FEDIOL Perspective to tackle 3-MCPD esters and Glycidyl esters

Symposium on MCPD Esters and Glycidyl Esters

Berlin, 20 June 2017

40.7 million tons oilseed crushed

25.5 million tons meals produced

14 million tons oils from EU crush

14.2 million tons oils refined of which...

5.6 million tons tropical oils

FEDIOL facts and figures

85% of the market covered

23 bn turn-over

180 plants

± 35 comp-anies

20,000 direct jobs

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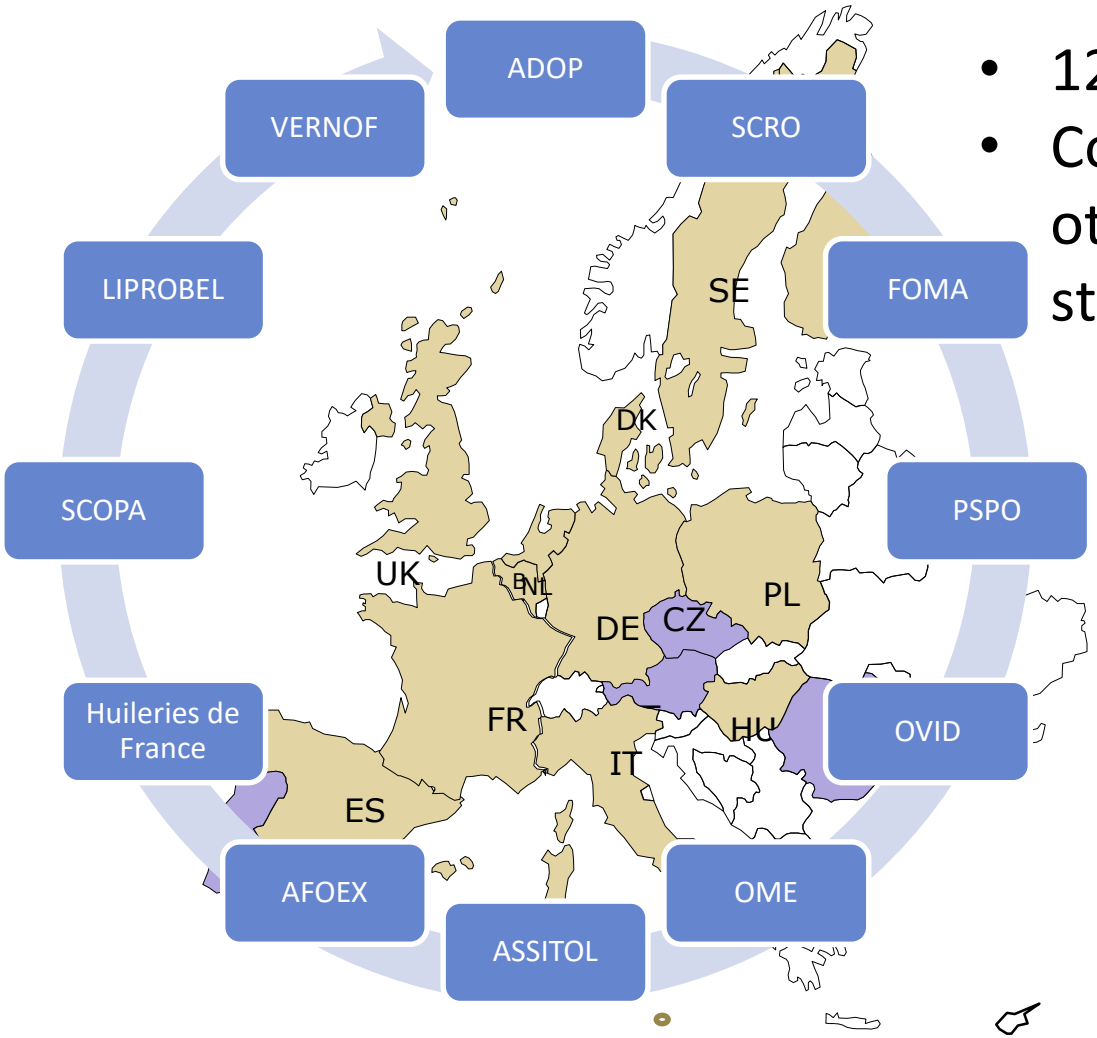
FEDIOL member associations



- 12 Associations
- Companies in 5 other member states

FEDIOL commitment to food safety

General vision

- Safe food an feed cornerstone for sustainable industry
- FEDIOL companies strive for constant improvement of food and feed safety whenever it is supported by scientific evidence and technical feasiblility

Specific objectives

- Develop a **good understanding** of the contribution of vegetable oils and fats to 3-MCPDE and GE occurrence
- Develop proactively and implement **viable mitigation technologies** to reduce 3-MCPDE and GE levels in vegetable oils and fats as far as reasonably achievable

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Why are vegetable oils refined ? Reminder

- Refining aims at producing a bland, odourless, fit-for-purpose product that meets customer, food safey and quality requirements
- Whether the plant follows chemical or physical refining, the process, from its original design, includes several steps which remove
  - phospholipids (gums),
  - free fatty acids,
  - colouring pigments,
  - odour and taste-bearing volatiles
- Today, refining has become increasingly critical for the removal of
  - volatile compounds and contaminants

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Why is there higher occurrence in palm oil? Reminder

Several factors play a role such as:

- Maturity of palm bunches at harvest;
- The delay between harvesting and processing and overall transport in the supply chain
- Higher natural occurrence of some substances present in palm fruit (so-called “precursors”);

Note also:

- High variability of occurrence from one batch to the other
- No clear visibility on occurrence in other refined fruit oils, such as olive, walnut etc, due to limited number of samples.

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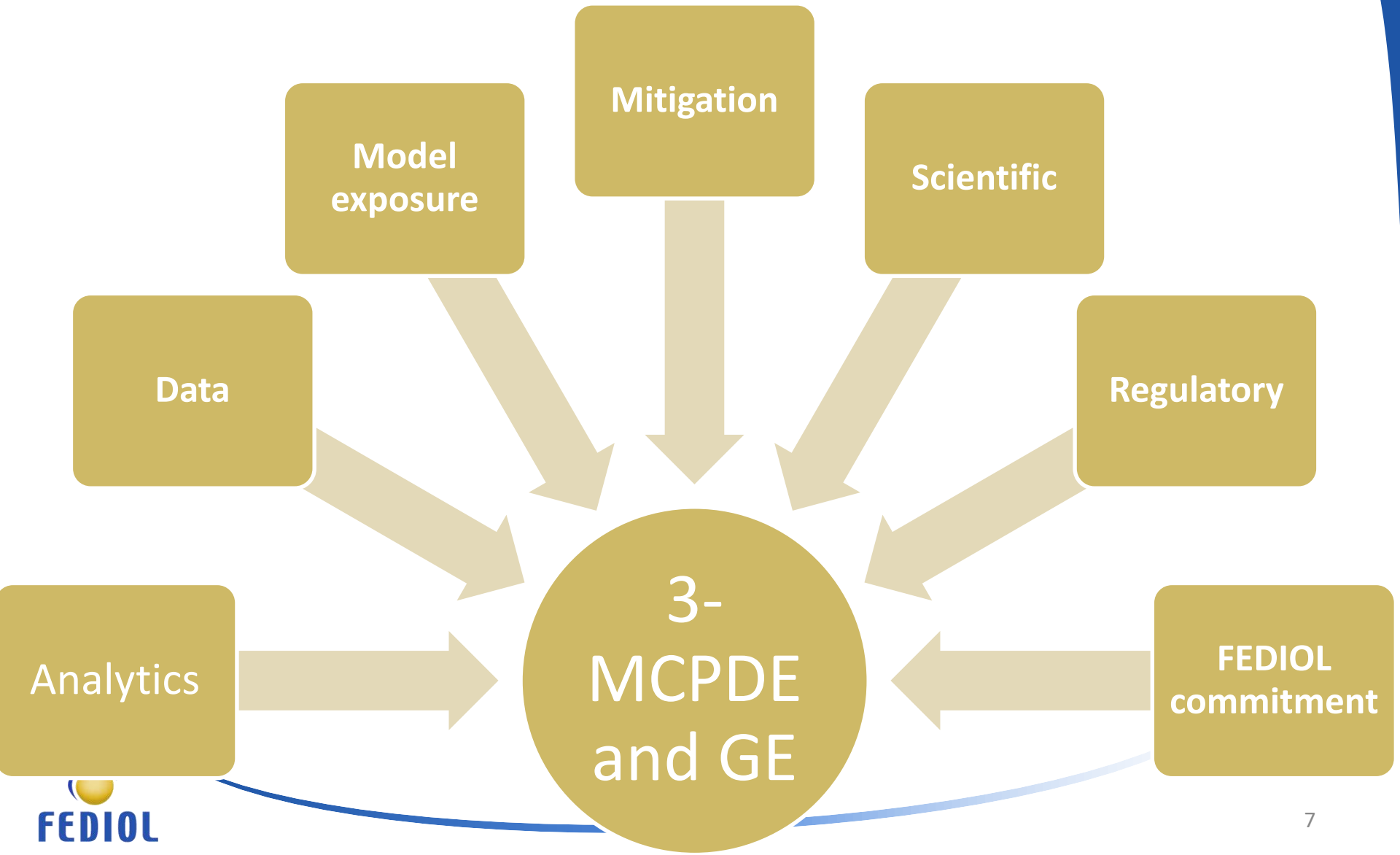
FEDIOL overall work on 3-MCPDE and GE



FEDIOL's Glycidyl Ester reduction commitment

- FEDIOL members worked on researching, developing and implementing mitigation strategies
- EFSA opinion 2016: 50% reduction in palm oil over a 5-year period (2010-2015) for Glycidyl Ester
- Mid-2015: FEDIOL commitment to reduce GE in all vegetable oils & fats for food to a max 1mg/kg by September 2017

Context:

- Substance risk profile in published literature, ALARA
- Available mitigation measures to apply
- Required implementation in each single EU factory

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Tackling 3MCPD esters

- FEDIOL: mid-2015, overall FEDIOL commitment to prevent and reduce, without setting a target value and timeline
  - Different risk profile
  - Different mitigation approaches than for GE
- 2016: EFSA opinion -> followed by JECFA opinion => differences currently addressed by EFSA reopened opinion
- FEDIOL: 2016 EFSA risk assessment outcome triggered renewed efforts on possible and effective mitigation measures that could be implemented within what timeline – Ongoing
  - Focus on prevention of precursors => further research at production level on the plant and crude vegetable oil
- 3-MCPDE and GE: effects on one vs. other and vice versa

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Responding to specific needs

Infant and follow on formulas and baby food

- Addressing specific objectives whilst maintaining other safety, quality and nutrition requirements
- Working together with Infant and follow on formula industry
- Find the balance between:
  - The need for reduced levels
  - The achievability of these levels for sufficient volumes

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To conclude

- Providing solutions to occurrence of Glycidyl ester (GE) and 3-MCPD ester is our responsibility
- The extensive work carried out allowed finding mitigation solutions for GE and take early, timebound commitment
- Implementation of GE commitment is still ongoing
- Following EFSA assessment, industry has been intensifying work on how to effectively tackle 3-MCPD esters

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