

# DOWNLAND<sup>®</sup>

PARTNERS IN FARMING HEALTH

**2016**  
QUALITY  
GRASS SEED  
MIXTURES



[www.downland.co.uk](http://www.downland.co.uk)

# THE BEST GRASS SEED MIXTURES

Downland Grass Mixtures have been developed over many years to ensure top quality, highly productive swards capable of exceptional performance and offer the best complete package to farmers throughout the length and breadth of the UK.

## THE BEST ADVICE

Downland distributors are trained to offer you the best advice for your farm at all times. Their knowledge can help balance issues of yield, seasonal growth, forage quality, sward density, disease resistance and winter hardiness to ensure that you select the mixture best suited for your individual farm, enterprise and location.

## THE BEST PRODUCTS

- **Technical Excellence** – mixtures are formulated with only the very best varieties specially selected to suit the sward use
- **Top Forage Quality** – Downland's emphasis on forage quality and digestibility ensures that the maximum potential from forage is achieved
- **Highest Seed Quality Standards** – the highest standards of germination and seed purity ensure rapid germination and dense weed free swards
- **Mixture Range** – with a comprehensive mixture range, Downland has a carefully designed mixture for all locations and different sward uses
- **Innovation** – research and development ensures that Downland mixtures lead the field with innovative products like GrassMax™, ProNitro®, Advanced Grasses™ and high DNDF varieties

## THE BEST VALUE

The combination of the best products and the best advice from experienced Downland distributors who understand the economics of livestock farming at a local level, ensures that Downland Grass Seed Mixtures always deliver real value from top performance swards.

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# DOWNLAND QUALITY STANDARDS

Quality grass seed is the foundation of a good sward.  
To ensure the best possible sward performance Downland  
Grass Leys are formulated using only the very best varieties  
sourced to the highest possible quality standards.



## DOWNLAND VARIETIES

All the varieties used in Downland mixtures have been selected on the basis of their performance in extensive trials throughout the UK. Detailed assessment of vitally important variety characteristics like yield, forage quality, palatability, density and persistency ensures that not only the very best varieties but also those that are suited to the final sward use, are included in the Downland mixture range.

## DOWNLAND GERMINATION & PURITY

Seed germination and purity are key elements of a quality grass seed mixture. All Downland mixtures are formulated with varieties selected on the highest quality standards.

Germination is the measure of a seed’s ability to produce a plant and is expressed as the percentage of live seed in the bag. Current UK seed certification means that in some species up to a quarter of the bag can be dead seed that will never produce a plant. Given the importance of high germination to good establishment, all Downland mixtures have a minimum germination standard of 90% guaranteeing improved establishment and better value for money.

	SPECIES		
	Italian Ryegrass	Perennial Ryegrass	Timothy
UK Minimum Germination	75%	80%	80%
Downland Minimum Germination	90%	90%	90%
Downland Actual 2015 Germination	92.6%	93.2%	92.9%
Benefit of Downland	17.6%	13.2%	12.9%

The actual germinations achieved in 2015 are equivalent to a saving of almost £10 per acre at 2016 prices but the real value is in better establishment, more plants per acre and much denser swards

In addition to low germination standards, UK grass seed certification also allows the presence of relatively high levels of serious grassland weeds potentially introducing literally thousands of new weed seeds each time a field is reseeded. The UK minimum standard can allow up to a staggering 1250 dock seeds, 30,000 couch seeds and 25,000 blackgrass seeds to be sown per acre. As with germination, Downland mixtures have their own much higher purity standards guaranteeing a standard for weed seed content which is up to 10 times better than the UK minimum requirement.

Following extensive trial work with the world's leading grass seed company, DLF, Downland has been able to introduce a unique type of forage grass with high yields and excellent forage quality into its mixture recipes. These Festuloliums or Advanced Grasses™ have been developed by crossing Ryegrass with Fescues combining the best characteristics from each of the parents in a single species.

Advanced Grasses™ are a major breakthrough in grass seed breeding combining very high yields, excellent forage quality and early spring growth with very good stress tolerance and disease resistance. They are particularly appropriate in short to medium term mixtures and when combined with either red or white clover, can provide very high yields of protein rich forage.

UK trials of mixtures containing Advanced Grasses™ and Red Clover like Downland Protein Plus (see page 13), have shown substantial DM yield increases per hectare over control and very high protein yields.

Two Advanced Grasses™ included in the 2016 Downland mixture range are

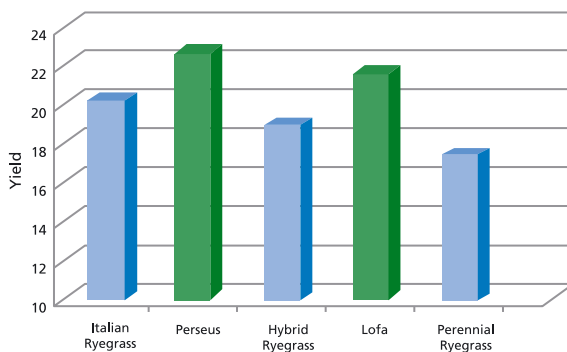
### Advanced Hybrid Ryegrass™ – LOFA

As an Advanced Hybrid Ryegrass™, LOFA is ideal for extensive use within UK grass mixtures. Behaving like a Hybrid Ryegrass but with very fast establishment, high yields, excellent stress tolerance and disease resistance, it is an ideal component in 3 – 5 year mixtures and is particularly suitable as a companion grass for Red Clover.

### Advanced Italian Ryegrass™ – PERSEUS

Perseus is an Advanced Italian Ryegrass™ but with much better persistence than conventional Italian Ryegrass and combines high yields with good quality and high sugar levels. It has exceptional early spring growth and good disease resistance and with its unique set of characteristics it is also an ideal companion grass for Red Clover.

**The yield performance of Lofa and Perseus compared to conventional varieties is shown below**



Source : UK Recommended List and DLF Trifolium trial data



# DOWNLAND FORAGE QUALITY

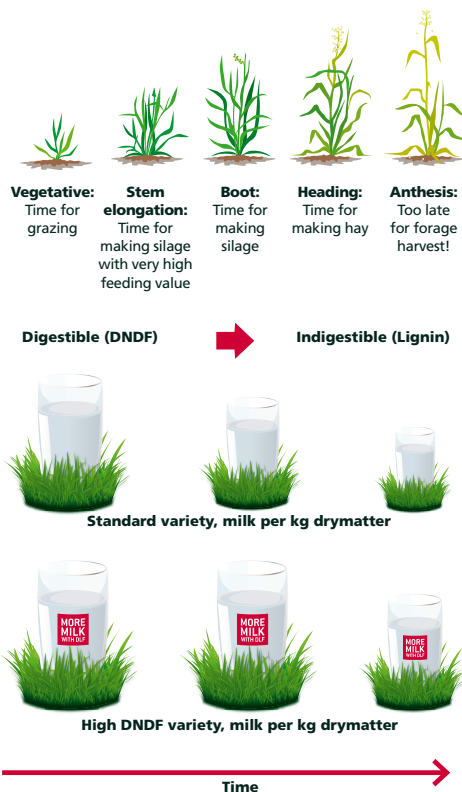
High yielding livestock need top quality forage. Increasing the feeding value of grass can have a dramatic effect on livestock productivity and the Downland emphasis on both yield and forage quality ensures that the maximum potential from forage in the ration is achieved.

## DNDF Makes the Difference

Recent research into animal nutrition has shown that Cell Wall Digestibility (DNDF) is the single most important quality parameter in grass. DNDF is vital to rumen health. It stimulates the rumen function, stabilises pH and improves both the digestion process and the utilisation of nutrients.

Young grass always produces forage with high digestibility but yields are low and as grass matures the opposite applies. High DNDF varieties bring improved animal performance by delivering the best combination of yield and quality as grasses progress through the different growth stages.

The illustration shows how high DNDF varieties maintain higher digestibility throughout the growth stages and the impact on animal production.



## Downland Top DNDF Varieties

Access to state of the art trials and technology has allowed Downland to introduce fibre digestibility into its variety selection process. As a result, the quality assessments used in Downland mixture design have gone beyond the criteria used to produce UK Grass Variety Recommended Lists, ensuring that only the 'best of the best' varieties are included in the 2016 mixture range.

# DOWNLAND RESEEDING SOLUTIONS

Good grass leys whether for cutting or grazing are the backbone of every livestock enterprise. Consequently as both yield and forage quality are essential components of maximising profitability from grass, it is vital to maintain the number of productive grasses at a high level and regular over-seeding and where necessary, complete reseedling is an essential part of this process.

Although the cost of reseedling appears high, the investment in replacing poor grass with a new and productive ley is recouped very quickly in many different ways. The benefits of maintaining grass quality at a high level are clearly demonstrated in the table below.

	Good Ley	Poor Ley
Yield (t DM/ha)	<b>12 t</b>	<b>8 t</b>
Forage Quality (MJ ME/kg DM)	<b>12.0 ME</b>	<b>10.5 ME</b>
Response to Fertiliser N (kg : kg)	<b>25 : 1</b>	<b>15 : 1</b>
Cost of Production (p/kg DM) – grazed	<b>3 – 5 p</b>	<b>8 – 12 p</b>
Cost of Production (p/kg DM) – silage	<b>8 – 10 p</b>	<b>16 – 20 p</b>

Every grassland farmer recognises that grass production declines as the sward ages. The rate of decline will vary from farm to farm however through time, sown species gradually die out and are replaced by unproductive, unpalatable and poor quality natural and weed grasses. As this happens the production potential falls and the cost of replacing the lost production with concentrates rises dramatically.

Age of Ley	Yield (t DM/ha)	ME (MJ/kg DM)	Lost Energy ('000's MJ/ha)	Milk Equivalent (litres/ha)	Concentrate Replacement Cost (£)
<b>1</b>	<b>13.0</b>	<b>12.0</b>			
<b>3</b>	<b>11.5</b>	<b>11.8</b>	<b>18</b>	<b>3,400</b>	<b>360</b>
<b>6</b>	<b>8.5</b>	<b>11.0</b>	<b>55</b>	<b>10,200</b>	<b>1,100</b>
<b>9</b>	<b>7.0</b>	<b>10.5</b>	<b>80</b>	<b>15,000</b>	<b>1,590</b>

Provided it is started early enough, routine overseeding every two or three years with the Downland range of **GrassMax✓** mixtures (pages 23-26) can help to maintain plant numbers, yield and forage quality and prolong the productive life of the sward. However in older swards where sown species have fallen to a relatively low level, overseeding is unlikely to be successful and in many cases a full reseed is the only option.

# DOWNLAND RESEEDING SOLUTIONS

In grassland areas there is an increasing trend towards replacing grass in the summer months however a missed or failed reseed at this time can put pressure on silage acres the following spring. A spring reseed will not produce sufficient bulk for cutting in the year of sowing however the inclusion of Westerwolds Ryegrass can offer a solution.

Westerwolds Ryegrass is a short lived grass species designed to die out in the year of sowing following an initial flush of growth. It will provide substantial bulk in the year of sowing and can be grazed within 8 weeks or cut for silage 10 – 12 weeks after sowing. A spring reseed with Westerwolds will produce an estimated 20 – 25 tonnes of fresh grass in the year of sowing and has the added benefit of providing a nurse crop for the young grass and helping to compete against weeds.

Westerwolds is included in a full mix at 20% by weight or 3 kgs/acre taking the total sowing rate to 17 – 18 kgs/acre and it should always be sown by the end of June to ensure that it dies out in the year of sowing. It can be subjected to any combination of cutting and grazing but its autumn management should always include hard grazing to ensure it is eradicated as survival into the second year may damage the final sward.



*The inclusion of Westerwolds Ryegrass in a Downland mixture allows reseeding and bulk production in the year of sowing.*

## DOWNLAND VARIETIES

All the varieties used in Downland mixtures have been selected on the basis of their performance in trials throughout the UK. Information is collected from both in-house trials and from the various UK Recommended Lists of Grass and Clover Varieties thus ensuring that Downland mixtures benefit from the latest information and maintain their performance at the highest possible level.

Almost 30 different grass and clover varieties are used in Downland mixtures with each selected to suit the mixture purpose and duration.

A selection of Downland's top varieties are shown below

### **BOYNE**

An outstanding variety and one of the highest yielding Perennial Ryegrasses on all three UK Recommended Lists, Boyne produces very high yields under both cutting and grazing with very good early spring growth and excellent sward density.

### **SOLOMON**

A high DNDF variety with excellent all round performance, Solomon is recommended throughout the UK with high yields, good spring and autumn growth and very good forage quality.

### **SEAGOE**

Recommended throughout the UK and a very high yielding Tetraploid Perennial Ryegrass under both managements, Seagoe has very good forage quality combined with excellent early and late season growth.

### **ASPECT**

A Tetraploid Late Perennial Ryegrass, Aspect appears on all three UK Recommended Lists and is an excellent dual purpose variety with high yields under both cutting and grazing combined with good forage quality and sustained growth throughout the season.

### **AVOCA**

A white clover variety recommended throughout the UK, Avoca is an outstanding variety suited to both cutting and grazing with high clover yields, very good persistence and exceptional early spring growth.

### **IONA**

A relatively new medium leaved white clover appearing on all three UK Recommended Lists, Iona has high clover yields and excellent persistence under both managements.



# THE BEST GRASS SEED MIXTURES

The previous pages have described why Downland grass mixtures offer exceptional value for money, however as with any product, customer experience is the only real measure of quality and success. Below are endorsements from livestock farmers the length and breadth of the country confirming the quality and production potential of the Downland range of grass seed mixtures.



*'We have been delighted with Downland Versatile which is well named, as it performs well on both the heavy and light ground we have and whether we are conserving grass or grazing it. The Timothy inclusion gets us off to a great start in the spring and crucially the mixture grazes well into the autumn and winter'*



Martin Gribbon, Farm Manager for E.C Robertson, Home Farm, Dalkeith, Midlothian (Seed supplied by Murray Farmcare Ltd)



*'We started to use Downland Cut and Graze some time ago and it has transformed our grassland in terms of both yield and silage quality'*

Bob Day, Farm Manager for J. C. Dunning, High Chapel Farm, Tebay, Cumbria (Seed supplied by Jobsons Animal Health)

*'We have grown Downland Forager for several years now and it has performed really well for us producing top quality silage and excellent aftermath grazing for our beef cattle. There are a range of soil types across the farm and Forager has always established well even with min till. Our grass has to work very hard and the swards have certainly performed up to expectations, we are very pleased with Forager'*



Phil and Dave Hobby, Bower Farm, Shenmore, Herefordshire (Seed supplied by R M Jones)



*'Our Downland Intensive sown in early autumn 2014 germinated and established really well with excellent early vigour. This year we managed four cuts, all producing great yields and it is now providing valuable autumn grazing for the cows in what has been a very difficult and challenging year for milk producers'*

Jim Kirk, Heanton Barton Farm, Petrockstowe, Devon (Seed supplied by Perkins Ltd Animal Health and Nutrition)

# DOWNLAND CLOVER

There are many different types of clover available for inclusion in grass mixtures with each type having very different characteristics, uses and production potential. Despite these differences, they all offer substantial benefits to the farmer by providing high quality, palatable, protein rich forage and as clover can 'fix' up to 150 units N / acre / year it can reduce or completely eliminate the need for nitrogen fertiliser.

## WHITE CLOVER

White Clover is less productive than Red Clover but it is much more persistent and is therefore used in medium to long term mixtures. The sowing rate of White Clover should be around 1.0 – 1.5 kgs/acre (7% - 10% of the mixture by weight) and it should be sown shallowly into a firm, fine seedbed. The optimum soil pH is 5.8 – 6.5 and clover has a high demand for phosphate and potash. Mixtures containing White Clover can be sown throughout the year but summer reseeds should be completed in time to allow clover to fully establish before the onset of winter.



There are many different White Clover varieties and their performance varies enormously in terms of yield, seasonality and persistency under different management regimes. All the clover varieties used in Downland mixtures are specially selected from UK Recommended Lists and matched to suit the sward use.

## RED CLOVER

Red Clover is a very high yielding, short-lived perennial plant with a normal life-span of 2 to 4 years. It has a tufted, upright growth habit from the crown of the plant which lies at ground level and it has a deep tap root. Its upright growth habit from a central crown restricts its use for grazing and it is essentially a crop for silage production which can be cut 3 to 4 times a year over its life expectancy of 3 full production years.



Red Clover has the potential to produce high yields of protein rich forage (typically around 15 – 20% crude protein) but needs to be sown at 3.5 – 4.0 kgs/acre (25% by weight) in a mix with suitable grasses to provide sugars for the ensiling process. The ideal companion grasses are Hybrid Ryegrasses and the new Advanced Grasses™ both of which have a similar life-span and are aggressive enough to compete in a sward containing a high percentage of Red Clover.

# DOWNLAND HIGH CLOVER MIXTURES

In recent years interest in high clover mixtures has increased dramatically due to an ever increasing awareness of the benefits that clover can bring. Downland High Clover Mixtures, which can also be supplied as organic, contain higher levels of clover than conventional mixtures and allow farmers to unlock the potential of a high clover content in the sward.

## DOWNLAND HIGH CLOVER DUAL PURPOSE

A flexible high clover dual purpose mixture specially designed for cutting and grazing

- Specially formulated for both high sugar and high DNDF forage
- Designed for 2 to 3 cuts of high D-value silage followed by aftermath grazing
- Based on Tetraploid Ryegrasses allowing a high clover content to develop
- Contains Timothy for bulk and as an ideal companion grass for clover
- High White Clover content to ensure good establishment and a high clover content in the sward
- Available with a 70% organic content to meet 2016 organic certification regulations

## DOWNLAND HIGH CLOVER GRAZE

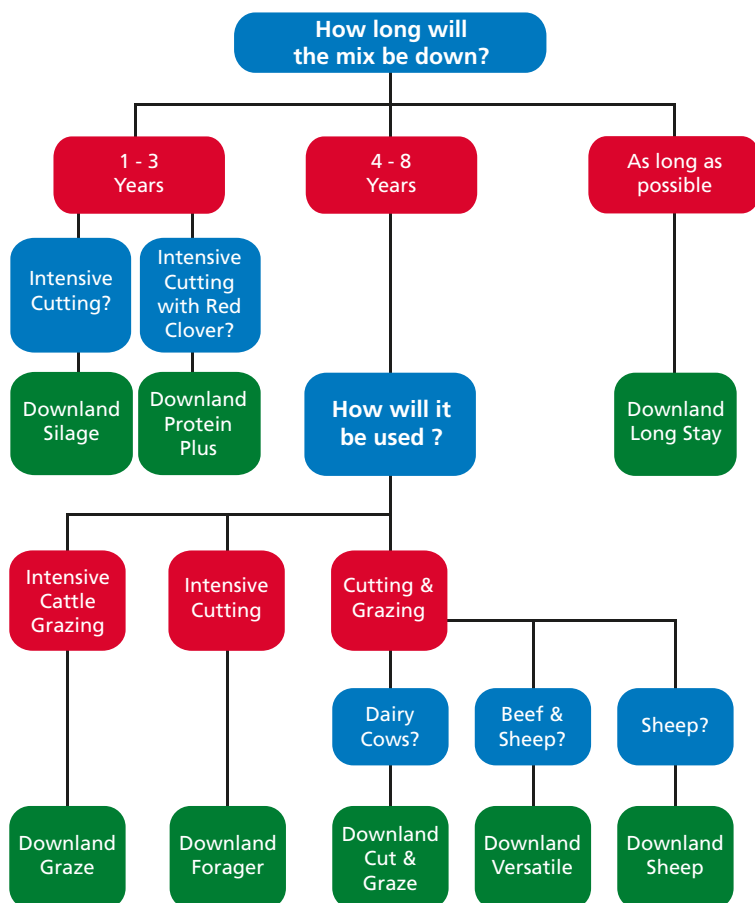
A medium to long term specialist grazing mixture

- Mixture design to ensure the maximum contribution from clover in a grazing situation
- Specially formulated for both high sugar and high DNDF forage
- Grass varieties chosen for their high yields under grazing management
- Exceptionally good forage quality and sugar levels for grazing palatability
- Formulated with Diploid and Tetraploid Perennials to ensure the correct balance between grass and clover in a grazing sward
- Contains a high level of clover varieties selected for their grazing performance
- Available with a 70% organic content to meet 2016 organic certification regulations

# DOWNLAND MIXTURE SELECTOR

Downland mixtures are designed and formulated to meet specific sward uses. Significant differences between mixture recipes are not always obvious but even small differences in varieties or their proportions in the mix can change the way in which the final sward behaves.

The Downland mixture selector is designed to help answer many of the common questions in mixture selection, however if in doubt, please contact your Downland distributor for further advice.



# DOWNLAND SILAGE

2 - 3 years Intensive Cutting

## VARIETIES USED

### Alamo

Italian Ryegrass

### Kigezi 1

Tetraploid Italian Ryegrass

### Citeliac

Tetraploid Hybrid Ryegrass

### Bahial

Tetraploid Hybrid Ryegrass

### Lofa

Advanced Hybrid Ryegrass™

### Perseus

Advanced Italian Ryegrass™

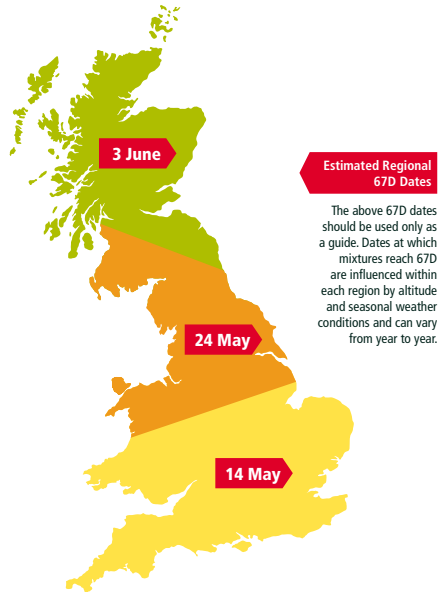
## SOWING RATE

**14 kg/acre**

34.5 kg/hectare

Conventional  
Forage Mixtures

**DOWNLAND**  
PARTNERS IN FARMING HEALTH



- Specially formulated to provide the maximum bulk under intensive cutting over 2 – 3 years
- Includes the Advanced Grasses™, Lofa and Perseus, combining very high yields with excellent feed value and fast regrowth after cutting
- Italian Ryegrass varieties are Alamo and Kigezi 1, two of the highest yielding Italians on UK Recommended Lists
- Very good spring growth for high silage yields at early first cut dates
- High Tetraploid content ensures high sugar levels for silage fermentation and grazing palatability
- Very good disease resistance
- Variety selection ensures rapid recovery and regrowth after cutting
- Overseed with **GrassMax** CUT



# DOWNLAND PROTEIN PLUS

A Short Term Intensive Cutting Mixture with a high proportion of Red Clover specially designed to increase both silage yields and protein levels

## VARIETIES USED

### Citeliac

Tetraploid Hybrid Ryegrass

### Tetragraze

Tetraploid Hybrid Ryegrass

### Bahial

Tetraploid Hybrid Ryegrass

### Lofa

Advanced Hybrid Ryegrass™

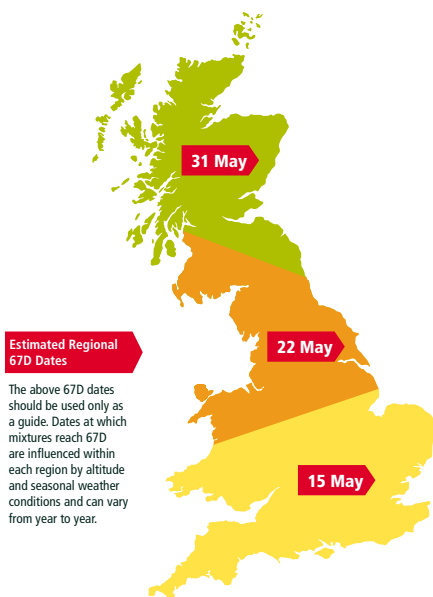
### Downland Red Clover Blend

Red Clover

## SOWING RATE

**14 kg/acre**

**34.5 kg/hectare**



- Specially formulated with a high level of Red Clover for high protein silage
- Will cut up to four times a year over its lifespan of 3 full production years
- Grasses specially selected for their massive yield potential and ability to compete and survive in a sward containing a high proportion of Red Clover
- Contains high sugar grasses to balance the Red Clover content and to ensure sufficient sugars for good silage fermentation
- Contains a high proportion of the Advanced Hybrid Ryegrass™ Lofa which is an excellent companion grass for Red Clover combining exceptionally high yields with good forage quality and the ability to compete and persist in a Red Clover sward
- Varieties selected for their high yields under conservation on UK Recommended Lists
- Will provide excellent aftermath grazing in late Summer and Autumn

# DOWNLAND INTENSIVE

4 – 6 years Intensive Cutting or  
Grazing Ley particularly suited to  
light or drought prone soils

## VARIETIES USED

### Lofa

Advanced Hybrid Ryegrass™

### Glenstal

Tetraploid Intermediate  
Perennial Ryegrass

### Seagoe

Tetraploid Intermediate  
Perennial Ryegrass

### Twymax

Tetraploid Late  
Perennial Ryegrass

### Alfonso

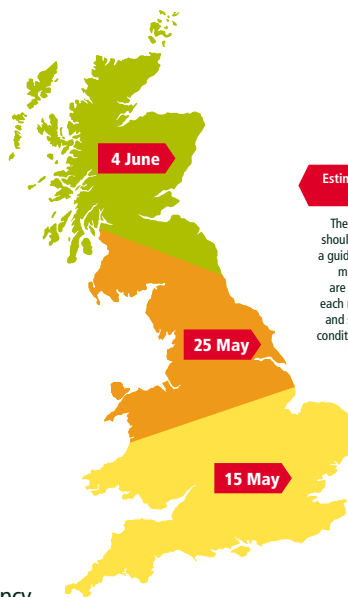
Tetraploid Late  
Perennial Ryegrass

## SOWING RATE

**14 kg/acre**

**34.5 kg/hectare**

- Specially formulated for top quality high sugar and high DNDf forage
- Includes the Advanced Hybrid Ryegrass™ Lofa combining exceptionally high yields with good forage quality, stress tolerance and excellent persistency
- Improved for 2016 with the addition of Alfonso, a new Tetraploid Late Perennial Ryegrass, which has very high yields under both cutting and grazing and excellent forage quality
- Deep rooting Tetraploids help to provide good drought resistance
- Varieties chosen for their performance under both cutting and grazing
- High sugar content for rapid silage fermentation and excellent grazing palatability
- Good seasonality of growth for early Spring and late Autumn grazing
- Very good general disease resistance and excellent resistance to Crown Rust, one of the most damaging grassland diseases
- Large seeded, vigorously establishing Tetraploid grasses make this mix ideal for pasture rejuvenation
- Overseed with **GrassMax<sup>™</sup> CUT**



**4 June**

**25 May**

**15 May**

### Estimated Regional 67D Dates

The above 67D dates should be used only as a guide. Dates at which mixtures reach 67D are influenced within each region by altitude and seasonal weather conditions and can vary from year to year.

Conventional  
Forage Mixtures

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# DOWNLAND FORAGER

4 - 6 years Intensive Cutting Ley  
with Autumn Grazing

## VARIETIES USED

### Solomon

Intermediate Perennial Ryegrass

### Boyne

Intermediate Perennial Ryegrass

### Glenstal

Tetraploid Intermediate  
Perennial Ryegrass

### Seagoe

Tetraploid Intermediate  
Perennial Ryegrass

### Pastour

Late Perennial Ryegrass

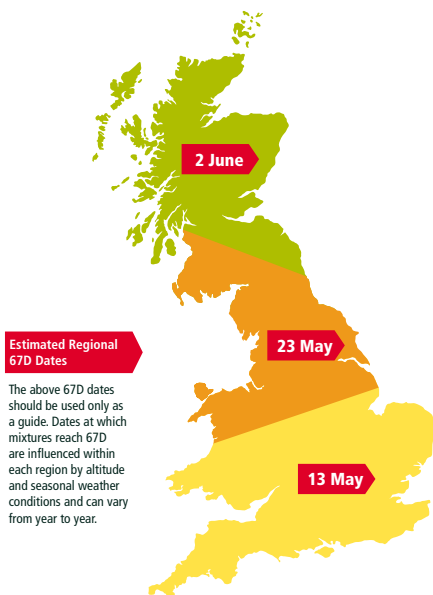
### Alfonso

Tetraploid Late  
Perennial Ryegrass

## SOWING RATE

**14 kg/acre**

34.5 kg/hectare



- Specially formulated for top quality high DNDF forage
- Includes both Boyne and Solomon two of the highest yielding Intermediate Perennial Ryegrasses on UK Recommended Lists
- Improved for 2016 with the addition of Alfonso, a new Tetraploid Late Perennial Ryegrass, which has very high yields under both cutting and grazing and excellent forage quality
- High silage yields and good aftermath grazing
- Varieties selected on the basis of their cutting yield and forage quality
- Tetraploid content provides high sugar levels for rapid silage fermentation and grazing palatability
- Good Spring growth with later heading for high yields at flexible cutting dates
- Excellent forage quality and mid-season D-value
- Very good disease resistance particularly to Crown Rust, one of the most damaging and serious grassland diseases
- Downland Cutting Clover Blend option if required
- Overseed with **GrassMax** CUT

# DOWNLAND GRAZE

Long Term Cattle Grazing Ley

## VARIETIES USED

### Boyne

Intermediate Perennial  
Ryegrass

### Pastour

Late Perennial Ryegrass

### Romark

Late Perennial Ryegrass

### Cancan

Late Perennial Ryegrass

### Aspect

Tetraploid Late Perennial Ryegrass

### Alfonso

Tetraploid Late  
Perennial Ryegrass

### Downland Grazing Clover Blend

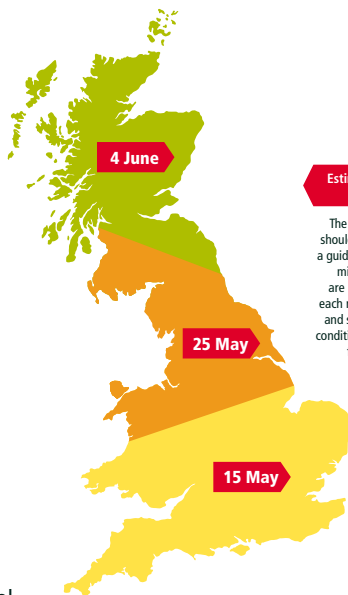
White Clover

## SOWING RATE

**14 kg/acre**

34.5 kg/hectare

- Specially formulated for high sugar forage
- All varieties selected for their high grazing yields, exceptional forage quality and tightness of heading date ensuring a productive, palatable and easily managed grazing sward
- Improved for 2016 with the addition Aspect and Alfonso, two new and very high yielding Tetraploid Late Perennial Ryegrass varieties with excellent forage quality and grazing palatability
- Very good sward density able to withstand heavy grazing pressure and resist poaching
- Balanced proportions of Diploid and Tetraploid grasses for maximum palatability and sward density
- Excellent forage quality and mid-season D-value
- Designed to have grass at the right stage for grazing at cattle turnout
- Very good all round disease resistance helping to maintain both yield, forage quality and grazing palatability
- Contains White Clover varieties specially selected for intensive cattle grazing
- Overseed with **GrassMax** GRAZE



#### Estimated Regional 67D Dates

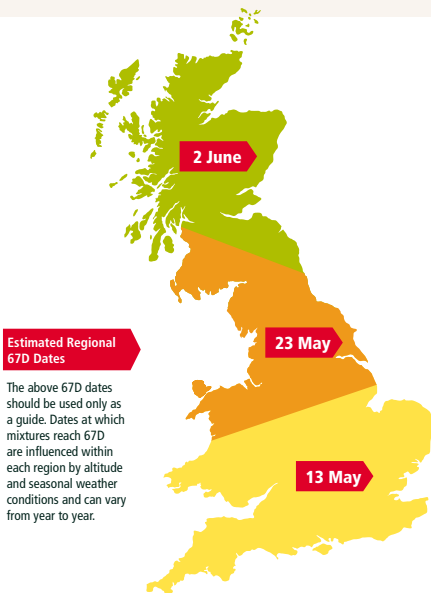
The above 67D dates should be used only as a guide. Dates at which mixtures reach 67D are influenced within each region by altitude and seasonal weather conditions and can vary from year to year.

Conventional  
Forage Mixtures

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# DOWNLAND CUT & GRAZE

4 - 8 years Dual Purpose Ley



## VARIETIES USED

### Citeliac

Tetraploid Hybrid Ryegrass

### Solomon

Intermediate Perennial Ryegrass

### Boyne

Intermediate Perennial Ryegrass

### Glenstal

Tetraploid Intermediate Perennial Ryegrass

### Pastour

Late Perennial Ryegrass

### Twymax

Tetraploid Late Perennial Ryegrass

### Downland Dual Purpose Clover Blend

White Clover

## SOWING RATE

15 kg/acre  
37 kg/hectare

- Specially formulated for top quality high DNDF forage
- An intensive mix aimed primarily at the dairy sector designed for high silage yields over two cuts followed by good aftermath grazing
- Contains a high proportion of Solomon and Boyne two of the highest yielding Intermediate Perennial Ryegrasses on UK Recommended Lists
- Varieties selected on the basis of their cutting yield and forage quality
- Tetraploid content provides high sugar levels for improved silage fermentation
- Good Spring growth with later heading for high yields at flexible cutting dates
- Excellent forage quality and mid-season D-value
- Contains Downland Dual Purpose Clover Blend designed to achieve maximum clover content and persistence under both cutting and grazing
- Overseed with **GrassMax** DUAL PURPOSE



# DOWNLAND VERSATILE

Long Term Dual Purpose Ley

## VARIETIES USED

### Boyne

Intermediate Perennial Ryegrass

### Cancan

Late Perennial Ryegrass

### Pastour

Late Perennial Ryegrass

### Toddington

Late Perennial Ryegrass

### Kintyre

Tetraploid Late Perennial Ryegrass

### Aspect

Tetraploid Late  
Perennial Ryegrass

### Promesse

Timothy

### Dolina

Timothy

### Downland Dual Purpose Clover Blend

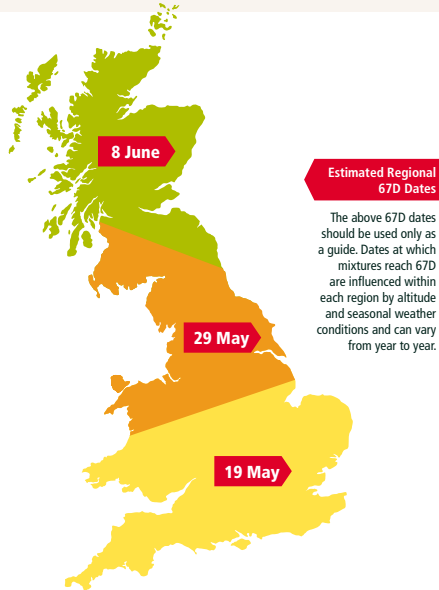
White Clover

## SOWING RATE

**15 kg/acre**  
37 kg/hectare

Conventional  
Forage Mixtures

**DOWNLAND**  
PARTNERS IN FARMING HEALTH



- Specially formulated for high DNDF forage
- Contains a high proportion of Late Perennials for good production and persistency over many years
- Includes Boyne one of the highest yielding Intermediate Perennial Ryegrasses on UK Recommended Lists
- Contains Timothy to enhance Spring growth, palatability and silage yield at later cutting dates
- Good Spring growth without early heading
- Formulated to suit a wide variety of uses and farm enterprises
- Good winter hardiness ensures reliable production for many years
- Contains Downland Dual Purpose Clover Blend designed to achieve maximum clover content and persistence under both cutting and grazing
- Overseed with **GrassMax** DUAL PURPOSE

# DOWNLAND LONG STAY

Permanent General Purpose Ley

## VARIETIES USED

### Solomon

Intermediate Perennial Ryegrass

### Seagoe

Tetraploid Intermediate  
Perennial Ryegrass

### Glenstal

Tetraploid Intermediate  
Perennial Ryegrass

### Pastour

Late Perennial Ryegrass

### Romark

Late Perennial Ryegrass

### Alfonso

Tetraploid Late Perennial  
Ryegrass

### Promesse

Timothy

### Dolina

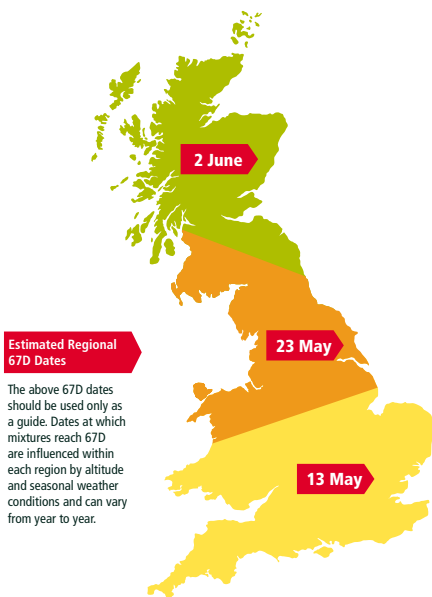
Timothy

## Downland Grazing Clover Blend

White Clover

## SOWING RATE

**15 kg/acre**  
37 kg/hectare



The above 67D dates should be used only as a guide. Dates at which mixtures reach 67D are influenced within each region by altitude and seasonal weather conditions and can vary from year to year.

- A long term mixture specially formulated for high yields of top quality forage and a long growing season from early spring to late autumn
- Varieties specially selected for their high yields under both cutting and grazing and also their persistency under dual purpose management
- Particularly suited to later areas or where first cut is being taken in June
- Contains Timothy to enhance Spring growth, palatability and silage yield at later cutting dates
- Good Spring growth without early heading
- A high proportion of Late Perennials for good production and persistency over many years
- Good winter hardiness ensures reliable production for many years
- Contains Downland Dual Purpose Clover Blend designed to achieve maximum clover content and persistence under both cutting and grazing
- Overseed with **GrassMax** GRAZE

# DOWNLAND SHEEP

A Long Term Sheep Grazing Ley

## VARIETIES USED

### Solomon

Intermediate Perennial Ryegrass

### Premium

Intermediate Perennial Ryegrass

### Boyne

Intermediate Perennial Ryegrass

### Romark

Late Perennial Ryegrass

### Cancan

Late Perennial Ryegrass

### Alfonso

Tetraploid Late Perennial Ryegrass

### Promesse

Timothy

### Dolina

Timothy

### Downland Grazing Clover Blend

White Clover

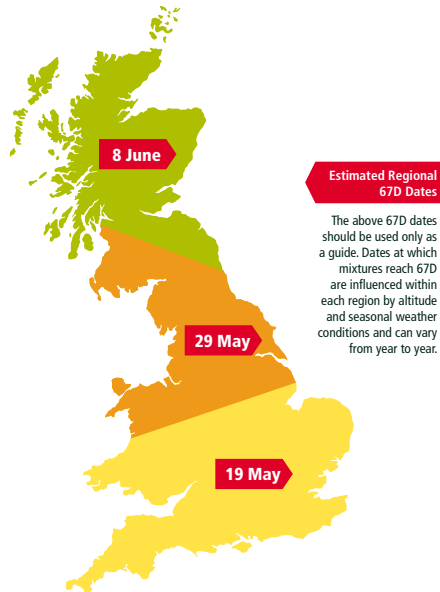
## SOWING RATE

15 kg/acre

37 kg/hectare

Conventional  
Forage Mixtures

**DOWNLAND**  
PARTNERS IN FARMING HEALTH



- Specially formulated for long term sheep grazing with varieties selected for their high grazing yields, persistency and sward density
- Includes both Boyne and Solomon two of the highest yielding Intermediate Perennial Ryegrasses on UK Recommended Lists producing very dense and persistent swards with excellent good early and late season growth
- Only includes varieties with high grazing yields and proven performance and persistence under hard grazing
- Early bite without early heading provided by a high Timothy content
- Will also provide a cut of hay or silage if required
- Very good winter hardiness and persistency for longevity of the sward
- High clover content of varieties specially selected for optimum performance and persistency under sheep grazing

## DOWNLAND CATCH CROP

Sowing a fast growing catch crop in early or mid-summer after a field of grass or an early harvested cereal crop can provide very valuable forage for grazing throughout the autumn, winter and early spring. As a result of increasing demand, Downland has introduced two highly productive catch cropping mixtures.

### DOWNLAND CC

#### VARIETIES USED

##### **Alamo**

Italian Ryegrass

##### **Emerald**

Forage Rape

##### **Green Globe**

White Turnip

#### SOWING RATE

**9 kg/acre**

**22 kg/hectare**

- Designed to produce autumn grazing for sheep and fattening lambs
- A fast growing and very productive catch crop mix
- Will provide both autumn grazing from the combination of species and winter and early spring grazing from the Italian Ryegrass

### DOWNLAND CD

#### VARIETIES USED

##### **Alamo**

Italian Ryegrass

##### **Emerald**

Forage Rape

#### SOWING RATE

**9 kg/acre**

**22 kg/hectare**

- A similar mix to Downland CC but without the white turnips
- Designed to produce autumn grazing for sheep and fattening lambs
- Formulated with proportions to ensure both the Forage Rape and Italian Ryegrass establish successfully
- A fast growing and very productive catch crop mix
- Will provide both autumn grazing from the combination of species and winter and early spring grazing from the Italian Ryegrass



# DOWNLAND EQUIPaddock

A General Purpose Horse Grazing  
and Hay Mix

- Based on the densest Perennial Ryegrass and Timothy varieties for an exceptionally dense and damage resistant sward with varieties specially selected for their grazing performance, sward density and damage resistance
- Very winter hardy and equally suited to all soil types
- Contains only Diploid Ryegrass for improved sward density and suitability for production of hay
- Ryegrass varieties selected for sward density and palatability
- Contains a high percentage of Creeping Red Fescue to further improve sward density and resist poaching
- Contains Timothy to enhance palatability and suitability for grazing and hay production



## VARIETIES USED

### Orantas

Intermediate Perennial Ryegrass

### Premium

Intermediate Perennial Ryegrass

### Toddington

Late Perennial Ryegrass

### Promesse

Timothy

### Dolina

Timothy

### Maxima

Creeping Red Fescue

## SOWING RATE

15 kg/acre

37 kg/hectare

Conventional  
Forage Mixtures

**DOWNLAND**  
PARTNERS IN FARMING HEALTH



# DOWNLAND OVERSEEDING

Overseeding presents a real opportunity to restore production in tired or damaged swards to newly sown levels without the expense and disruption of a full reseed and it can also be used to introduce or increase clover levels in the sward.

The key to successful overseeding lies in ensuring that the newly sown plants are capable of competing with the existing grass and that the germinating seedlings have sufficient vigour to establish successfully in what can be a very competitive environment. Increasing the competitiveness of the establishing plants can be achieved in three ways each of which has a cumulative effect in ensuring success.

## Minimise Competition from the Existing Sward

When the existing sward is growing strongly there is obviously more competition for the establishing seedlings. Consequently the timing of the actual overseeding operation and the subsequent fertiliser treatment are important factors to consider. The objective should be to find a window during the season when the existing sward is short and is not growing strongly. Ideal conditions are provided after a hard graze or immediately after the last silage cut of the season and when no fertiliser has been applied.

## Use a Mixture Designed for Overseeding

Large seeded grasses are more competitive in their establishment and all the Downland GrassMax™ mixtures are comprised of Tetraploid Hybrid and Perennial Ryegrasses specially selected for their establishment vigour. The use of these large seeded aggressively establishing grasses significantly increases their ability to compete with the existing sward.

## Use Mixtures Treated with ProNitro®

For 2016 Downland has introduced a brand new fertiliser coating on GrassMax™ mixtures where every individual seed is coated with nitrogen fertiliser in both fast and slow release forms. This unique targeted fertiliser concept feeds the sown seeds and not the surrounding sward and dramatically improves the establishment vigour and seedling competitiveness at the most crucial time in the overseeding process. Extensive trials have shown that ProNitro® is up to 4 time more effective than conventional fertiliser treatment and has demonstrated substantial gains in the number of plants established and in both root and shoot development.

**New for 2016**

# DOWNLAND OVERSEEDING

If done correctly overseeding not only improves yield but also has a significant effect on palatability, forage quality, spring growth and the overall response to fertiliser inputs. Successful overseeding however depends on following strict guidelines which have been developed to ensure the best possible end result.



## Guidelines for Successful Overseeding

### Field Preparation

- Remove all surplus grass growth by cutting or hard grazing
- Scarify the area in opposite directions using a wire tine grass scarifying harrow

### Sowing

- Sow at the same time as scarifying with up to 10 kg/acre (25 kg/ha) of the appropriate GrassMax™ seed mixture
- Where ProNitro® is used, as the fertiliser coating increases the weight of the seed, it is necessary to increase the treated seed sowing rate to ensure that the same number of actual seeds sown remains at the target level. As ProNitro® increases the weight of the seed by 50%, the sowing rate should be increased by the same amount taking the standard ProNitro® sowing rate to 15 kg/acre (37 kg/hectare)
- Immediately after sowing roll the field to consolidate the ground and ensure good seed to soil contact

### Timing

- With untreated seed the optimum window is immediately after the last silage cut of the season or after a hard graze in the Spring or Autumn
- Although the benefit of minimising competition from the existing sward also applies to ProNitro® treated seed it's increased competitiveness reduces the dependence on timing and may offer the opportunity of a much wider overseeding window

### Fertiliser

- For high clover establishment wait until at least 30 days before applying any Nitrogen fertiliser
- If clover is not included wait until at least 10 - 15 days after sowing

### Livestock re-introduction

- After cutting wait until aftermaths have fully recovered
- After sowing keep stock on for 10 - 15 days then remove and allow sward to recover



BEFORE



AFTER

# DOWNLAND

## GrassMax<sup>TM</sup>

CUT

For overseeding fields that will be mainly cut for silage

### VARIETIES USED

#### Lofa

Advanced Hybrid Ryegrass<sup>TM</sup>

#### Citeliac

Tetraploid Hybrid Ryegrass

#### Glenstal

Tetraploid Intermediate Perennial Ryegrass

#### Downland Cutting Clover Blend

White Clover

### SOWING RATE

10 kg/acre

25 kg/hectare

- Contains large seeded aggressively establishing grasses which are ideal for overseeding
- Grasses specially selected for their high conservation yields
- Varieties chosen for good Spring growth to maximise first cut yields
- Contains a high proportion of Downland Cutting Clover Blend to ensure good clover production and persistence under intensive silage management
- No clover option available on request

# DOWNLAND

## GrassMax<sup>TM</sup>

CUT

WITH RED CLOVER

For overseeding fields that will be cut for silage and where the introduction of red clover is required

### VARIETIES USED

#### Lofa

Advanced Hybrid Ryegrass<sup>TM</sup>

#### Citeliac

Tetraploid Hybrid Ryegrass

#### Downland Red Clover Blend

Red Clover

### SOWING RATE

10 kg/acre

25 kg/hectare

- Contains large seeded aggressively establishing grasses which are ideal for overseeding
- Grasses specially selected for their high conservation yields and their ability to compete and survive in a sward with a high Red Clover content
- 30% Red Clover content to ensure a good plant population in the overseeded sward
- Excellent forage quality and high Red Clover content for increased protein levels in silage

Downland GrassMax<sup>TM</sup> mixtures are available with ProNitro<sup>®</sup>

For overseeding fields that will be predominantly grazed

For overseeding fields that will be both cut and grazed

#### VARIETIES USED

##### Catabi 1

Tetraploid Intermediate Perennial Ryegrass

##### Glenstal

Tetraploid Intermediate Perennial Ryegrass

##### Diams

Tetraploid Late Perennial Ryegrass

##### Twymax

Tetraploid Late Perennial Ryegrass

##### Downland Grazing Clover Blend

White Clover

#### SOWING RATE

10 kg/acre  
25 kg/hectare

#### VARIETIES USED

##### Citeliac

Tetraploid Hybrid Ryegrass

##### Glenstal

Tetraploid Intermediate Perennial Ryegrass

##### Alfonso

Tetraploid Late Perennial Ryegrass

##### Downland Dual Purpose Clover Blend

White Clover

#### SOWING RATE

10 kg/acre  
25 kg/hectare

- 100% Tetraploid grasses which are ideal for overseeding as they have the largest seeds and are aggressive establishers
- Grasses based entirely on Perennial Ryegrass varieties with the highest grazing yields on UK Recommended Lists
- Excellent Crown Rust resistance
- Contains a high proportion of Downland Grazing Clover Blend containing varieties specially selected for their production and persistence under grazing
- No Clover option available on request
- 100% Tetraploid grasses which are ideal for overseeding as they have the largest seeds and are aggressive establishers
- Based on Hybrid and Perennial Ryegrasses with high yields under both cutting and grazing
- Varieties chosen for good Spring growth to maximise first cut yields
- Contains a high proportion of Downland Dual Purpose Clover Blend to ensure good clover production and persistence under both cutting and grazing
- No Clover option available on request

Downland GrassMax<sup>TM</sup> mixtures are available with ProNitro<sup>®</sup>

# DOWNLAND GREENING

Greening is now an established requirement on many farms throughout the UK, introduced to encourage the delivery of 'farming practices beneficial for the climate and the environment'. Greening comprises three elements namely Permanent Grassland, Crop Diversification on arable land and Ecological Focus Areas. Although the principles of Greening remain the same throughout the UK, with devolved governments there are some differences in the schemes operating in England, Wales and Scotland and farmers are advised to check the CAP regulations in their respective areas.

Whilst the Permanent Grassland and Crop Diversification elements are essentially farm management issues, Ecological Focus Areas require farmers to follow one or more different cropping and / or mixture options on at least 5% of their arable land.

Ecological Focus Area Options	Basic Guide
Fallow Land	Fallow period January to July (actual dates vary between regions). Wild Bird and Nectar mixtures encouraged Temporary grass and buffer strips can be managed as fallow with grass. Grass can be sown during the fallow period and utilised after the end date
Buffer Strips and Field Margins	Areas adjacent to water courses and round fields. Wild Flower and Wild Bird mixtures may be established
Catch Crops and Green Cover	Periods vary between regions. Grass undersown in a previous crop or a mixture of 2 or more crop groups can be used
Nitrogen fixing crops	Periods vary between regions. A mixture comprising two or more specified leguminous crops can be sown

# DOWNLAND GREENING

Differences in the various UK Greening regulations largely centre on timings and closed periods for the protection of nesting birds and other wildlife, however despite these variances eligible mixtures to meet the different Ecological Focus Area options can be standardised across the country.

## FALLOW LAND

Temporary grass can be managed as fallow however Wild Bird and Nectar Rich mixtures are encouraged. There are many different Downland mixtures specially designed to fulfil the requirements and to suit both the climate and geography of the different regions within the UK. Typically wild bird mixtures will contain cereals and other seed producing plants whereas nectar rich mixtures will be based largely on leguminous species.

## BUFFER STRIPS & FIELD MARGINS

This option is fulfilled by mixtures containing only grasses including Fescues, Meadow Grasses, Timothy, Bents and Cocksfoot but they can also be combined with wild flowers and nectar producing plants. Wild flowers can include a huge range of species from Ox-eye Daisy to Birdsfoot Trefoil and Yellow Rattle and examples of nectar producing plants would be Red Clover, Vetches and Lucerne.

## CATCH CROPS & GREEN COVER

For many farmers, grass undersown in the previous crop will fulfil the catch crop option whereas green cover will comprise a mix of 2 or more of the following crop groups Rye, Vetch, Phacelia, Barley, Oats, Mustard and Lucerne.

## NITROGEN FIXING CROPS

A list of eligible nitrogen fixing crops is published by the relevant authorities and includes Peas, Beans, Lucerne, Sainfoin, Trefoils and Red, White, Crimson, Alsike and Yellow Blossom Clovers.

The range of eligible mixtures for different options and climatic conditions is vast and well beyond the scope of this grass seed catalogue, however details of all the mixtures and their recipes can be found in the Downland Countryside brochure which provides a comprehensive and extensive guide to Countryside Stewardship mixtures.



# DOWNLAND ROOT AND FODDER CROPS

In addition to grass seed mixtures for forage production and greening, Downland also offers a comprehensive range of root seeds and fodder crops through its extensive franchisee network to meet the needs of livestock farmers.

## FODDER BEET

Fodder Beet is grown as a main root crop and has the ability to produce massive yields of high energy fodder and is an excellent supplement to grass silage. Indeed Fodder Beet has the capacity to produce the highest energy yields per hectare of all the commonly grown fodder crops. The roots are very palatable to stock and can be lifted and fed whole or grazed in situ.

## SWEDES

Swedes grow on a wide range of soil types, produce high yields of high energy fodder and can be grazed in situ or lifted for stock feed or as a cash crop. Whatever the intended use, the dry matter content is one of the most important characteristics to consider. Low dry matter types are softer and are more suitable for early use whereas the high dry matter types are more winter hardy and therefore better suited to later utilisation.

## KALE

Kale is the highest yielding of all the forage brassicas and has excellent feeding value and a high crude protein content. Kale can be grazed, cut and carted to housed livestock or ensiled as big bale kaleage. Sown from mid-May to mid-June it can provide a long period of utilisation however there are big differences in terms of winter hardiness and varieties should be chosen to suit the utilisation period. For maximum yields Kale requires good fertility and a pH of at least 6.0.

## FORAGE RAPE

Rape is fast growing and will tolerate poorer fertility conditions than Kale. Sown from June to early August it has the potential to provide good yields of digestible forage and valuable autumn and winter grazing.

## STUBBLE TURNIPS

Stubble Turnips provide palatable and digestible fodder for grazing 10 – 12 weeks after sowing. They can be sown at any time with the required utilisation period determining the sowing date. They are less winter hardy than other forage brassicas and should be used before Christmas. Varieties vary in their leaf to root ratio with leafy types being generally more winter hardy.

# DOWNLAND COUNTRYSIDE

Farm diversification, environmental schemes and an ever increasing emphasis on wildlife and conservation has created a vast array of seed mixtures and single crops for different uses on farm containing a wide and complex spectrum of plant species.

Greening



The 2016 Downland Countryside brochure, available from your local Downland distributor, is a practical guide to Game Cover, Environmental, Green Manure and Forage Crop Seeds and contains detailed information on crop choices for different uses. It also provides clear advice on both species and mixture selection and the appropriate husbandry to ensure that objectives are met.



PARTNERS IN FARMING HEALTH

Your nearest Downland distributor is

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