February. Rondos strong root anchorage ensures reduced wastage in the field.

## Tyfon

Typhon is a vigorous Hybrid best suited to spring sowing. This variety provides a valuable feed in the summer months when grass regrowth traditionally declines. Avoid sowing too early as this could result in bolting.

## Samson

Consistently reliable Autumn variety which is very palatable with high dry matter. A popular choice with many of our customers suited to both cattle and sheep grazing.

## Vollenda

Large leaf highly digestible variety with early vigour for fast establishment. Fast growing and good bolting resistance.



**HORIZON SEEDS**

STUBBLE TURNIP



# SWEDE

Variety	Graze	Lift & Store	Culinary	Pre Xmas	Post Xmas	Club Root Resistance
Airlie	✓	✓		✓		
Brora		✓	✓	✓		
Invitation	✓	✓			✓	
Gowrie	✓	✓			✓	✓
Kenmore	✓	✓		✓		
Lomond	✓	✓			✓	✓
Magres		✓	✓		✓	
Marian	✓	✓	✓	✓		✓
Ruta Otofte	✓	✓	✓	✓		



## Why grow swedes?

- Excellent high energy winter feed
- Low production costs
- Finishing lambs or winter maintenance
- High dry matter yields
- Cost effective (even when yields are only moderate)

## Sowing information

Sowing dates: April – June

Sowing rate: Precision drill 350-850gm/ha (150-350gm/acre) Grade H seed

Direct Drill 3kg/ha (1kg/acre) Natural seed

Broadcast 5kg/ha (2kg/acre) Natural seed

## Yield and Feed Quality

Average DM yield: 7-10 tonnes/ha

Average fresh: 70-80 tonnes/ha

Dry matter: 9-13%

Crude protein: 10-11%

"D" Value: 82D (Digestibility)

Metabolisable Energy: 12.8-13.1 MJ/kg DM

## Growing Cost (Approximate)

£403 per hectare

Fresh weight: £5 per tonne

Dry Matter: £62 per tonne

## Soil type

The crop can be grown on a wide range of soils including sandy loams, silts, peat or clay loams. pH of around 6.5 is the target.

## Varieties:

### 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.

### Brora

Brora is a deep, purple-skinned variety, which can be grazed early in the autumn or used for the pre-packed market as an early harvested crop. Brora has a high marketable yield and is fully tried and tested in the UK. Brora has low resistance to powdery mildew.

### Invitation

Invitation is a very uniform, clubroot resistant variety, ideal for utilisation after Christmas. It also has excellent resistance to powdery mildew and will produce large leaves for extra grazing potential. Invitation is winter hardy and is suitable for sheep or cattle.

### Gowrie

Gowrie is a variety bred in Scotland and can be utilised pre or post Christmas. It can produce high dry matter yields and exhibits good resistance to both clubroot and powdery mildew.

### Kenmore

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.

### Lomond

High fresh and dry yields make this variety ideal for finishing lambs post Christmas. Lomond has both powdery mildew and clubroot resistance and trials show it suffers less from rots and splits in its root.

### Magres

Magres is the professionals choice, grown in the UK as a uniform purple swede with a flexible harvest date. Used by many growers to supply the supermarkets.

### Marian

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.

### Ruta Otofte

Ruta Otofte is a medium dry matter variety with good mildew resistance. It is a dual purpose variety suitable for fodder and culinary use with purple skin and cream coloured flesh. Ruta Otofte is a popular variety with sheep farmers.

**HORIZON SEEDS**

F O D D E R C R O P S

# KALE

Variety	Type	Club Root Resistant	Graze in situ or zero graze
<b>Bittern</b>	Kale		Both
<b>Caledonian</b>	Kale	✓	Both
<b>Goldeneye</b>	Kale	✓	Both
<b>Grampian</b>	Kale	✓	Both
<b>Grüner Angelita</b>	Kale		Both
<b>Keeper</b>	Kale		Both
<b>Maris Kestrel</b>	Kale		Both
<b>Pinfold</b>	Kale		Both
<b>Proteor</b>	Kale		Both
<b>Sovereign</b>	Kale	✓	Both
<b>Thousand Head</b>	Kale		Both
<b>Interval</b>	Kale/Rape		In Situ
<b>Redstart</b>	Kale/Rape		In Situ
<b>Swift</b>	Kale/Rape		In Situ



## Varieties:

### Bittern

Medium sized frame with a good leaf to stem ratio. Bittern boasts a high sugar content in the stem. Very palatable to cattle and exceptional cold tolerance and long usage period.

### Caledonian

Caledonian is a very high yielding kale It is clubroot tolerant, which now enables growers to continually sow kale on clubroot infected sites. Caledonian's huge yield makes it ideal for utilisation by dairy and beef cattle.

### Goldeneye

Goldeneye is a giant type kale 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. Club root tolerance.

### Grampian

Bred in Scotland, Grampian produces excellent autumn or winter feed for both sheep and dairy cows. Grampian exhibits very high dry matter yields, combined with some clubroot tolerance and can be used in outwintering systems.

### Grüner Angelita

A very high yielding variety with good winter hardiness and excellent feeding quality with high fresh yields. Since its introduction to the UK it has become a popular choice with UK farmers. It's high yields makes it ideal for utilisation by dairy, beef cattle and winter feed for sheep.

### Keeper

Keeper is very winter hardy and exhibits good lodging resistance. It is a medium/short type, ideal for finishing lambs and providing high quality winter keep. It has low SMCO levels (antinutritional chemical).



## Why grow kale?

- Low cost option for finishing lambs
- Buffer feed for dairy cows during dry summers
- Flexible utilisation period
- Excellent crude protein
- High yields and economical to grow
- Out-wintering systems

## Sowing information

Sowing dates: April – early July

Sowing rate: Precision drill 2kg/ha (750gm/acre)  
Grade J seed

Direct Drill 4-5kg/ha (1-2kg/acre)  
Natural seed

Broadcast 8kg/ha (3kg/acre)  
Natural seed

## Growing Cost (Approximate)

£496 per hectare

Fresh Weight £9 per tonne

Dry Matter £67 per tonne

## Soil Type

Kale grows best on a medium loam soil with a pH of around 6.5.

**HORIZON SEEDS**

FORAGE KALE

# KALE

# KALE/RAPE HYBRIDS

## Maris Kestrel

Maris Kestrel is established as the leading UK variety suited to all livestock. Extremely digestible and a long utilisation period makes this a very popular farmers choice.

## Pinfold

Fast growing and ideal for early sowings. Pinfold will provide excellent yields in a short period of time.

## Proteor

Proteor is a winter hardy, intermediate stem kale with a high yield potential and high leaf-to-stem ratio, providing the best quality feed. High yielding and good digestibility.



## Sovereign

Sovereign is a high yielding, medium-tall forage kale with good club root tolerance. Good dry matter yields and excellent leaf-to-stem ratio. Successfully tested for winter hardiness and keeping ability, it has the potential to maintain good quality production over a longer usage period.



## Thousand Head

Thousand Head Kale is a popular, tried and tested variety with good standing ability and winter hardiness. Thousand Head is a slender stemmed variety bearing leafy foliage. Excellent winter hardiness providing forage for feeding after Christmas.

Known as Kale-Rapes, these are forage Brassicas produced by crossing Kale and Rape to produce varieties which have the rapid establishment and quality of Rape combined with the higher yield and hardiness of Kale.

So far, the best are hardier and more *Alternaria* resistant than most Forage Rapes and slightly higher yielding, like Interval and Swift. Both are ideally suited to summer planting and winter use. Redstart is a variety selected for good resistance to bolting, *Alternaria* and Mildew. Normally used for spring planting and summer use, it has also proven good for autumn/winter use.

## Interval

When it comes to filling the gap in your Winter feed programme Interval rape/kale hybrid can really boost your profits. Interval's exceptional yield potential, disease resistance and palatability is ideal for finishing lambs or dairy cows. Interval is very fast to establish with some crops ready to utilise within 10-12 weeks of sowing.

## Redstart

Redstart is a unique utility fodder crop, which offers the highly beneficial combination of rapid growth ability and good all year round performance. The forage rape genes in Redstart give it the ability to grow very fast while the kale genetics deliver very good winter hardiness. It's a combination that means Redstart is a superb catch crop for countering late season grazing shortages. Redstart is mainly used as a high energy high protein grazing for cattle and sheep and is ideal for out wintering systems.

## Swift

Swift is a new, fast growing rape/kale hybrid that offers superior regrowth ability and good all year round performance. The forage rape genes in Swift give it the ability to grow very fast while the kale genes deliver very good winter hardiness. It is a combination that means Swift is a superb catch crop for countering late season grazing shortages.





# FORAGE RAPE

## Why grow Forage Rape?

- Fast growing leafy catch crop
- High protein content
- Longer lasting than stubble turnips
- Winter hardy hybrids available
- Fattening lambs
- Flexible sowing period
- Sheep, Dairy or Beef production

## Sowing Information

Sowing dates: May – end August

Sowing rate: Direct Drill 6kg/ha (2.5kg/acre) Natural seed  
Broadcast 10kg/ha (4kg/acre) Natural seed

## Growing Cost (Approximate)

£408 per hectare

Fresh weight: £12 per tonne

Dry Matter: £107 per tonne

## Soil Type

As most crops are grazed in situ a free draining light loam with a pH of 6 - 6.5 is ideal.

## Barsica

Barsica is a leafy, nutritious annual brassica that is very palatable to all classes of livestock. Barsica is an excellent multi graze forage with high yield that provides excellent feed value. Barsica is a true biennial and flowers the year following seeding, keeping it in a vegetative state longer for best forage quality.



## 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.

## Hobson

Hobson is the variety for finishing lambs. It has excellent resistance to powdery mildew; a disease which can make some crops unpalatable leading to a high wastage factor. Hobson is very palatable and digestible.

## Hungry Gap

For later use, Hungry Gap's exceptional winter hardiness will ensure crops can be used in January and February. It is best sown in June or July and its growth habit is very kale-like in appearance.



## Rampart

Very versatile variety suited to dairy, beef and sheep feeding regimes. Sowing period is Spring, early Summer and after cereals. Rampart provides a good graze in situ forage crop for Autumn and Winter periods. Good regrowth makes this a promising variety.



## Turnip Rape Hybrid Pasja

Pasja is a high energy, early maturing hybrid forage brassica bred for rapid growth, re-growth, and high performance. Being a taproot type brassica it can be used over a much longer period of time than the traditional turnip or rape cultivars. Pasja has exceptional regrowth ability and should provide good amounts of summer feed. Initial trials suggest it is very productive and with good grazing and fertility management produces outstanding yields. Pasja produces exceptionally leafy forage with excellent nutritional value.

**HORIZON SEEDS**

FORAGE RAPE

# FORAGE & ENERGY RYE

## Why grow forage rye?

- Early turnout (reducing over wintering costs for cows)
- Winter sheep keep
- Flexible sowing options after maize or cereals
- Zero grazing and big bale options
- Helps mop up residual nitrogen and prevents soil erosion

## Sowing information

Sowing dates: September - October

Sowing rate: Direct Drill 185kg/ha (75kg/acre)  
Straight sown  
or 125kg/ha (50kg/acre)  
With Italian Ryegrass  
17kg/ha (7kg/acre)

## Growing Cost (Approximate)

£339 per hectare

Fresh weight: £12 per tonne

Dry Matter: £78 per tonne`

## Soil type

A weed free sheltered, well drained field is ideal as most crops are grown for their early grazing ability.

## Varieties for forage/energy:

### Humbolt

Humbolt Forage Rye is a UK Bred forage variety producing excellent early spring growth, which can be used for an early turnout for cows or an early graze for sheep. Good Early Spring growth and Winter hardy.



### Protector

One of the fastest growing rye varieties available, it even grows at low temperatures when other varieties stop growing. Helps provide protection against soil erosion due to coverage and rapid plant development in autumn. Constantly high uptake of nitrogen during the Autumn period. Fertiliser can be applied in early spring but should be kept at a moderate level. Dry matter yield of Protector is higher than that of other similar varieties (and is similar to hybrid rye) at time of cutting in early May. Also a useful cover crop option before silage maize.

## Hybrid Energy Rye

### SU Drive

Low input variety with consistent yields complementing grain and whole crop silage. Very good drought-tolerance. Outstanding resistance to brown rust and rhynchosporium.

### Cossani

Very high yielding in UK and European trials. Good resistance to lodging. Robust disease profile, suitable for feed and baking.

### Magnifico

Magnifico has very good straw strength and thickness which means its easy to grow with a simple PGR programme. A robust fungicide programme targeting brown rust is essential to keep the variety disease free and retain green leaf area. Good lodging resistance.



### SU Performer

Turbo hybrid with very high yield, Good lodging resistance, best leaf health. High hagberg falling number and low enzyme activity. High yielding and high brown rust resistance.

### Helltop

Helltop is a high yielding variety which benefits from vigorous early growth and fast leaf development. Helltop's quick establishment benefits it by out competing weed seed. Performs well on more tricky heavy soils than many varieties. Helltop has preformed well in initial trials and shows great promise as a variety.



**HORIZON SEEDS**

FORAGE RYE



# MAIZE



## The importance of maturity

Maize silage offers livestock and AD growers the highest energy concentration to drive milk, meat or methane production throughout the year. As maize matures from 25% Dry Matter to 35%DM it moves the sugar in the leaf to starch in the grain. The optimum maturity is 30-35% DM for clamping and production.

## Maize Heat Units

Maize is precision drilled in late April / Early May when soil temperatures reach 10°C for 4 days at breakfast at 10cm depth. If sowing early check the long term forecast.

Different maize varieties require different amounts of Maize Heat Units (mean of the min and max temp above 6°C on an accumulated basis from 1st May to 30th September) to reach full maturity. The Maize Heat Unit maps are based on 30 years of Met office data and show average availability. Height above sea level, aspect, shelter, soil type and fertility will all affect the heat units available on the field.

## Maize Heat Unit maps

### Ultra Early

- 1200 - 1249 Maize Heat Units.
- Varieties enable growers to achieve successful silage crops even in marginal areas.
- Gives flexibility to growers in favourable areas for early harvest, double cropping or optimum entry into autumn crops.



### Varieties Available

- Es Ardent
- Es Picker
- Es Remington
- ★ Es Lovely
- Es Ballade
- Es Bodyguard

### Extra Early

- 1250 - 1299 Maize Heat Units.
- The principle maturity group used by existing growers.
- Allows growers to maximise yield and quality on a regular basis.



### Varieties Available

- Dominator
- ★ Absalon
- Es Marco
- ★ Cathy
- Dualto
- Dutop
- Hobbit

## Maize in the rotation

Some growers will have a rotational need to drill or harvest early or late and will need to adjust variety maturity accordingly.

Drilling late after first cut grass, or harvesting in late September to establish winter wheat or grass leys are common and allow the field to be fully utilised.

## Bred for Britain varieties

Extensive trialling is conducted throughout the UK in replicated and farm trials to select varieties which are Bred for Britain. Maize varies greatly with location so understanding the genetics and linking to the field and rotation ensures great performance.

## Maize Agronomy

Check soil pH (6.5-7) to ensure nutrients are available to the crop.

Be realistic about nutrients from organic manures and be prepared to top up with bagged fertiliser.

Placed fertiliser "down the spout" with a protected source of Phosphate such as MaxiMaize will get the crop established fast.

Control all weeds at 2 true leaves, many crops require two herbicides.



A blocked MaxiMaize fertiliser spout is clearly visible all year.

## Do you need Plastic?

Plastic film will increase early season temperatures and ensure rapid establishment. Es Marco has been the highest yielding and given the highest starch yields in MGA plastic trials.



**HORIZON SEEDS**

MAIZE

Variety	Maturity	Cob Ripeness	Stay Green	Yield	ME	Starch	Plant Height
Es Ardent	11	8.3	5.9	94% = 15.6t DM/ha	11.3	33.3%	2.4m
Es Picker	10	8.5	5.8	99% = 16.5t DM/ha	11.4	35.1%	2.4m
Es Lovely	9	8.2	6.3	102% = 16.9t DM/ha	11.3	33.0%	2.4m
Es Ballade	8	7.9	7.2	100% = 16.6t DM/ha	11.1	31.6%	2.4m
Es Bodyguard	8	8.0	7.1	99% = 16.5t DM/ha	11.2	30.5%	2.4m
Dominator	8	7.6	7.3	102% = 17.0t DM/ha	10.9	29.6%	2.5m
Es Marco	7	7.5	8.1	106% = 17.5t DM/ha	11.1	29.8%	2.5m
Cathy	7	6.7	8.1	110% = 18.3t DM/ha	11.2	26.2%	2.4m
Dutop	7	6.8	7.4	108% = 17.9t DM/ha	11.2	28.7%	2.5m

## Es Ardent

High yielding ultra early variety. Suitable for marginal sites where a good combination of grain maturity and plant dry down is required. Ideal variety on good sites where earliness of maturity is required combined with high yields. Very consistent performance on farm. Drill 42,500 seeds per acre.



## Es Picker

Well proven high yielding group 10 for extremely marginal sites with excellent early vigour. Tall erect leaved plant with the best combination of grain maturity and plant dry down. Very stable consistent variety on many different farms and preferred on the most difficult growing sites. Drill 42,500 seeds per acre.

## Es Lovely

Early maturing heavy yielding variety. Lovely has exceptional early vigour for rapid establishment, in difficult seasons. and superb resistance to lodging. High starch content and excellent ME value giving a top quality feed. Outstanding yields from an Ultra Early Variety. Excellent cob to bulk ratio combining to fill your clamp with an outstanding feed. Drill 42,500 seeds per acre.



## Es Ballade

Suitable to be grown on all favourable and less favourable sites across a large part of the country. Large cob with rapid cob finish and high scores for cob ripeness ensure Es Ballade continues to be a top UK variety. In a difficult 2015 season it has still produced the goods all over the country. Even on heavier fields Es Ballade will respond and adapt to these sort of sites. The result is high levels of ME and starch combined with high yields for above average financial returns per acre. Very early maturing when grown under plastic. Drill 42,500 seeds per acre.



## Es Bodyguard

A great addition to our portfolio, Es Bodyguard is a new high yielding early variety which will perform on varying soil types. Cob formation is superb with very early cob ripening and this helps provide a very digestible, high out-put silage suitable for forage or AD use. It is a very robust plant, and can be taken to grain stage if required. Drill at 40,000-42,500 seeds per acre for best results.



## Dominator

Suitable for growing on all favourable sites. Good variety for beef production. Very high yields 102% of control, Excellent ME and Starch levels giving high energy yields per acre. Large plant with big cobs. Extremely good cob ripeness for maturity group. Also tried and proved suitable for growing under plastic. Popular for forage or AD situations, and can be grown on for grain production. Drill 45,000 seeds per acre.



## Es Absalon

Very high digestibility drives production. Long harvest window allowing harvest planning. High output ratio for optimum milk, meat or biogas production. In the main maturity group required by most growers, Absalon has good grain maturity and large cob driving starch production. Plant remains green at harvest increasing harvest window for chopping. Drill 42,500-45,000 seeds per acre.



## Es Marco (Drought Tolerant)

First variety with potential to produce two true cobs for exceptional starch yields. Its real asset is drought tolerance, and especially on light soils it will fulfil its potential in a big way !! Very consistent in very different growing seasons producing enormous yields of high quality silage. Performs exceptionally well under plastic as it proved in MGA replicated trials, producing yields exceeding 20 tonnes per acre with the highest starch yield. Will almost always double cob under plastic. Drill 42,500 seeds per acre.

## Cathy

One of the highest yields on NIAB favourable list 2017. Grows distinctively with large erect green leaves, and exhibits good early vigour. A large plant with a blocky shaped cob containing large flat grains. Will provide very high yields of high ME and starch silage. Drill early on best growing sites for best results. Suitable for forage or AD situations. Drill 42,500-45,000 seeds per acre.

## Dutop

A very high yielder for the best of growing sites, giving an extended harvest window. Dutop has good early vigour producing a robust green plant with impressive wide leaves. Has shown good grain maturity on many different sites. Drill early on best growing sites for best results. Suitable for forage or AD situations. Available at more economic price. Drill 42,500-45,000 seeds per acre.



### SEED DRESSINGS

All seed of the above varieties will be treated with either Fludioxonil + Metalaxyl or Thiram, plus Mesurool and include the unique maize seed treatment Opticoat ZM.

\*Dominator, Cathy & Dutop treated are treated with Thiram plus Mesurool but no trace element treatment.

### Wireworm Seed Treatment – Sonido

Seed treated with Sonido  
will be available for sowing in 2017.  
Please enquire for more information.

# OILSEED RAPE

## Oilseed rape remains the best break crop

For many growers Oilseed rape remains the best break crop because it:

- Is the most profitable break crop in a cereal rotation.
- Allows good entry for wheat.
- 1st Wheats after OSR are always the best.
- Spreads the workload at drilling and at harvest time.
- Uses different chemistry to control black-grass, helping with weed resistance management and control.
- Can be harvested using similar machinery as cereals.
- It allows cultural weed control prior to cereals, so reducing the cost of control in the following wheat.
- Provides pollen for bees and habitat for a range of wildlife.

Other break crops are agronomically challenging and it is often hard to get the necessary premium or specification or they have limited markets.

## Easy to grow

Oilseed rape is easy to grow if you choose the right variety for your farm. Much has been spoken about Cabbage stem Flea Beetle and insecticide resistance. Using vigorous conventional varieties, drilling early into good seedbeds and good consolidation all improve success rates.



## Disease resistance key to reducing costs

The three main yield robbing diseases of Oilseed rape are Phoma stem canker, Light Leaf Spot and *Verticillium* wilt.

Breeders have made great progress in improving resistance in the plant to Phoma and *Verticillium*, Light leaf spot is harder with different pathogen races in different areas of the country.



Phoma stem canker is the major disease in the main OSR growing areas in the East and Central region of the UK where 60% of the rape crop is grown.

## Easy to harvest

By focusing on Low Biomass conventional varieties such as Es Alegria and Es Mambo with superb disease resistance and vigorous establishment the variety can solve many of the challenges of rape growing.

Low Biomass varieties with good lodging resistance allow faster and easier harvesting reducing stress on labour and machinery.



## Clearfield tolerant varieties

Problematic cruciferous weeds which are difficult to control with Bifenox and increased levels of volunteers mean that Clearfield varieties, which can be sprayed with Cleranda and Cleravo, improve weed control in the field.



**HORIZON SEEDS**

O I L S E E D R A P E



# OILSEED RAPE

## ES ALEGRIA

- Conventional low biomass variety
- Early to harvest
- Excellent autumn and spring vigour
- Very good standing power and lodging resistance
- High oil content
- Good resistance to Light Leaf Spot and *Verticillium* wilt
- Multigene resistance to Phoma Stem Canker



## ES MAMBO

- Conventional low biomass variety
- Top HGCA Agronomic Merit rating, combined multigene disease resistance
- Consistent high yields
- Very high oil content
- Good resistance to *Verticillium* wilt
- Excellent standing power and lodging resistance
- Very good autumn vigour aiding establishment



## RGT ARAZZO

- Hybrid variety
- Consistent high seed Yield
- Excellent spring vigour
- Early flowering and seed maturity
- Superb lodging resistance and stem stiffness
- High gross output in *Verticillium* wilt trials
- Consistent variety that always delivers



## Spring Oilseed Rape

Often seen as a low input crop with easier management requirements. The main criteria for variety selection is the ability to achieve rapid early growth and stand well.

## ES AXANA

- Restored hybrid
- High yield potential
- High oil content
- Low glucosinolate
- Very good early vigour
- Good disease resistance and high stress tolerance
- Strong stem: no lodging

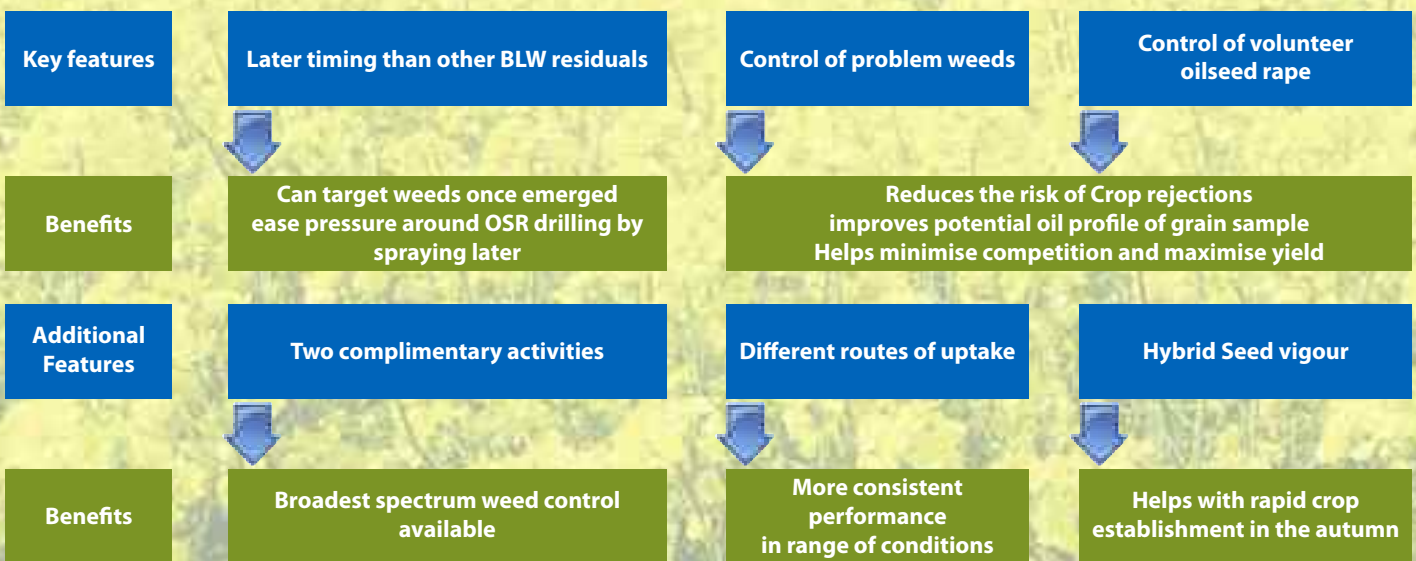


# CLEARFIELD OILSEED RAPE

## Why Use Clearfield?

Clearfield Oilseed Rape is a production system combining high quality hybrid seed with BASF herbicides. The system is a new way to approach weed control in oilseed rape, allowing true post-emergence broad spectrum activity.

With a continuing positive outlook for oilseed rape, excellent performance on difficult weeds like charlock will bring new opportunities to grow the crop on the farm using traditional plant breeding. Varieties are being produced by a range of seed companies and there will be wide choice available to the grower. The Clearfield herbicides, with the brand names Cleranda and Cleravo, are UK approved specifically and only for use on winter oilseed rape hybrids carrying the Clearfield brand. Good stewardship of Clearfield oilseed rape is essential.



## High Performance on These Key Weed Problems



### Charlock

**Description:** Charlock is a 20-200cm high, dark-green to purplish hairy annual; it can be very variable in form, with irregularly toothed leaves. The pale yellow four-petalled flowers occur at the top of the flowering spike.

**Prevalent soil types:** found on well-aerated and well-watered but drained, alkaline-rich soils, which have a high organic matter content.



### Runch (Wild Radish)

**Description:** annual, growing to 1m tall, with roughly hairy stems. The leaves have toothed lobes near the stem and a large lobe at the tip. There is a branched tap root.

**Prevalent soil types:** it prefers lime-free but nutrient-rich sandy and loam soils.



### Hedge Mustard

**Description:** it is an annual or over-wintering annual, 30-60cm tall, with almost horizontal branching stems and deeply cut spear-shaped and lobed leaves. The yellow flowers are very small with four petals, in flat-topped flower heads. Hedge mustard reproduces only by seed, which is wind dispersed.

**Prevalent soil types:** likes dry, loose, nutrient-rich loams and sandy, stony soils.



### Shepherd's purse

**Description:** a very variable annual or biennial dicotyledon, growing to 5-60cm. Most of the leaves grow as a rosette at the base. The flowerhead is covered with small four petalled white flowers, developing into a characteristic heart-shaped seed head.

**Prevalent soil types:** it generally grows in nutrient-rich soils, with pH>5, such as humus-rich loams and nitrate-rich sandy soils. Shepherd's purse avoids wet soils.

**HORIZON SEEDS**

CLEARFIELD RAPE



# CLEARFIELD OILSEED RAPE

## Es Angel CL

Es Angel CL has been grown in UK breeder trials under a standard herbicide program and has been entered into NIABTAG Clearfield trials for harvest 2016 alongside 8 other Clearfield varieties.

Experience in France has shown excellent results on wider rows with at least 25cm between rows to allow cruciferous weeds to germinate quickly.

- Hybrid variety tolerant to Cleranda (IMI)
- High yield
- Very good resistance to lodging
- Good early vigour
- Very healthy plant, high tolerance to diseases
- Very good frost resistance
- Good oil content



Treated Yield	106	Earliness of flowering*	7
Oil Content %	45.3	Earliness of maturity*	6 (Astrid)
Height	152	Resistance to Light Leaf Spot*	5
Resistance to lodging*	[8]	Resistance to Phoma Stem Canker*	8
Stem Stiffness*	[8]	Autumn Vigour	Medium



## Es Aquarel CL

Es Aquarel CL is currently in the NIABTAG Clearfield trials and has been tested in UK breeders trials using conventional herbicides. Es Aquarel is very early in maturity like Es Alegria allowing growers to harvest oilseed rape before wheat crops are ready to combine.

Wide row spacings (+ 25cm) provides better weed control in the field allowing the Clearfield herbicides to give full control of broadleaved weeds, volunteer cereals, charlock, volunteer OSR and hedge mustard that can cause oil purity problems.

- High yield in UK for Clearfield variety
- Early maturity like Es Alegria
- Very high resistance to lodging
- Very healthy plant with high tolerance to disease
- Good Oil Content
- Pod shatter resistant



Treated Yield	105	Earliness of flowering*	8
Oil Content %	44.6	Earliness of maturity*	8 (Alegria)
Height	147	Resistance to Light Leaf Spot*	6
Resistance to lodging*	[8]	Resistance to Phoma Stem Canker*	8
Stem Stiffness*	[8]	Autumn Vigour	Good

**HORIZON SEEDS**

CLEARFIELD RAPE

# SUNFLOWER

Sunflowers prefer an open sunny site with a potash rich clay loam soil but will tolerate most soil types.

Sunflower crops can be successfully produced south of a line from the Wash to the Bristol Channel.

Sunflowers enjoy a low fertiliser regime. Where soil indices are zero then 50:80:150 NPK should be applied to the seed-bed. If soil indices are 2 then no P or K is needed. High nitrogen levels will cause the plants to become very vegetative.

Sow between end of April until May, soil temp at 5cm depth should be 7oC average. Drill at 3-5cm depth in 25cm rows at a target population of 48,500 seeds per acre or 120,000 seeds per hectare. Sow into light moisture where possible to give the seeds maximum chance of good establishment.

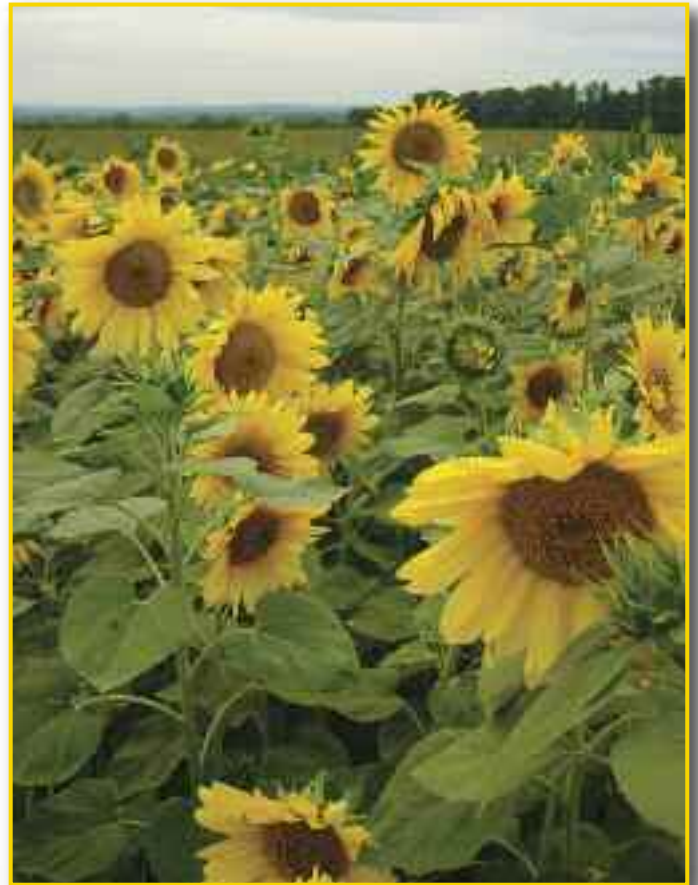
Harvesting normally takes place from Mid September onwards but can be later in poorer seasons.

## Sowing information

Sowing dates: End of April Until May

Sowing rate: Direct Drill 120,000sds/ha (48500/acre)  
precision drilled.

*Full cultural details are available on request.*



## Es Baltic

Baltic is an early maturing, high yielding variety that has performed consistently in trials. It is a medium to tall type for oil production. Maturing in approx. 135-140 days Baltic is classed as an early variety and can be cultivated as far north as the Wash successfully.

Oil content for Baltic is 43-46%.

Baltic boasts good standing ability, high dry matter yield and a high oil content.

- High Yielding
- Phomopsis Tolerant
- Mildew Tolerant
- Sclerotinia Tolerant
- Phoma Tolerant
- Resistant to Lodging
- Early Maturing
- High Oil Content
- Good Field standing

***HORIZON SEEDS***

S U N F L O W E R



# SEED PROCESSING SERVICES



Horizon Seeds offers farmers the complete seed service. Here at our headquarters in Eye, Suffolk we can process your seed. From collection through processing, seed dressing, testing and dispatch you can be assured you are getting the best service possible.

We have a modern fully equipped seed cleaning and processing plant here at Eye and are able to process your seed to a very high standard.



Rod Clarke heads our seed processing team and his hands on approach and attention to detail ensures we maintain the highest achievable standards. Our fully accredited plant is staffed by our professional team who have had many years experience within the seed trade. Quality accuracy and service are the key drivers in our processing.



Our Modern processing and treatment facility is capable of processing both conventional and organic crops. As well as this we are able to adapt to process most species of agricultural crops to the highest of standards.

We are able to pack processed seed into a variety of formats from 1 acre units right up to 1000kg packs to suit your farm needs.



Horizon Seeds has a large storage facility on site which has the benefit of offering us continuous production, continuity of supply and flexible distribution options. This allows us to tailor our service to meet your needs and deadlines.



Our network distribution partners offer us the ability to react quickly and efficiently to your demands. Located adjacent, our preferred freight agents offer us an efficient nationwide distribution service which we are able monitor and track throughout the journey.

**HORIZON SEEDS**

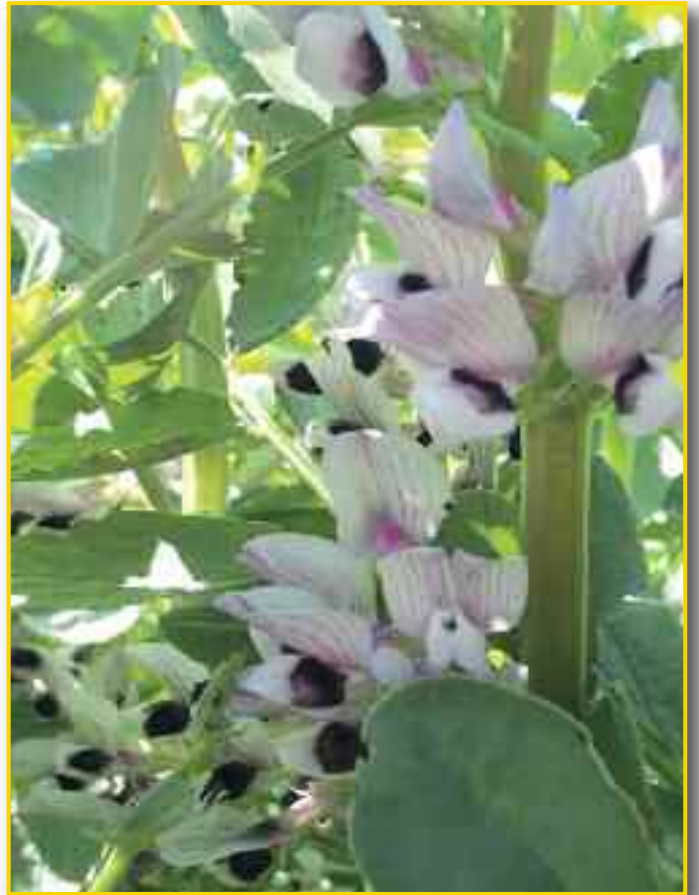
COMBINABLE CROPS

# COMBINABLES



## Horizons Own Production Seed Crops

Growing our own seed crops allows us to ensure the highest possible seed certifications are met. We have the luxury, with the benefit of fully trained, experienced staff, to monitor and regularly inspect our seed from sowing right through to harvest.



## Seed Variety Sourcing

Horizon Seeds are proudly independent of breeders so we can source without bias the best varieties to suit your needs. We understand the regional requirements and our constant trials and data gathering/analysis we are able to source for you the best range of varieties.



**Our Bespoke seed service is at your disposal and Rod and his team are waiting for your call!**

**To discuss your requirements please call Rod on the number below and we will do our best to help you.**

***HORIZON SEEDS***

COMBINABLE CROPS



# MAXI-MAIZE PLACEMENT FERTILISER



**Maxi-Maize is the ideal placement fertiliser.**

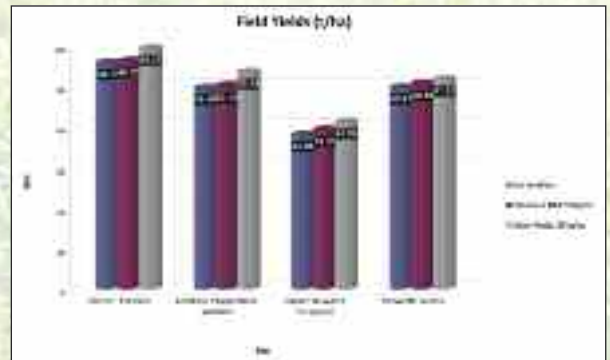
**Up to 10% Increase in yield.**

**Apply one 25kg bag per acre down the spout of the drill**

Maxi Maize 25kg/acre

MAP 50kg/acre

## Does it work in the field?



- Extra yield of +1.3t/acre above no placement fertiliser
- + 0.93t/acre above standard DAP at 50kg/acre



Improved grain maturity and more grain per cob is gained from Maxi Maize placement fertiliser.

Field experience shows benefit to growers throughout the season with more vigorous plants, earlier tasselling, more grain sites and earlier grain maturity.

# Efficie-N-t<sup>28</sup>

## Slow release foliar nitrogen fertiliser

### Meeting maize's need for Nitrogen in-season with Efficie-N-t 28 slow release foliar nitrogen fertiliser

Maize needs some 50% of its total nitrogen requirement from the 8th leaf stage through to tasselling, but a further 35% is needed to fill the cob, during August and September. However, losses due to leaching and volatilisation of seedbed applied nitrogen may leave the crop short of essential nitrogen during these later stages of growth.

Until now there has not been a safe product for in-season supplementary nitrogen application. Trials grown since 2012 at a range of sites across the UK, have shown Efficie-N-t 28 can be effectively and safely used on maize and the results have shown an average fresh weight yield response of 13%.

Applied in July, Efficie-N-t 28 helps meet the crops continuing need for nitrogen as the cobs begin to fill.

What is Efficie-N-t 28 (28.0.0)

It is a liquid foliar nitrogen fertiliser, based on urea polymers of variable lengths. The longer the chains, the slower they break down, resulting in a phased release of nitrogen over a total of 6-8 weeks, SCORCH FREE.

Proven over four years

An application of 25kg (20 litres) per hectare delivers 7kg of nitrogen which has been shown across a variety of crops to give the same response as 40kg of nitrogen supplied in 150kg of calcium ammonium nitrate. This is of particular benefit to those farming in a NVZ.

### Efficie-N-t 28 benefits in Maize

- Average 13% increase in yield over controls
- 5x the efficiency of soil applied nitrogen
- Reduced nutrient losses following application and increased uptake by the crop
- Phased release over 6-8 weeks and is not prone to leaching or volatilisation
- Sticky technology ensures 100% uptake
- Scorch free and safe to apply unlike traditional foliar urea products
- Can be tank mixed with most fungicides
- Helps stay within N max
- Proven over four years in a variety of forage and arable crops
- Can be applied with a standard high clearance crop sprayer

**Packed in: 20L (25kg) drums, 800L or 1000L IBCs.**  
**Application rate: 20L/ha diluted in 100-300 L water**



*Applied in July using a high clearance sprayer  
No scorch even at 30°C temperatures*



**Untreated**  
180.3g/cob 405 grains/cob  
TGW 444.5gms

**Efficient 28**  
236.8g/cob 445 grains/cob  
TGW 531.4gms

**HORIZON SEEDS**

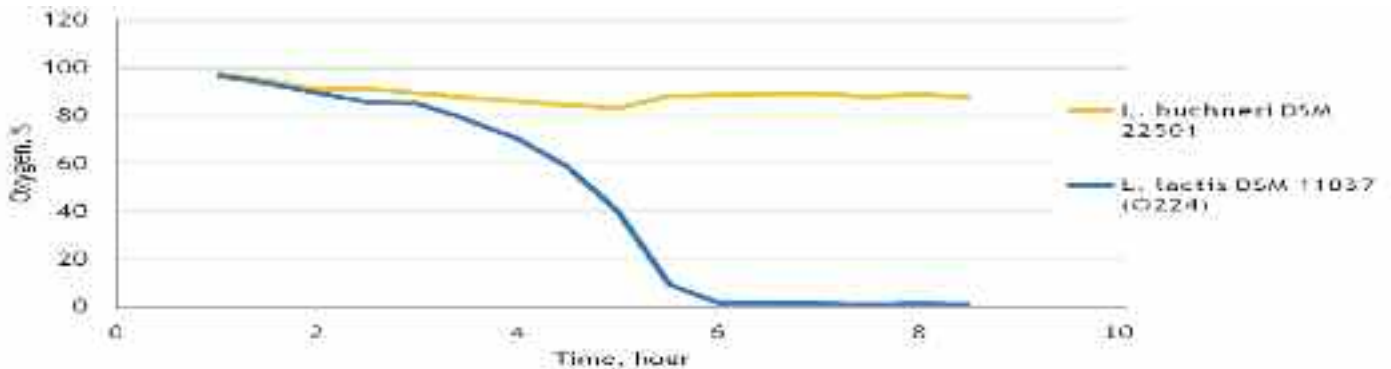
EFFICIE-N-T 28



## What is SiloSolve FC?

SiloSolve FC is a combination of *Lactococcus lactis* O-224 and *Lactobacillus buchneri*. O-224 consumes oxygen at all stages of growth and thereby makes it more difficult for fungi to grow. Furthermore O-224 is a homo-fermentative strain with proven benefits such as reduction of dry matter losses and improved fermentation. *Lactobacillus buchneri* has a proven effect against the growth of fungi. The *Lactococcus lactis* O-224 and *Lactobacillus buchneri* work synergistically, as O-224 removes oxygen and improves fermentation, while *L. buchneri* reduces fungal growth.

**In the chart below you can see that *Lactococcus lactis* O224 has reduced the Oxygen in the sample to zero in just six hours**



**The sealed samples show the effect of the oxygen removal with sample on the right being the SiloSolve FC treated. Note how the bag has shrunk onto the sample.**



**The *Lactobacillus Buchneri* LN1819 is included to reduce the chances of mould. The samples below were exposed to the air in a laboratory for 10 days.**

### Untreated sample

Day 1



Day 10



Day 1



Day 10



**Treated with SiloSolve FC**

### Use:

Contents of one 200 g sachet are added to 20-200 litres of water, corresponding to 0.2-2 litres/tonne fresh forage. Recommended dose = 250.000 cfu/g fresh forage. Apply within 24 hours of mixing

### Package:

200g sachets treating 100 tonnes of fresh forage  
 One box contains 10 x 200 g sachets

Form: powder

Solubility: water soluble

Shelf life: 12 months at room temperature (<20°C)

- *Enterococcus faecium* M74
- *Lactococcus lacs* SR3.54
- *Lactobacillus plantarum* CH6072
- Xylanase

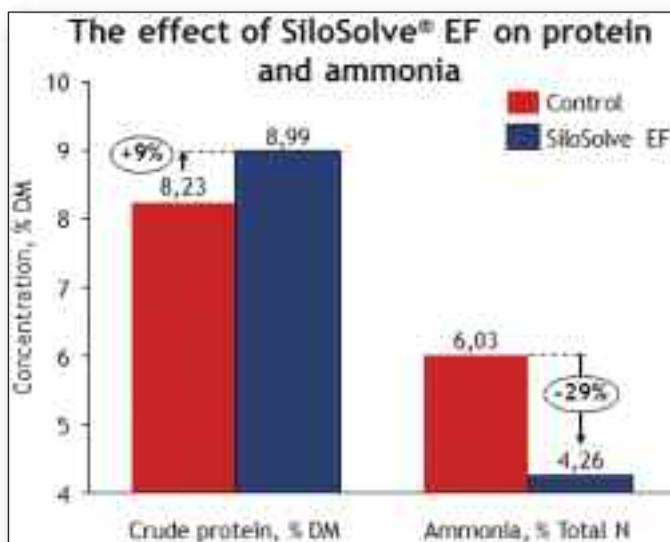
**Inoculant for enhanced fermentation under difficult conditions, when dry matters are below 25%**

## Advantages

- Rapid reduction in pH
- Reduced dry matter loss
- Improved fermentation
- Reduced protein degradation

In some cases maize and grass will be harvested with a low dry matter content. Under these conditions special treatment is needed to get the best fermentation.

SiloSolve® EF has been especially designed to help boost the onset of fermentation of such crops at minimum loss, resulting in improved quality and better value for money.



**Maize silage at 26.8 %, Jatkauskas, 2010.**

### Package:

- 500g sachets treat 100 tonnes of fresh forage.
- Form: powder
- Solubility: water soluble
- Shelf life: 12 months at room temperature (<20°C)

### Use:

Contents of one 500 g sachet are added to 20 -200 litres of water corresponding to 0.2-2 litres/tonne fresh forage.

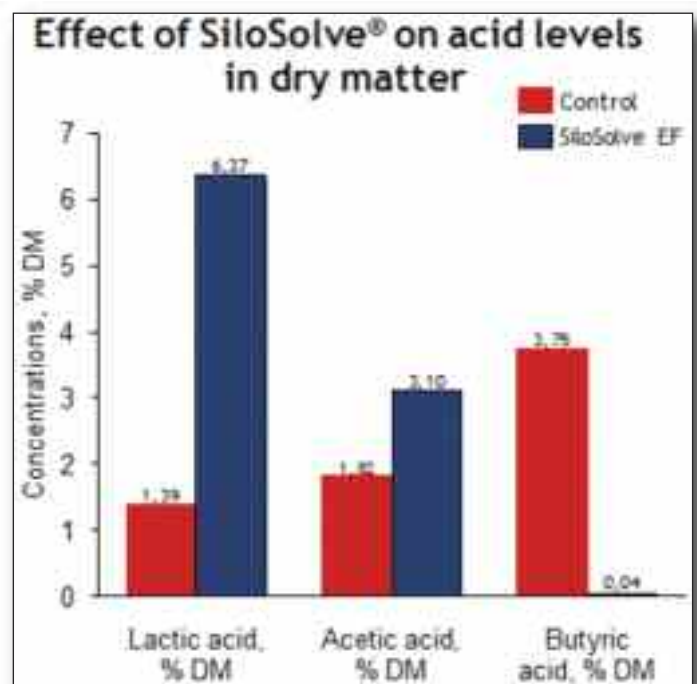
Recommended dose = 250,000 cfu/g fresh forage

SiloSolve® EF contains three lactic acid bacteria strains in combination with the fibre-degrading enzyme, Xylanase. The three lactic acid bacteria compliment each other to improve the silage fermentation by rapidly lowering the pH and reducing the growth of microorganisms that can spoil the silage. High levels of butyric acid cause smelly, less palatable silage and leads to reduced quality, high dry matter loss and a lower return on investment. SiloSolve® EF consistently reduces butyric acid and promotes good fermentation.

Xylanase is added for its ability to break down plant fibres, making hard-to-get nutrients available for the lactic acid bacteria to improve fermentation. The result is better smelling, more palatable and higher quality silage.

### SiloSolve® EF promotes high quality silage

Several trials demonstrate that SiloSolve® EF preserves crude protein and reduces levels of ammonia-nitrogen, making more protein available to animals. SiloSolve® EF also reduces dry matter loss. It all adds up to high quality silage.



**Grass-clover ensiled at 26.5% DM. Jatkauskas, 2009.**



# SILOSTOP



It makes sense to protect those hours and the money invested in harvesting and clamping your forage. As soon as oxygen gets into contact with your silage then moulds can grow wasting tonnes of valuable feed.

This clever display shows three of the most popular selling "Silage Film" sheets. Three slices of the same banana have been sealed in

each and whilst the Silostop Orange on the left shows little change the two competitor sheets have allowed oxygen in and the banana is starting to change colour.

The bottles at the bottom of the picture show the amount of oxygen allowed through by the various sheets with Silostop clearly the smallest at less than 10ml whilst the best of the other two would allow up to 4000ml per square metre and the other popular sheet would allow up to 8000ml per square metre to permeate the film in 24 hours.



**Silostop Orange** is a translucent film with an orange tinge to it and would need to be used in conjunction with a standard black poly sheet to stop UV from creating spoilage.



**Silostop Black** is 45 microns thick and has the added benefit of having its own anti UV penetration barrier therefore negating the need for a second sheet. With both the Orange and Black films it is advised that a Secure Cover is also used to hold the Silostop in place and protect the sheet from vermin damage.



**NEW Silostop Max** 80 microns combines the properties of Silostop Black with greater toughness and durability as a result of its heavy duty thickness. This more robust form of film is ideal for use on field clamps and for clamping beet with its irregular form. It's also the ideal film if you have an inexperienced team sheeting up. There is no need for a UV protector as this is built in to the Silostop Max, so simply protect with a Secure Cover for the perfect clamp. Remember to apply black side down onto the silage. The orange side goes face up to help reduce surface heating.



**Silostop Grey** 75 micron Wall Film has the potential to virtually eliminate side and shoulder spoilage. It is important to tuck 1m underneath the base of the clamp and also to fold at least 1m under the top sheet to shed rainfall off the silage. Remember to allow for this when calculating the size required.



**Silostop Bale Wrap** 25 micron is a step change in bale wrap technology. It is a thin, stretchable film that prevents oxygen getting into the bale, consequently reducing losses by more than 40%. Its oxygen barrier properties gives you the opportunity to wrap your bale 4 times instead of 6 times. Therefore saving you time in the field. The thin and stretchable nature of this film allows you to use it exactly as you would any other bale wrap - just less of it!

**HORIZON SEEDS**

SILOSTOP

# SECURE COVERS®



## How Secure Covers work

Secure Covers are made from an interlocking knitted textile which, unlike simple woven material, will not fray and fall apart when damaged. Although very tough, Secure Covers are very flexible and follow the contours of the silage surface keeping the silage sheet in close contact with the silage, reducing aerobic spoilage. Secure Covers rough surface make them effective windbreaks helping prevent wind lifting the silage sheet.



During the development of Secure Covers many different types of textiles were tested and rejected. Covers made from simple woven material because they fray and fall apart when damaged. Simple woven material used to make silage cover is also very stiff and does not follow the contours of the silage surface. This together with poor windbreak characteristics can lead to lifting and aerobic spoilage.

Secure covers are designed to be laid in sections on your pit and weighted down with gravel bags down the edges and across the joins. This enables the cover to maintain a drape across the face to stop birds feeding and as the clamp is fed out sections can be removed rolled and stored for next use. With a guaranteed UV stability of 10 years, it is no wonder that Secure Covers is the market leader.

The sheets come in either 8m or 12m lengths and with widths from 10m to 25m as standard. So there is bound to be a combination suitable for your clamp.

If you require advice on how many sheets of what size you will need for your clamp please ask and we can work out a plan for your individual requirement.

## Secure Covers – For bale stacks



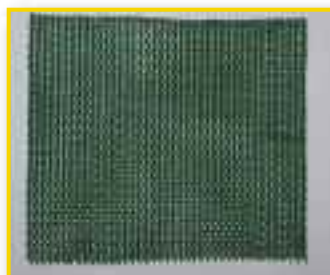
If you have “big bale silage” that is being ruined by birds pecking through the plastic wrap to get a free feed then using Secure Covers for your stack could be a sensible solution.

## Secure Windbreaks



Rapid fit windbreaks with ratchet tensioning system. Can be used for permanent or temporary weather protection and ventilation.

In a range of sizes and complete with all fixtures and fittings to suit most buildings, simple to fit but tough for the job.

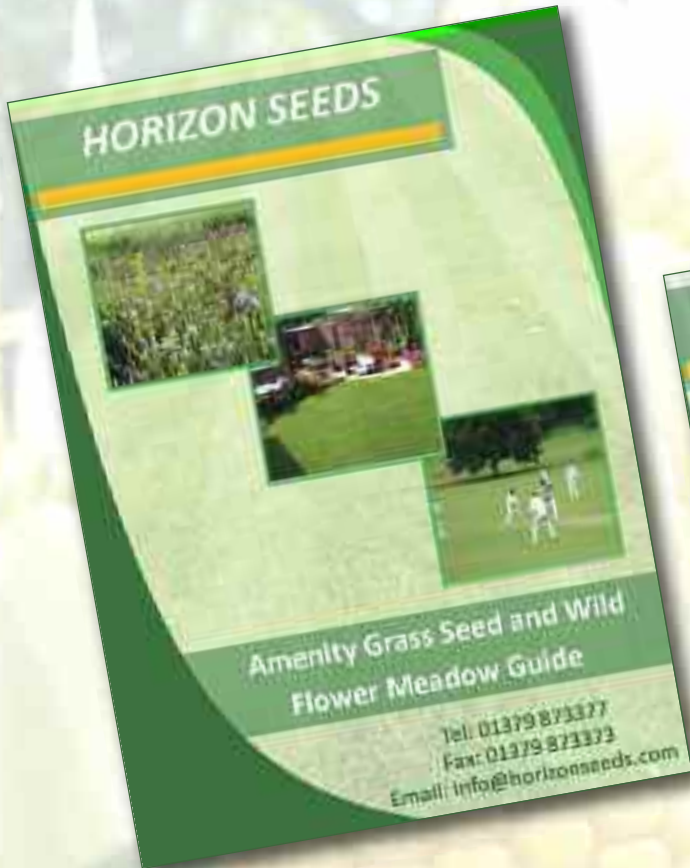


**Secure Cover on left — competitor on right**  
**Not only UV stable for 10 years**  
**but does not fray either**

***HORIZON SEEDS***

SECURE COVER





**Would you like to see our other catalogues?  
Please call us or ask your local agent for a copy**

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