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2009
on stand
no. 628

Welcome...

to our Summer 2009 Cereals edition of Insight. This issue contains important information for our ACCS members on mycotoxins, an update for APS scheme members and news about the new GTAS scheme for road transport.



We are running our popular prize draw again at Cereals with six free NSTS sprayer tests to be won – don't forget to fill in the coupon on the back page and bring it along to our stand at Cereals. We are also pleased to announce the launch of our new website and hope that you will take a look at it.

Coming with the newsletter is a supplement about Risk Management in today's climate and the challenges and opportunities it represents to UK Agriculture. It highlights some of the work being done by NSF-CMi in this area and the new services we are bringing to the market. I urge you to read it and, if you have any queries or require further information, please do not hesitate to contact me.

We look forward to seeing you at Cereals 2009 and wish you all the best in these challenging times.

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Cereals News

NSF-CMi will be present at Cereals 2009, the leading technical event for the arable industry. Please do pay us a visit on stand 628.

We always like the opportunity to talk to our members and gain your feedback on the schemes and indeed our own service to you. This year the show takes place on Wednesday 10th and Thursday 11th June at Vine Farm, Wendy, Cambridgeshire. Cereals is bigger than ever this year, with over



64 hectares of exhibits, crop trials and live demonstrations.

Over 400 suppliers will be there to keep visitors up-to-date with the latest products, advice

and information.

As usual, there will be a NRoSO box on our stand where you can post the request for your CPD points. Please visit us at any time during the show.

Enter our Cereals 2009 prize draw – see back page!

NSF-CMi offers GTAS for road transport

NSF-CMi Certification is now offering the GAFTA Trade Assurance Scheme (GTAS) for road transport.

GTAS (Storage and Haulage) is accredited under UKAS EN45011, has mutual recognition status with AIC/TASCC and is accepted both nationally and internationally by all sectors of the grain trade.

The scheme is a major leap forward, allowing companies operating within the trading and logistics fields in the UK the opportunity of a choice of assurance scheme for the first time. It is the first HACCP based scheme that covers all the logistical elements of the trade on an international basis from the farmgate in the country of origin, to the final end user in the country of destination.

GTAS is the most comprehensive scheme available, producing one complete trading and logistics scheme with the best professional practices designed to



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NSF-CMi offers GTAS for road transport (cont.)

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maintain consumer confidence concerning the handling and delivery of safe food and feed.

NSF-CMi is offering the GTAS Transport (by road) module at £235+VAT which is the total cost with no additional registration fees.

The standards and application form are available by request

or on our website www.nsf-cmi.com along with other information about NSF-CMi Certification, and on the GAFTA website www.gafta.com

For more information about the GTAS scheme please contact paul.adams@nsf-cmicertification.com or tel: 07775 575829

Mycotoxins – the whys and wherefores....

Contributed by Dr Ken Wildey, Technology for Growth

There has been much media coverage of mycotoxins in recent months and a brief review and 'update' might be helpful to ACCS members

What are mycotoxins?

Mycotoxins are toxic chemicals produced by the mycelia of growing fungi (moulds). Their main purpose is thought to be as defensive chemicals, to protect the area in which they are growing from 'invasion' by other competing organisms, especially other fungi.

The key issue is that some of these chemicals are extremely potent toxins – either by direct (acute) toxicity or as carcinogens. They are also rather 'tough' molecules which are difficult to break down (by, for example, the digestive tract or physical challenges like heat and light) and accordingly they can survive from primary production to contaminate the length and breadth of the food chain.

As a result of their potency and persistence a number of human and animal health issues have been formally linked to ingestion of mycotoxins – but as with any chemical, the quantities of toxins as well as their individual toxicities are important in terms of assessing and managing the risk. Maximum permitted levels have been agreed internationally under the Codex Alimentarius process on a range of raw materials and foodstuffs.

To the UK cereal grower there are two distinctively different types of mycotoxins that can affect our crops – one type that ONLY grows in the field and the other that ONLY develops in storage. It is important to understand that there is no 'crossover' of the two types; and that if field-produced toxins are present at harvest they do NOT continue to be produced once the crop has come in. At the same time neither are they destroyed nor in any way reduced post-harvest, during which stage other, completely different, moulds and their toxins start to colonise the stored crop if conditions are favourable.

The key field mycotoxins of importance to UK cereal farmers are known generically as trichothecenes and they can be produced by moulds associated with stem-based diseases



and ear blights (especially *Fusarium* species). There are several different species of moulds that can affect cereals and some species can never produce toxins; and furthermore, even those species that CAN produce toxins do not produce toxins all the time (and, as a further complication, within a species that can produce toxins, some populations/strains can't actually do so...). There are several different toxins that can be produced by field fungi but the most important ones are deoxynivalenol (DON) and zearalenone.

Following harvest a quite different 'group' of moulds from those that grow in the field can develop in grain, if the conditions are suitable. Storage mycotoxins can only develop post-harvest and the key problem toxin in UK storage is ochratoxin A (OTA), which can only be produced by one single species of mould, *Penicillium verrucosum*; thus a much 'simpler' picture in relation to field toxins. However, OTA's much higher toxicity has led to a very much lower maximum permitted level.

What limit levels are currently in place?

The main challenge presented by mycotoxins lies in the very low limits permitted under International regulations. The maximum levels allowed in different cereal products are measured in parts per billion (ppb) and are as shown in Table 1.

Table 1	DON	ZEAR	OTA
Unprocessed wheat/barley	1250	100	5
Flour	750	75	3
Finished products	500	50	3
Infant food	200	20	0.5

Assured Produce Scheme 2008/09

Important Changes which may affect you

The new Assured Produce Scheme (APS) standard took effect in October 2008. All NSF-CMi members are sent the new Produce Farm Scheme Manual at the time of renewal but there are some important changes which some growers do not appear to be aware of. These changes have major implications for your certification and membership status.

The changes are listed in the Produce Farm Schemes Manual pages 106 – 109 and we list below a summary of the main changes.

As normal, auditors will raise non-compliances during the audit where the member does not meet the standard.

Critical Failure

Where non-compliances are raised at the assessment against points in the standard which are detailed as 'critical failure points' these will result in immediate suspension of membership. Once the report is received by NSF-CMi Certification office, they will be listed on the APS

website as suspended.

Suspended growers will be contacted in writing by NSF-CMi informing them of the options open to them.

Corrective actions

The standard now has control points which are defined as "Must's". At the closing meeting at the end of the audit, the auditor will identify any non-compliances relating to 'Must's'. If there are any non-compliances raised against 'Must' points then the audit report will stay open for 28 days from the date of the assessment. This will give you time to send in any evidence required to demonstrate these points have been corrected.

If evidence is not received within 28 days then the membership will be suspended, until such time as the evidence has been received.



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There are currently no limits for mycotoxins in animal feedstuffs but guidance values have been issued by the EU – as an example DON has a maximum of 8000ppb in feed grains but only 900ppb in complete pig diet. As an alternative to laboratory testing, a number of test kits are available that can be used by the farmer at a lower cost.

What can we do to reduce risk in the field?

Being moulds, the development of *Fusarium* and other closely related species is strongly dependent on moisture conditions (especially rainfall) at different times during the growing cycle and thus climate and weather patterns can have a major impact on the likelihood of toxins being present, as well as on their levels. Accordingly, geographic location is a key factor - but other agronomic factors can also raise the risk of mycotoxins being present. Of particular importance is the method of cultivation used; and also whether, for example, the cereal crop is following maize (which presents a quite severe risk).

In response to industry concerns about mycotoxins in UK cereals, the HGCA produced a helpful Risk Assessment model which effectively obviated having ALL wheat samples for human consumption tested before delivery. However the extremes of the 2008 harvest still indicated some weaknesses in the model and, from 1st February 2009, UK millers required ALL wheat loads to be submitted with an analytical certificate, no matter what the HGCA's Risk Assessment tool indicated.

A very practical guide has been published by HGCA to guide UK growers on minimising DON and Zearalenone levels in cereals and detailed instructions are also available from HGCA on who needs to carry out a risk assessment and how to do it.

Storage risk management

Again moisture is the key – linked also to temperature. In general the warmer and wetter the grain during the early stages of storage, the higher the risk of mycotoxin production. The good news is that *P. verrucosum* (the only species of fungus that can produce mycotoxins in UK storage) needs a relatively high relative humidity in grain for development and production of OTA – equating to above 18% moisture content in cereals. Accordingly, all effort must be made to prevent grain being held at higher moistures, even for short times (the safe storage period is measured in days).

Using the HGCA Risk Assessment tool, if the result shows a 'high' risk, a DON test must be carried out to attach to the grain passport. If the Risk Assessment shows only a 'medium' risk – but the land is in a high risk area (see regions' ratings maps on the HGCA website) then a DON test must still be carried out.

The HGCA Risk Assessment tool can be found at www.hgca.com, at the back of the ACCS manual, in the NSF-CMi Farm Record Book and on the NSF-CMi website at www.nsf-cmi.com

News in brief

Agricultural waste can now be collected by 'Assured' contractors

B & B Contractors from Gunnislake in Cornwall are the first to be assured under the NAAC's new Assured Land-Based Contractor (Agricultural Waste Collection) Scheme.



The first load of waste collected by an 'Assured' contractor arrives back at B&B Contractors' depot.

Designed to promote a safe, traceable waste collection service, the scheme audited by NSF-CMi took nearly two years to develop by the NAAC, its members and key people from the waste industry.

Tim Bloye of B&B Contractors said "It is important that we are recognised for the high quality professional service that we offer to our customers. Successfully completing the ALBC's independent audit scheme proves our professionalism."

NSF-CMi 2009 Cereals prize draw Win a free NSTS sprayer test!

Complete this coupon and bring along to the NSF-CMi stand 628 at Cereals 2009 to win your prize. There are six prizes to be won. Winners will be contacted personally.

* up to a maximum value of £250.

Name

Address

.....

Postcode

Home telephone

Mobile

Email

Scheme name please tick box

ACC APS B&L

Other.....

Scheme Membership No

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If no evidence is received after 6 months then the membership will be terminated. The member will then not be allowed to rejoin the scheme for another 12 months. This is a change to the APS scheme rule which we hope will not affect any members.

Impact of non-compliances on LEAF Marque

For those growers who are also members of LEAF Marque, please let us remind you that if there are any non-compliances raised which require rectifying within APS, and they are not rectified within 28 days then the LEAF Marque membership will be suspended at this point, which will result in you having to rejoin the scheme as a new member and undergo another LEAF Marque assessment.

Visit the new NSF-CMi website

We have just launched our new website. With a fresh new look and easy to navigate, we think you'll find it's worth a look. New features include:



- Industry newsfeed on the home page giving the latest news daily of what's going on in the food industry.
- In the Publications section you'll find all the scheme manuals and application forms for easy reference online or to download.
- Also in the Publications section is our new 'Business Advice' section where you are able to download information on every aspect of trading straight from the Trading Standards Institute. Simply send for the password the first time you use and you're away!
- Under 'Services' we highlight our new 'Risk Services' a valuable new way to risk assess your enterprises. See our pull-out supplement.

In addition to the above, you will find information on all of the certification schemes we offer and all our other services.