Calls for move back to risk tool

Pre-movement testing of wheat from the coming harvest is on the cards again despite a recent revamp of the HGCA risk assessment tool. *Robert Harris* reports

Wheat growers intending to sell their grain into the human food chain after the coming harvest will almost certainly have to get it tested for fusarium mycotoxin levels before loading it out.

All grain destined for mill intakes will have to be tested on farm to ensure it meets legal limits for deoxynivenol (DON), and in some cases zearalenone (ZON), for the first few months after harvest at least.

And if the current marketing year is anything to go by, some may retain those pre-movement tests right through to the last load of the coming season.

It seems likely that the HGCA's risk assessment tool, viewed by the NFU and many farmers as a cheaper but equally accurate option, will again be used as a back-up rather than the first line of defence.

Under laws introduced by Brussels in 2006 to protect human health, owners must ensure their grain is safe for human consumption – containing less than 1250ppb of DON and 100ppb of ZON.

Millers are taking no chances. Memories of the soaking 2008 harvest – when widespread fusarium infection caused mycotoxin levels to soar – are still fresh in the memory. The risk assessment tool, widely accepted in the two previous years, was not designed for such a deluge.

Instead, the industry agreed to switch to intake testing for the first three months after harvest, and for a mycotoxin count derived from a pre-movement test to accompany all loads. This built up a picture of disease levels upon which a regime for the rest of the season could be based.

In 2009, the same three-month, intensive testing regime was retained. Although intake tests were scaled back once it was clear it was a low mycotoxin year, only two mills – RHM and ADM – dropped their requirement for pre-movement tests, and others are demanding it even now.

Whether that will happen this season remains to be seen.

"The events of 2008 were such that the whole supply chain became aware of the issue, and millers need to demonstrate due diligence," says Martin Savage, trade policy manager at Nabim, the trade body representing millers.

"Stakeholders have agreed again to have a three-month intensive testing regime. After that, end users will decide what strategy to adopt. No one can call that decision at the moment – it will depend on individual millers and their customers."

UNNECESSARY EXPENSE

Whatever they decide, most on-farm grain will have been tested by then. That concerns Guy Gagen, chief arable adviser at the NFU, who maintains testing is an unnecessary expense.

He believes the HGCA risk assessment tool – which was revamped during 2009 to allow for higher rainfall levels at the critical flowering and pre-harvest timings – is now robust enough to replace pre-movement testing, which he maintains is a poor compromise between practicality and accuracy.

"No test is particularly accurate – a lot depends on achieving a representative sample and preparing it correctly. And mycotoxin levels vary enormously, not just within a heap, but even between individual grains."

Ninety-five out of 100 tests fall into a range of +/-20% of the actual level, he adds. "They are not designed to accept or reject loads on the basis of borderline results. And to ensure every load was within the legal limit, you would need to carry out one test per tonne on farm – the industry has compromised on a test every 50-100t.

BARRY WHYLES

Above: Before shipping out wheat, growers will almost certainly have to get it tested for fusarium mycotoxin levels.

Left: Widespread fusarium infections caused mycotoxin levels to soar in 2008.

"Risk assessment has been validated by the HGCA as being almost as effective as the sophisticated chemical analyses that the authorities would use to enforce the regulations.

"You would have thought that the millers' testing regime would have given them ample opportunity to have come up with similar findings.

"We estimate their current strategy is costing farmers about 40p/t – or £2-3m of unnecessary cost. The massive amount of work involved to give no better result seems futile to me."

Mr Savage does not dispute Mr Gagen's point on test accuracy, but says that test results are more representative than the current risk assessment.

"They are currently the best method to rapidly assess mycotoxin levels. We see a clear relationship between pre-movement testing and our rapid intake tests, but when we compare risk assessment with intake results we don't see a good correlation at all."

The fact it was a low-level year for mycotoxins didn't help, he says. Nor did the fact that only a third of the 3000 samples tested by the millers were accompanied by a risk assessment form, which severely limited the opportunities to compare data.

"There is circumstantial evidence that some people were not filling out their risk assessment forms correctly, perhaps because they failed to keep proper records."

Others may have had difficulty measuring rainfall accurately, perhaps relying on local weather station information, which could be miles away.

More seriously, says Mr Savage, some farmers may have abused the system. "We heard of farmers calling mills saying they didn't know what to do, and we have even heard reports of lorry drivers completing them," he says.

Mr Gagen says if millers really want the scheme to work they should report suspicious risk assessment scores to the Assured Combinable Crops Scheme, which includes an audit of the risk assessment.

"We are frustrated that suspected mis-declarations are seldom reported back to the ACCS for investigation. This would strengthen risk assessment as the sanction of being suspended or expelled from crop assurance would have serious implications for a farm business."

DATA ACCURACY

Simon Hook, research manager at the HGCA, believes millers have a point over the accuracy, or lack of it, when it comes to form filling. "It does ask for fairly precise detail about two rainfall events, and farmers need to have proper records. This is probably one of the main areas that millers see as a problem.

"I don't think that Nabim has had access to particularly high-quality data when it has been trying to make comparisons."

He agrees validations are difficult to do in a low mycotoxin year. "But, where we have been able to do it, we have done so on a very vigorous basis, and comparing all the agronomic data from grower supplied samples and with DON figures has given very good results.

"While we firmly believe we have made the risk assessment tool much more robust after the re-evaluation, we want to make it even better.

"I hope that continued refining over the next couple of seasons will convince the industry that it is right way to go when it comes to mycotoxin legislation."

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MANAGEMENT AID

Benefits of risk assessment tool

Matthew Read (pictured), who farms 1260ha of combinable crops on the Hampshire/Wiltshire border, has already started filling out this season's risk assessment forms and urges other farmers to do the same.

Mr Read grows about 120ha of Einstein for milling, and some of his 130ha of Gladiator will also find its way into grists.

"The risk assessment form is much more than just a scoring exercise – provided you put the right information in, it becomes a mycotoxin management tool that can influence your decision making as the season progresses."

He has found a consistent relationship between his risk assessment and last season's pre-movement test results. "We base our testing on the assessment scores, and last season tested every 200-300t coming in.

"Our scores consistently came out at 11-12, just in the medium category. All the pre-movement tests came out at less than 500ppb, so the risk assessment forms erred on the side of caution, which is the right place to be."

At about £40/test, the cost totalled a few hundred pounds. But had the scores been higher, Mr Read would have tested more frequently.

Dr Hook says all growers should follow Mr Read's example and use the tool as a management aid. "Risk assessment highlights all the factors of good agricultural practice, so it can really help keep fusarium levels to a minimum as the season progresses."

The key is to fill it in accurately, he adds. "Don't leave it to the end to complete – it takes much longer and you may not have access to the information you need."

As chairman of the Assured Combinable Crops Scheme, Mr Read agrees. "It's in our interest to fill in these forms as accurately as possible. Millers can and should ask for a follow-up procedure if they feel they have not been completed properly.

"More importantly, we need to keep the customer happy. I would rather see the risk assessment tool adopted as the industry standard than pre-movement testing, so we growers need to show the milling industry that a simple arrangement can work."