SPRING 2012

AGRONOMY Update

The application of science and technology

CROP SITUATION

Make the right decisions now to

PROTECT YIELD

NEW APPS SEE INSIDE

THIS ISSUE»

Welcome

Dear Readers,

My name is Stephen Henning and I am the Regional Director for Agricultural Products across Northern Europe. Just over a year ago I moved here from the US as a Regional Manager responsible for the Western third of the US. The great thing about that market is the **diversity of crops** from **cereals to almonds**. Many have asked me what are the biggest similarities and differences in agriculture from the US to the UK. While there are some differences, I find there are a lot of similarities! Whether it's is managing the various challenges such as **risk management, labour, regulatory** and **legislative policies, global markets** or **resources,** one common area stands out and that is the need for **innovation and differentiation**. That is why I am excited about this 1st edition of Agronomy Update developed and provided to you by BASF. We are committed to **creating innovative solutions** for sustainable farming. We are aware of the challenges Agriculture face in the area of **Food Safety** and believe that innovation has and will remain the critical factor to meet these challenges.

As you will see in this magazine, we are focused on providing in-field solutions, ranging from our superior SDHI offer called Adexar to applications you can use to make informed decisions when needed the most which is on the farm. As I stated before, our goal at BASF is to continue to develop and lead innovation that optimises agricultural production. I hope the information in this magazine proves beneficial in the decisions that are in front of you this year. We also request your constructive feedback on this magazine so we can improve future editions for better value to you. We have offered a little incentive if you provide that feedback, so I encourage you to do so.

I wish you a successful season.

My Best Regards,

Stephen Henning
Regional Director for Agricultural Products
UK, Ireland, Nordics and Baltics

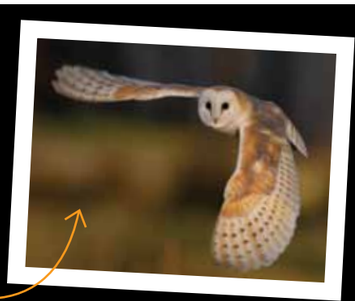
Agronomy Update is compiled and edited by: Janine Ferrie - BASF Communications Officer

Contents

BASF would like to **thank** all parties who contributed to this magazine.

Your support is invaluable and without you, it would not have been possible.

Rawcliffe Bridge
CELEBRATES
its 10th Anniversary.
See page 16



Lodging can reduce yield by up to 75%

Canopy Management in cereals crucial this season to prevent lodging. Sarah Clarke, from ADAS explains how this risk can be best assessed.

The CAT – helping growers to manage cereal crops

This season, earlier sowing, higher seed rates and more residual Nitrogen than normal have all contributed to give the large wheat crops that can currently be seen throughout the country. Growers are being advised that these crops should be managed carefully in order to optimise Nitrogen inputs and reduce the potentially high lodging risk.

Nitrogen (N) is a key input to any crop, and is often the most costly, so getting the amount right is important to optimise both yields and gross margins. The Soil Nitrogen Status (SNS) of a crop, which includes an estimate of the amount of N already in the crop, is needed to produce a Nitrogen recommendation. The amount of N already in the crop can be determined by measuring its Green Area Index (GAI), as 1 unit of GAI contains 30 kg N/ha. *"In a season like this where we've experienced a mild autumn, crops may well have taken up more N than usual, so it is particularly important to measure GAI to check crop N status,"* says ADAS researcher Dr Sarah Clarke.

Lodging risk can also be estimated from crop GAI, with larger crops being more lodging prone due to more tillers and weaker stems. Lodging can reduce yield by up to 75%, and Hagberg Falling Number by 20 seconds a day, as well as increasing combining time and drying costs. There is also a variety effect, with around 70% of current Recommended List varieties at risk from lodging (lodging resistance score <7). *"To assess lodging risk, the GAI of a crop should be measured at growth stages 30 and 31,"* says Sarah Clarke. *"GAI should be 1-1.25 at the first timing and 1.5-1.75 at the second. Each 0.5 unit increase above this reduces a variety's lodging resistance score by 1, a significant effect."*

GAI can be estimated by eye from the area of the ground covered by the crop, but it is not easy and can lead to large errors - the GAI would be 1 if the area of the crop was estimated as 50%, but would double to a GAI of 2 if the estimate was 65%. This difference would lead to different conclusions on how best to manage the crop.

A more accurate way of estimating GAI is by uploading a digital photograph on to the Canopy Assessment Tool, or 'CAT'. This gives a measurement of GAI, an estimate of the lodging risk, and an appropriate BASF PGR programme for the crop.

The CAT, developed by ADAS and BASF, can be accessed through BASF's agricentre website **(www.agricentre.basf.co.uk)** or can be downloaded as an App onto an iPhone. The e-tool also has some new features for the 2012 season. *"The CAT now has more options, and can be used for winter barley as well as wheat crops,"* says BASF's Sarah Mountford-Smith. *"It will also be available for BlackBerry very soon."*

So the advice to growers is clear.
"In terms of optimising both Nitrogen and PGR inputs, knowing the GAI of your crop is very important," says Sarah Clarke.

"With the lush crops we are seeing this season, assessing GAI will be especially worthwhile, and using the CAT is a quick and easy way of doing this."

The GAI Tool for Winter Cereals.

CAT enhancements 2012 assist improved PGR and nitrogen precision

Assessing a crop's canopy Green Area Index (GAI) precisely can be tricky, but it is an important indicator for accurate fertiliser and agrochemical application timings. The Canopy Assessment Tool (CAT) developed for winter cereals, allows an accurate and consistent assessment of crop nitrogen content (in kgN/ha) from its GAI and crop lodging risk from a digital photograph.

The CAT was originally developed for use in winter wheat and this has been expanded to include winter barley. *"We have also improved its user-friendliness through more appropriate default settings which save users time. The key area of enhancement is its use not only for assessing lodging risk and hence PGR timings, but also for accurately assessing crop nitrogen content. This means that it has two key timings and two key functions – the first is when the CAT is calibrated to be used from Growth Stage 12 to 32 to calculate crop nitrogen content and the second is when it is used from GS 30 to 31 to calculate lodging risk and PGR needs."*

"The CAT is an easy-to-use practical aid, calculating crop nitrogen requirements accurately and allowing appropriate fertiliser and PGR programmes to be devised. It helps to justify inputs and is very much a part of an ongoing ICM approach. Having the CAT on the mobile interface makes the tool faster and more flexible," **says BASF's Sarah Mountford-Smith.**

Sarah explains that the CAT is very simple to use.
"Either on iPhone App or using a digital camera, photographs should be taken directly above the crop at the appropriate timings. A 1 metre x 1 metre area is perfectly adequate, but choose an area representative of the whole field. If you are using the online version, upload your photos to ***www.agricentre.basf.co.uk*** *website. If using the App, field photos are processed immediately or can be saved and processed at a more convenient time."*

"The iPhone App automatically generates an assessment of GAI, Crop N and subsequent report there and then in the field. The App has a save function for crop photos and associated crop reports and automatically records the location by GPS. Another feature is the ability to export the risk assessment by email to customers or colleagues at the touch of a button."

In 2011 there were more than 4,000 uses of the CAT online by growers and advisors, and more than 400 downloaded the CAT App. *"Hopefully more growers and advisors will have a go with the CAT this spring. The new improved CAT is being demonstrated at the Precision Farming event on the BASF stand at Stand Number 28, where you can download it free of charge on the day of the event."*

Summary – CAT enhancements 2012:

- For use in winter barley, as well as winter wheat
- For use from crop growth stage 12 to 32 to assess nitrogen content
- Calibrated to provide shoot numbers per sqm for winter wheat at GS 30
- Remembers your county, date, crop GS, variety and predicted yield each session… no need to input every time you upload a new photo.
- Link to GrowHow's N-Min Service for subsequent fertiliser programmes

If you've used the CAT, send us your feedback – we'd love to know what you think, both good and bad! Send us constructive feedback – it will help us to improve the tool for you. If you also provide your name and address we will send you a free Canopy knife to say thanks!

Send us your feedback to agricentre@basf.com or fill in the feedback form in this magazine and return to the FREEPOST address.

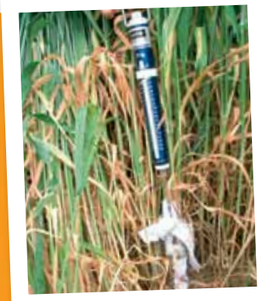
More info on the CAT is available from the BASF website **www.agricentre.basf.co.uk**

Prevent lodging with Canopy® management

A combination of early drilling and the mild autumn means many wheat and barley crops are at high risk of lodging and a robust PGR programme may well be required to protect yield.

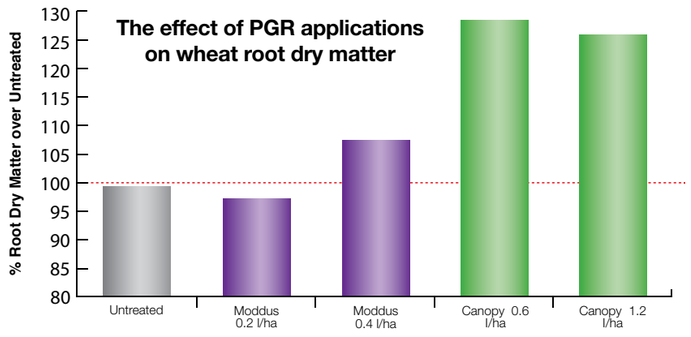
Based on two complimentary active ingredients (mepiquat chloride + prohexadione-calcium), Canopy is an ideal alternative to a standard Chlormequat programme at the key timings.

The high density of tillers present in some forward crops right now may have important consequences because it leads to weak stems which are therefore more prone to lodging. Dense crops also channel resources to building shoot growth rather than root growth and this will lead to weaker root anchorage in the soil, potentially resulting in root lodging. In such situations, Canopy is ideal at the growth stage 30 timing; both active ingredients in Canopy stimulate root growth in young cereal plants. Trials on winter wheat plants have demonstrated that applications of Canopy increase root dry matter by up to 27% over the untreated. Plants treated with Canopy are rooted more firmly in the soil; their roots have 30% higher tensile strength.



Force required for uprooting
(wheat plants ~ 10 days after anthesis; loamy sand with ~ 40% field capacity)

Untreated: 23 N/EBS
Canopy: 35 N/EBS
(2x 0.81/ha)
(N/EBS = Newton per ear bearing stem)
Under the chosen trial conditions: 1kg = 1kp = 9.81N



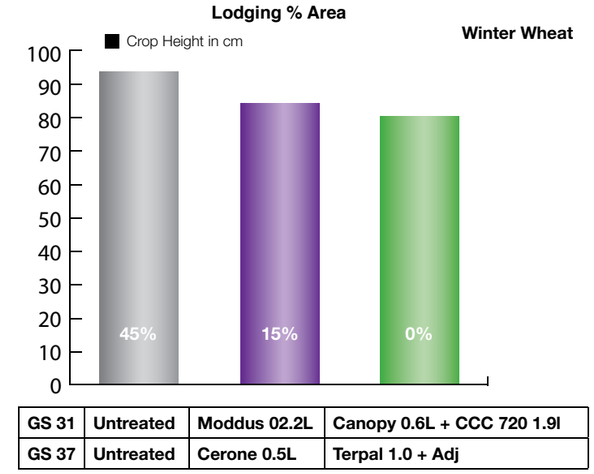
Canopy roots are not only stronger and longer but also the proportion of fine roots increases as well; and therefore the ability to extract water and nutrients from the soil is improved. Deep and stable roots are an important contribution to securing yield and quality, especially during periods of temporary drought – something that we have been all too familiar with in recent years.

Where early nitrogen is applied to forward, dense wheat crops, a robust PGR programme will be essential, particularly as many of the varieties being grown are lodging susceptible because they are weaker strawed. Independent trials have shown that Canopy increases stem strength by 24% applied at GS 31-32, and in addition to stimulating stem thickness and cell density Canopy uniquely enhances the stem wall structure by increasing stem dry matter and lignin content. These effects make the crop more resistant to lodging by giving the stem a higher tensile strength with greater resistance to breaking.

Active over a wider temperature range than both chlormequat and trinexapac-ethyl (in Moddus and Optimus), Canopy provides greater use flexibility to the grower for early and late season crop growth regulation should the weather turn cold again. This flexibility in use is also supported by the fast and immediate PGR effect. There is no dependency on light intensity to kick-start activity; Canopy can be applied and will work in almost any weather; in cold overcast conditions as well as warm, sunny weather. In addition to application flexibility, onset is rapid. The active ingredients in Canopy are activated immediately at the time of application, being less dependent on the plant's metabolism for activation as is the case for trinexapac-ethyl as in Moddus and Optimus which require high temperatures and a period of sunlight for activation. The rapid onset of activity by Canopy can offer more consistent growth regulation, particularly in variable or adverse weather, not observed by other plant growth regulators and is the reason why crops treated with Canopy end up very uniform and the even flowering improves the ripening and facilitates easy harvesting.

Where crops are at risk, my advice is to take out an insurance policy against lodging by using Canopy to maximise and protect yield. The costs of a lodged crop far outweigh the cost of robust programme, particularly when you've already invested in that crop from sowing!

Watch the Video and earn 2 Basis and 1 NRoSo points



GS 31	Untreated	Moddus 02.2L	Canopy 0.6L + CCC 720 1.9l
GS 37	Untreated	Cerone 0.5L	Terpal 1.0 + Adj

Source: Independent Trial 2008, FIFE, Scotland

All rates are L/ha

Early season our advice would be to assess the crop lodging risk using the CAT (Canopy Assessment Tool) either online or using the CAT App for iPhone. For winter wheat crops at medium risk of lodging we would recommend 0.6-0.8 l/ha Canopy + 1.2 l/ha Chlormequat 720 at GS 30-32. For winter barley, we would suggest 0.4-0.75 l/ha Canopy, moving to 0.6-1.0 l/ha in higher risk situations. Moving later in the season, a follow up of either Terpal or Canopy may be required depending on the risk.

The advantages of using Canopy are clear:

- The revenue potential is optimised
- Improved stem strengthening and rooting
- Increasing the scope of application times creates more flexibility in operations
- Security for yield and quality in almost any weather

Canopy®
Encourage & protect yield

Canopy contains mepiquat chloride + prohexadione calcium

High disease pressure increases importance of T0 spray in wheat

Frost, one of farming's most important allies, has been in very short supply this winter. For autumn sown crops the generally mild and wet weather conditions have been ideal for plants to flourish along with the cereal diseases they host. Rusts, mildew and *Septoria tritici* are all being detected in alarmingly high levels – levels not seen since 2007. In this feature, agronomists outline what the risks are specifically to wheat and how they will approach their early fungicide programmes this spring.

Peter Cowlwick of CCC Ltd

Peter Cowlrick of CCC Ltd, an AICC agronomist covering Sussex and Hampshire, points out that this season will need to be quite different to the last few years: *"We already have wheat crops in mid-January with very good leaf retention and thick canopies; early drilled crops in particular have high numbers of tillers. Also, whilst we have seen some rain, soil moisture levels are not yet back to where they should be and with the higher temperatures, available soil nitrogen levels are similarly high, giving thick, lush canopies."*

"Correspondingly, we have really high levels of diseases such as rusts – surprisingly yellow rust is already evident in some of the more susceptible varieties – we would not normally expect to see yellow rust until March! Brown rust is generally a later problem, but we have significant levels of that too on the large acreages of susceptible varieties. Mildew levels have also been high – we will have to wait a couple of weeks to see what effect the recent frosts have actually had on damping disease levels down," he says.

"However, if the weather remains mild and wet then we will have to be fairly swift off the blocks with the T0 fungicide spray. Critical to this application will be monitoring the emergence of leaf four and to ensure that it has adequate protection. So, T0 should be around mid-March; earlier than we have seen in the previous two seasons when it has been as late as April."

"My recommendations at T0 will certainly centre around a low dose triazole + CTL (chlorothalonil) for the rusts and Septoria, with the addition of a mildewicide where required. Ceando is a well put together option from a cost perspective and at early timings delivers effective disease control as part of a good chlorothalonil-based programme with its curative triazole [epoxiconazole] and a mildewicide [metrafenone]. Capalo with the additional fenpropimorph is also a good option particularly where rust is more active."

"It's a given nowadays that the T0 is worth its cost, in 2007 we were getting yield responses of 0.4-0.7t/ha – and with an average T0 costing somewhere in the region of £12-£15/ha and at harvest prices around £140/tonne it does not make sense to scrimp."

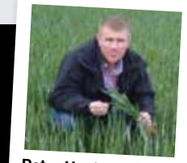
***"Further east it's going to be all about keeping on top of rusts this season,"* suggests Mark Hemmant of Agrovista.**

"We have large hectarages of rust susceptible varieties in the ground and conditions are ripe for the disease that is currently lurking to flourish, and whilst we are currently seeing high levels of yellow rust, we also need to be concerned about brown rust if mild conditions continue."

He reminds growers of spring 2007 where following a mild autumn and early spring, brown rust was a huge problem for susceptible varieties in the east – and suspects we could see the same again this season. *"The short cold spell will not have reduced the threat – it may have halted or delayed brown rust – and we may see variety ratings fall under this pressure."*

Based on this, and should conditions remain as they are, Mr Hemmant is recommending a pre-T0 fungicide spray to go on with the Atlantis or manganese, such as low dose cyproconazole. *"An application of Ceando would also take care of any mildew, and both are compatible with Atlantis. For less susceptible varieties a well-timed T0 will be sufficient. A T0 is no longer a question but a critical and integral part of the rust control programme, whilst also taking care of any early season Septoria and mildew."*

With so many new cereal fungicide options on the market in 2012, Peter Hughes, Fungicide Product Manager, tries to simplify the options available from BASF this coming season and explain why they fit:



Peter Hughes - BASF Product Manager, Cereal Fungicides

Wheat

Timing	Products(s)	Why use it?
T0	Ignite 0.45L/ha +/- Corbel	Base early input for rusts and *Septoria*, essential this season
T1	Tracker 1.0L/ha +/- Comet 200	Best for eyespot covering rusts and *Septoria*, maintains yield potential
T2	Adexar 1.0 - 1.5L/ha +/- Comet 200	Maximise returns and protect yield by keeping flag leaf free from *Septoria* and rusts
T3	Metconazole based product e.g. Sunorg Pro, Brutus	Broad spectrum ear wash; fusarium, mycotoxin reduction, rusts and *Septoria*

Barley

Timing	Products(s)	Why use it?
T1	Adexar 1.0L/ha	Highly active covering Rhyncho, net blotch rusts and Ramularia. Significant yield contribution, a key new player in barley fungicides
T2		

"Particularly with the arrival of new SDHI chemistry, some of the confusion this season surrounds where and if to use strobilurin chemistry in wheat," says Mr Hughes.

"Our trials and independent trials clearly demonstrate that pyraclostrobin as in Comet 200 consistently delivers a yield response when used with the new SDHIs.

Strobilurins have another mode of action and they work differently to SDHIs, they complement each other.

Comet 200 offers superior greening effects and supports crops when they are suffering in drought conditions which are likely to be present in many places this spring.

With the hightened rust threat this season and susceptible varieties in the ground, Comet 200's excellent rust control properties, as endorsed in the HGCA wheat disease management guide, gives it a place at either T1 or T2 in wheat this season."

SDHIs-Adexar

Adexar is last to the party but set to steal the show

The old adage 'saving the best 'til last' is the term Lincolnshire farmer Andrew Ward is using to describe BASF's new cereal fungicide, Adexar. Approved for use in wheat, barley, oats, rye and triticale. Adexar contains the active ingredient Xemium which is from the SDHI group of chemistry. Adexar follows the launch of two SDHIs last season - bixafen and isopyrazam.

Jonathan Blake, Senior Research Scientist with ADAS, described Adexar as *"a very good all-round product with no obvious weaknesses"* adding that *"the unique feature of Adexar is its strength on Septoria tritici, where it is highly curative but also shows persistence as a protectant. Its strength as a protectant against rusts is sufficient, in most cases, alone."*

Bill Clark, Commercial Technical Director, NIAB TAG has trialled Adexar over a three-year period; he said: *"Adexar has been outperforming bixafen and isopyrazam dose for dose. Added to this the Xemium products are giving better Septoria control as well as better yields."*

"The icing on the cake for the Xemium range is that it seems to stimulate deeper rooting, improved green leaf area retention and increased rates of photosynthesis," which may explain the yield advantages that Mr Clark has seen.

Andrew Ward, Farmer Licolnshire

Adexar was also trialled by three farmers in their commercially grown wheat crops. Andrew applied a T2 tramline strip of Xemium within his first wheat crop of Oakley. Despite the very dry condtions in the build up to T2 spray applications, the Xemium treated strip netted a yield increase of 0.3t/ha over another of the new SDHIs used in the same field and Andrew said it was very visibly greener.

"You have complete confidence whatever the varietal disease weaknesses. The yield response from Xemium was incredible for a dry year; I now can't wait to use it with more soil moisture as the response could be straggering!"

Untreated

Teagasc Wheat trial, Ireland. Variety Cordial

Adexar Untreated

Teagasc Wheat trial, Ireland. Variety Cordial

Jonathan Blake sees this product with "an obvious place at T2, when it will have the largest impact on yield, however under high Septoria pressure, it may also fit well at T1 to check disease progress onto the upper canopy". He added that Adexar *"appears to be compatible with chlorothalonil which may prevent or delay the development of resistance."*

In barley Mr Blake said that Adexar *"has been shown to be very strong, rivalling bixafen based products for efficacy on Rhynchosporium."*

BASF's Peter Hughes added: *"For barley as well as being strong on Rhynchosporium control, Adexar gives excellent control of the other key barley diseases, net blotch, rust and Ramularia. In 2011 trials* ***Adexar proved to be the highest yielding treatment of the SDHIs*** *in most situations."*

He explained what he thinks sets the Xemium active ingredient apart from the other new SDHI chemistry; *"we have conducted detailed lab and field studies on its distribution within the plant and it is this property which is its key differentiator."*

"The molecule is designed to give it the capability to reach the target enzyme rapidly in the plant, whilst drip feeding fungicide from depots retained in the leaf to give continuous protection and movement to new plant growth. We call this unique effect HyperFlow Technology."

"We've seen real value from Hyperflow if you are forced to spray earlier or later than planned – the product performs better in sub-optimal situations than any other we have seen to date."

"What makes BASF really proud is that this technology, combined with high intrinsic activity, consistently achieves the high degree of disease prevention with levels of curativity that we have never seen before in our fungicide development work."

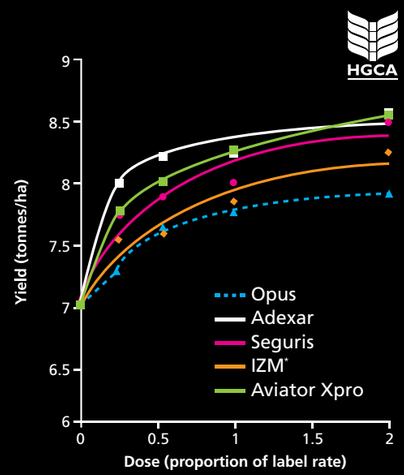
Adexar contains 62.5g/l Xemium and 62.5g/l epoxiconazole and is approved for use in wheat, barley, oats, rye and triticale. Adexar is available for the 2012 spring season and will be packed in 10 litre Ecopack containers for ease of handling and operator safety. Once on farm Adexar has the practical advantage that it can be used on both wheat and barley crops, which differs from the approach from other manufacturers.

Xemium is being launched globally by BASF for use in a range of other crops, including maize and soybeans with several other crops to follow.

Peter Hughes - BASF Product Manager, Cereal Fungicides

Why should I use adexar™ WITH XEMIUM in wheat?

In wheat with Septoria, Adexar delivers highest yields at a range of practical dose rates……



Yield data, 2009-2011, N=17

Key facts:

- 62.5 g/l xemium + 62.5 g/l epoxiconazole
- EC formulation
- Wheat, barley, oats, rye and triticale on label
- Excellent tank mix compatibility and crop safe
- Highest yield responses in a range of crop potential and disease pressure situations
- The best yield consistency when forced to spray early or late
- Available in 10L Ecopacks
- Available widely for 2012 through all distributors
- Suited T2 wheat, T1/T2 Barley

Watch the videos and take a virtual trial tour now available on **www.adexar.co.uk**

hyperflow TECHNOLOGY

Time to re-visit lodging in oilseed rape

This year's winter oilseed rape got off to a terrific start and many crops are well advanced. Such crops are likely to be at risk from lodging, but lodging in oilseed rape is perceived as being unpredictable. Farmers and advisors know lodging causes damage, but most information to date has been subjective or anecdotal.

Consequently a new review was done by an ADAS team led by Dr. Peter Berry to assess the impact of lodging in winter oilseed rape, to measure its effects on yield and to consider mechanisms to effectively reduce lodging.

According to the HGCA, when it comes to varietal characteristics, lodging is the second most important characteristic after yield in oilseed rape. As such, resistance to lodging is a key breeder target. The height of a variety correlates poorly with lodging, so resistance to lodging is more complex and would include other features such as stem strength, tap root dimensions and soil strength.

Drs Sarah Clarke, Charlotte White and Peter Berry of ADAS set out to investigate the impact of lodging across a wide range of data sources.

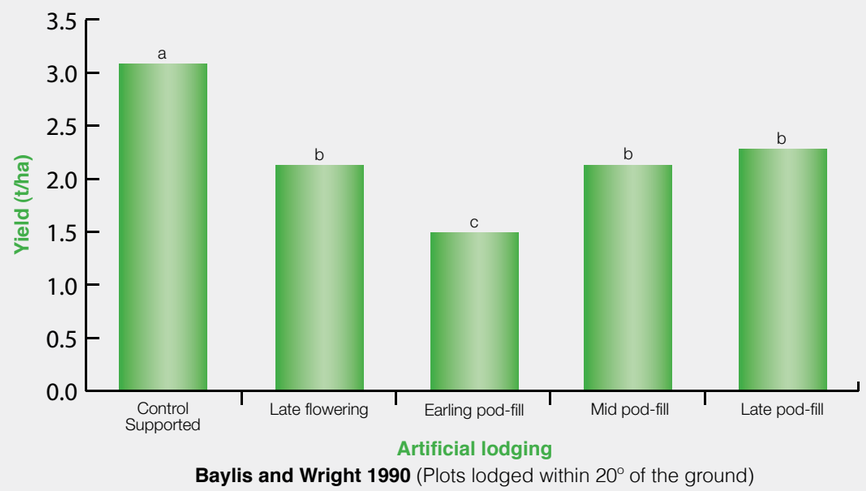
They studied the effects of lodging on yield and mechanisms of reduction.

A key finding of the review was that lodging in rape causes a yield reduction of between 16-50%, a significant loss with rape at £360/tonne. This yield loss is as a consequence of restricted assimilate supply and poor seed fill plus pod shatter. The researchers found that the magnitude of yield loss due to lodging depends on two key criteria – the start time and the severity.

Sarah Clarke - Research Scientist ADAS

They also established that lodging compresses the crop canopy layer, reducing light penetration and utilisation, impacting on yield. *"Lodging at flowering will reduce seed set and seed weight and reduce pollen flow. It also reduces pod synchrony, leading to risk of increased pod shatter"*, says Dr Berry.

Time of Lodging: Effect on Yield



Baylis and Wright 1990 (Plots lodged within 20° of the ground)

"Another interesting finding was that lodging at early pod fill was the most damaging in terms of yield – yield loss of 52% when artificial lodging to 70° to the ground.

Metconazoles (as in Sunorg Pro) is the key active ingredient with growth manipulation effects in oilseed rape and has a key role to play in this running season.

Dr Berry further reports that full dose metconazole reduced final height by 7 to 11cms (with a half dose having half the effect) and also reduced lodging by 28%. *"There also appeared to be a strong link between height reduction and lodging, with each 5cm reduction in height reducing the % area lodged by 10%. The greatest height reduction occurred from mid stem extension applications, whereas lodging was reduced by applications from green bud to mid-flowering."*

Referring to an earlier metconazole review of Berry and Spink (2009) it is now possible to predict that such a reduction in lodging may reduce yield losses by 0.07 to 0.16 t/ha. Therefore it may be estimated that a treatment able to reduce height by 10 cm may increase yield by up to 0.32 t/ha depending on the severity of lodging.

BASF Agronomy manager Clare Tucker advises that, because oilseed rape is unpredictable in its growth, assessment of Green Area Index (GAI) should be routine for all crops if lodging risk is to be reduced and yields maximised.

"GAI measures give guidance on nitrogen requirements and provide thresholds for Sunorg Pro applications. For the latter GAI is best measured at flower buds visible stage at the point of stem extension. If the GAI of the crop is greater than 0.8, then an application of up to 0.8 l/ha of Sunorg Pro to the crop will be economically justified. This should be done once the crop is 'visibly' growing, from about mid-stem extension through to yellow-bud," she says.

Clare points out that the mid-stem extension applications in March will generally shorten the crop and reduce lodging risk the most. *"However strong active growth is more important than actual growth stage so it is better to delay if too cold/dry."*

Used at about yellow-bud (early April) Sunorg Pro will maximise canopy effects and seeds/sq m for yield, will reduce lodging risk and contribute to Sclerotinia control.

sunorg® pro

www.totaloilseedcare.co.uk

Moving forward with the BASF OSR GAI tool – wide row measurements now available

Introduction

- The BASF GAI tool, developed in conjunction with ADAS, has been an important agronomy management tool for oilseed rape growers and agronomists over the last few years.
- The tool, available both as an App or online, has provided an accessible and consistent method for growers to assess the GAI index to aid in management decisions such as spring growth regulation with Sunorg Pro, and guidance on nitrogen timing and applications.
- Through a simple process of uploading a photograph of the crop canopy onto the tool, the GAI (ratio of green tissue area to ground area) can be calculated.
- However, with an increasing amount of oilseed rape being grown in wider rows, it has become more difficult to obtain an accurate reading for these crops.
- In response to this, BASF and ADAS have further collaborated to develop the tool to reflect this changing approach to oilseed rape management.
- The GAI tool now offers a wide row option for more accurate GAI calculations.
- This is available for use this spring and can be accessed online at **www.totaloilseedcare.co.uk**

GAI Tool developments

- The work required to develop this wide row option has been led by **Dr Sarah Clarke at ADAS**
- **Comments from Dr Clarke:**
  - The GAI tool is already fairly accurate, particularly for conventionally drilled crops. However, this fine tuning will make the GAI measurements for wider row crops much more accurate than they have been in the past, particularly for large crops.
  - For example where a crop will have resulted in a GAI 2 in the past, this will most likely have been underestimated by about 15-20% for wide row crops.
  - Users will have a drop-down option on the tool for wide rows (+30cms) or narrow rows (-30cms).
  - In order to get the row positions in the photograph in the correct position it is recommended that the screen is turned around so that there is a row running at the opposite corners of the photo, or diagonally to each other.

Agronomist comment

- Already use the GAI tool on a regular basis for making spring growth regulation using Sunorg Pro and fertiliser recommendations.
- The wide row facility is a welcome and significant development as more and more oilseed rape crops are being grown in wide rows – as much as up to half to a third of crops, particularly in eastern counties (which are the large rape growing parts of the country).
- Anything that makes the GAI measurement more accurate is extremely important as this helps to make the correct decisions for managing the crop effectively in the spring.
- This season: Crops this season have been well ahead, and very large. Although this latest cold weather will slow down development it will be interesting to see what effect it will really have had.
- Crops are currently sitting in the cold with rosettes waiting to expand and well-developed root systems that will be ready to mop up the nitrogen once the temperatures warm up, so growth regulation using Sunorg Pro (metconazole) will be incredibly important this spring.
- Autumn Sunorg Pro applications have been very successful and results have been impressive. This is an important effect of metconazole as a plant regulator.

GAI = 0.9

GAI = 2.1

BASFInnovationInTechnology

Providing in-field solutions and decision making tools for UK growers

The BASF Weed ID App developed in association with ADAS provides an easy to use reference guide to the major broad-leaved weeds and grass-weeds in the UK. Based on the Encyclopaedia of Arable Weeds, this App has been designed to be an easy to use, in-field practical aid allowing for the correct identification of 140 arable weeds species.

Whatever crop you are growing, it is an essential part of good agricultural practice to know the weed species to control in order to make the correct herbicide decisions. In addition the App provides a bespoke weed-mapping tool – Mapmyweed. This unique tool helps to pinpoint weeds across a field or site, on a google map. This can then be recorded by name, location and size of weed patch by year.

Weed ID App NEW

- Quick and easy access to over 140 species and 1,000 images of UK Arable weeds.
- Weed descriptions and images at cotyledon, young plant and mature plant growth stages.
- Detailed grass-weed line drawing highlighting distinguishing characteristics
- Interactive search of all weeds by common name, scientific name, Weed ID filter or free text search
- Option to photograph weed in field and compare to library images
- Opportunity to export weed photos when required and GPS location
- App is available from iTunes for £2.99

Encyclopaedia of Cereals Disease App NEW

An App version of the popular BASF Encyclopaedia of Cereal Diseases will soon be available on iPhone, Blackberry and Android. This mobile version of the Encyclopeadia, developed in conjunction with the HGCA and cereal disease expert, Bill Clark, allows users to identify all of the UK's cereal diseases.

Cereals Disease App

Easy reference to the disease of UK cereals and causal organisms by:

- Common name
- Pathogens responsible
- Symptoms
- Life Cycle
- Importance of the disease
- Photographs

The App will be FREE to download soon.

GAI Tool for Winter Cereals - CAT Tool and App - enhanced!

- The Canopy Assessment Tool (CAT) developed for winter wheat and barley, allows an accurate and consistent assessment of crop nitrogen content from its green area index (GAI) and crop lodging risk from a digital photograph.
- Now available as an iPhone App, the App automatically generates an assessment of GAI, Crop N and report as it is needed in the field, purely by taking a picture of the crop canopy. The App has a save function for crop photos and associated crop reports and automatically records the location by GPS. There is also the ability to export risk assessments by email where required.

For more information on these Apps visit www.agricentre.basf.co.uk

Adexar Virtial Trials Tour NEW

The 'Virtual Trials' experience offers the user visual information and data comparing disease control and yield from Adexar use in wheat. These real time trials have been generated from trials conducted by Teagasc in Ireland in 2011, where *Septoria tritici* pressure was relatively high.

By clicking on the flags it is possible to look at two different trial series.

Fungicide Performance: This set of trials compares standard treatments of the best triazole epoxiconazole, against all the current SDHIs on the market against untreated. It is possible to click onto individual plots and see for yourself the different levels of disease and green leaf area following treatments, at both the top of the crop and further into the crop.

Timing Trials: This trial shows the effect of timing on the efficacy of the SDHIs and triazoles. Applied at a range of timings from GS 39, +10 days and +20 days, it is clear to see that SDHIs demonstrate superior protective and curative activity over the triazoles.

Visit **www.adexar.co.uk**

10th Anniversary of Rawcliffe Bridge

Graham Hartwell, Environmental Stewardship Manager

Best practice agronomy and best practice in the food value chain

The demand for food is constantly increasing and that demand is driven by a public that expects farmers to deliver their crops - the raw materials for food production - in an arena policed by a balance of economic, and socialogically defined forces. At the same time the public wants its farmers to deliver a landscape that delivers birds, bees, buterflies and biodiversity.

The objective of Rawcliffe Bridge and The Grange is to to show what can be done to deliver a balanced approach to sustainable farming - high quality crops alongside high biodiveristy by using the skills and technology common in crop production. This approach is delivered by farming that provides a landscape to deliver both biodiversity and breadmaking wheat.

These inspiring farms have attracted many visitors to experience our clear messages for whole farm approach to sustainable intensification.

Best Regards

Graham Hartwell
Environmental Stewardship Manager,
BASF plc, Crop protection

Biodiversity's rich rewards

At first glance the Hinchliffe's 350-acre farm at Rawcliffe Bridge near Goole in East Yorkshire looks like the efficient, productive arable farm that it is. But when you take a moment to look and listen, what is fascinating about this place is that you enter a vibrant world of diverse bird, insect and plant life; a balance between intensive farming and highly effective wildlife management.

BASF has partnered the Hinchliffe family at the farm since 2002 in implementing practical wildlife enhancing measures to encourage biodiversity whilst not detracting from the highly productive arable areas of the farm. It seems fitting to review the progress on its 10th anniversary.

"The Rawcliffe Bridge partnership and biodiversity learnings have been so valuable to a very wide public that BASF has extended our approach by partnering Andrew and William Pitts' at The Grange near Kettering," explains Graham Hartwell, Environmental Stewardship Manager at BASF. "We are also planning a further eight sites across Europe by the end of 2012."

Improving biodiversity is just part of the objective of demonstrating sustainable intensification of cropping at Rawcliffe Bridge and The Grange. Best practice agronomy using current technology and techniques drives profitable crop production and the same technology and techniques can be used to improve biodiversity. Effectively managed crop production and improved biodiversity are a powerful and socially responsible combination; they are both key drivers in managing sustainable intensification of farming.

Image courtesy of Limagrain UK

The farm at Rawcliffe Bridge

The Hinchliffe's farm has a wheat-based rotation and much of the wheat is grown under contract for seed. Most of the soil is known as 'warp land', a highly fertile alluvial plain extending to depths of between 10-18 inches resultant of intentional flooding from the adjacent Dutch River sometime between 1820 and 1850. The result is that it is perfect for growing some of the best quality wheat in the UK; because of this it is used for extensive fungicide, seed treatment and wheat variety trials (averaging 24 varieties every year) in a joint venture between BASF and leading plant breeders.

Habitat creation and measurement

The Rawcliffe Bridge biodiversity initiatives introduced have been practical and have already proved valuable to fellow farmers during numerous farm walks and training days held by the farmer James Hinchliffe in partnership with BASF.

Independent annual counts of birds (conducted to RSPB and British Trust for Ornithology standards), bats, moths and butterflies have also been undertaken to gauge the effectiveness of the measures.

"These counts have been very valuable in planning what needs to be done next to encourage the species that you want on the farm," explains BASF's Graham Hartwell, Environmental Stewardship Manager.

"The focus has been on enhancing the wildlife features on the farm using simple techniques, farm labour and standard farm equipment. Essentially we have worked with James Hinchliffe to establish year-round food supplies for birds as well as roosting/nesting sites James has planted and encouraged plant species which have in turn attracted amphibians and insects, particularly those species fed to fledglings during the nesting season."

Pollinators also benefit from the managed approach to creating habitats. Butterflies and bees respond to an increase in pollen and nectar in the landscape which attracts pollinators and helps increase populations. The mixture of flowering species within the habitats created using "biodiversity by design" are situated ideally within the farm to encourage foraging. Pollen and nectar are produced from early spring to late autumn by planning sowing dates and bee nest sites are found in the field ditch sides and woodland. Similarly, butterflies benefit from the tall grassy habitat enhanced with a variety of wild flowers which together with nearby woodland deliver areas for hibernation and egg laying.

Simple approaches implemented from the early years include:

- The feeding of 'tail corn' or screenings harvested from the headlands in the yard and on farm tracks over the winter;
- Putting up 30 nest boxes in 2003 for hole-nesting birds like tits and tree sparrows. By 2011, a total of just over 100 nesting boxes significantly boosted blue tit, great tit and especially tree sparrow numbers, the latter have established a new colony in farm woodland;
- Putting up barn owl nesting boxes at the edge of established woodland and along hunting flight lines;
- Supplementary feeding is routine during winter: feeders are placed adjacent to woodland;
- No use of summer insecticides for aphid control in winter wheat for the past 12 years;
- Direct cutting of oilseed rape instead of swathing which delays disturbing the field for 10-14 days giving the resident reed buntings time to fledge their last brood of young;
- Ditch and dyke management to encourage water voles to recolonise.

Nearly every field has a ditch around two sides, which provide good wildlife corridors and the annual dredging and cutting is delayed until October on a rotational rather than annual basis to encourage the tussocky grasses favoured by voles. Mr Hinchliffe has also planted 7 acres of native broad-leaved trees and berry-bearing shrubs with Corsican pine, alongside a 100-year-old oak wood. To extend the wildlife corridors further grassy margins have been planted.

* All pictures taken at the Rawcliffe Bridge site. Biodiversity pictures courtesy of Robert Hare (rob.agt@btinternet.com)

Wild bird mixes and cover crops

"Planting a mix of plant species in field margins is the best way of providing a good range of wild bird food and cover throughout the seasons, but to take our understanding further, we started working with Limagrain UK (then Advanta Seeds) to better understand what bird species fed on which wild bird cover crops and when," **Mr Hartwell adds.**

Seasonal drilling sequences have been undertaken since 2005 at Rawcliffe Bridge testing over 30 individual wild bird food crops. This work has been extended to The Grange since autumn 2008 to test performance in a different soil type.

"The trials are extremely practical; it's all about looking at what food can be provided in the different seasons and then looking at the seed rates, drilling dates and the establishment of different wild bird food crops, plus we also include herbicide interaction trials to determine which herbicides could be used to help control the pernicious arable weeds which often out-compete wild bird and cover crops during the first season of establishment."
Crop structure is also investigated in the trials.

The results show some marked differences in the lifespan of individual plant species, an important consideration given the costs associated with establishing field margins and cover crops.

He says that the aim is to have some feed and cover value from crops over the different seasons and then to add in some flowering species to encourage insects on which the birds can then feed. Then it's about putting mixes together that attract the birds you want to encourage.

The work conducted allowed Limagrain to develop a mixture of vetch, triticale, Phacelia, fodder radish and linseed which is now marketed as Magnet and can be sown in the autumn.

"The species combination has compatible plant structure which doesn't compete with itself, but most importantly, provides food for birds at different times of the year."

Mr Hartwell adds that ***"the benefit of sowing a mix such as Magnet in the autumn is that it gets established in better soil conditions in October and then when spring comes, which is when the breeding cycle for birds is starting; there is already an established habitat with flowers to encourage insects for feeding fledglings and to provide a very useful area to attract and encourage bees. The same mix sown in the spring in the trials start flowering in June, too late for early fledglings but is very useful for the latter broods. This balance between autumn and spring drilling is particularly useful to deliver a continuous supply of food for many insect and bird species."***

Schools and general public

In addition to encouraging other farmers, a big part of the work undertaken at the farm has been the 'outreach' to local schools, the general public and key influencers to agriculture. "Rawcliffe Bridge has been invaluable to communicate how intensive farming can also achieve great strides in encouraging biodiversity," explains Mr Hartwell. "We have had over 800 visitors to the farms during 2011 including The Rt Hon James Paice MP, Minister of State for Agriculture and Food, food service companies, food retailers, Defra, Natural England, The Royal Society for the Protection of Birds (RSPB), Voluntary Initiative (VI), National Farmers' Union (NFU), the Game and Wildlife Conservancy Trust, major UK supermarkets and international visitors from France, Germany, Ireland, Sweden, Denmark, Venezuela, Argentina and the Baltic States.

"The Hinchliffes have also opened their farm gates to groups from local schools, local residents and to the media as well as to scientific institutes to show just how much can be done using normal farm equipment, sensitive farming practices and a passion to see the countryside buzzing with biodiversity. Managed right, Britain's farms are a far cry from the sterile environs depicted by agriculture's critics; you just have to come to Rawcliffe Bridge to see what's possible."

Biodiversity statistics at Rawcliffe Bridge

Rawcliffe Bridge is a 350-acre intensive arable farm near Goole in East Yorkshire.

Since the biodiversity work was started by farmer James Hinchliffe in conjunction with BASF in 2002, the practices have achieved the following:

- 110 bird species, above average for a lowland farm and including 64 species on the list for conservation concern;
- 25 skylark territories, which is nearly 2 times the UK average lowland density;
- Tree sparrow numbers increased from 6 to 59 pairs between 2003-2010 following the introduction of 'bed and breakfast' nest boxes and feeding stations;
- Corn bunting numbers are 3 times the UK lowland average.
- Grey partridge numbers are 6 times the UK lowland average;
- Meadow pipit territories around the field boundaries are over 2.5 times the UK lowland average;
- Yellow wagtail territories are 47 times the UK lowland average;
- Successful breeding between 2004-2010 for kestrels, tawny owls and little owls;
- 154 plant species on field boundaries;
- 165 species of moths, 22 species of butterflies, 8 species of dragonflies and 2 species of bats identified to date;
- 56 species of water plants surveyed, including 5 rare species;
- Good water quality evidenced by common stonewort, dragonflies, damselflies and sticklebacks.

* All pictures taken at the Rawcliffe Bridge site. Biodiversity pictures courtesy of Robert Hare (rob.agt@btinternet.com)

Precision Farming 2012:

Putting precision into practice

The Precision Farming Event, held on Wednesday 7th March 2012 at the Exec Exhibition Centre, East of England Showground, Peterborough offers visitors the opportunity to find out about the **latest techniques** and **compare equipment** from all the main suppliers in the UK's leading technology exhibition. Alongside the exhibition of the latest equipment and services, the comprehensive seminar programme offers valuable information on a range of topics from industry leading experts and farmers. Planned presentations include how smart phones and 'Apps' can help operators, a detailed look at trials into automated **nitrogen applications** as well as putting agronomy into precision farming. With a focus on putting precision farming into practice leading farm managers will be explaining how they put the technology to work in their operations. **These seminars provide hands-on experience of how equipment can be employed to improve accuracy, cut costs and boost margins**. All the UK's leading manufacturers and suppliers attend the Precision Farming Event.

This year, for the first time, they will also be holding a **'plug fest'** checking the compatibility among different makes of controllers. This will include ISOBUS compliant and standard equipment, and is likely to provide some useful information for owners and operators looking to invest in new systems.

BASF The Crop Protection Partners for the Precision Farming Event: BASF is the world's leading Chemical Company. In collaboration with ADAS, BASF have developed a **Canopy Assessment Tool (CAT)** for Winter Cereals geared to improved nitrogen precision through accurate estimation of crop nitrogen, and effective lodging control by providing a quick and easy assessment of crop lodging risk. Joining BASF is Sarah Clarke, a leading Research Scientist at ADAS.

Pack design and container rinsing

In addition to the BASF stand at Tillage Live, BASF also supported Bill Taylor on the Knowledge Trail who was informing and involving spray operators on advances and limitations in pesticide containers, their cleaning and disposal; a concept initiated by AEA.

Watch the videos from Tillage Live 2012 visit www.agricentre.basf.co.uk

Tillage Live 2011: BASF Crop Protection Partners for Tillage Live 2011

Tillage Live brought together the very best of arable autumn seedbed preparation and drilling equipment in large scale plots. In addition, the demonstration arena allowed new and innovative equipment to be displayed to visitors.

Sarah Cook talks through black-grass resistance management

To complement the working demonstrations at Tillage Live, BASF hosted a 'Quiz the Expert' drop in centre at the event thanks to partners ADAS and Silsoe Spray Application Specialist Paul Miller.

Paul Miller shows staining differences between Stomp 400 SC and Stomp Aqua

As part of the Tillage Knowledge Trail, BASF focused on the integration of chemical and cultural control measures for black-grass control. Present on the stand was ADAS' Sarah Cook who discussed the BASF funded black-grass dormancy results and the implications on timing and choice of farm control options to be used for the coming season.

Focus on formulation technology from BASF

Joining Sarah Cook was Paul Miller who was on-hand to talk through work he has undertaken with different formulations of pendimethalin in minimal tillage type systems and also demonstrated the lowest staining benefits of Stomp Aqua over other formulations of solo pendimethalin (products at 5% dilution in water). Paul Miller focused significant time demonstrating the lowest staining benefits of Stomp Aqua – BASF's new formulation of pendimethalin.

Adexar conferences 2012:

BASF invited agronomists and farmers to experience the difference at the official launch of Adexar – the extraordinary new cereal fungicide set to revolutionise cereal production.

Patrick Stephenson

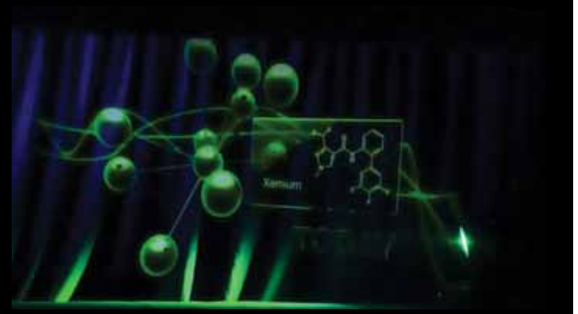
Following almost a decade of development, Adexar was unveiled using innovative 3D technology at the three launch events in January.

The events held at Peterborough, Edinburgh and York were well attended with over 200 growers and agronomists looking for more information on how Adexar can give them extraordinary yields this spring. Guest speakers at the English events included Bill Clark (the researchers view), Patrick Stephenson (the advisors view), and an insight into technology in crop production; a view from Argentina presented by Marcelo Valdez, Regional Sales Manager, AGD and Sergio Morichetti, Head of R&D, AGD.

The guest Speakers from Scotland included: Fiona Burnett, Senior Pathologist, SAC (the researchers view) and Andrew Gilchrist, Director, Scottish Agronomy (the advisors view).

Special thanks to all of our guest speakers including Chairpersons Guy Smith (English events) and Douglas Morrison (Scottish event).

For more information on the events, watch the videos and interviews at www.adexar.co.uk



Lamma 2012:

The chance to win the first can of Adexar in the UK was on offer at Lamma 2012 where Adexar was the main feature on stand 841 in Hall 8.

Visitors to the stand were offered the chance to win the first can of Adexar by correctly guessing the number of grains in the can which was on display at the event. Wide ranging guesses from 10,011 to 13,130 130 were submitted and with no correct guesses, the closest guess won.

The exact number of grains was 173,622 and 2 winners guessed 175,000 – only 1,378 of a difference. We felt both winners deserved a prize so both received a can of Adexar.

Congratulations to the two winners J Frost from Northampton and C Morgan from Shrewsbury.
The Competition to Win an iPad was won by: L.McKerrow from Aberdeenshire.

BASF proposed amends to metazachlor wording accepted at EU level


William Reyer - BASF Product Manager - Oilseed Rape

BASF have gained acceptance for a change in the field restrictions around the active ingredient metazachlor, included in products such as Springbok and Shadow.

Following EU re-registration in 2010, metazachlor-containing products have been restricted to use 'once every third year on the same field' by CRD. In response to concerns from growers and advisors, BASF applied to CRD in March 2010 to have the restriction amended.

Will Reyer, BASF's Field Crop Marketing Manager said: "We recognised the restriction around rotational use of metazachlor was causing difficulties for growers and that a more flexible approach would be helpful. As of today, February 2012, we are pleased to say that our proposed change has been accepted by the EU Standing Committee on Food Chain and Animal Health (SCFCAH) paving the way for the restriction in the Annex I inclusion Directive to be amended.

The new wording is expected to be: *"applications shall be limited to a total dose of not more than 1.0kg metazachlor/ha in a 3 year period in the same field."*

"We are now clarifying with CRD the timelines for implementation of this amendment on product labels and will advise growers and advisors as soon as we receive confirmation," says Will Reyer.

"Despite not being the only company selling metazachlor, we'll still take the lead in these areas. It's something we are doing across Europe and see it as part of our commitment to fully supporting our product range."

ProductNEWS

New herbicide to tackle growing weed challenges for maize growers

BASF announce the launch of a new herbicide for maize growers which can be applied pre- or early post-crop emergence. It contains a new active ingredient for maize growers, dimethenamid-P (DMTA-P).

As early weed control becomes increasingly challenging in maize crops, the herbicide has received significant interest from the contractors who regularly apply farmers' herbicides. They also deemed the good residual attributes of the herbicide as **"very useful"** for keeping the weeds at bay until the crop canopy grew big enough to shade out the weeds.

"We surveyed a number of sprayer contractors who said that because of the weather they often struggle with applying sprays to maize early enough because of other tasks they have like cereal fungicide sprays which are more time critical," explained Jonathan Ball, Maize Product Manager for BASF. "For this reason, the flexibility of timing offered by Wing-P, as well as the confidence that the products' residual activity in the soil would control later germinating weeds seemed to be very appealing to them."

Wing-P also adds a wider spectrum of weed control compared with Stomp Aqua, a popular pre-emergence herbicide for maize crops.

"Wing-P covers all the important weeds, with the DMTA-P adding a boost in control over straight pendimethalin of groundsel, annual meadow grass and orache," Mr Ball adds.


Jonathan Ball - BASF Product Manager - Maize

Unlike other maize herbicides on the market, Wing-P can be used from pre-emergence through to and including the 4-leaf stage of the crop (growth stage 10-14). Also it does not cause leaf scorch when applied at the later timings, a feature commonly seen with other post emergent products.

It is the flexibility of application timing together with the control of important weeds such as cranes-bill that will catch the imagination of maize growers when it comes to the new herbicide Wing-P, according to Peter Clare of ECM.

It is so important to make sure that you control weeds early in maize and the fact that Wing-P can be applied pre-emergence or early post-emergence will ensure that this herbicide will be applied, whatever the season throws at us, says Peter.

Advising farmers in the North West, Peter Clare points out that maize is increasingly grown continuously in his area. *"This means that we have very high weed populations to deal with in a crop that is quite uncompetitive early on. In some circumstances you can lose up to 20% of yield if weeds are not controlled early."*

He has also noticed that the weed spectrum in maize has changed with weeds such as cranes-bill becoming more widespread. *"A few years ago this used to be a minor weed but last spring we saw carpets of cranes-bill in maize. Few, if any, herbicides touched it, so it is good news that Wing-P will control it well. Other important weeds in maize are fat-hen, orache, polygonums and nightshade."*

Peter Clare has also noticed that the newer herbicides in maize are much kinder to the crop than the older ones. *"I will certainly be using Wing-P, hopefully pre-emergence in maize. But if we don't manage to get it on for whatever reason, then we have the flexibility to use it up to the 4-leaf stage of the crop, which is a big advantage over other maize herbicide materials."*

Wing-P contains pendimethalin and dimethenamid-p, it can be widely tank mixed with other partners. Recommended dose rate is 4l/ha. It can be used on forage and grain maize crops.

Pulse Prospects

Spring Pulse Opportunity

Whilst growers of winter beans last year saw yields and margins plummet, spring crops were far more resilient and today's values for human consumption grade have escalated to £250/tonne in the last few weeks. Overall, bean production is down 200,000 tonnes from its peak. With plantings of winter beans for 2012 drastically reduced there is a real opportunity for growing spring crops to meet both the UK market for feed quality and export for human consumption, contends Philip Wynn, director of Wynn Business Partnerships.

Markets and premiums remain favourable looking ahead to 2012 harvest with base feed values for both peas and beans today at £182/t for November. Premiums for human consumption beans mainly destined for Egypt with an annual market of c. 300,000 tonnes are trading at £20-30/t above feed values but will be subject to supply/demand factors post-harvest.

Pea premiums depend very much on variety but for best quality Kabuki marrowfats values will be c. £275/t. So across the board premiums for good quality pulses have moved up to a higher level.

So why choose spring pulses this spring? Perhaps trimming back sugar beet areas after a successful 2011 campaign or as a risk management strategy to reduce the spring cereal area. With the cost of nitrogen continuing to stay firm the 40-50 kg/ha of residual nitrogen is now worth between £30 and £37/hectare to the following wheat crop.

"Quality remains key in achieving good returns." Unless the soil structure is in excellent condition don't grow peas. Spring beans are a lower risk but you can't have soil compaction to achieve this level of returns – so minimise cultivations and choose timing of establishment very carefully.

Spring Cropping Margins

Crop	Yield t/ha	Margin £/ha (feed values)	Margin £/ha (with premiums)
Spring peas	3.5	391	531
Spring beans	4.0	481	581
Spring oilseed rape	2.5	489	N/A

Source: Philip Wynn

Once crops are drilled, herbicide choice becomes a critical decision. Rate flexibility and residual activity are important considerations depending on weed spectrum, growth stage, soil conditions, and moisture levels," adds Jonathan Ball, pulse product manager for BASF.

"A pre-emergence application of a product such as Nirvana that can be used across all pulses can be adjusted to suit expected weed populations, meaning that product is well targeted. For example, on combining peas and field beans, a rate of 4.5l/ha Nirvana offers a one shot solution for moderate to high weed populations controlling the germination of weeds such as black bindweed, poppy, fat hen, charlock and knotgrass."

"However, for low to moderate weed populations a lower rate of 3l/ha is sufficient. For vining peas, dose rate can be matched to soil type ranging from 2.5-3.5l/ha – although a follow up post emergence spray may be required in some situations. Nirvana can also be considered as a tank mix partner for more difficult weeds."

Canopy contains mepiquat chloride + prohexadione calcium

Terpal contains 2-chloroethylphosphonic acid + mepiquat-chloride

Comet 200 contains pyraclostrobin

Tracker contains boscalid + epoxiconazole

Ignite contains epoxiconazole

Brutus contains epoxiconazole + metconazole

Sunorg Pro contains metconazole

Wing-P contains dimethenamid-P + pendimethalin

Ceando contains epoxiconazole + metrafenone

Capalo contains epoxiconazole, fenpropimorph + metrafenone

Corbel contains fenpropimorph

Optimus contains trinexapac-ethyl

Opus contains epoxiconazole

Nirvana contains imazamox + pendimethalin

Stomp Aqua and Stomp 400 SC contain pendimethalin

Springbok contains dimethenamid-P + metazachlor

Shadow contains dimethenamid-P, metazachlor + quinmerac

Adexar contains epoxiconazole + fluxapyroxad

Atlantis contains iodosulfuron Methyl Sodium + mesosulfuron-methyl

Cerone contains 2-chloroethylphosphonic acid

Aviator Xpro 235 contains bixafen + prothioconazole

Seguris contains epoxiconazole + Isopyrazam

Moddus contains trinexapac-ethyl

The GAI Tool for Winter Cereals.

Canopy Assessment Tool. Available online or as an iPhone® App.

- Aids improved nitrogen precision in winter cereals through accurate estimation of crop nitrogen content
- Provides a quick and easy assessment of crop lodging risk

Available on the App Store

BASF
The Chemical Company

For more information on the CAT visit **www.agriCentre.basf.co.uk**