Critical Review of EFSA’s Proposed ADI for TFA

Dr. Helmut Burtscher-Schaden

Dr. Peter Clausing

European Parliament, Brussels 24 February 2026

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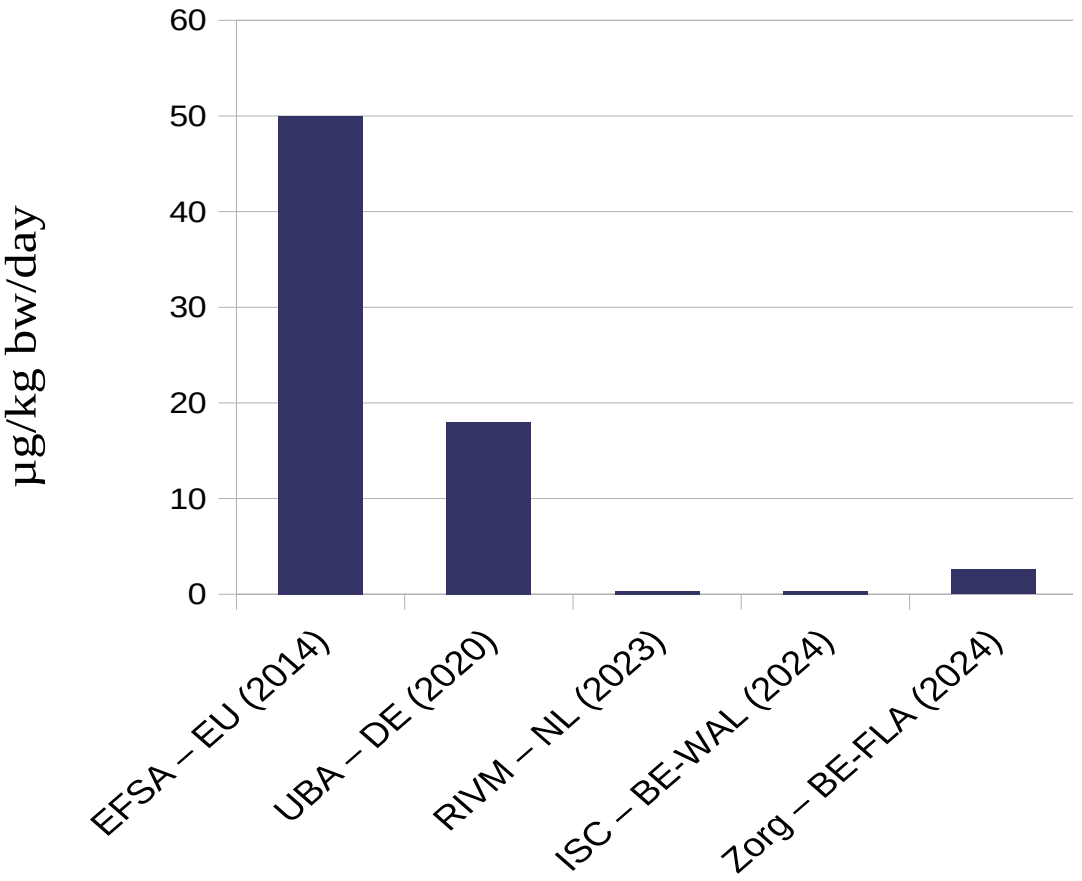
Previous ADI Values



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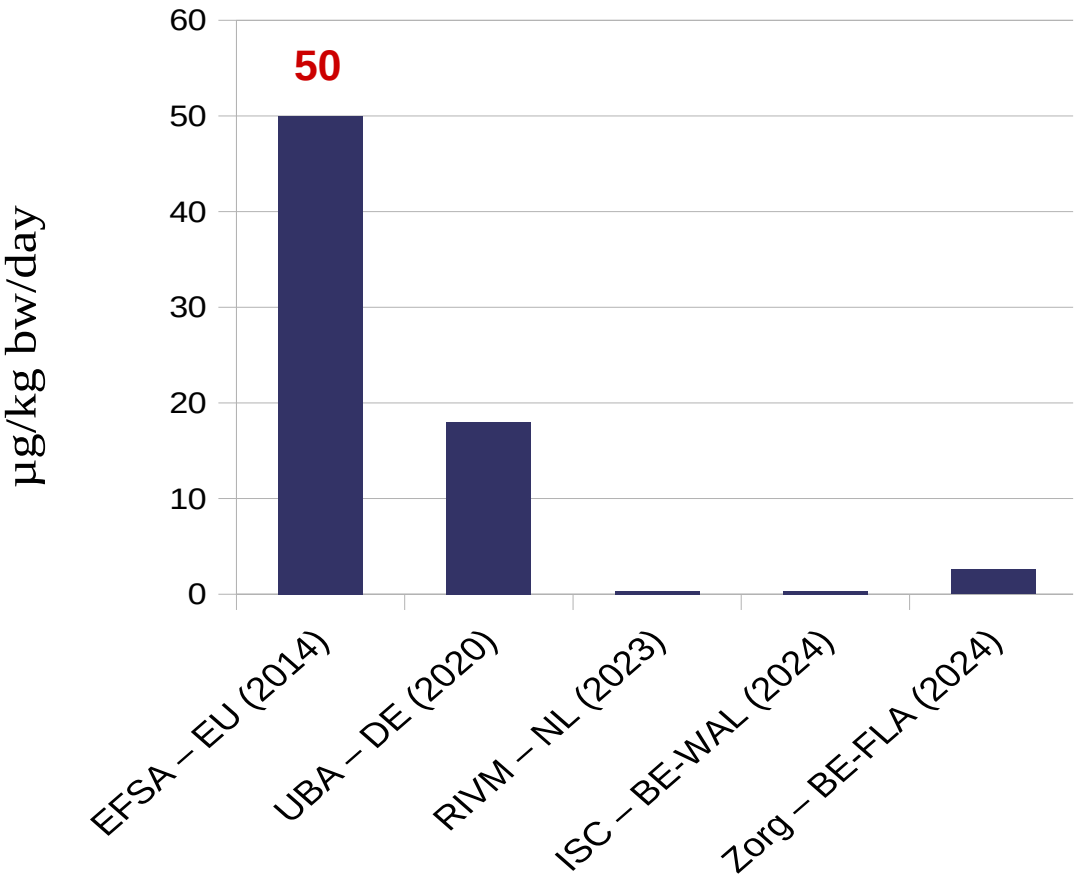

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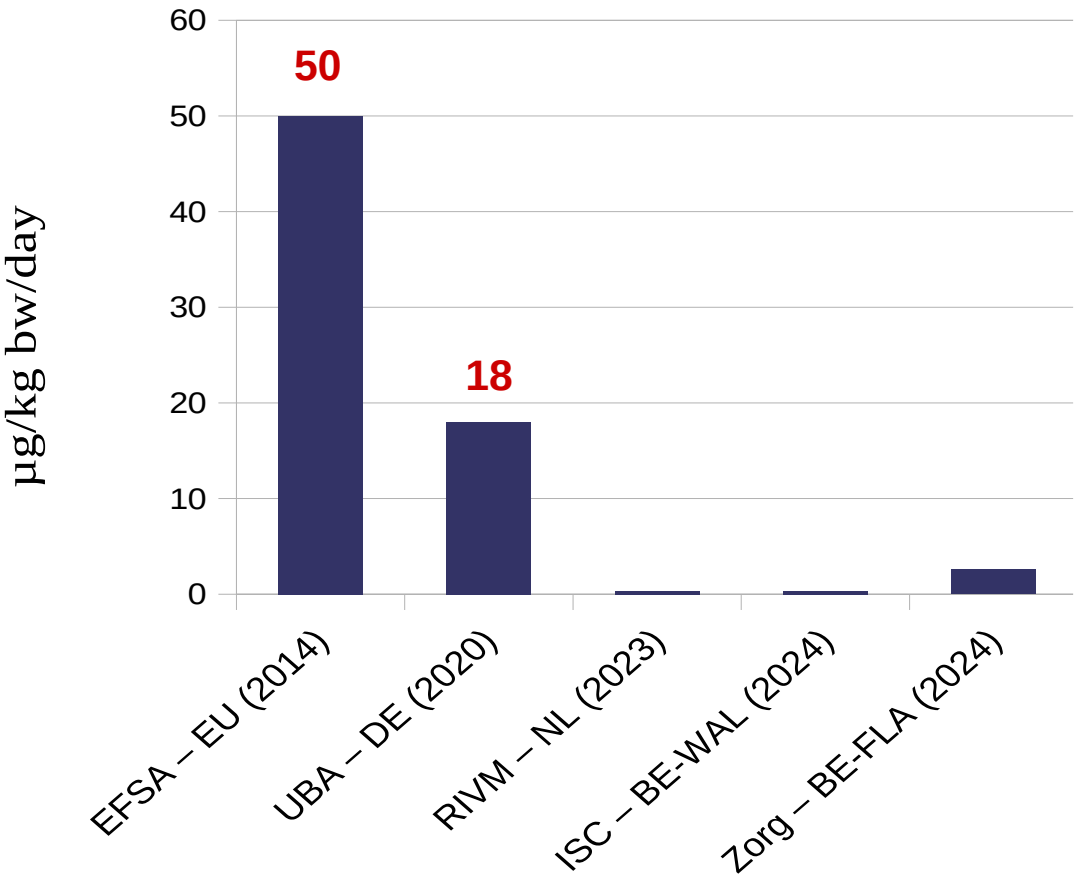

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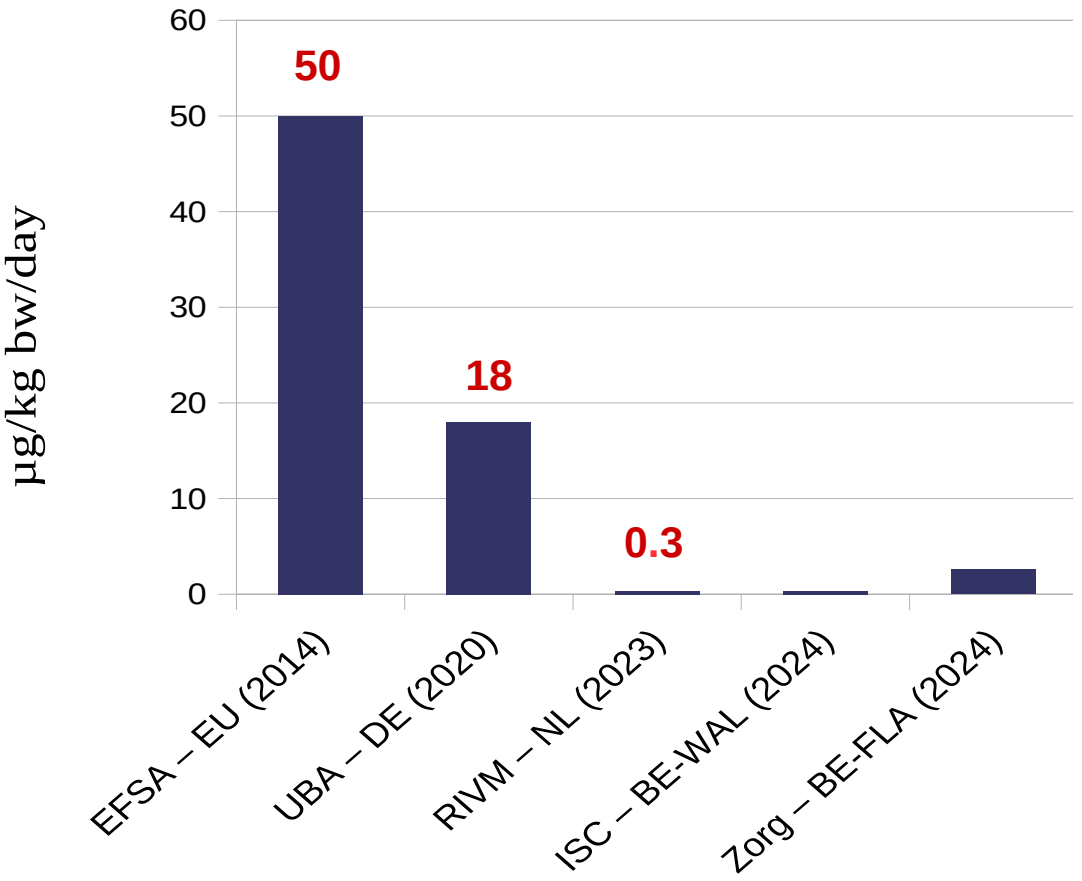

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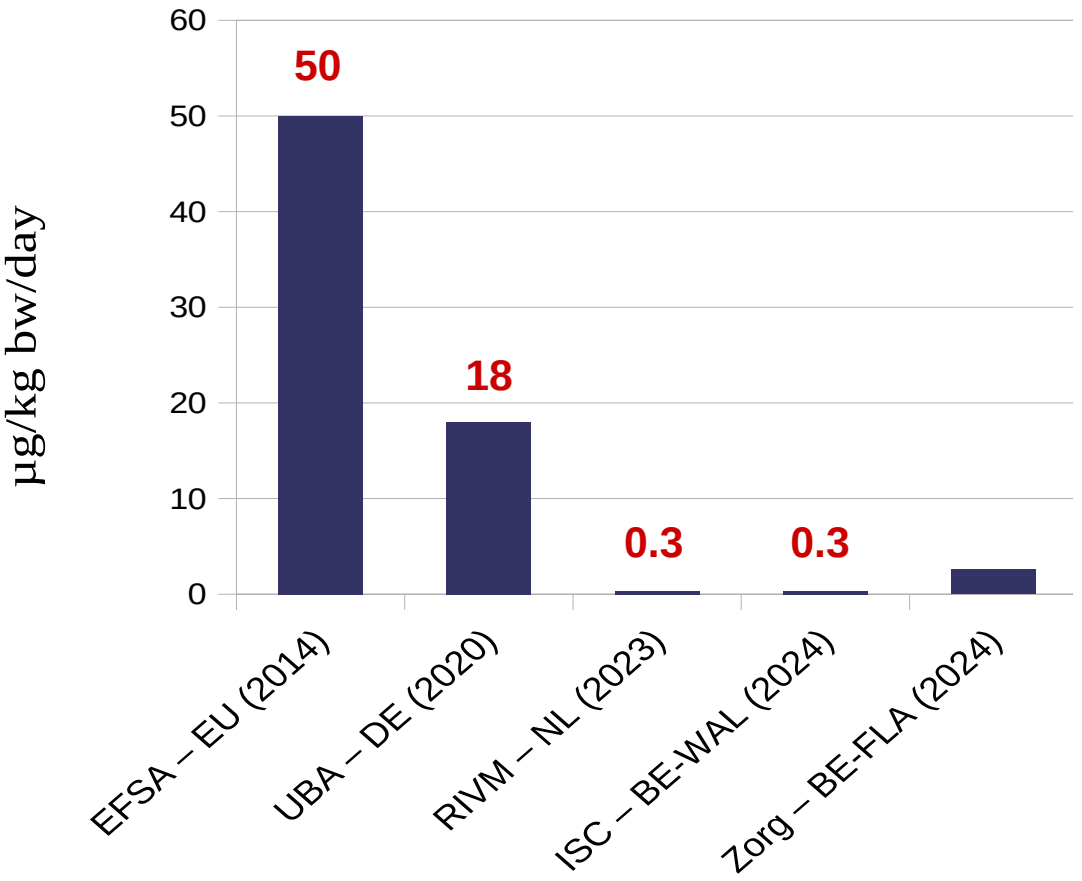

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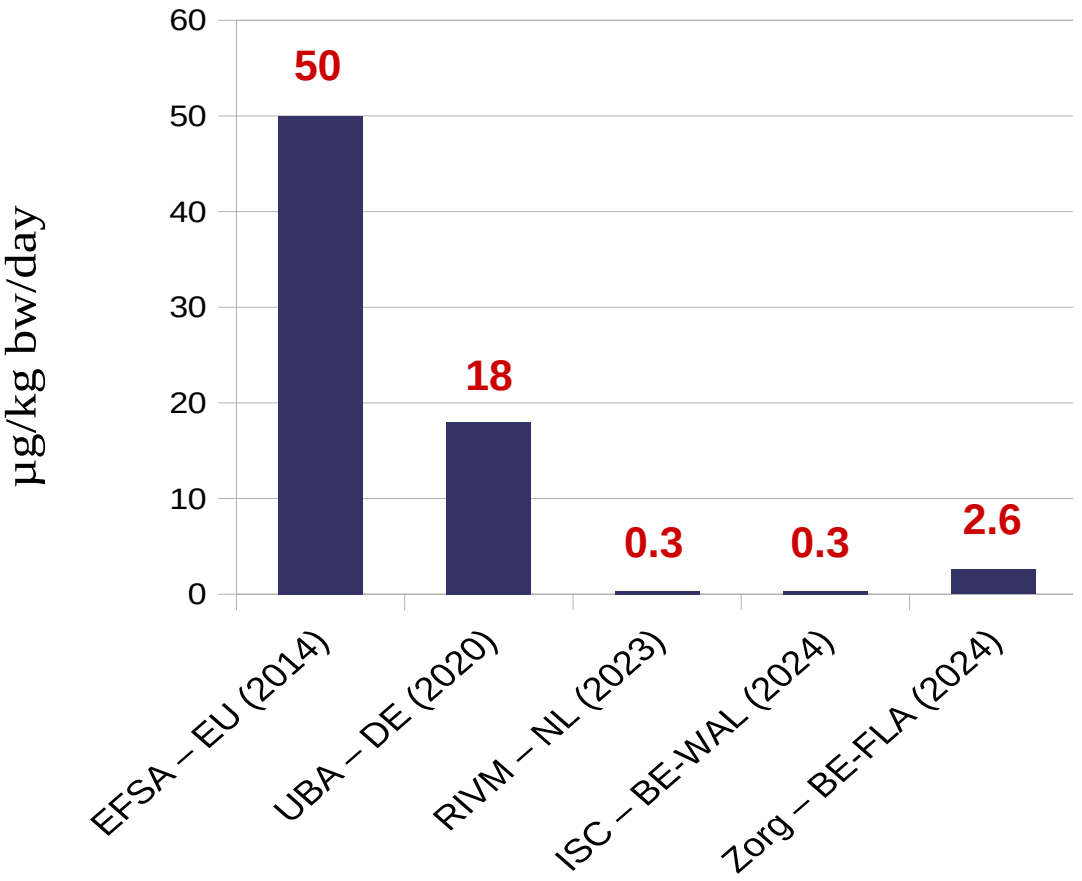

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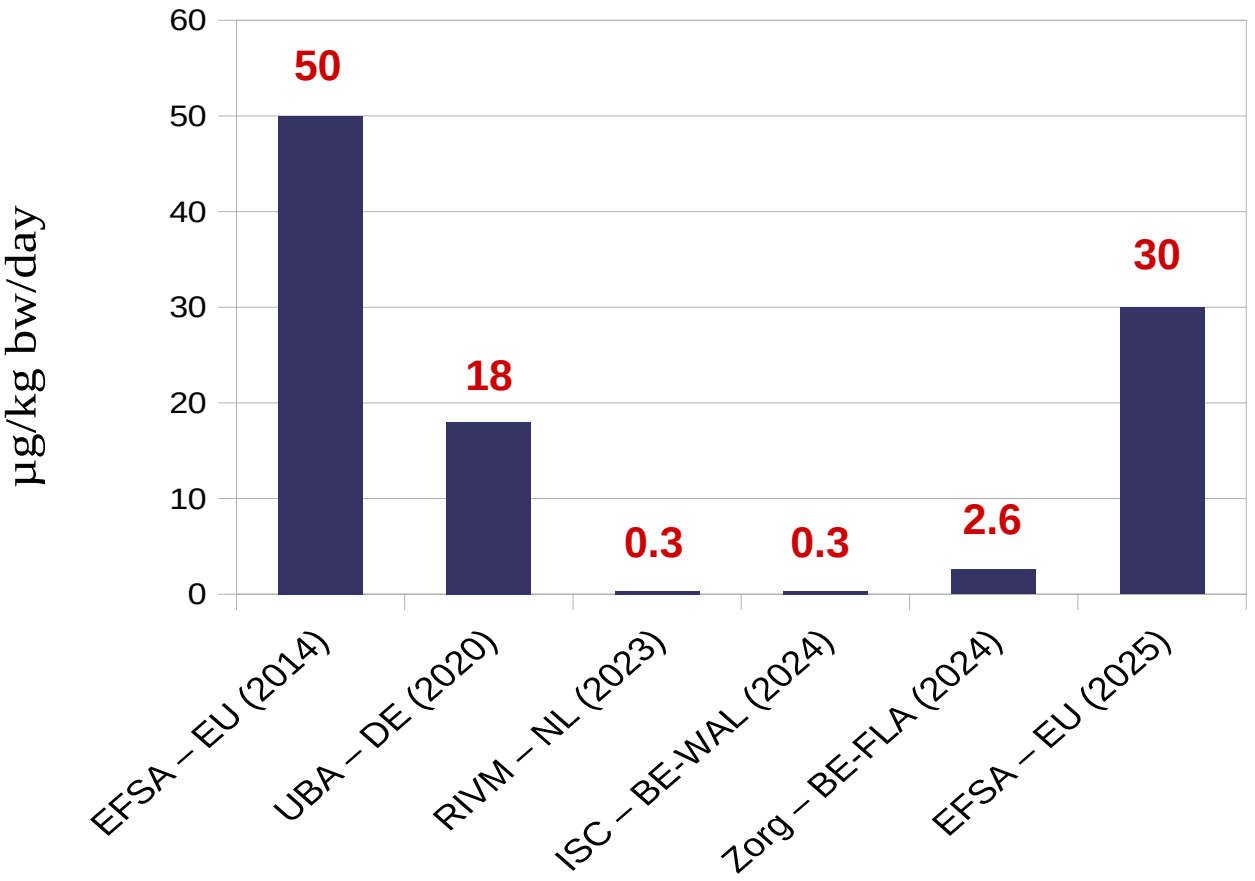
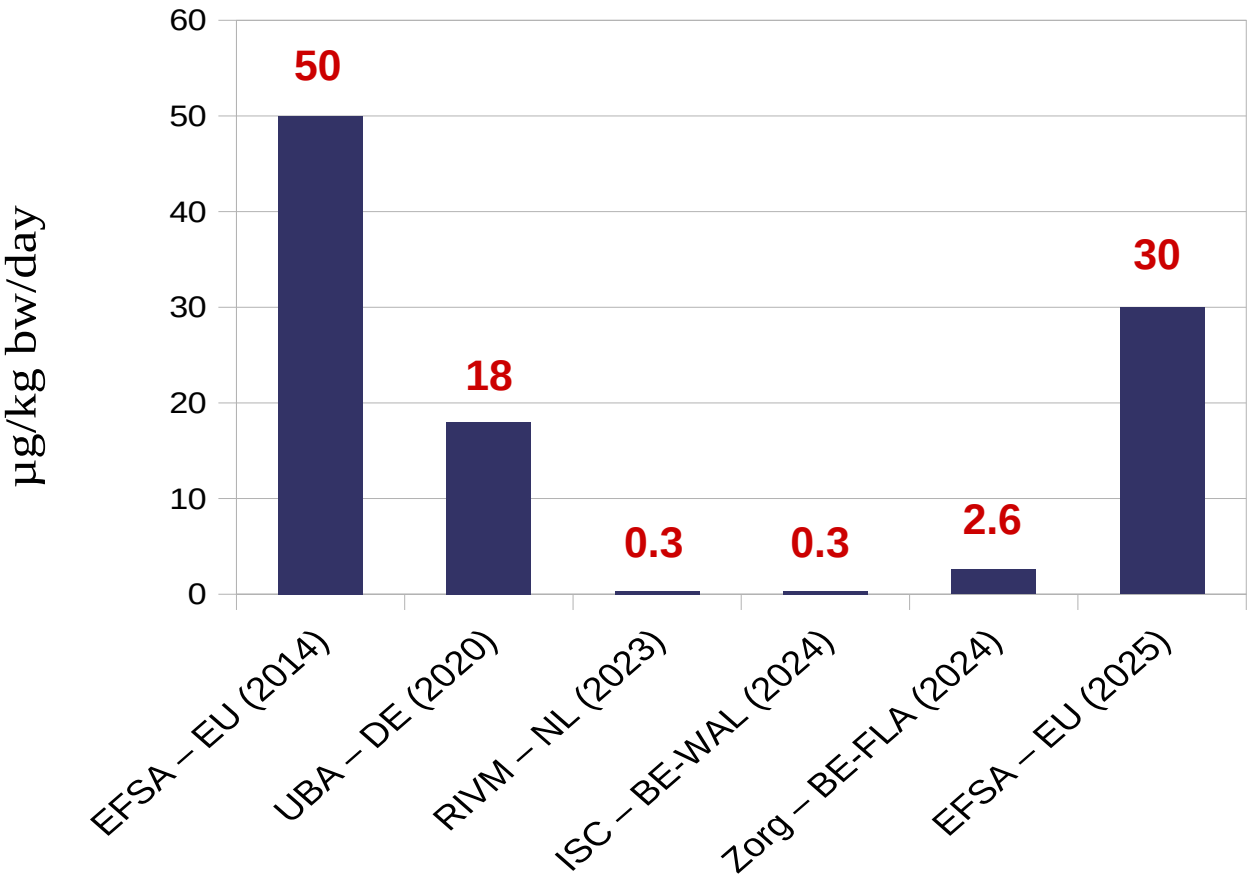


How did EFSA arrive at this value?



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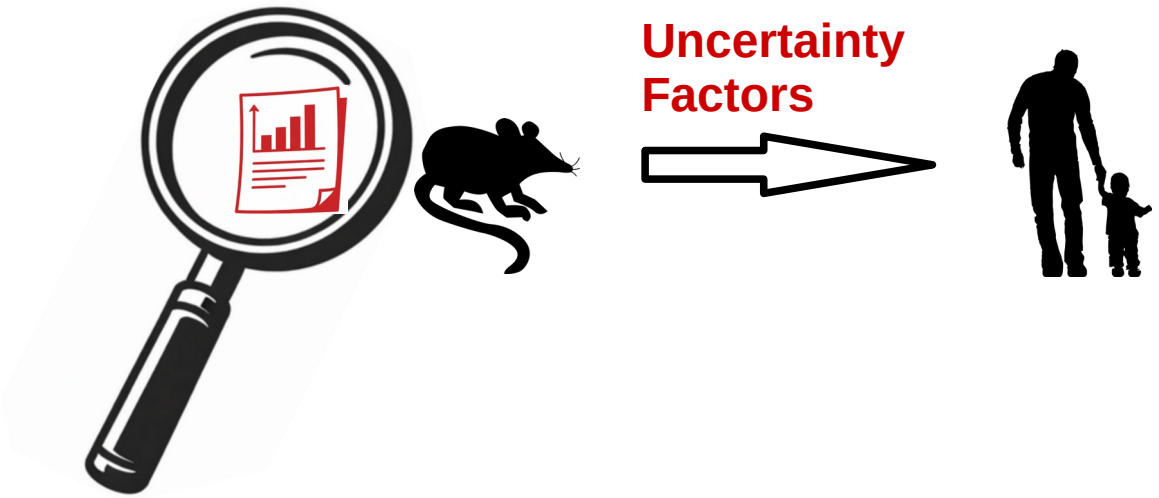

Methodological Deviations from Established Guidance

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Findings:
- NOAEL at lowest dose
- ↑ ALT (dose-dependent)
- ↓ Bilirubin (dose-dependent)

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EFSA assessment:
- No adverse effects up to highest dose
- ALT: not adverse (“<2-fold increase“)
- Bilirubin: dismissed

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Decrease in Bilirubin – a Robust Effect

% Decrease versus control 52 week study (**bold: signif.**)

Group		low	mid	high
Day 90	M	1	8	**35**
	F	3	**12**	**29**
Day 370	M	3	(+3)	8
	F	2	15	17

- 90 day studies: significant in all mid and high doses and **in low dose** of Syngenta study
- EOGRTS: significant starting at **low dose in F0-females**, starting at mid-dose in F1-males, seen at high dose F1-females

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→ EFSA relied instead on a Study (EOGRTS) with much shorter study duration

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Findings in the EOGRTS:

- ↓ T4 (thyroid hormone) – dose-dependent, significant, in all doses
- ↓ Immune cells (spleen) – dose-dependent, significant, in all doses

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NOAEL- approach

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EFSA's NOAEL- approach:

- Low dose: Effects judged "not adverse" (based on applied magnitude criteria)
- Historical control data used to discount statistically significant findings (not their primary intended use)

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BMD-Approach (Modelling kindly provided by Dr. Lars Brunken)

Using the BMD online software solution from EFSA (EU4U tool v 70.0) and modelling “achieved internal doses” as well as “T4 levels” with a set threshold for adversity of 20%, a **BMDL20 value of 1.5 mg/kg/d** is reached as PoD, leading to an **ADI of 5 µg/kg/d**, when applying the same total UF as EFSA.

Question to EFSA:

If BMD modelling is EFSA’s preferred methodological approach, and applying it to the same dataset leads to a six-fold lower ADI, why was it not applied in this case?

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EOGRTS: Additional Uncertainty Factors Warranted:

Short study duration → **UF 2**

Absence of a clear NOAEL → **UF 2.5** (when using the NOAEL approach)

Particularly concerning endpoints (e.g. immunotoxicity) → **UF 2**

→ Combined: UF 10

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Overall database gaps include:

- No carcinogenicity study
- Incomplete assessment of immunotoxicity

→ Under WHO Guidance: Additional UF 5–10

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Total additional UF required: 50–100

EFSA applied: UF 3

CONCLUSIONS

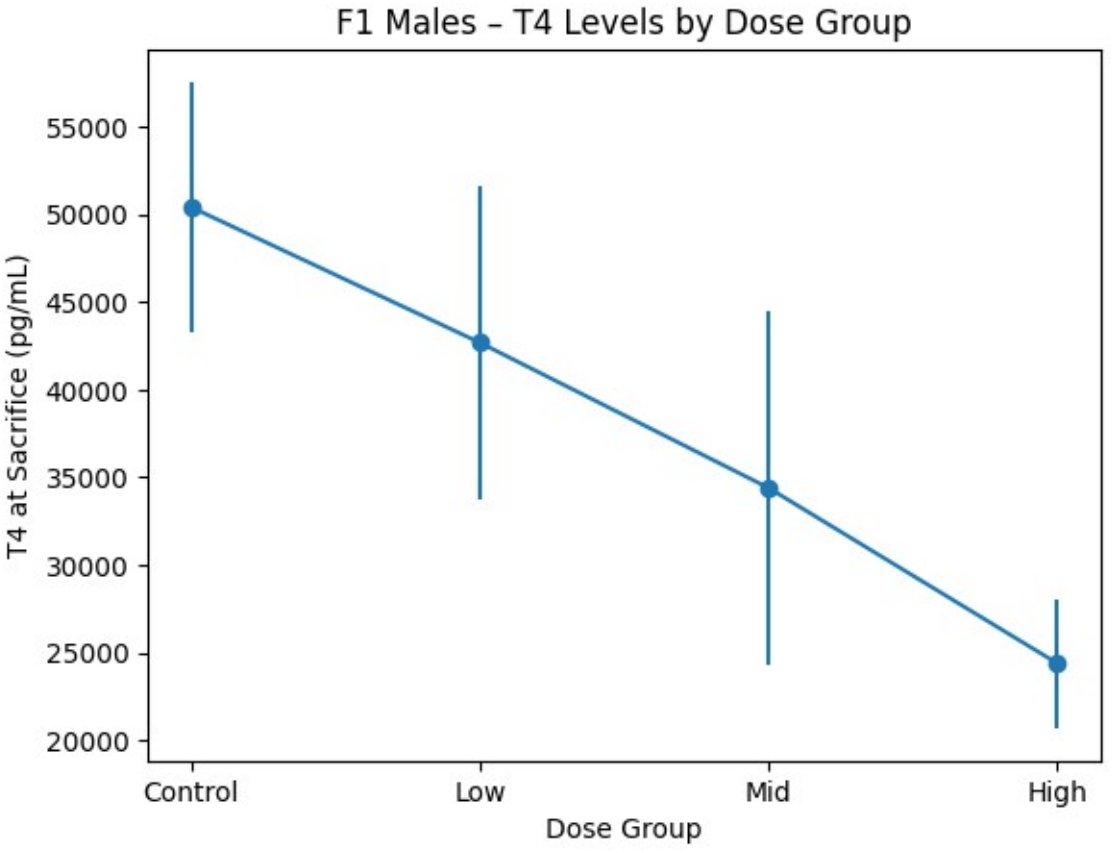
EFSA’s proposed ADI cannot be considered protective

A robust ADI would require:

- appropriate study selection
- full consideration of immunotoxic and developmental effects
- appropriate uncertainty factors

We therefore urge EFSA to revise its assessment and would welcome an open scientific exchange, including independent scientists from academia, to discuss the scientific basis of the assessment.

Thank you!


F1 Males – T4 Levels by Dose Group
T4 at Sacrifice (pg/mL)
55000
50000
45000
40000
35000
30000
25000
20000
Control
Low
Mid
High
Dose Group