

CROPTALK “”

Looking back at the subjects covered over fifteen years in Croptalk, it came as no surprise that many of the items written about are just as topical today as when they were originally featured.

Climate change initially provoked much argument as to whether or not it was actually taking place. However, there is now much more acceptance that alterations to our climate are really taking place, albeit slowly.

While some sectors of the horticulture industry remain fairly static, others have leapt ahead. One which has majorly advanced is the English wine industry. Our climate is now considered eminently suitable for the production of fine wines. Indeed, in international competitions, English sparkling wine has won many accolades. Driving through some parts of southern England, the extensive planting of vines could easily convince you that you were driving through northern France!

The extension of the soft fruit industry was originally hampered by considerable objections to the erection of the Spanish tunnels, deemed necessary by growers to extend the soft fruit season and as a consequence, reduce the reliance on imports. Fortunately, common sense ultimately prevailed and today's soft fruit industry is an unqualified success.

A recurring theme in the Croptalk column has been the withdrawal of so many crop protection products. This is still a worrying trend which growers have to face. The realisation of the cost of registering new actives and the length of time it takes to bring new products to market is gradually hitting home. Some would argue that registration has been made more difficult by the fact that the products are evaluated on a hazard, rather than a risk basis. Growers will certainly have fewer conventional crop protection products in the years ahead.

On the plus side, there have been several additions to the crop protection armoury largely due to the

“ One of the most recent trends in crop protection is the development of bio-pesticides ”

Specific Off Label Approval scheme (now renamed EAMU's). One of these which was particularly welcomed by protected lettuce growers in 2007 was the granting of a SOLA for the use of Gazelle on protected lettuce.

Several other products marketed by Certis have become available to the industry through the off-label scheme, allowing growers to use these for solving specific problems and which, without the off-label scheme, might well have been unavailable for growers to use in certain situations.

One of the most recent trends in crop protection is the development of bio-pesticides. The introduction of a product like NEMguard DE, which is based on a formulation of garlic, is proving successful in controlling nematodes in carrots and certain other crops. There are a number of other bio-pesticides in the pipeline and there can be little doubt that these have an exciting future.

Finally, and looking to the future, one of the main challenges growers face in the immediate future is that of maintaining a sustainable labour force. The Seasonal Agricultural Workers Scheme has been consigned to the dust.

What will be the effect of Brexit on the future availability of the European labour? Perhaps we should ponder the problems we face by sitting down and partaking in a glass of English wine. We might not solve the problems, but at least it would be enjoyable!



This month on Twitter

AHDB Horticulture @AHDB_Hort
Have you seen our newly revised Bush Fruit Crop Walkers' Guide? <http://horticulture.ahdb.org.uk/publication/bush-fruit-crop-walkers-guide-revised-2016>

HortNews @ACTHortNews
£2m research to improve fresh produce <http://hortnews.com/2m-research-to-improve-fresh-produce/> ... #hortnews



FreshProduceJournal @FPJlive
Which? calls for more fruit and veg promotions <http://www.fruitnet.com/fpj/article/169538/which-calls-for-more-fruit-and-veg-promotions>



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CROPSAFE

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NEWS

Where does your water come from? A journey from field to tap

Severn Trent Water provides 2.2 billion litres of clean water to eight million customers in the UK Midlands region every day.

Of this supply, 69% is provided by surface water sources such as streams and rivers, explains Neasa Revens, catchment scientist at Severn Trent.

“We have 16 major surface water works under our operation, from which the water is cleaned via a series of physical and chemical treatment processes, before being distributed to our customers.”

Alongside these practices, Severn Trent also continuously tests for up to 100 different pesticides, which have been identified as potential risks in the area, within their in-house laboratory.



Severn Trent catchment team

With so many external variables such as power prices and tighter environmental regulations, a wider approach was inevitable.

“To ensure we continue to offer a sustainable service and good value to our customers, we have diverted our focus away from further investment in expensive water treatment, into prevention at source.”

Severn Trent started catchment management ten years ago, and has developed this significantly over the past 18 months.

“Recent investment has allowed us to launch the ‘Farmers as Producers of Clean Water’ scheme in which farmers are rewarded for keeping metaldehyde out of their local water courses.

“It’s helped us all to understand where our water comes from a bit better.”



Granular activated carbon

“We sample weekly from the catchment streams and rivers during high-risk times, and also have a rigorous programme of testing at the treatment works,” explains Neasa.

Granular activated carbon (GAC) is used to absorb and remove any remaining pesticides after earlier treatment, and improves taste and odour before the final cleaning step.

“GAC regeneration is a significant cost for us in support of pesticide removal. For some products, such as metaldehyde, there are no cost-effective treatment options currently available.”

“ Recent investment has allowed us to launch the ‘Farmers as Producers of Clean Water’ scheme ”

One particular area stands out for its catchment work successes.

Three years ago, an engagement project was launched to encourage the use of ferric phosphate in Staunton Harold, on the Derbyshire/ Leicestershire border.

Since this work began, there have been no exceedances at the local Severn Trent treatment works for metaldehyde.

“Staunton Harold has been a huge accomplishment and demonstrates that working with farmers to produce clean water works.”



Staunton Harold

“Through these schemes we can support and work with farmers to take more responsibility for their parts of the river.

“We can provide advice, support and training which encourages ‘best practice’ and allows the farmer to go above and beyond good agricultural practice, which in turn will help to keep a range of crop protection products on the market.”

CERTIS

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- Certis interactive
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USE PLANT PROTECTION PRODUCTS SAFELY. ALWAYS READ THE LABEL AND PRODUCT INFORMATION BEFORE USE.
USE BIOCIDES SAFELY. ALWAYS READ THE LABEL AND PRODUCT INFORMATION BEFORE USE.

For further information with regard to the warning phrases and symbols for these products please refer to the product labels.

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System 50® is a registered trade mark of Mitsui AgriScience International SA/ NV. | Takumi SC® is a registered trade mark of Nisso Chemical Europe GmbH.

Ferric phosphate - a valuable addition to water catchment management

The improvement of water quality at source is an important and ongoing industry topic.

Kelly Hewson-Fisher, catchment advisor at Anglian Water, tells us how a trial to raise awareness of pesticides in water has proven ferric phosphate to be a viable solution to the issue.

"When I started with Anglian Water 16 months ago, there were no surface water catchment management trials being carried out in Lincolnshire.

"Awareness of sustainable metaldehyde usage was growing, but farmers still had concerns about the available alternatives."

Kelly soon established that a major barrier to using ferric phosphate pellets, was the lack of knowledge surrounding efficacy.

This triggered the decision to undertake a very simple trial that would investigate overall slug control strategies, and close the knowledge gap.

Trials began in Autumn 2015 on three farms in the Louth Canal area – an important drinking water source for the county.

All of the farms had similar soil types and were under-drained. This was a key factor, given 90% of the metaldehyde can be lost through field drainage systems.

Three fields of winter oilseed rape were put to the test. In field one, half of the field was treated with metaldehyde pellets, and the other with ferric phosphate pellets (Derrex).



Kelly Hewson-Fisher

Field two was treated with the same 50:50 split, but with metaldehyde and ferric phosphate pellets (Sluxx).

The third field was not treated with pellets, but cultural controls such as drilling and rolling were used to consolidate the seedbed and reduce slug movements.

"The farmers each made their own decision about timing and frequency of application," explains Kelly.

"Slug activity was then monitored using slug traps and we presented our findings back to the farmers.

"I also looked at ten, 1m² plots to assess plant damage. This was a useful way to gather data on the differences between ferric phosphate and metaldehyde. The results provided valuable evidence of the efficacy of ferric phosphate for Anglian Water's own knowledge, and for us to be able to share with the wider agricultural community.

"We saw for ourselves that plant numbers were comparable in both treated fields, and there was no considerable variation in efficacy. Through this we've driven a huge amount of awareness.

"At numerous collaborative events, I've been able to stand up in front of farmers and say with confidence that I was involved in the trial and monitored slug levels myself. I know how and why it works, and have seen first-hand the results in the field.

"It's rewarding to be able to work with the farming community in this way, and share valuable information that will help them to make informed decisions in the future.

"Slugs are a huge pest to many crops and can have devastating effects. Ferric phosphate is a product that farmers can utilise as part of their toolkit, to produce crops that we so greatly need."

Slug field trials



Sustainable crop protection - what's around the corner?

With sustainable usage likely to be a continued focus following the Brexit result, stringent safety criteria is only likely to increase the pressure on pesticide use in the UK, explains David Chandler from the Crop Centre at the University of Warwick.

"We've experienced ten years of decline in the number of actives available to the industry, and products are not getting easier to register," says David.

"Whereas previously there were around 1,000 actives, we now have around 330, and the registration process is getting more rigorous."

Global markets are continuing to focus on crops such as maize and soya, and pesticides for the horticultural industry - in particular protected edibles and ornamentals - are not a key focus internationally.

Resistance to insecticides is also a major issue with over 500 resistant species now known to have evolved.

One major advancement for the horticultural industry is bio-pesticides.

There are nearly 90 registered in the EU, and the bio-pesticides industry is growing at an average annual rate of 15 – 20% per year, explains David.



"Businesses are investing in them as there are no residual issues. Bio-pesticides are safe to use, and there is often flexibility in harvest intervals.

"The safety element is extremely important to growers, as greenhouse managers don't want to keep their workers away from the crops as a result of spraying."

One consideration of bio-pesticides is their susceptibility to environmental conditions, explains David.

"I'd recommend growers utilise them as a part of their toolkit and alongside a robust IPM system.

"Chemical pesticides continue to remain vital for crop protection, but bio-pesticides can be used as a component of IPM, that could take the resistance pressure off pesticides and help them be used in a more sustainable way.

"Everyone needs to understand how to get the best out of these products in the defence against pests. We are at the cutting edge of a step-change in crop protection, and growers will need to build on their knowledge and skills in order to continue to protect their crops in the future."

Finally, David contemplates the potential impacts of Brexit on the industry.

"Among the uncertainty, we know that a continued drive towards sustainability is inevitable.

"However, there is concern that EU regulations such as the Mutual Recognition System, which allows actives registered in the Netherlands

David Chandler



automatic approval in the UK, will be removed, and replaced with another layer of UK legislation.

"The speed of which actives are available to the whole UK agricultural economy is imperative, and so a collective voice on this will be vital in the coming months."

“ The speed of which actives are available to the whole UK agricultural economy is imperative, and so a collective voice on this will be vital in the coming months. **”**

What's on show at Four Oaks

Certis will be among the 400 exhibitors taking part in this year's Four Oaks show on 6th - 7th September in Macclesfield, Cheshire.

Come and find us on stands D124 and D125, to learn more about our range of crop protection products and speak to our team of IPM technical experts about their experience with using the bio-pesticide Botanigard along with Majestik.

For visitor information, please visit the Four Oaks website www.fouroaks-tradeshows.com.

Visit us on stands D124 and D125

Practical benefits of sustainable soil management



A four-year AHDB Cereals and Oilseeds research project has unearthed invaluable results for growers, into the benefits of adopting sustainable soil management practices.

One element of the Soil Programme - which involved an overall investment of £2.6 million - investigated how different types and quantities of organic matter in the soil can increase crop yields.

Early findings have shown that improvements to soil structure and an increase of nutrients can be achieved through the application of various organic materials, after just two years.

Farm yard manure (FYM), compost, anaerobic digestate and previous crop

residues were all tested, and were shown to have positive impacts on the soil, and in turn, crop yields.

Increasing soil organic matter also improved soil structure, with results indicating that water infiltration had improved and that less force was required in order to turn the ground during cultivation.

Unfortunately, there is no silver bullet to improving soil quality as every situation is different. Variances in soil microbiology,

seasonality and timing are all issues to contend with, and understanding what needs to be applied and when, will vary greatly on-farm.

However, with the research now complete, a final year report focusing on the economics of applying organic materials, is due imminently. Therefore, growers with a continued interest in the practical and financial implications of this important industry research should watch this space.

Savings made from a true IPM approach

The benefits of taking a hands on approach to pest management are being realised by one strawberry growing business in Essex.

Paul Roberts, co-founder and partner of Ashdown Nursery, established nearly 30 years ago, now grows approximately 160,000 strawberry plants in greenhouses covering 1.6 hectares.



Paul Roberts

"This year, we've had to deal with a significant increase in the number of spider mite, thrips and whitefly.

"Over the years, I have used a combination of crop protection methods and tried and tested pesticides. However, our armoury is limited and we're realistic to the fact that we're likely to lose more products in the future.

"As a result, we've tried to introduce bio-pesticides and biological controls in combination with an integrated, hands-on approach to identifying and tackling pests. In the spring, we can now produce up to 5.5kg of fruit per metre.

"This year in early April, we started to use Botanigard every 7 to 10 days to control the whitefly in particular, and incidentally this also had an effect on the spider mite. We applied it four times and the results got better and better."

Not averse to trying new things, Paul uses a range of different monitoring techniques and treatments for control.

"We use a hand lance with a motorised sprayer to apply bio-pesticides manually, as there are a lot of places for pests to hide among the dense leaf cover on our strawberries. They don't upset the atmosphere inside the



Ashdown Nursery

greenhouse either, which is an added bonus.

"The whole team takes crop walking seriously and we use coloured tape for identifying different pests in different areas. This is our way of ensuring no infestations are missed during spraying, and the pests don't have chance to take hold.

“ We applied Botanigard four times and the results got better and better. ”

"Going forward, we'll continue to focus more on biologicals where we can, as well as cultural control methods that minimise the need for continuous spraying," says Paul.

All produce is marketed through Berry Gardens, a Kent based co-operative, whom Ashdown Nursery has been successfully working with for the last 15 years.

Paul explains how 30 years of growing hasn't been without its challenges.

Simon Jones looks back on 26 years with Certis

With a background in horticulture and a career in crop protection spanning 35 years, including 26 years at Certis, Simon Jones - UK Technical Manager - has seen the business evolve significantly in this time.

"Two generations of ornamental growers in the family really sparked my interest in the industry," he says.

After qualifying with an OND in Glasshouse Crops Production, Simon went on to gain some invaluable, but diverse industry experience, including becoming a member of the Royal household at Windsor, and growing cut flowers and pot plants for the Queen.

In 1989, he joined BCP - delivering bumblebees and advising tomato growers on biological control methods. Throughout his time at BCP, and then from 2001 as part of Certis, Simon has performed several key roles including technical services manager, UK sales manager, and now technical manager for Certis UK, a position he has held for the past three years.

"There is a great deal of variety to my day-to-day responsibilities, as the Certis portfolio is very diverse, but my experience in IPM is key to many aspects of my work.

"One of the highlights has been my involvement over the years, in the company's transition into an integrated crop management (ICM) business.

"Helping Certis to adapt to changes in the industry, and seeing the company evolve in order to continue to provide solutions for our customers, has been very rewarding.

"Most recently we have focused on developing our portfolio strategy which includes arable, potatoes and biorationals. ICM and the use of bio-pesticides alongside conventional



Simon Jones

crop protection products is becoming increasingly important, and I look forward to Certis continuing to grow in this area."

EAMU update

Certis have a wide range of products that may also have an off-label use, or Extension of Authorisation for Minor Use (EAMU). When establishing if a product has an EAMU, it is important to check the CRD, Liaison or AHDB Horticulture websites.

CRD:

<https://secure.pesticides.gov.uk/offlabels/search.asp>

Liaison (by subscription):

<https://secure.fera.defra.gov.uk/liaison/>

AHDB Horticulture (access by levy payers):

<http://horticulture.ahdb.org.uk/horticulture-levy-payers>

EAMU product update

The following products have recently been granted an EAMU:

KARMA (potassium hydrogen carbonate) has been granted an EAMU for the use as a fungicide for the control of botrytis

and powdery mildew in grapes. This provides growers with an opportunity to use an approved formulated product up to eight times on the crop for botrytis, without compromising residues close to harvest. More information on this new use can be found in a factsheet on the Certis UK website

SYSTEM 50 (flufenacet) has been granted an EAMU for the use as a herbicide for the control of black-grass in triticale and rye crops

TAKUMI SC (cyflufenamid) has been granted an EAMU for the use as a fungicide for the control of powdery mildew in strawberries at a rate of 150ml per hectare. Up to two applications are allowed per crop with a three-day harvest interval. Maintaining concentration for curative situations will be required

Warning notices about EAMU use: As Extensions of Authorisations for Minor Use conditions will not be given on the product label provided by manufacturers, it is essential that anyone who needs to use a product does so in accordance with an Extension of Authorisation. The text of the Extension of Authorisation must be read before commencing any spraying operation.

All Extensions of Authorisation for Minor Use carry details of their expiry date. However, they remain in force only while the product from which they are derived continues to be authorised. These uses are not endorsed by Certis and are carried out entirely at the risk of the user.

The extension of the authorised use provides for the use of Karma (M16363), System 50 (M16612) and Takumi SC (M16000) in respect of crops and situations, other than those included on the product label. No efficacy or phytotoxicity data have been assessed and as such the 'extension of use', is at all times done at the user's choosing, and the commercial risk is entirely theirs.

Users must be in possession of a copy of the Extension of Authorisation and Number prior to use which is available from the CRD website.

Upcoming industry events

Event	Date	Location
Four Oaks	6th – 7th September	Four Oaks Nursery, Cheshire
Tomato Growers Conference	28th – 29th September	Chesford Grange Hotel, Warwickshire
South West Growers	5th October	Matford Centre, Devon
British Carrot Growers Day	6th October	Scampston Estate Site located off Malton Road, West Knapton, YO17 6RL
Cucumber Growers Conference	12th October	Waltham Abbey Marriott Hotel, Essex
GroSouth	9th November	Roundstone Nursery, West Sussex

Technical hotline

0845 373 0305

For more information, growers are urged to contact the Certis technical hotline

BASIS & NRoSO CPD points

Reading this publication qualifies the reader for two BASIS points and two NRoSO points.

BASIS reference number: CP/53138/1617/g – to apply for your BASIS points e-mail the code and your BASIS account number to linda@basis-reg.co.uk

NRoSO reference number: NO462933f – to apply for your NRoSO points e-mail the code and your NRoSO membership number to nrosocpd@cityandguilds.com

Organic update

A number of Certis products are permitted for use on organic crops, following renewal of their organic status.

Full organic status has been secured for:

Botanigard (*Beauveria bassiana*)
 Cyd-X (Granulovirus – *Cydia pomonella*)
 Jet 5 (peroxyacetic acid)
 Karma (potassium hydrogen carbonate)
 NEMguard (garlic extract)
 SluXX and Derrex (ferric phosphate)
 SluXX HP and Iroxx (ferric phosphate)

Derogation organic status has been secured for:

Majestik (maltodextrin)
 Spruzit (pyrethrins)
 Eradicoat (maltodextrin)
 Cuprolyt (copper oxychloride)
 Growers are reminded to check with their individual certification authority prior to use.

Welcome to our 'Certis interactive' page

This is a chance for you to take part and get in touch via Twitter @CertisUK

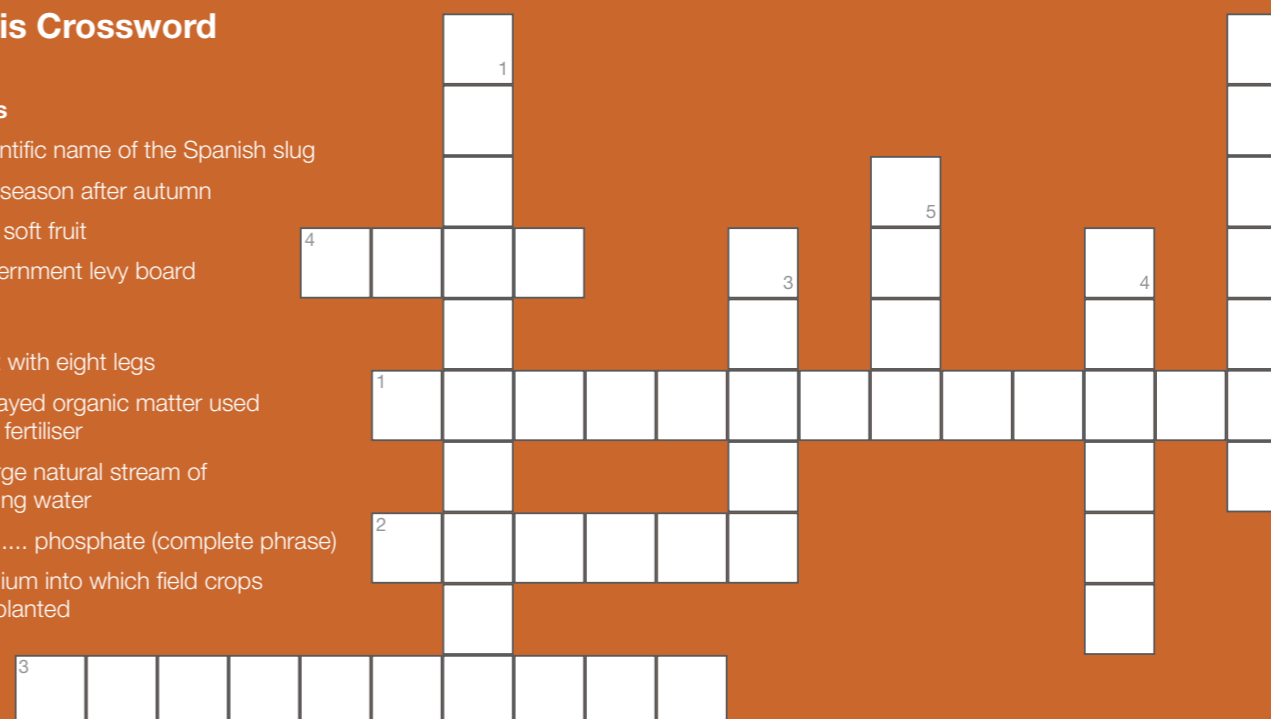
Certis Crossword

Across

1. Scientific name of the Spanish slug
2. The season after autumn
3. Red soft fruit
4. Government levy board

Down

1. Pest with eight legs
2. Decayed organic matter used as a fertiliser
3. A large natural stream of flowing water
4. phosphate (complete phrase)
5. Medium into which field crops are planted



Across 1. *Arion vulgaris* 2. Winter 3. Strawberry 4. River 5. Soil
 Down 1. Spider mite 2. Compost 3. River 4. Ferric 5. Soil



#CertisFAQ
 tweet us your
 questions

Your questions answered

1. What should I do for spider mite control in the early autumn?

Going into the autumn period spider mites may be stimulated to go into their over winter diapause stage. This could be triggered by shorter days, lower temperatures or lack of food. In some situations, with heated structures and live plant material, the spider mite may survive without going into diapause.

Therefore, it's important for growers to consider taking early autumn action to reduce spider mite numbers. A robust spray programme and good hygiene will be key. Even pruning plants back may help, provided remains are removed from the glasshouse.

One spray option worth considering is mixing Botanigard with Majestik, which we know is effective for controlling spider mite activity, but will also deal with any remnants of whitefly and thrips that might be present. Make sure the climate is right for this operation. This should be applied at this time of the year, with increased humidity and falling light levels, into the evening.

2. What slug species should we be on the look-out for this season?

There are two particular species that we have experienced more reports of in the past year.

The common grey field slug (*Deroceras reticulatum*) is light grey/ brown in colour, which usually grows to around 5cm. The key breeding season is in September to October, but they can continue to be active through very cold temperatures. Remember some slug pellet actives are better than others when colder temperatures are prevalent.

The Spanish slug (*Arion vulgaris*) is a large species, which is typically red/ brown in colour. The number of eggs that this slug produces can be up to double in comparison to native species.

When it comes to control of either species, without a doubt, the grey field slug has many effective control options available. However, the Spanish slug, which is an omnivorous feeder can choose between plant and animal material, so this species will be more difficult to control. Correct identification, and seeking expert advice about containment will be required for this species.

