BARENBRUG

BARFORAGE NEWS

ISSUE 10 | 2018

Our role in Biodiversity

New advice guides and tools

Celebrating ten years at Cropvale







Welcome to another edition of BarForage News – our newsletter for farmers interested in getting more from their grass. Across the country, there's no doubt that the past winter felt very long, very cold and very wet. From December onwards, we saw some of the worst snow we've seen in decades, followed by a spring characterized by extreme highs and lows. Throughout March and early April, the cold felt unending with significantly lower than average temperatures. Then, two weeks later, it was like we were living in a completely different country with the hottest April day (29°C) on record since 1949.

I suppose that's what you'd call a temperate climate! However, with widely fluctuating temperatures, we've seen significant variations in grass performance at the start of the growing season. Italian ryegrasses, including Westerwolds and hybrid ryegrasses, were able to put on good vegetative growth at temperatures down to $4-6^{\circ}$ C - so were largely unaffected by the prolonged cold weather.

However, perennial ryegrasses, which need 8-10°C, and clover, which require even warmer conditions, fared less well. Given that these leys make up the bulk of UK farmed grassland, there is inevitably some catching up to be done.

Whatever grass you grow, during the season ahead the challenge, inevitably, will be to get the very best quantity and quality out of your fields. One obvious solution is to replace your worst performing fields with new leys. On average a new ley will out yield the one it replaces by more than 50%. This nearly always means that any investment can be recouped in under twelve months! If you need help getting your swards in shape, pick up the phone and speak to one of our team. We've got a huge amount of information for farmers to tap into, which we've accumulated over many years.

In 2018 our forage grass team is celebrating ten years of Cropvale - our breeding trials site in Worcestershire. Cropvale sits at the heart of our work and is a really important place. In the last decade, the work undertaken at Cropvale has helped us bring numerous, superior forage and amenity grass varieties to market. Read more about our work at Cropvale over the following pages, and if you ever want to visit the site, do let us know. We're always happy to spend time with farmers that want to find out more about the science of good grass.

James

James Ingles, Head of Agriculture

MEET THE TEAM

The agriculture team at Barenbrug has a busy few months ahead with an industry event to attend every couple of weeks.

If you are planning to visit any of the shows below, please stop by our stand to say hello. This autumn you'll find us at:

UK Dairy Day (Ludlow, Stand L13) 12 September 2018 at The International Centre, Telford

Agriscot 21 November 2018 at Royal Highland Centre, Edinburgh

Royal Ulster Winter Fair 13 December 2018 at Eikon Exhibition Centre, Lisburn, Northern Ireland

NEW LOOK WEBSITE

Have you visited the Barenbrug website recently? If not, head online! We've recently redesigned the site, making it even easier for you to find all the grass growing information you need. In a dedicated farming section, alongside details of all the different forage grass varieties we offer, you'll find a range of resources that you can download. There are guides and videos on all kinds of subjects, plus details of all the farmers taking part in our Grass into Gold scheme. Hopefully you'll like the look of the new site and find it easy to navigate! Let us know if you have any feedback.





The 2018/19 Recommended Grass and Clover Lists (RGCL) for England and Wales, and Scotland, have been published and once again varieties bred by Barenbrug UK feature highly throughout.

On the RGCL for England and Wales, 24 ryegrass varieties, which were either bred by Barenbrug or its partners appear on the list - four of which are brand new varieties that make an appearance for the first time.

Making their debut are Galgorm and Callan – two varieties of diploid perennial ryegrass, which were developed by our forage grass experts in cooperation with the team at the Agri-Food and Bio-Sciences Institute (AFBI). In addition, two new tetraploid varieties make the list for the first time: Bannfoot, a tetraploid hybrid ryegrass arising from the AFBI / Barenbrug partnership; and Barimax, a tetraploid Italian. Barimax, Galgorm and Callan also appear on the RGCL for Scotland, which was selected by the team at Scotland's Rural College.

In terms of grass performance, each of our new varieties offer farmers something slightly different:

- Ğalgorm is an intermediate diploid perennial ryegrass, with a heading date of 22nd May, which offers very good total annual yields combined with a very good mid-season D-value of 78.3D under simulated grazing management. Galgorm has an excellent first cut of 107% and an early grazing yield of 112%. It also offers very good autumn yields coupled with very good crown rust resistance

- Callan is a late diploid perennial ryegrass with a heading date of 1st June. Óffering very good spring yields under simulated grazing management (117%), Callan delivers a very good total yield under conservation management of 102%. It also offers very good resistance to crown rust
- Bannfoot is an exciting new tetraploid hybrid ryegrass with a heading of 19th May. Bannfoot has a high percentage of perennial parentage meaning it is incredibly persistent - as demonstrated by its third year yield figure (105%), which is the highest 3rd year yield of all hybrid ryegrasses on the RGCL. Alongside an excellent yield in year three, farmers that sow Bannfoot can expect excellent first cut yields and high resistance to crown rust
- on the 20th May and provides strong first and second cut yields as well as good total year figures for both year one and two. The first cut quality of Barimax is 71.9D and it has a crown rust resistance score of 7.3.

Forage grass varieties, available from Barenbrug, that have appeared on the RGCL before, and which feature again include:

- Clanrye, Dunluce, Glenariff, Moira and Seagoe, which have been established on hundreds of UK farms and create excellent swards
- added to the Recommended List for England and Wales in 2015 Gläsker and Gosford, which were added in 2016

Barimax is an Italian tetraploid that heads

Caledon and Glenarm, which were

- Fintona, which was first listed in 2014 and remains the highest yielding ryegrass ever produced
- Plus two white clover varieties: Crusader and Barblanca.

Mhairi Dawson, Research & Development Manager for Agriculture, said: "Naturally we are delighted that four of our new varieties have been included on the Recommended Grass and Clover list for England and Wales for 2018/19 - alongside so many of our existing varieties. In a further endorsement, three of the four new grasses have also been added to the Scottish Recommended List. This achievement, and the fact that so many of our varieties continue to appear, year after year, is testimony to the quality of our grass breeding programmes. The continual investments we make in our varieties are clear to see. The end result is grass with genetics that stand the test of time, give farmers peace of mind and - most importantly - provide a good return on investment. In the current market, that's more important than ever."





NEW SWARD STICK SHOWS HOW BARENBRUG SWARD STICK YOUR GRASS MEASURES UP

Knowing when to graze grass and for how long requires careful judgement. Grazing grass too early – before a second new tiller leaf appears – can damage grass persistency and put future growth in peril. Conversely, if a field is left too long, grass will enter the ceiling phase of growth. In this phase, tillers continue to produce new leaves; however, there is no further increase in net pasture mass due to the dying off of older leaves.



To help farmers gauge when to graze grass, we've developed a brand new sward stick, which is available completely free of charge. Printed with the optimum heights for grass for both cattle and sheep, the sward stick is designed to make it easier for farmers to decide when to graze and when to rest their fields.

There are several ways to measure grass but a sward stick is the simplest way to get started. Featuring a 15cm rule, our sward stick has three columns that give farmers colour coordinated zones for grass measurement - depending on the time of year:

- Spring (March to April)
- Late spring and summer (May to August)
- And autumn (September to November).

James Ingles said: "We've created sward sticks in the past and they've proved really popular so we're expecting these ones to disappear quickly. You can request a sward stick via our website or pick one up at the

FREE Sward Stick

Order your FREE Sward Stick at www.barenbrug.co.uk Or send us a message on social media:

Facebook.com/BarenbrugUK Twitter.com/BarenbrugUK

events we'll be attending throughout the year. If you've not used a sward stick before, our team will be happy to show you how. It's a really simple, effective tool that every livestock farmer should have at their disposal." We recommend using

sward sticks on a weekly basis – to build up a log of grass growing information. Farmers should walk each relevant

field, once a week, to monitor sward height. Following a similar route each time, they should take 30 to 40 leaf-top readings per field – before calculating an average and recording it in a notebook. This information can then be used to aid decision-making and for longer-term seasonal and year-onyear assessments and adjustments.

NEW SHEEP GUIDE ADDS TO ENTERPRISE ADVICE AVAILABLE

Last year, we made the decision to create a series of enterprise specific grass guides that offer information and advice to farmers working in different parts of the farming sector.

Recognising that market conditions have been difficult for some time, and that farmers have more forage options available than ever before, our guides are designed to help UK farmers make the right choices and pick the right products as they work to achieve their grassland goals.

Each guide contains useful information about grassland growth and practical advice on perfecting pasture performance and looking after leys long-term. There are also details about the different grassland management techniques, and varieties and species available to UK farmers.

Our Sheep Guide, which was officially unveiled at ScotSheep at the end of May, is our latest guide - following the successful launch of our Brassicas Guide in 2016, and our Dairy and Beef Guides, which came out in November 2017 and February 2018 respectively.



GOOD GRASS GUIDE -UPDATED EDITION AVAILABLE

Guide, which was first published in 2016, to include even more information for farmers that want to realise more profit from homegrown feed.

Available free of charge, the Good Grass Guide is packed with practical pointers about gauging grass quality. The booklet includes a wealth of information about what to do with fields in different states of repair. There is a section on field indexing and planning; in other words, identifying what you want from each field, and scheduling in work that will extend the number of good grass days available.

We've been updating our Good Grass There are pages dedicated to soil nutrition and structure; and why investing in grass is important. There is information about reseeding versus overseeding; seed selection and managing new swards.

> There are also photographs and facts and figures about productive grass species, common weeds, diseases and pests. At the back of the guide you'll also find space to note down observations about individual fields and pastures.

FREE Guide **4 SIMPLE STEPS TO SUCCESS**

DOWNLOAD INSTANTLY **REQUEST PRINTED COPY** www.barenbrug.co.uk/GoodGrassGuide Mhairi Dawson said: Regardless of breed, all UK sheep farmers have one thing in common; the need to provide their animals with top quality grass to eat. Costing far less than manufactured animal feed, wellmanaged grassland can supply almost all of the energy and protein requirements of a flock – but deciding what type of grass to grow and how best to manage it can be difficult. With so many forage grass options now available, our guide is designed to help farmers make the right choices."

If you are interested in receiving one of our guides, please get in touch, either via our website or contact a member of our team who will be happy to email you a copy if that's easier.



In producing this guide, our aim is to demonstrate that - with the right investment - big improvements in grass utilization are relatively easy to achieve. Our regional forage grass experts speak to farmers on a weekly basis. Across the UK we get asked the same questions. How can I grow more grass? What can I do to keep my animals out on grass for longer? Where do I start when it comes to renovating my fields? The Good Grass Guide is designed to help answer all these questions, and more.



CELEBRATING A DECADE OF GRASS TRIALS AT CROPVALE

This year we're celebrating a decade of research and development at our Cropvale trials site in Worcestershire. Established in 2008, Cropvale is a leading location for testing the performance, palatability and persistency of forage grass varieties and mixtures bred for use by UK farmers.

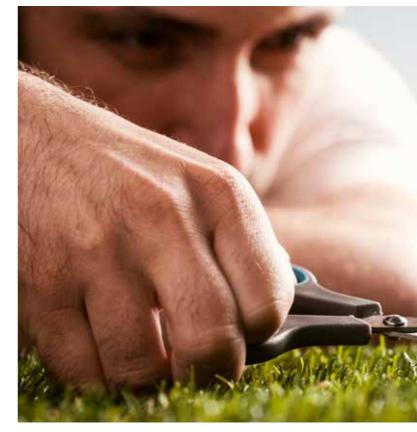
Every year, thousands of new grass plots are sown at Cropvale, which spans 15 acres of farmland in the Vale of Evesham, between Pershore and Evesham. Cropvale is used to test new grass seed products developed out of the international breeding programme

Cropvale is a major disease trials centre for the National Institute of Agricultural Botany (NIAB) for the England and Wales Recommended Grass and Clover lists.

James Ingles said: "Cropvale plays a critical role in the UK farming sector, putting new grass seed varieties through their paces to ensure that they will give farmers the best possible results. Over the last decade we've sown thousands

of grass plots at Cropvale so we can closely monitor their potential in terms of overall yield but also palatability, persistency and disease resistance. Cropvale is a unique place, doing vital work. We are proud of the site's track record in advancing the agriculture industry's understanding of the science of good grass, and for the role it plays in developing grass products that consistently top national recommended lists." lists."

Over the following pages, read more about the history of Cropvale, the people that work there, and the projects that make it such a special place in the world of grass.



Cropvale has a long growing season of around 300 days. The site is well sheltered with grass growth limited by frost and cold weather in the winter, and drought in the summer.

Because of its location, there is a strong focus at Cropvale on testing varieties and mixtures designed for use in central and southern England and Wales; areas where a lack of summer rainfall and fungal diseases such as crown rust can affect both grass yield and quality.

Varieties tested at Cropvale typically include early, intermediate and late heading varieties of perennial ryegrasses; hybrid and Italian ryegrasses; cocksfoot; timothy; tall fescue; vetches; and red and white clovers.

Trial plots are sown twice a year, with main sowing occurring in the autumn. Sowing is followed by two years of cutting to simulate normal farm use. The plots are cut for two silage crops, followed by a normal rotational grazing. Subject to weather conditions, cutting dates will follow standard farm practice. Spring sowings are mainly of species such as lucerne, which is slow to establish and prefers a full summer before cutting commences.

In addition, there are demonstration plots that will replicate yield information about the performance of different species compared to known varieties such as Tyrella and Dunluce. Also included in these trials are mixtures that will give both total yield and seasonal growth information as well as sward densities and disease resistance figures for all our current and prospective BarForage leys.



A CLOSER LOOK AT OUR WORK AT **CROPVALE**

To perform well at Cropvale, varieties must have good overall disease resistance, be able to perform over a long growing season and be tolerant of hot, dry conditions.

We also have a number of plots at Cropvale dedicated to trialling new varieties of amenity grass, grown for use at football stadiums and on golf courses – among other applications. In addition, we are testing mixtures and species such as tall fescue, westerwolds and vetches, which are outside the UK National List system.

GLOBAL EXPERIENCE

Cropvale is one of 14 breeding and research stations that Barenbrug operates worldwide – two of which are in the UK. Our other UK trials site is at Loughgall in Northern Ireland and is managed in conjunction with our partners at AFBI. This multi-site approach, spanning two very different locations, means that the testing of new potential varieties takes into account all of the main UK grass usage areas.

Where possible, the same seed stock will be used at both of our UK sites, and although we don't undertake a direct comparison between yields at the different sites, we do compare performance by looking at the highest yielding varieties within each trial.

As well as being home to our England and Wales grass trials site, Cropvale is a mixed enterprise farm with beef, sheep and arable production.

Roger Hutchings and his family have farmed the land at Cropvale for almost 60 years. Roger, who manages our grass trials site in parallel to his family business, spoke to BarForage News to tell us more about the history of the farm and how it came to be a Barenbrug trial site.

BarForage News (BF): Thanks for talking to us Roger. Can you begin by telling us a bit about Cropvale and how your family came to farm the land here?

Roger: My Mum and Dad moved to Cropvale Farm in 1959, the year before I was born. Both Mum and Dad have strong farming backgrounds. Dad was brought up on a mixed farm in Warwickshire and Mum has a dairy background. Once they were married, Mum and Dad to moved to Cropvale Farm where there were 50 acres of land. Initially they started off with a few Ayrshires, then they moved on to Friesians. Over the years, the business grew in size with Mum and Dad buying up additional pockets of land as and when they could afford it until, eventually, they'd trebled the original acreage.

BF: When did you get involved with running the farm?

Roger: Growing up on the farm I was obviously involved from a very early age. At the age of 12 I had my own cattle to look after - a herd of Barley bulls that I had to feed before and after school. At sixteen years of age I went to Hindlip College on day release to learn about farm management. At eighteen I left the farm for a year and went travelling - before coming back to Worcestershire to continue working alongside Mum and Dad.

BF: When did you take over running the farm?

Roger: I took over the day-to-day management of the farm in 2000 when Dad retired but, to this day, Mum and Dad still take an active interest in Cropvale. They live just up the lane so they call in most days and Dad still helps out when asked. He often mows the amenity plots on site. Until recently he was groundsman at Pershore Bowling Club so has a real affinity to these grasses.

BF: How has the farm changed over the vears? Roger: Obviously the business has changed

considerably over the years. You have to evolve and expand just to stand still in farming, and we've tried a number of different things. In 2001 we decided to set up a B&B to supplement the income we were getting from our dairy cows but, just as our plans were coming together, foot and mouth hit, and everything had to go on hold. We struggled on with dairy farming for a few years after the crisis - building the business back up. However, in 2007 we decided - with regret - that we'd have to get out of dairy farming. Our decision coincided with a casual, yet very timely, discussion with James Ingles from Barenbrug, a good family friend. James explained that he was working for an international seed company called Barenbrug and that they were running a UK grass trials site in the next village. The land wasn't performing as well as Barenbrug wanted and James said the business was on the look out for another location. Discussions evolved and, having bought another piece of land in

2003, which we weren't doing much with, I invited James up to the farm to take a look. The rest, as they say, is history.

CROPVALE -FAMILY AFFAIR

BF: So in 2008, Barenbrug's trials site moved to Cropvale Farm?

new trials site at Cropvale. Initially I ran both sites for Barenbrug side-by-side, but once the trials field at Cropvale was fully established, Barenbrug let the other land ao.

BF: What was it like setting up the site? Did you know anything about managing grass trials?

Roger: As you can imagine, there was an awful lot to learn - not just about setting up the site but also about its dayto-day management. To get things going I worked very closely with James, who also introduced me to David Johnston at AFBI. David talked me through how the trials site in Northern Ireland is managed and I got to visit Loughgall several times to learn about the growing and cutting schedules they have in place there. The information they



Roger and his Dad at Cropvale

BARFORAGE NEWS



trial plots, and logging all the data is quite a complex, time-consuming process. With around 2000 plots sown every year, there is always something to do! But saying that, I like the variety it brings to the job and, after ten years, I've got the work down to a fine art with a tight schedule of jobs to follow week by week.

BF: Can you walk us through a typical day managing Cropvale?

Roger: There isn't really a typical day. But I can tell you about the different kinds of activity that I do in each area of the site. During the main growing season, management of the forage plots typically includes walking and scoring the plots and taking down details of any disease observations. This is done every week.

When it comes to cutting, I have to mow and weigh each plot individually - making a note of the yield. We do this in line with general farming practices to give a true result. After cutting, it's a case of feeding the grass to the cattle that graze our fields. Then I have to refertilise the soil before the process starts all over again.

On the amenity side, our plots have to be mown twice a week over the same period as the sports that the grass has been developed for. I also have a wear machine that I have to use. This spikes the grass replicating the impact that different boot studs have on a sward. Once a month, the Barenbrug amenities team travels over from The Netherlands to look at the overall management, review results, and help me top-dress the grass accordingly.

BF: What's changed over the last ten years? Roger: The biggest change has probably been in the machinery we use. The technology has moved on over the years, making all the different jobs much easier -





although we've still got some of the original equipment on site.

BF: How has your opinion of grass changed since running the site?

Roger: Obviously, with our history of dairy farming, my family and I have always known the importance of growing good quality grass - but working with Barenbrug for ten years has really opened my eyes. Like most farmers, I never realised just how much time and effort goes into bringing new grass varieties and mixtures to market. It's a fascinating process and I'm pleased to be part of such important work.

BF: What's the best thing about managing Cropvale?

Roger: One of the best things is being part of a bigger team. It's an absolute pleasure to run the site. I love growing and cutting the new varieties of grass, and generating data that ultimately makes a difference to livestock farmers across the UK. I look forward to continuing this work over the next ten years and to helping Barenbrug and its partners get even more information out of the site.



CROPVALE – PART OF A GROWING NETWORK OF GLOBAL TRIAL SITES

BarForage News spoke to Piet Arts, Global Research Manager at Barenbrug in the Netherlands, to find out more about the wider importance of the work carried out at Cropvale.

As an international breeding company, the Royal Barenbrug Group needs multiple testing locations worldwide to support and evaluate our activities. Currently, we've got 14 locations situated around the globe – including two in the UK, one of which is Cropvale.

To create forage grass varieties for the UK, our team draws information from our forage breeding programs in the Netherlands, France and New Zealand, where the growing conditions are similar. Our breeding program with AFBI at Loughgall in Northern Ireland is also a very important part of our work in the UK. We have exclusive rights to market the varieties that come out of this program and over the years, this relationship has delivered many important forage varieties that make a real difference to UK farmers.

Having the opportunity to test all of our new grasses at Cropvale gives us the chance to assess how they will perform in practice and whether they are fit for use in the UK. All available experimental perennial ryegrass varieties from the Barenbrug and AFBI programs are tested for three years at Cropvale.

Each autumn, the breeding team from Barenbrug in the Netherlands visits Worcestershire to work with Roger Hutchings to plant the new trials at Cropvale. Our first visit was in 2007 when we took the train from Calais to Dover, in a 13.5 metre-long truck, carrying all of our planting equipment. Just a few years later, Cropvale was recognized as an excellent location for scoring the disease tolerance and susceptibility of ryegrasses – and was added to NIAB's disease evaluation work.

The work conducted at Cropvale by Roger fits alongside the programs we run at our trial locations across Europe. From our site in Cork, in the Republic of Ireland (ROI), to Kazan, in the far east of Russia, we test grass genetics in all climates across the continent.

Because the UK's growing environment is quite specific, the information gathered at Cropvale enables us to select exactly the right genetics to enter NIAB's official trials. Over the years we've had many successes, including the development of top-performing varieties such as Fintona and Ballintoy. These varieties work especially well in the UK and ROI, demonstrating the importance of Cropvale in our chain of sites.

Thanks to Roger for all the excellent work undertaken at Cropvale over the last decade. All the investments the Royal Barenbrug Group makes in the newest breeding technologies, such as genomic selection, would be worthless if the testing at our trials site was not done properly.

The work conducted by Roger will ensure that we can continue to develop sustainable grass products that have the right characteristics for the UK, delivering drought tolerance, better disease resistance and improved nitrogen use efficiency.



Thijs van Welie, Gerrit van de Kamp, Piet Arts and Henk Tollenaar.

BARENBRUG AND AFBI: A PARTNERSHIP DELIVERING REAL RESULTS



Barenbrug UK has been part of a highly successful grass breeding partnership with AFBI in Northern Ireland since 1991. Over that period, AFBI grass breeder David Johnston has seen 46 varieties get added onto UK recommended lists. Through this work, AFBI has gained a reputation as one of the most prolific grass breeding organisations of the last 25 years. In the past two decades, the work of David and the team at AFBI has helped increase grass yields by around 0.5% per annum, with evidence showing that there have also been gains made in digestibility and disease resistance.

Cropvale has played a major role in this work, with most of the Barenbrug / AFBI varieties available on the list today monitored at the site during their development. As we celebrate ten years of Cropvale we are pleased to say that the productivity of the Barenbrug-AFBI partnership looks set to continue over the next decade.

The table opposite highlights, the 26 new varieties currently in official trials at Cropvale and at our other joint trials sites in the UK, having gone through the Barenbrug Development process.

Just some of the varieties that have arisen from our partnership and have proved a real success in the marketplace.

Let us know if you are using them on your farm!

Early perennial ryegrass (diploid) Moyola

Intermediate perennial ryegrass (diploid) Moira Glenariff

Copeland

Intermediate Perennial Ryegrass (tetraploid) Malone Fintona Seagoe Dunluce Caledon

Late Perennial Ryegrass (diploid) Tyrella Clanrye Glenarm Drumbo

Late Perennial Ryegrass (tetraploid) Dunloy Dundrum Navan

Successful Science.

New recommendatio coming years:

Glasker – Early PRG (diploid) Gosford & Galgorm – Intermediate PRG (diploid) Barimax – Italian ryegrass (tetraploid) Barclamp – Hybrid ryegrass (diploid) Callan – Late PRG (diploid) Ballintoy – Late PRG (tetraploid) Bannfoot – Hybrid Ryegrass (tetraploid)

Also available from the Barenbrug Group: Baritmo – Westerwold Barspectra II – Westerwold Barmultra II – Italian ryegrass (tetraploid) Barsilo – Hybrid ryegrass (diploid)



The development and ongoing analysis of these new candidate varieties means our partnership is set to bring new grasses to market every year up to 2025 - while we continue to develop and submit new varieties annually, in the background.

Grass species	Number of varieties in trial
PERENNIAL RYEGRASSES Lolium perenne	
Early diploid	1
Intermediate diploid	8
Intermediate tetraploid	4
Late diploid	6
Late tetraploid	5
HYBRID RYEGRASSES Lolium x boucheanum	
Tetraploid	2

New recommendations in production for



ENDS TO BOOST

As well as trialling forage grass varieties, we have established a number of biodiversity plots at Cropvale as part of a larger European trial looking to find the next generation of 'herbal ley'.

Featuring up to eight different species, the plots include better known species such as red and white clover and chicory alongside lesser known or, at least, less commonly used species in the UK. The trial plots also include a blend of perennial ryegrass, soft leaf tall fescues and timothy.

The aim of our biodiversity trials is to come up with an optimum blend, or a series of blends, of legumes, herbs and grasses, which will be suitable for a wide range of grassland farmers throughout the UK and Europe. Ultimately, we want to come up with blends that will produce large volumes of high quality forage for livestock farmers to be able to feed to their animals to increase meat and milk yields - in a way that has the least environmental impact.

Including leaumes in a biodiversity blend is one way to achieve this. Legumes have great nitrogen (N) fixing potential, which means less artificial nitrogen needs to be added to the soil to grow the crops. Deep-rooted species are also employed to improve soil structure while flowering species are utilised to help pollinating insects do their job.

Due to the nature of the species involved, weed control in our biodiversity trials is very limited so we score the plots for their natural weed suppression abilities, which will add to the persistency and quality of a mixture in the field.

Initial trials on the continent have proved very interesting with important observations already captured regarding fertiliser rates and sward composition. There are now several batches of seed out 'on farm' to investigate the influence of grazing pressure on the sward compositions. This is a process we will eventually repeat in the

Currently, we have three Barforage mixtures, which lean towards this genre of product:

- HERBAL GRAZE: New for 2018, this mixture is a bio-diversity multi-species herbal ley, which will adapt and thrive in diverse locations and soil types. This diverse mixture has been proven to provide a hardy, very long grazing season for ruminants, coupled with multi legume species to fix nutrients to sustain year-long production
- PROTA PLUS: First developed and launched in 2012/2013, after trials at Cropvale, and as an adaptation of a Barenbrug France product, is a blend of Italian ryegrass and annual clovers. Prota Plus provides a 12-18 month ley for high protein silage or grazing in season one, with a winter bite for livestock throughout the winter and potential for silage in the following spring. The mixture is very flexible and can be used solely for silage production or for grazing any class of stock, including breeding sheep
- BARFINISHER: This is a blend of chicory and plantain (two commonly used forage herbs) alongside red and white clover. The clovers are ideal companions for the broad leaved herbs as they provide some of the N required for the large green leaf area - meaning less bagged input is needed. Deep rooted, and high in protein and minerals, Barfinisher can be sown as a short-term green manure or used for two to three years for grazing livestock.

Through our work at Cropvale we have also developed a portfolio of wildflower seed mixtures that are specifically suited to different growing environments and soil types. Producing colourful displays of wildflowers, with a balanced mix of species, these products can be used by farmers that want to create buffer strips, improve the margins of fields, and / or meet the objectives of Environmental Stewardship.

Annual wildflowers: For farmers interested in growing wildflowers at the margins of their fields, our annual wildflower mixture includes species such as cornflowers, poppies and corn marigolds. Annual wildflower species complete their life cycle within a one-year period. They typically establish from seed in the spring; flower; produce seed; then die off by the onset of winter. The continuation of the species is entirely dependent on the successful establishment of the seed produced.

As their survival depends on the success of their seed, annuals have evolved to produce larger quantities of seed. Annuals require ground disturbance each year in order to establish, which is why they are commonly seen growing in road verges, on waste ground and on arable farmland. Annuals can provide a boost of colour to spring sown seed mixtures although this will only last for one season, as seed will not establish in a developed sward.

Perennial wildflowers: The majority of wildflower species are perennial species that re-establish in the spring from their own rootstock. Most species will germinate from seed in year one; flower; produce seed in year two; go dormant over the winter; and re-establish in the spring. Some perennials are short lived, only lasting for three to four years, whereas some species can survive for many years.



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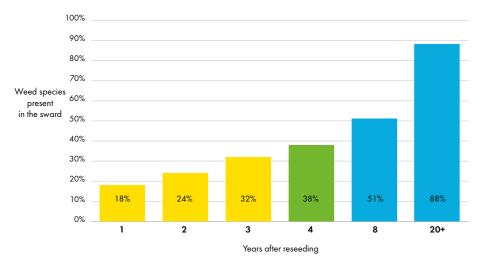
Our perennial wildflower mixes contains species including Yarrow; Common Knapweed; Yellow Rattle; Devil's Bit Scabious; St John's Wort; Common Catsear; and Autumn Hawkbit.

Our perennial wildflower mixtures include products designed for use in wetland and water edge environments; for shaded hedgerows and woodland; for classic hay meadows; for coastal areas; and for general ground cover. We produce mixtures optimised for dry, sandy soils; chalk, limestone and calcaereous ground conditions; and clay and heavy soils. We also produce a mixture for bees and butterflies, which features species included on the Royal Horticultural Society's 'Perfect for Pollinators' list.

Speak to our team if you are looking for something specific or head to the Wildflower page of our website, which can be found under Landscaping.



CHECK OUT NUMBERS THAT CAN ADD UP TO BETTER GRASS



The harsh cold winter of 2017/18 means that UK stocks of forage are now very low. After record-breaking conditions, farmers have had to buy in silage and hay from quite a distance – and it's not been cheap. Demand has seen prices rise by as much as 20-30% in some livestock areas. Everyone knows that farmers don't sell their best quality forage, yet neighbouring farmers have been buying it from one another at quite a premium.

This coming season, farmers should address this deficit and give serious consideration to reseeding grass – ensuring that productivity increases in the years ahead; and that they aren't left with a shortfall.

Reseeding grassland can feel like a major investment, especially if you've got a big farm, but you shouldn't underestimate its importance. Did you know that in order to just 'stand still' in terms of grass quality, you should, ideally, reseed a minimum of 10% of your grass every year!

A basic reseeding rate of just 10% is enough to prevent a decline in grass productivity while a 15% rate will start to deliver real gains - and make a difference to your bottom line. Conversely, fields that are not reseeded will quickly become overrun with weed species with little or no nutritional value.

The graph above shows that just one year after reseeding, weed species can make up to 18% of a sward. After four years that figure has more than doubled to 38%, and after eight years, weeds will be starting to dominate the sward (51%).

James Ingles said: "Some farmers are understandably reticent about reseeding given continuing economic uncertainty and the lack of clarity around Brexit. For some it's a case of batoning down the hatches and seeing what happens over the course of the next ten months.

But is that wise? If you look at the numbers they are actually really persuasive. Yes, reseeding involves an initial outlay but, if you consider the DM, milk and animal gains to be had, it's definitely worthwhile. As with anything in life, doing nothing is the worst decision you can take and will quickly lead to a real reduction in grass quality and productivity.

If you were to reseed 15% of your grassland every year, you'd ensure that all the grass on your farm was renewed every six years - helping to maintain grass yields and the nutritional value of this vital form of feed. Obviously some farmers will be able to reseed larger areas of grassland while others will find 15% a stretch. Whatever your circumstances, it's worth doing what you can. When it comes to reseeding our message is simple - doing something is always better than doing nothing!



If reseeding isn't really an option for you, then why not consider overseeding. It's not a long-term fix; it's more of a mid-term solution but, on the right fields, it can be an effective way of improving productivity and reducing costs.

Overseeding is ideal for farmers who need to improve grassland performance to boost profits but perhaps feel nervous about investing in a full reseed or taking a field out of rotation.

While brand new swards will always outperform older grasses, overseeding can help to increase dry matter yields shortterm - reducing farm reliance on expensive bought-ins and even improving live weight gains.

Currently, only 2% of UK grassland is overseeded. However, implemented carefully, overseeding has the potential to improve pasture productivity by up to 40% for between three to four years - depending on field quality. As a general rule of thumb, we advise that fields that score between 2 and 4 on our field indexing system can really benefit from overseeding. Here are some factors to bear in mind.

When overseeding, it is crucial to use a mixture designed specifically for this purpose. Any existing productive grasses present in the ley already have an established root system and a leaf canopy for capturing light for photosynthesis. The new grass seed that is introduced needs to be able to work with these conditions and overseeding mixtures are blended accordingly.



Typically, they contain tetraploid perennial ryegrass varieties whose seeds are larger, and have more aggressive growth habits and are therefore faster to establish within an existing sward.

As well as overseeding a tetraploid-based variety or mixture, introducing clover could be another option. Clover can fill in gaps to reduce weed ingress. It can also help improve nitrogen levels - encouraging tillering, which makes swards denser. Crucially, clover can also encourage higher voluntary intakes, improving live weight gains.

For advice on overseeding, contact one of our team to discuss potential next steps. Full contact details can be found on the back page of this edition.

BARENBRUG



If you've recently made the decision to reseed or overseed, you might be feeling a bit confused about how to pick the right forage grass variety for your farm. Do you go with the same variety you've always used, or try something different?

If you've not bought grass seed for a number of years, you'll undoubtedly find that there are many more products available. In the last five to ten years, grass seed technology has moved on considerably, with many new varieties with much better genetics and performance potential now available.

With input costs increasing, selecting the right seed mixture to suit your system is essential. So where should you start? Well, obviously, looking at Recommended Lists is a good place to begin. Proven to deliver, forage grass varieties included on the Recommended Lists for England and Wales, and Scotland, have been extensively tried and tested to make sure the numbers add up.

In recent years, the Recommended List scheme has changed. It's no longer partially funded by merchants - so the data is available to everyone. Today, the testing is funded by plant breeders through the British Society of Plant Breeders and the ruminant levy boards (AHDB and Hybu Cig Cymru).

The England and Wales list contains 168 varieties while the Scottish list contains 132 1st choice varieties and 16 red clovers. Each grass is ranked by heading date with detailed information included on a number of variables including:

- Grazing yields Grazing D-values
- ME yields
- Seasonal growth yields
- Annual growth yields for each year up to three years - including a mean value

- Plus expected yields per cut, up to four plus harvests.

Data is also provided on ground cover characteristics; resistance to diseases including crown rust, drechslera and mildew; and the year the variety was first listed.

Obviously, as a grass seed breeder, the Recommended Lists are important to the team at Barenbrug - helping us differentiate our products from those of our competitors. With grasses tested independently, the numbers speak for themselves. As you'll see on page 3, our varieties regularly appear on the list - with some appearing year in, year out, because of the outstanding results they offer.

This year's list features 39 varieties of ryegrass and clover that were either bred by or are available through Barenbrug. More than ten of these grass products were listed for the first time more than a decade ago, with one of our clovers, Aberystweth S.184, first appearing as far back as 1969 when it was developed by IBERS.

Other examples of best selling varieties, which are renowned for delivering great results, include Fintona - the highest

Download the Recommended Grass and Clove Lists for England and Wales and listed varieties n Scotland. www.barenbrug.co.uk/resources

yielding perennial ryegrass in the UK, ever. Developed by our team and our partners at AFBI, Fintona provides unrivalled spring grazing yields and an impressive sward density - providing a pretty solid investment.

Consider the following factors when choosing a grass seed mixture:

- How long do you want the grass to last?
- How will your field by grazed?
- Do you need strong ryegrass growth rates early in spring or is late spring feed quality more important? What's your stock class?

Generally, diploid varieties create a denser field, are more forgiving under grazing in stress environments, and are more competitive with weeds. Tetraploid varieties are, by and large, more palatable and have improved with faster digestibility, and improved utilisation and intake.

If you've still got questions and want to discuss the pros and cons of reseeding, please contact one of our team. Contact details for our regional grass experts can be found on the rear cover.





Hopefully, in this edition of BarForage News, we've convinced you that doing something with your grass is always better than doing nothing.

To help you take the next step, we've come up with four simple steps that can help you improve your grass performance.

Get a grasp on your grass **UNDERSTAND**

THINK SOILS

PLAN

ESTABLISH

& DEVELOP

Use our Field Indexing guide

compaction

addressed

Reseed 15% of your grass per year

Treat your grassland like an arable crop

Understand when to sow

Reseeding Overseeding Managing and plan ahead See below, or request a copy of our latest Good Grass Guide to find out more.



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NEW PADDOCK MAINTENANCE GUIDE AND FRESH LOOK FOR **EQUINE GRASS RANGE**

We've recently relaunched our range of grass seed products for the equine industry. Three products are now available under our Hunters Equestrian range: a generalpurpose grass seed, a traditional meadow grass seed, and a herbs mixture. To support the relaunch, we've also developed a free guide that gives horse owners step-by-step, season-by-season, paddock maintenance advice.

Conscious that most horse paddocks are repaired by overseeding rather than renovated through a complete reseed, we've repackaged our equine products in 10kg bags. Easy to handle, these bags provide enough grass seed for up to one acre. Products available include:

- General Purpose: This hardy mixture contains grasses that have been selected for their roughage and low fructan content. Designed to cope with the pressures of equestrian use, the mixture has a strong plant rooting system, which creates a dense sward that is hardwearing, persistent and delivers the right levels of roughage required for a fit and healthy equine gut. Approximately 70% of this specialist product is made up of perennial ryegrass, 16% of strong creeping red fescue, 8% of meadow fescue, and 6% of Timothy.

- Traditional Meadow: In this traditional meadow grass product, we've blended a mixture that recreates the nutritional characteristics of a natural habitat. Free from ryegrass, the mixture uses species that are less aggressive to aid biodiversity. Swards sown with this mixture are likely to be lower in fructans than a traditional ryegrass sward, reducing the risk of laminitis, which can occur when horses have access to too much high-sugar grass.

Herbs: The final product in our Hunters Equestrian range is a special blend of herbs, typically found in older horse pastures, which can provide valuable nutrients and trace elements. With a deep rooting structure, the herbs mixture provides a good source of minerals and trace elements and will add diversity of species in a pasture. Developed especially for grazing horses and ponies, this mixture is made up of 45% chicory, 20% sheeps parsley, 20% salad burnet, 9% ribgrass and 6% yarrow.

| BARFORAGE NEWS|

Mhairi Dawson said: "Correctly managing your paddocks and overseeding them regularly can make a big difference to the amount of grazing available to horses. It can also make grass more resilient to the day-to-day pressures of feeding and exercise. The three products we have assembled are each valuable in their own right and, used in conjunction with the advice in our paddocks guide, will give horse owners everything they need to grow more grass."

Alongside our Hunters Equestrian grass seed paddocks and pastures range, we've developed a range of specialist equine grass products for the equine industry for gallops, racecourses and polo pitches.

We also have a range of products that are perfect for horse owners and smallholders that want to grow grass for hay and haylage.

Explore the guide, video and range online at www.barenbrug.co.uk/horses.



GENERAL PURPOSE GRASS SEED

- Grass varieties used have been specifically selected for roughage and low fructan content

- wearing and persistent - Paddock will deliver grazing and forage
- production
- Yields good levels of effective roughage, ideal for a fit and healthy equine gut

10kg OWS: Up to 0.7 acre EPAIRS: 1 acre

GRASS SEED

habit to aid diversity.

- Helps prevent laminitis
- managed



HERBS MIXTURE SEED

HUNTERS

EQUESTRIAN

GENERAL

PURPOSE

GRASS SEED

HUNTERS

EQUESTRIAN

TRADITIONAL

MEADOW

GRASS SEED

In naturally occurring grassland many more species are found other than grasses.

While these are low yielding plants, they have the ability to supply different trace elements and minerals to grazing horses or ponies.

This blend of herbs contains many of the plants found in older horse pastures, which can give valuable properties to the diet.

- The herb mixture has been developed especially for horses and ponies it includes a number of deep rooting and nutritious species which provide a good source of minerals and trace elements
- It will add diversity of species to the pasture
- Perennial mixture of species

FREE GUIDE GETTING THE BEST OUT OF YOUR PADDOCKS www.barenbrug.co.uk/horses



PRODUCT RANGE

Hardwearing general-purpose mixture designed to withstand the pressures of equestrian use and provide good quality grazing for horses.

- Produces a good, springy, dense turf
- The low fructan concentration reduces the risk of laminitis
- Strong grass plant rooting system, making the sward dense, hard-

IN THE BAG

10kg packs

70% Perennial ryearas 16% Strong creeping red fescue Meadow fescu Timoth

TRADITIONAL MEADOW

Formulated to recreate the nutritional characteristics of a natural habitat.

- The mixture is ryegrass free and uses species with a less aggressive growth
- Swards sown with this mixture are likely to be lower in fructans than a ryegrass sward, reducing the risk of laminitis
- The healthiest pasture for your horse
- Effective fibre in your horse grass
- The optimum grass seed for your horse meadow - Good horse pasture that can be effectively

IN THE BAG

25%	Tall fescue
25%	Strong creeping red fescue
20%	Meadow fescue
15%	Timothy
15%	Smooth-stalked meadowgrass



10kg packs

IN THE BAG

1kg

45%	Chicory
20%	Sheeps Parsley
20%	Salad Burnet
9%	Ribgrass
6%	Yarrow

OUR TEAM



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