

2025 Harvest Insights and 2026 Feed Risk Assessment: Implications for Animal Health and Feed Safety

The 2025 harvest presented region-specific challenges in feed safety across Europe, the United States and Canada, with significant implications for livestock health and productivity. Over 2,000 new-crop samples were analysed globally, revealing a complex profile of multi-mycotoxin contamination. These findings emphasise the importance of proactive, evidence-based feed risk management and the need to understand both mycotoxin prevalence and co-occurrence in order to safeguard animal performance.

Alltech Harvest Broadcast: Expert insights

In mid-January 2026, Alltech hosted its global Alltech Harvest Broadcast, 'From Field to Feed: 2025 Crop and Mycotoxin Analysis,' from its headquarters in Kentucky. The broadcast brought together international experts to discuss harvest outcomes, regional weather impacts, mycotoxin prevalence and practical strategies for producers.

Dr. Jan Dutton, CEO of Prescient Weather Ltd., emphasized the critical role of weather variability in determining both crop yields and mycotoxin risk, saying, 'Weather and climate are among the biggest drivers of both crop performance and mycotoxin risk and those impacts vary dramatically by region and year.'

Dr. Dutton highlighted the utility of predictive tools such as CropProphet, which integrate weather, soil and crop data to help producers manage production and market risks. 2025 patterns observed included:

- **United States:** Significant heat in early and late July, with mild weather during corn silking.
- **Canada:** Oat-growing regions experienced substantial dryness from May through June.
- **Europe:** Above-normal temperatures during the early corn-growing season, with dry conditions in June followed by modest recovery in July.

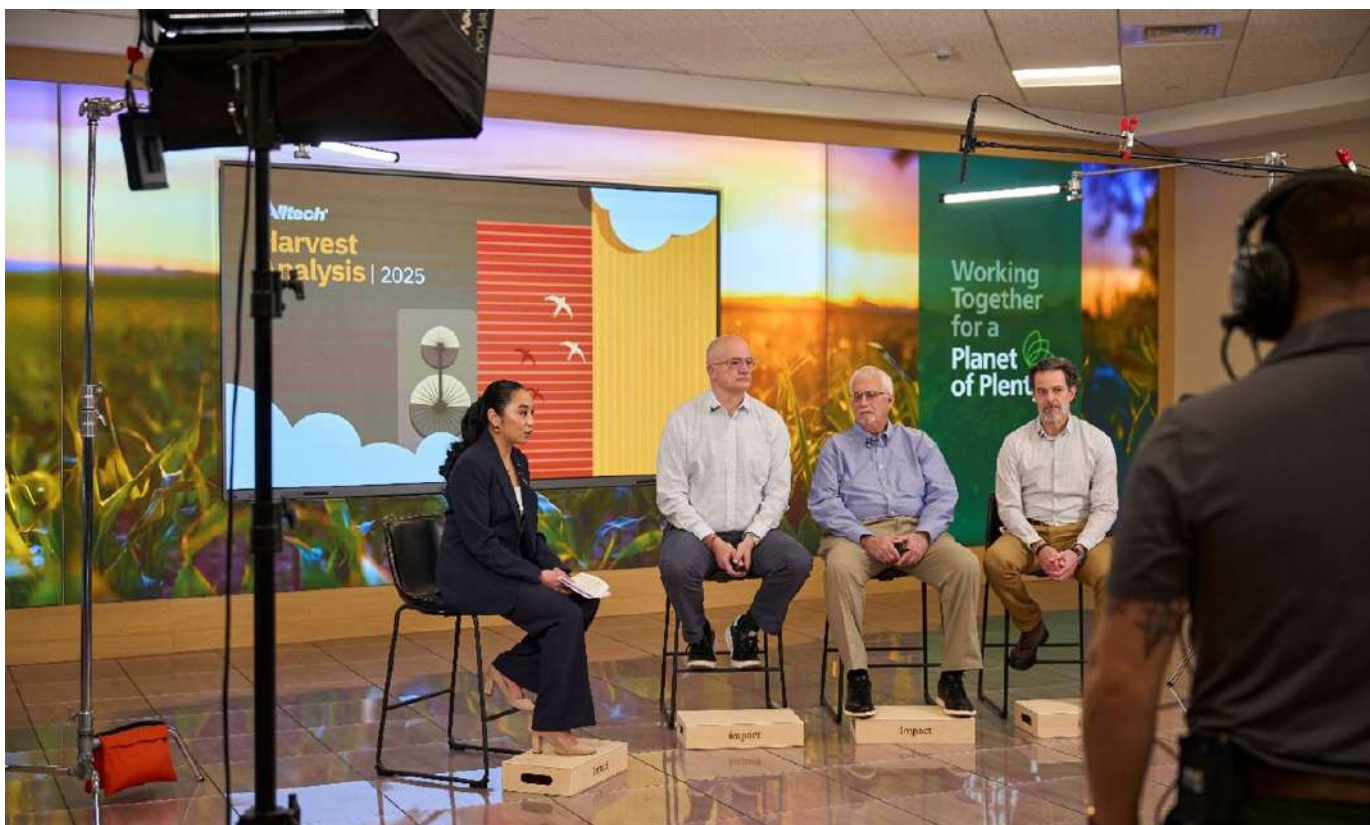
Dr. Max Hawkins, global technical support at Alltech, noted, 'This year, we saw mycotoxin risk shift west in the U.S., while risk in the east declined – a clear reminder that risk patterns change year to year depending on weather and crop stress.'

Dr. Alexandros Yiannikouris, research group director at Alltech, highlighted advances in AI for pre-harvest mycotoxin prediction: 'Decades of research into effective mitigation tools are now being enhanced through AI-driven predictive modelling, integrating more than 200 factors that influence mycotoxin risk, allowing us to identify elevated risk even when visual crop quality or historical averages suggest conditions are safe.'

These insights reinforce the importance of proactive management, including thorough testing, predictive modeling and targeted interventions such as the Mycosorb® Evo range of mycotoxin adsorbents, which are designed to protect animals from diverse toxins, including DON and fusaric acid, in an increasingly variable mycotoxin landscape.

Harvest Analysis Methodology

The Alltech 2025 Harvest Analysis drew on more than 1,232



European samples (tested through Alltech® 37+ and SGS), more than 1,000 samples from across the U.S., and 800 samples from Canadian crops and forages. Analytical protocols included quantitative determination of aflatoxins, deoxynivalenol (DON), zearalenone, T2-HT2 toxins, fusarenon X and emerging mycotoxins. Multi-mycotoxin occurrence was emphasised, reflecting the growing recognition that co-occurring toxins can exert additive or synergistic effects on animal health.

Samples were collected over a broad time frame, from July through December 2025, and encompassed grains, silages, whole-crop feed and forages. Advanced data modeling, including AI-driven predictive tools, was used to correlate environmental factors, historical trends and agronomic data with mycotoxin prevalence.

Europe: High Mycotoxin Risk and Regional Variability

The Alltech 2025 European Harvest Analysis showed significant multi-mycotoxin prevalence across all commodities, with an average of 6.8 mycotoxins per sample. Prolonged dry conditions during spring and summer, followed by late-season rainfall in some regions, created a highly variable contamination landscape. Drought stress reduced natural fungal suppression, favouring the development of certain toxin groups, particularly aflatoxin B1 in corn, while late rainfall increased risk in grains and forages.

Key Regional Insights:

- Western Europe (Ireland, U.K., France)
 - Small grains presented low to moderate risk, with barley consistently riskier than wheat.
 - Emerging mycotoxins were most prevalent, followed by fumonisins and type A trichothecenes, with type A trichothecenes and fusarenon X posing the greatest concern.

- Forages, especially grass silage, carried higher risk, with average *Penicillium* toxin levels of 273 ppb. Corn silage and whole-crop silages showed moderate risk, primarily driven by type B trichothecenes.
- Northwestern Europe (Germany, Denmark, Finland)
 - Corn silage presented elevated risk from type B trichothecenes and zearalenone.
 - Wheat and barley showed low to moderate risk, with barley again more affected.
 - Corn contained moderate levels of fumonisins, aflatoxins and T2-HT2 toxins, with T2-HT2 toxins posing the greatest risk.
- Central and Southern Europe (Czech Republic, Poland, Hungary, Bulgaria, Romania, Croatia, Serbia, Spain, Portugal, Greece, Italy)
 - Corn silage showed moderate risk, with T2-HT2 toxins, DON and aflatoxins most prevalent. Extreme hotspots were noted, including 733 ppb aflatoxin B1 in Serbian corn.
 - Barley was moderately risky, largely due to fusarenon X, while wheat remained lower risk.
 - Forages were impacted by emerging mycotoxins, *Aspergillus* toxins and type B trichothecenes.
 - Eastern Europe (Baltic States, Ukraine, Russia)
 - Grass silage carried high risk, dominated by *Penicillium* toxins.
 - Wheat and barley showed generally high risk, with barley more affected.
 - Corn had moderate risk, driven by T2-HT2 toxins and DON, with aflatoxin B1 averaging 13 ppb and reaching a maximum of 57 ppb in Russian corn.

Overall, the combination of multi-mycotoxin contamination and species-specific sensitivity underscores the importance of evaluating both toxin concentration and co-occurrence,

CropProphet - Observed Weather Anomalies

**Precipitation Anomaly (% of Normal)
July 2025**

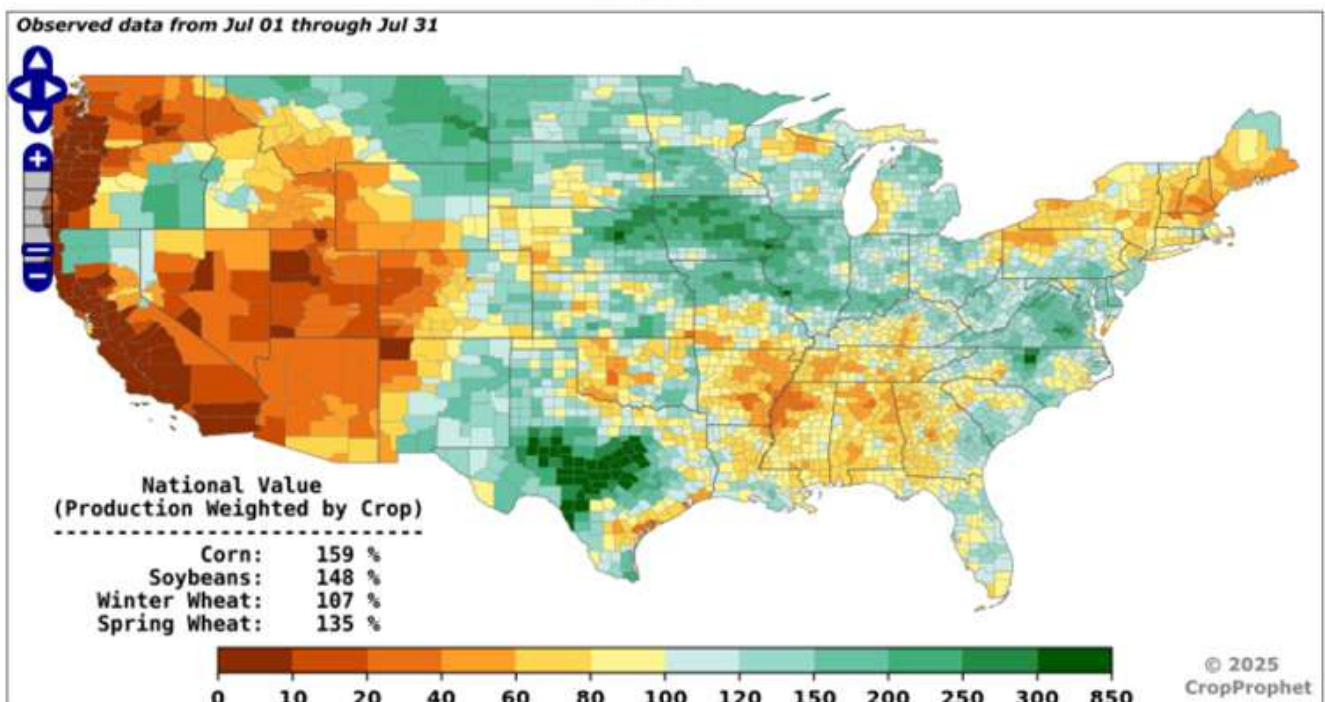


Figure 1: CropProphet U.S. observed precipitation anomalies in July 2025

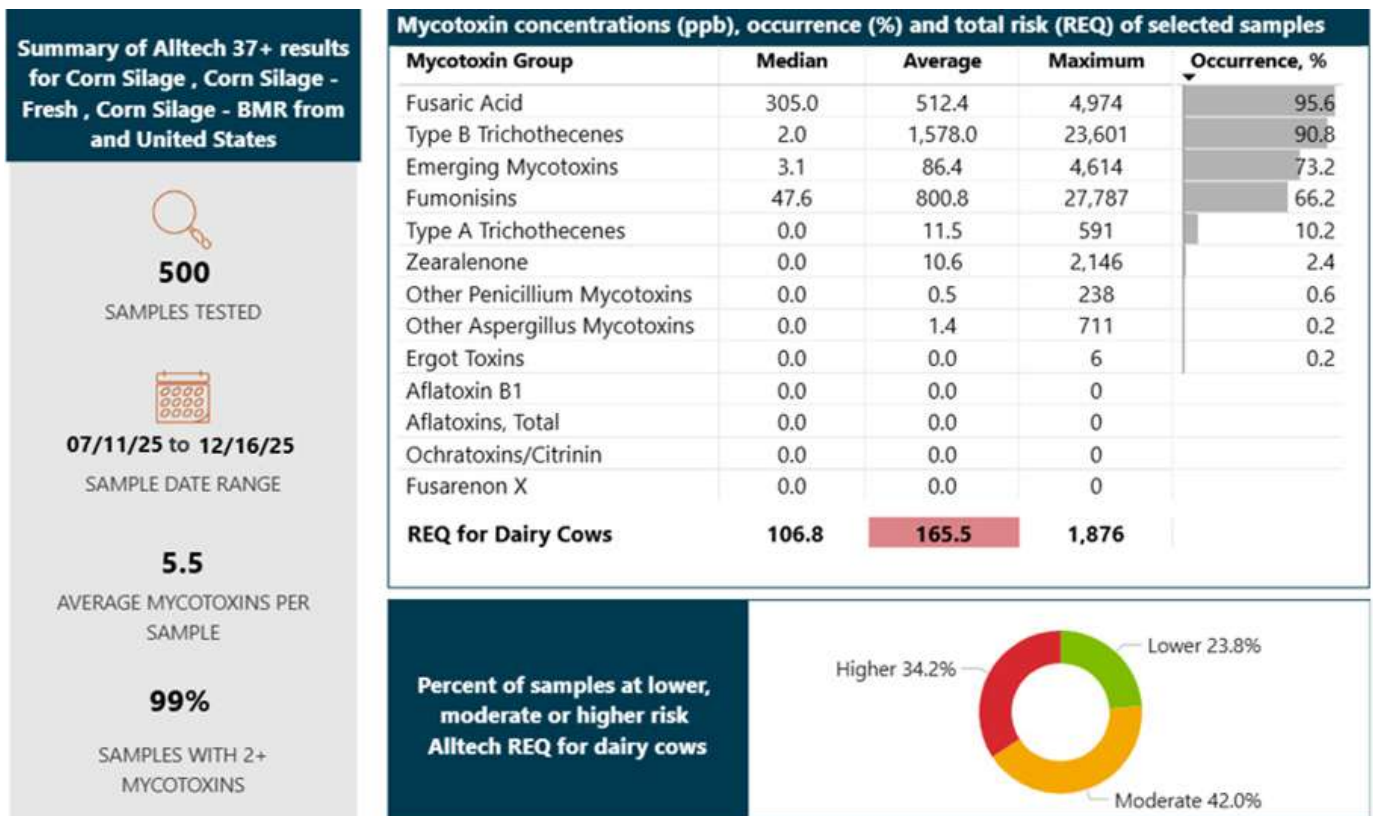


Figure 2: Summary of Alltech 37+ results for corn silage in the U.S. in 2025

particularly for high-performance livestock such as dairy cows, pigs, broilers and youngstock.

United States: Corn and Corn Silage Challenges

The 2025 U.S. growing season was marked by variable weather, including early and late July heat and mild conditions during corn silking. Disease pressure from Southern corn rust, tar spot, wind damage and localized excessive rainfall contributed to multi-mycotoxin accumulation.

Corn Silage:

- Average of 5.5 mycotoxins per sample, predominantly Fusarium species.
- Risk increased as the harvest progressed, emphasizing the need for continuous monitoring.
- High-risk regions correlated with disease hotspots and areas experiencing late-season rainfall.

Corn Grain:

- Average of 6.5 mycotoxins per sample, with Fusarium mycotoxins predominating.
- Type B trichothecenes were present at more than twice the concentration of corn silage, highlighting the vulnerability of grain to late-season stressors.

Corn Feedstuffs (including processed feed grains):

- Average of 7.2 mycotoxins per sample, with Fusarium toxins again most common.
- Progressive contamination through the harvest period reinforces the importance of post-harvest monitoring and storage management to limit risk in finished feed and TMRs.

Canada: Broader Geographic Risk in Forages

Canadian crops exhibited moderate to high multi-mycotoxin prevalence, with clear differentiation between grains and forages:

- **Grains:** DON and zearalenone were the primary contaminants, with moderate overall risk.
- **Forages:** Multi-mycotoxin prevalence was higher, including DON (69% of samples), T2-HT2 (54%) and zearalenone (79%).
- Risk distribution was broader geographically in forages, highlighting the importance of careful storage and monitoring throughout the season, particularly for grass silages and haylage destined for high-producing livestock.

Multi-mycotoxin Exposure: Mechanisms and Implications

The presence of multiple mycotoxins in a single feed sample can produce additive or synergistic effects, which may not be apparent when evaluating single toxins in isolation. Potential impacts include:

- Reduced feed intake
- Impaired immune function
- Intestinal inflammation
- Reduced nutrient absorption
- Subclinical performance losses in growth rate, milk yield or egg production

High-producing animals are particularly sensitive to these cumulative effects.

This emphasises the need for comprehensive risk assessments that integrate species-specific tolerance, toxin co-occurrence and cumulative load, rather than relying solely on single-toxin thresholds.

AI and Predictive Modeling for Pre-harvest Risk

Artificial intelligence is becoming a critical tool for anticipating mycotoxin risk prior to harvest. Collaborative European research integrates over 200 agronomic, climatic and historical variables into AI-driven predictive models. These tools allow for:

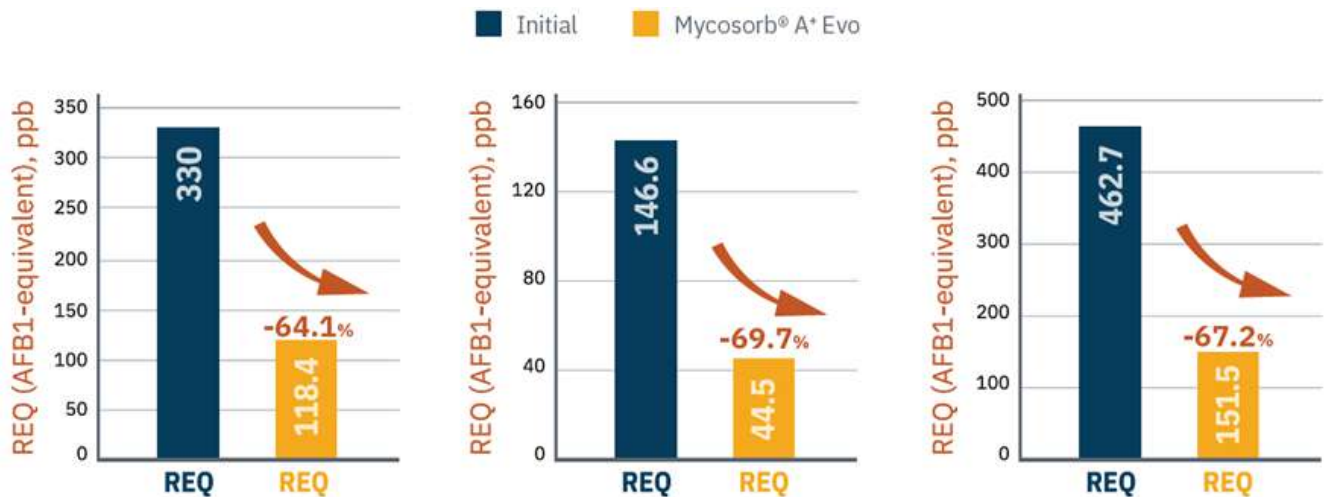


Figure 3: REQ reduction with the inclusion of Mycosorb A+ Evo at three different levels of contamination

- Early identification of high-risk regions
- Quantitative assessment of likely toxin combinations
- Informed decisions for preventive interventions, including targeted use of adsorbents, binders and other feed additives.

According to Dr. Yiannikouris, these AI models can detect elevated risk even when crop appearance and historical averages suggest safe conditions. Thus, AI can provide a more proactive approach to feed safety management.

Preparing for 2026: Forecasts and Risk Mitigation

Looking ahead, climatic variability and emerging weather patterns, such as the development of El Niño in mid-2026, could bring wetter-than-normal conditions across U.S. corn regions, increasing mycotoxin risk.

Effective mitigation strategies for 2026 should include:

1. Regular pre- and post-harvest testing to identify multi-mycotoxin contamination
2. Region-specific risk assessment integrating climatic, crop and storage data
3. Proactive feed formulation using evidence-based nutritional interventions
4. Integration of predictive AI modeling into feed safety and production planning

These approaches enable producers to safeguard livestock health, maintain performance, and reduce economic losses associated with subclinical mycotoxin exposure.

In addition to these proactive strategies, the use of next-generation mycotoxin mitigation tools is increasingly important in managing the complex, multi-toxin feed environment highlighted by the 2025 harvest. Alltech's Mycosorb® Evo range combines yeast cell wall extract with a novel bacterial ingredient to provide broad-spectrum protection against key mycotoxins, including DON, fusaric acid and Penicillium toxins. For higher-risk scenarios or sensitive animals such as breeders, ruminants and youngstock, Mycosorb® A+ Evo delivers enhanced binding efficacy by integrating yeast, algae and bacterial components, helping to reduce the impact of multi-mycotoxin exposure on animal health and performance.

Alltech's REQ (Risk Equivalent Quantity) tool measures mycotoxin risk in animal feed using a single value for multiple toxins. Lower REQ values mean safer feed. This tool helps producers quickly evaluate contamination and make

informed decisions to protect animal health. The below figure shows REQ at baseline and with the use of Mycosorb A+ Evo.

Incorporating Mycosorb Evo into feed programs ensures a proactive, science-based approach to mycotoxin management, helping producers maintain animal health and performance even in highly variable and challenging seasons.

Conclusion

These Alltech 2025 Harvest Analysis results highlight the dynamic and region-specific nature of mycotoxin risk across Europe, the U.S. and Canada. Multi-mycotoxin contamination remains prevalent in grains, silages and forages, with significant implications for animal health.

Evidence-based, scientifically informed feed management is essential to mitigate risk. This includes rigorous testing, risk analysis and targeted interventions. By applying the lessons from 2025, producers can enhance feed safety, protect animal health and maintain performance in 2026, despite ongoing climatic uncertainty.



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Evie Johns is the digital content specialist within the Technology Group at Alltech. She is responsible for planning and delivering high-quality content for all technologies and services alongside the Technology Group marketing leads and wider Alltech creative team. Evie holds a master's degree in psychiatry and has a background in the finance and agriculture sectors. She is based in Stamford, U.K.