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Mycotoxin Summary 2025 (Apr-June)

Global and India Overview

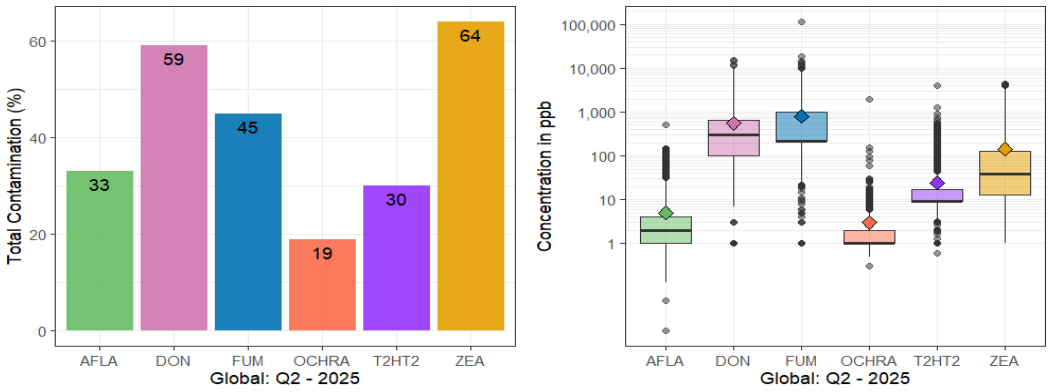


Key highlights of the global summary of mycotoxin levels Apr-June 2025

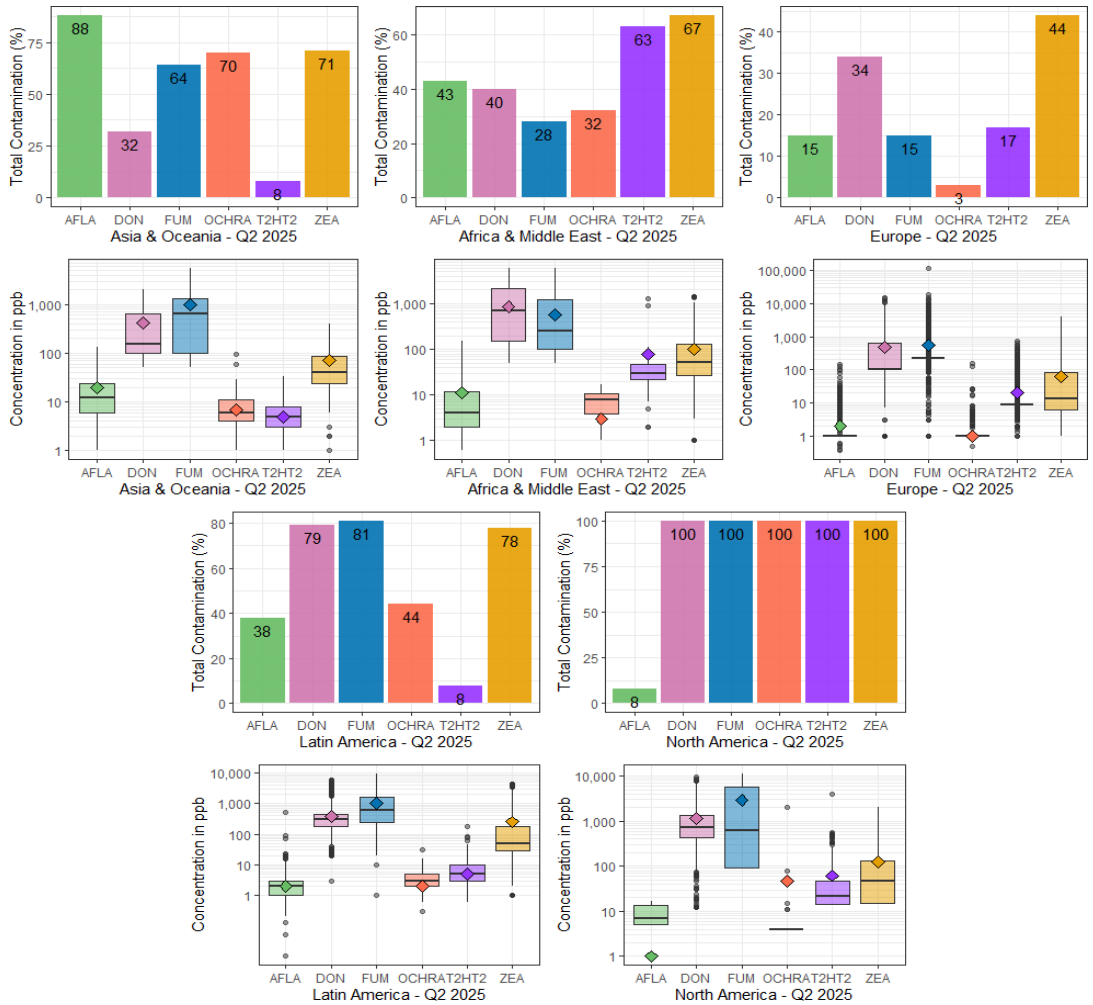
Among all tested samples, Zearalenone (ZEA) was the most prevalent (64%), followed closely by DON (59%), Fumonisins (FUM) at 45%, T-2/HT-2 at 30%, Aflatoxin (AFLA) at 33%, and Ochratoxin A (OCHRA) at 19%. Average concentrations ranged from just 1–5 ppb for AFLA and OCHRA, to 24 ppb for T2HT2, while DON (avg 560 ppb), FUM (avg 802 ppb), and ZEA (avg 141 ppb) showed substantially higher levels—some samples even exceeded 10,000 ppb for DON and 100,000 ppb for FUM. These trends align closely with 2024 global surveys, where ZEA (~66%), DON (~58%), FUM (~54%), and T-2/HT-2 (~56%) were also the most frequently detected, and DON and FUM exhibited the dominant average and median concentrations.

Mycotoxin	% Contamination	Avg. Concentration (ppb)	Median Concentration (ppb)	Minimum Concentration (ppb)	Maximum Concentration (ppb)
AFLA	33	5	1	0	500
DON	59	560	218.5	0	15509
FUM	45	802	219	0	116375
OCHRA	19	3	1	0	2000
T2HT2	30	24	9	0	4000
ZEA	64	141	33	0	4403

Summary of Mycotoxin Contamination



Summary of mycotoxin concentration distribution in different regions during Apr-June 2025 (all samples together)

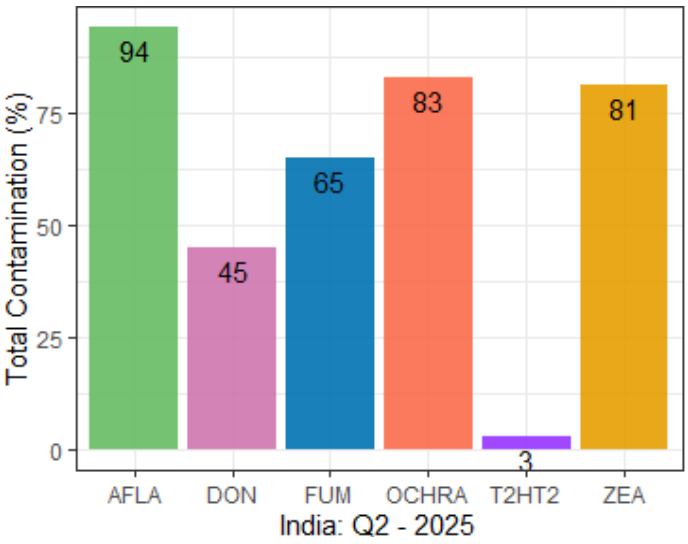


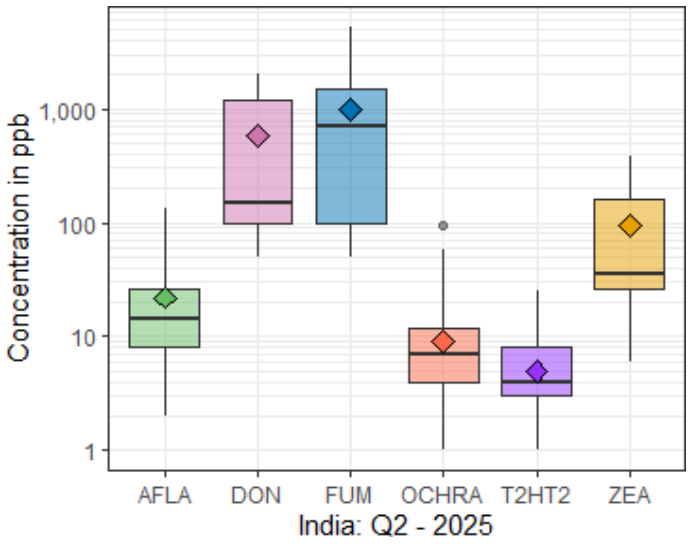
Key highlights of the India summary of mycotoxin levels Apr-June2025

India Q2 2025 mycotoxin data reveals an alarming contamination landscape: Aflatoxin and Ochratoxin A dominate (>80% prevalence), while Zearalenone, Fumonisins, and Deoxynivalenol also occur in most samples. Fumonisins reach especially high average levels (981 ppb), indicating considerable livestock risk. T-2/HT-2 toxins are scarce in the dataset (3%, low ppb). These findings reflect India's recognized status as an extreme-risk region where multi-mycotoxin exposure and elevated toxin levels pose pronounced threats to feed and food safety, consistent with recent South Asia surveillance reports.

Mycotoxin	% Contamination	Avg. Concentration (ppb)	Median Concentration (ppb)	Minimum Concentration (ppb)	Maximum Concentration (ppb)
AFLA	94	22	14	0	132
DON	45	583	150	0	2000
FUM	65	981	700	50	5200
OCHRA	83	9	7	0	96
T2HT2	3	5	3	0	25
ZEA	81	96	31.5	0	390

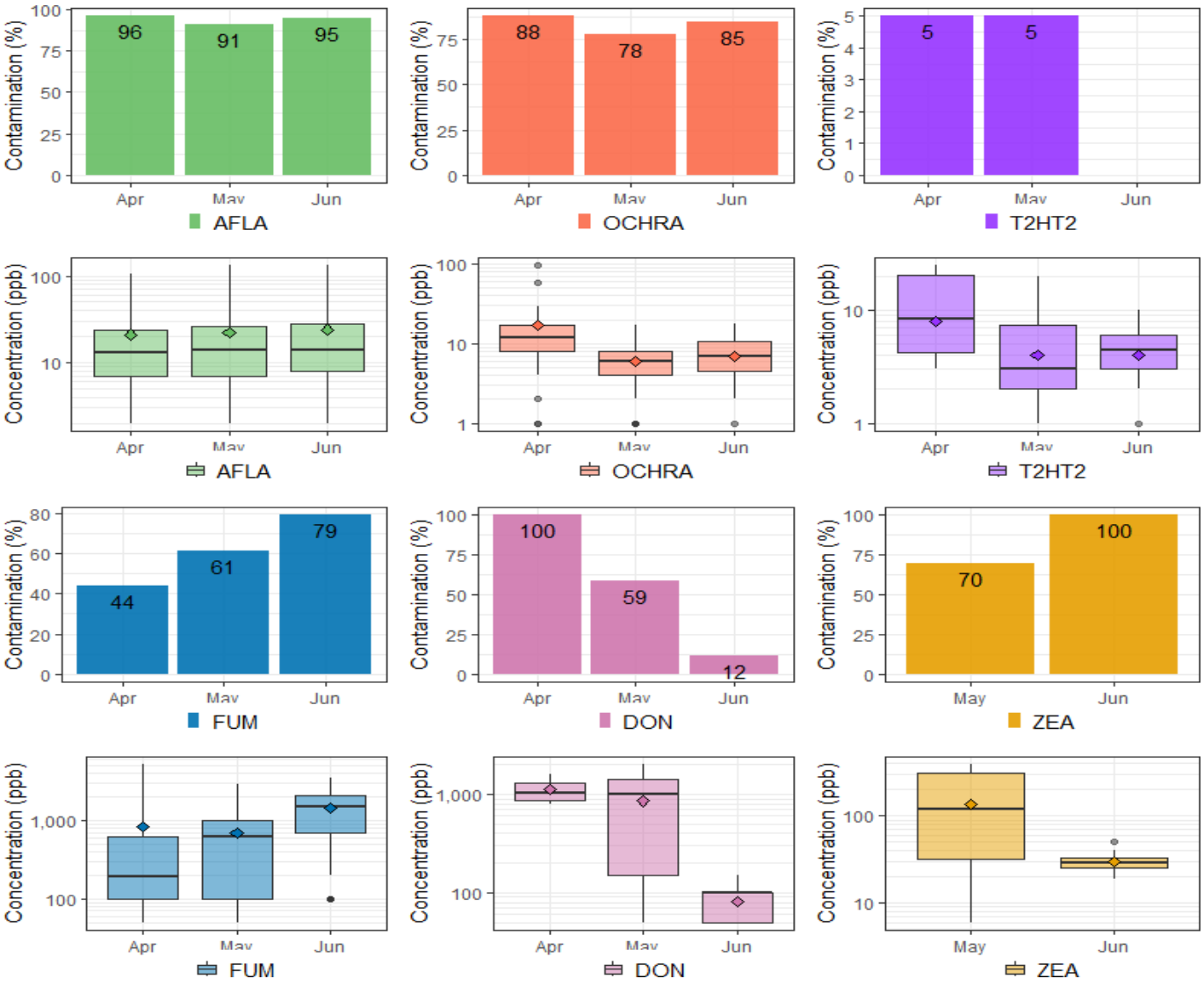
Summary of mycotoxin contamination in India during Apr-June 2025





Summary of Month-wise Mycotoxin Contamination and Distribution in India Q2 – 2025 (all samples together)

In Q2 2025, India's mycotoxin contamination exhibited strong seasonal shifts: Aflatoxin remained consistently high (~90–96%) with moderate ppb levels; Ochratoxin A stayed prevalent (~78–88%) at low-to-moderate concentrations; and T-2/HT-2 toxins were sporadic (~5%). Fumonisins rose sharply in prevalence (to ~79% by June) and reached the highest concentrations, while DON plummeted mid-quarter—from ubiquitous contamination with high ppb levels to low detection in June. Zearalenone emerged distinctly mid-quarter, peaking in June at full prevalence (~100%) albeit at modest concentrations compared to FUM and DON.



Mycotoxin Contamination in Maize – India Q2 2025

In Q2 2025, maize in India exhibited high levels of mycotoxin contamination: Aflatoxins and Fumonisins each affected nearly 80% of samples, with Fumonisin levels significantly elevated. Zearalenone also proved pervasive (~90%), while DON was moderately common (~62%) and at substantial concentrations. Ochratoxin A appeared frequently but at low ppb values, and T-2/HT-2 toxins were largely absent. These patterns align closely with recent domain surveys and affirm the ongoing mycotoxin risks stemming from maize in India, particularly for livestock feed safety.

Mycotoxin	% Contamination	Avg. Concentration Samples (ppb)	Median Concentration (ppb)	Minimum Concentration (ppb)	Maximum Concentration (ppb)
AFLA	78	22	11	2	131
OCHRA	71	5	5.5	0	12
T2HT2	0	4	3	0	10
FUM	78	947	800	100	2300
DON	62	708	900	100	1800
ZEA	90	88	75	0	189

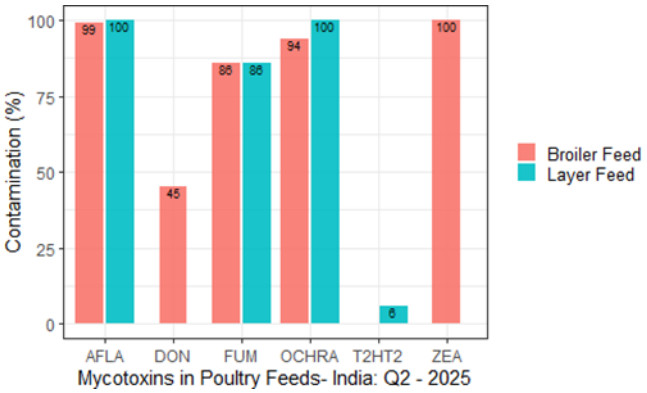
Mycotoxin Contamination in Rice Byproducts – India Q2 2025

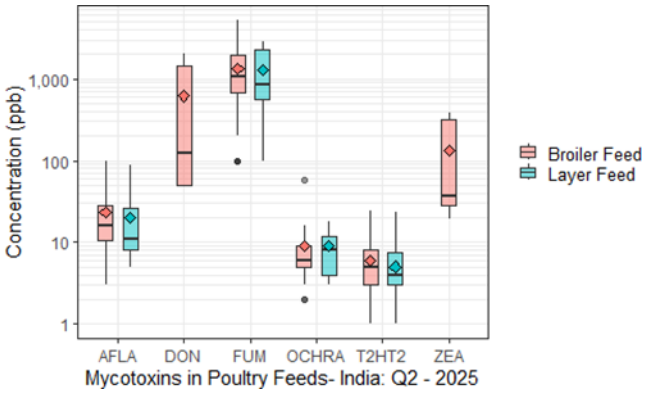
In Q2 2025, rice by-products in India demonstrated relatively low mycotoxin contamination: Zearalenone was the most frequently detected (43%), though at moderate levels (< 200 ppb), while Aflatoxin appeared in 30% of samples at low ppb concentrations. Fumonisins, DON, and Ochratoxin A were detected in only a small fraction (< 11%) and mostly at trace levels. T-2/HT-2 toxins were not detected. These results suggest a lower mycotoxin risk profile in rice by-products compared to other cereal matrices like maize.

Mycotoxin	% Contamination	Avg. Concentration (ppb)	Median Concentration (ppb)	Minimum Concentration (ppb)	Maximum Concentration (ppb)
AFLA	30	4	2	0	19
OCHRA	0	1	0	0	2
T2HT2	0	0	0	0	0
FUM	11	122	100	50	350
DON	0	69	50	0	200
ZEA	43	41	20	1	152

Mycotoxin Contamination in Poultry Feed – India Q2 2025

In India, Q2 2025 poultry feed samples show very high mycotoxin exposure: Aflatoxin and Ochratoxin A contamination is nearly universal (~99–100%) in both broiler and layer feeds, with low-to-moderate levels (typically 10–50 ppb). Fumonisins also exhibit high prevalence (~88%) and consistently elevated concentrations (median >1,000 ppb). Deoxynivalenol is found in ~45% of broiler feed samples at substantial levels (~1,000 ppb median). Zearalenone appears in all broiler feed samples, though layer feed data is unspecified. T-2/HT-2 toxins are essentially absent.





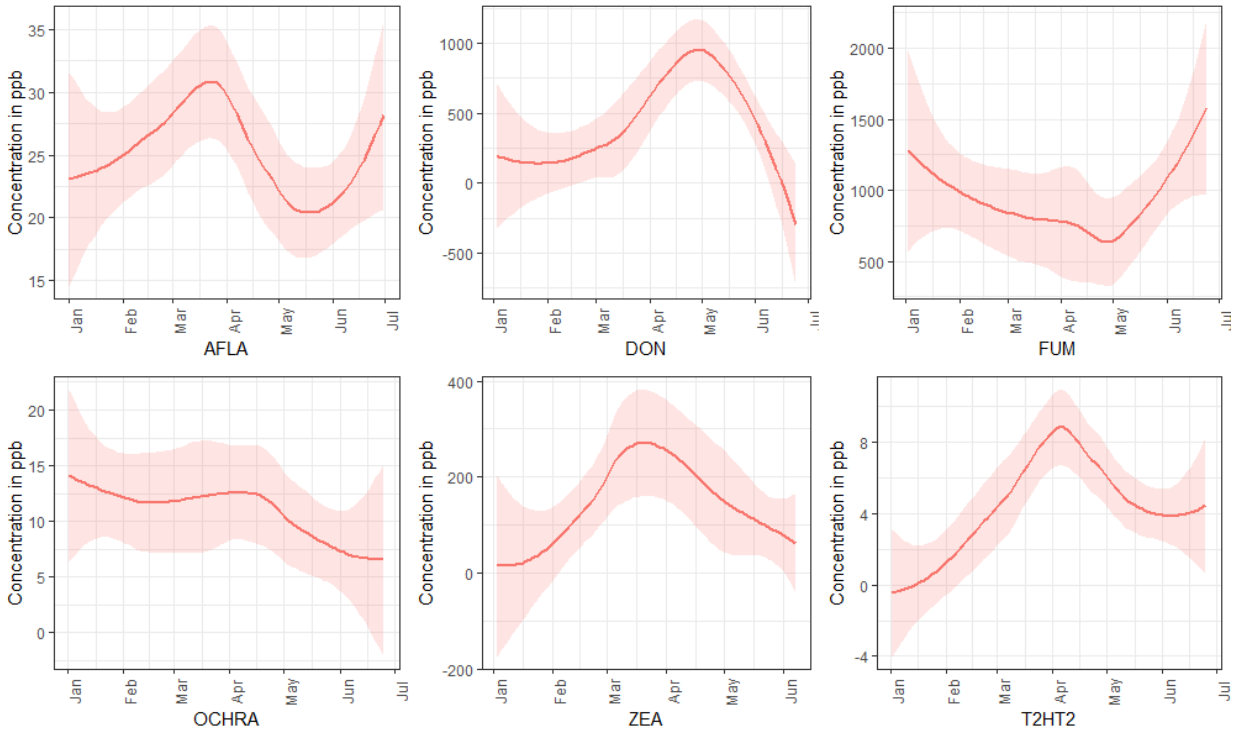
Mycotoxin Contamination in Ruminant Feed – India Q2 2025

In Q2 2025, ruminant feed in India exhibited ubiquitous aflatoxin contamination (100% of samples) with average levels (~18 ppb) indicative of a serious contamination risk —posing potential reductions in milk yield and overall animal health.

Mycotoxin	% Contamination	Avg. Concentration (ppb)	Median Concentration (ppb)	Minimum Concentration (ppb)	Maximum Concentration (ppb)
AFLA	100	18	19.5	5	34

Trend in Indian Mycotoxin Contamination during Q1 + Q2 2025

During Q1–Q2 2025, mycotoxin levels in India showed distinct seasonal cycles: Aflatoxin increased into the spring, dipped slightly in mid-Q2, then peaked again by early summer. DON and Fumonisins peaked sharply in early Q2 before declining toward June. Zearalenone surged in spring and receded by late Q2. T-2/HT-2 showed modest but steady rise in spring followed by a mid-Q2 decline. Ochratoxin A remained relatively stable at low–moderate ppb levels.



Mycotoxin Forecast for India Q3 2025 (in ppb)

Forecast model projects: Aflatoxin contamination remains a concern throughout Q3, with levels fluctuating between 28 and 32 ppb. July: Expect moderate aflatoxin levels around ~29 ppb, with variability between ~11 to 47 ppb. August: Slight dip to ~28 ppb average, though still fluctuating widely across the range. September: A projected increase to ~32 ppb average, with higher variability (low ~14, high up to ~50 ppb). These patterns suggest peak aflatoxin risk emerging in late Q3, consistent with modelled predictions indicating heightened A. flavus growth and aflatoxin production during August–September in key maize-producing regions.

Month	Mycotoxin	Avg (Mid)	Avg (Low)	Avg (High)
Jul	AFLA	29	11	47
Aug		28	10	46
Sep		32	14	50

Mitigation Approaches:

Given the consistently high prevalence of aflatoxin, fumonisins, zearalenone, and DON in Indian feed and grain samples throughout 2025—including average levels often exceeding regulatory thresholds—effective mitigation strategies are essential.

Key Practical Steps:

- Implement routine mycotoxin screening (e.g. using tools like Trouw Nutrition's Mycomaster for rapid on-site detection).
- Maintain strict moisture control and hygiene across storage and feed mill sites to prevent fungal growth. (e.g. Trouw Nutrition's Mold Inhibitor Fylax Range)
- Use integrated Mycotoxin Risk Management programs that combine prevention, identification, and response to contamination.

Recommended Supplement Strategy:

Consider incorporating TOXO®-XL or TOXO®-MX from Trouw Nutrition into feed formulations. These binders offer a three-pronged mode of action:

- Mycotoxin binding via high-quality smectite clays—effective across the "Big 6" toxins.
- Gut barrier support using selected glucose biopolymers to reinforce tight-junction integrity.
- Immune modulation through purified β-glucans to counter chronic toxin exposure.

These products are validated across species (poultry, ruminants, swine, aquaculture) and have proven capacity to reduce performance losses and even improve ROI under high-exposure conditions.