

Decreasing mycotoxin load in food grade oats



Diana Bucur
Teagasc Oak Park



Steven Kildea
Teagasc Oak Park



Martin Danaher
Teagasc Ashtown

National Tillage Conference 2025

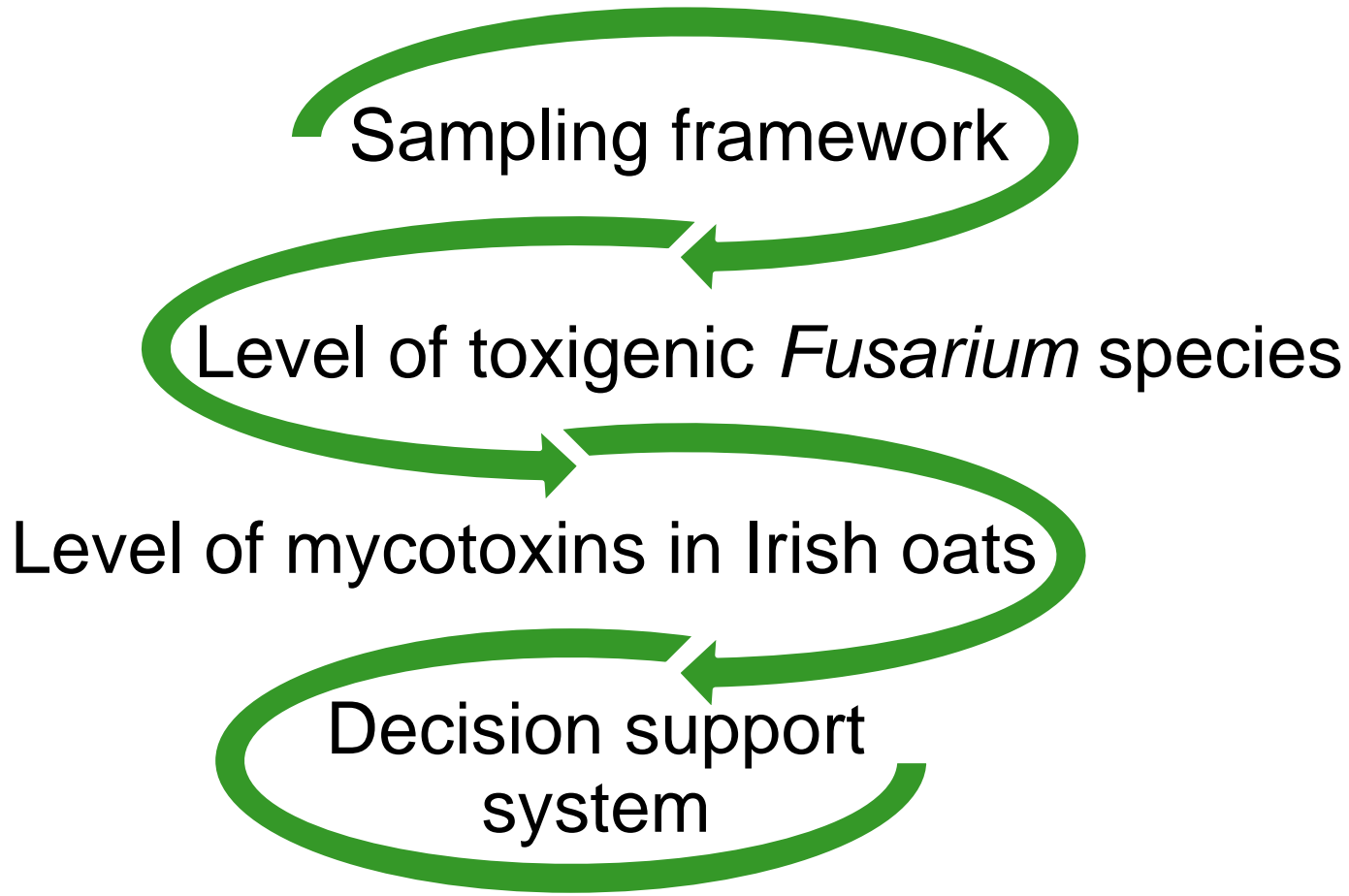
Wednesday, 29th January | Lyrath Hotel, Kilkenny

www.teagasc.ie/tillagecon25

Mycotoxins: A Current Challenge in Irish Oats

- New EU limits on levels of mycotoxins allowed in oats:
 - 200 µg/kg for unprocessed oats.
 - ~100 µg/kg for processed oats (direct consumption).
- Ireland's reputation for high-quality oats depends on keeping mycotoxin levels low.
- Managing the risk of *Fusarium* infection key to reducing mycotoxin levels

Mycotox-I: Field to Fork assessment and mitigation of mycotoxin exposure risk for Ireland



An Roinn Talmhaíochta,
Bia agus Mara
Department of Agriculture,
Food and the Marine



Department of
Agriculture, Environment
and Rural Affairs



University College Dublin



QUEEN'S
UNIVERSITY
BELFAST

afbi

AGRI-FOOD
& BIOSCIENCES
INSTITUTE



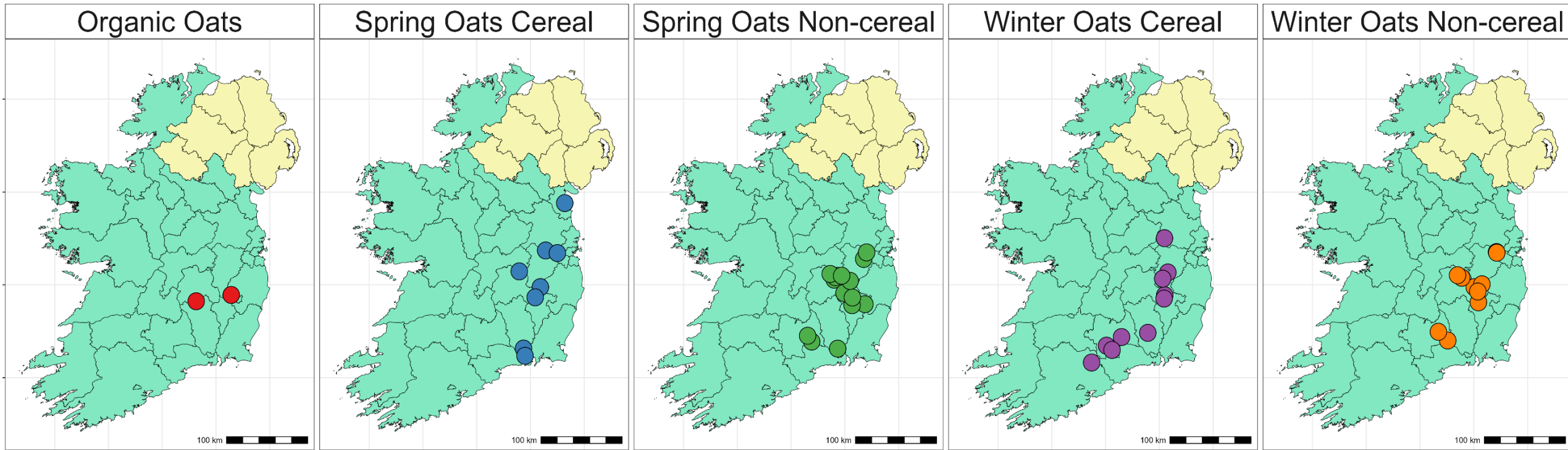
Maynooth
University

National University
of Ireland Maynooth



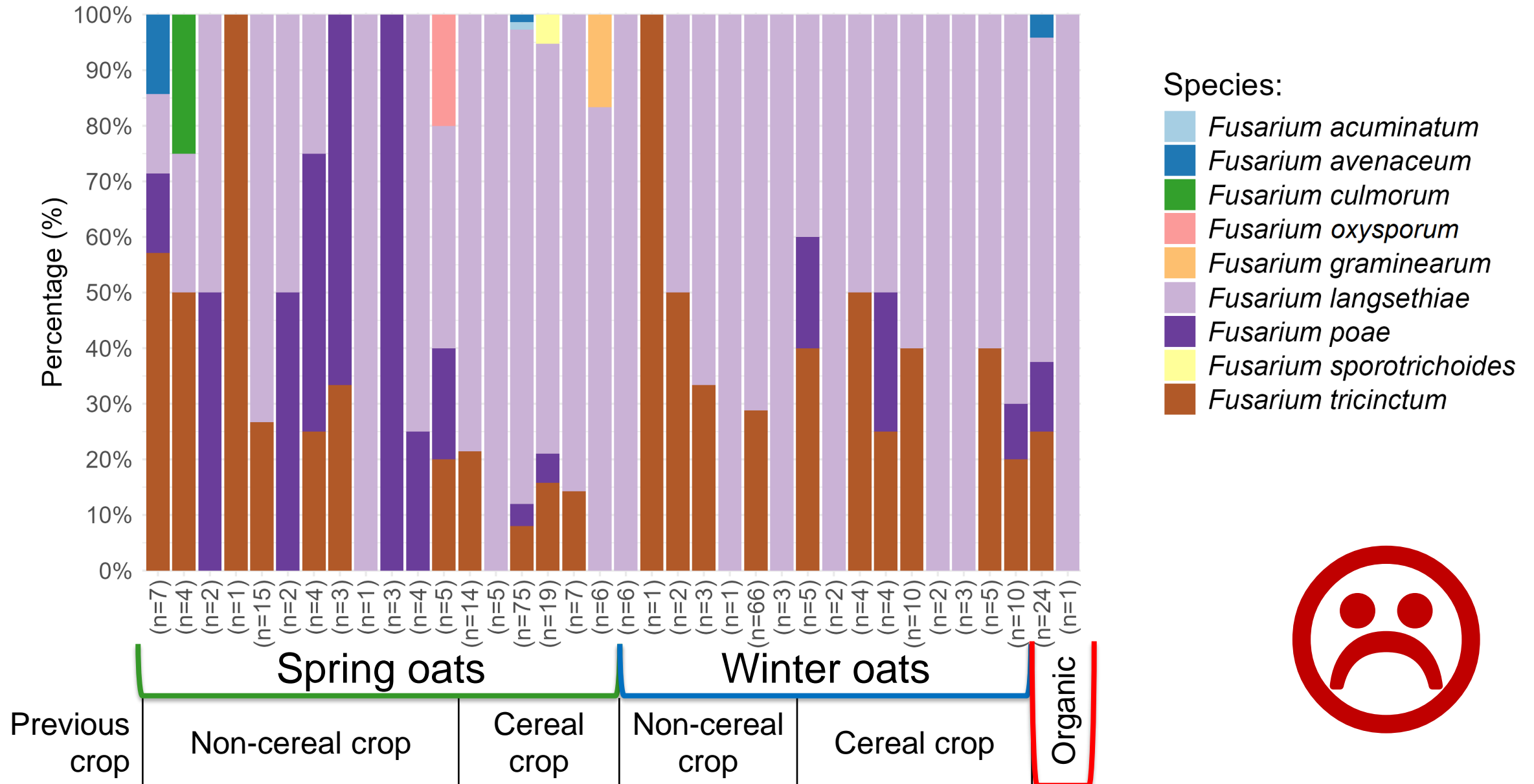
AGRICULTURE AND FOOD DEVELOPMENT AUTHORITY

Establishing what *Fusarium* species are in Irish oat crops



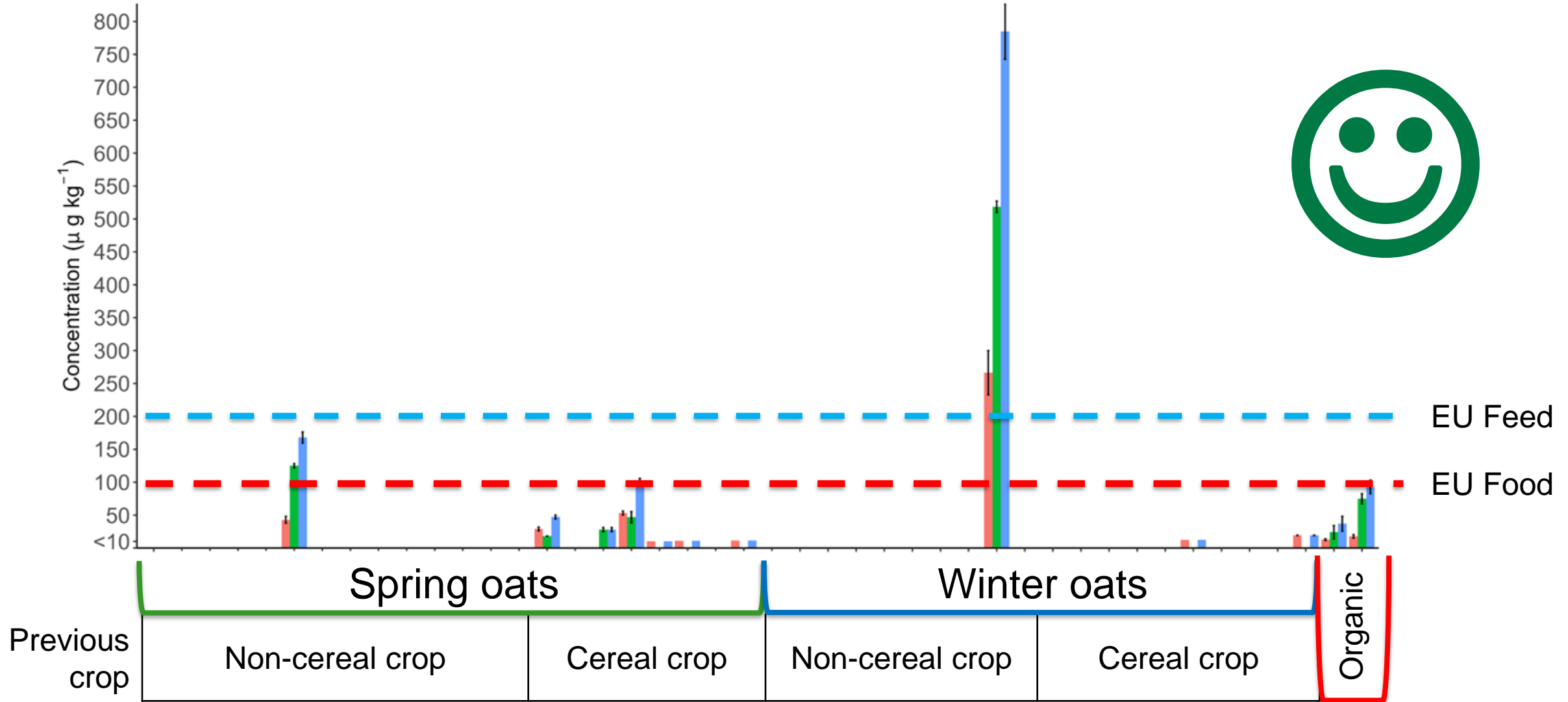
In field sampling across different Irish oat cropping systems

Mycotoxin producing *Fusarium* species present in all crops, but prevalence depends on crop



Levels of key mycotoxins were low

Mycotoxin: ■ T2 Toxin ■ HT2 Toxin ■ Sum T2 & HT2 Toxins



Conclusions & Recommendations

Hazard of *Fusarium* is constant and mitigation is essential

Fungicide Management:

- Rotate azoles; use effective active ingredients where sensitivity remains high.
- Correct timing of sprays (e.g., heading/flowering stages).

Field Practices:

- Consider resistant/tolerant oat varieties.
- Good crop rotation reduce *Fusarium* inoculum.

Harvest & Storage:

- Harvest at optimal moisture; dry quickly to inhibit fungal growth.

Regulatory Compliance:

- T2+HT2 now enforced under EU law—be aware of testing and threshold limits.