



European Consortium
of the Organic-Based Fertilizer
Industry

Fostering innovation related to bio-based primary or secondary components

11 April 2018 – EU Fertilisers Regulation:
plant and organic materials

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About ECOFI

- Producers of organic fertilizers, organo-mineral fertilizers and organic soil improvers
- Members active in most European countries, the Mediterranean and the Middle East
- Accounts for roughly 60% of the European market in organic-based fertilizers, which is worth about €250 million euros
- The industry is dominated by SMEs



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An abbreviation

- Throughout this presentation, we use the term “organic-based fertilizers” to mean organic fertilizers, organo-mineral fertilizers and organic soil improvers



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Secondary plant-based raw materials from many value chains are used to produce organic-based fertilizers (and other fertilizing products)

Value chain	Product components
Food and beverage	Plant (including seaweed) extracts hydrolysed proteins, vegetable cakes, natural polymers & starch derivatives, molasses, vinasse, marc, exhausted yeasts, coconut fibre, chaff, vegetable tops, husks, seeds & stalks, pulps & pomaces, fats & oils
Cosmetics	Plant (including seaweed) extracts, vegetable cakes
Pharmaceuticals	Plant (including seaweed) extracts, vegetable cakes
Lumber, paper and packaging	Bark, cellulose, pulp, paper, cardboard, wood fibre, sawdust, wood chips, twigs, recycled plant materials
Petroleum	Humic & fulvic acids from lignite & leonardite
Textiles	Flax shives, fibres, vegetable cakes, vegetable stones



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Plant-based materials today fall into 3 groups

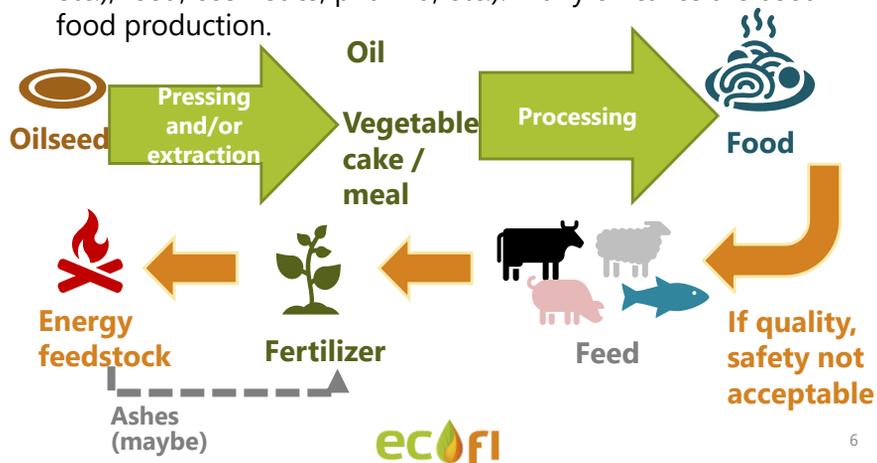
1. **Not subject to REACH** → Materials subject only to physical processing such as grinding, water processing or other non-chemical methods
2. Materials & extracts **subject to REACH, but exempted from registration**, such as natural polymers
3. Materials & extracts that **must be REACH registered**



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Case 1: Vegetable cakes

- **Production processes:** Mechanical and/or chemical treatments. Sourced from many value chains (wine production and oil production for food (rape, sunflower, canola, peanut, etc.), feed, cosmetics, pharma, etc.). Many oil cakes are used in food production.



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Case 1: Vegetable cakes

- **Agronomic or technical interest of the material:** High in organic nitrogen/protein, dry matter, organic matter (carbon) content; slow release of nitrogen; stable organic matter; used for biostimulants; can be used in organic farming. **Also used for animal feed.**
- **Concerns under the draft regulation:** Vegetable cakes are industrial by-products and therefore excluded from CMC 1. Most processes would exclude them from CMC 2 because of the use of chemical solvents. Cakes from food processing are not included in the list of CMC 6. Therefore **vegetable cakes appear to be excluded from the future fertilizing products regulation.**
 - **Cakes used today at national level benefit from exemption to REACH registration.** To qualify for CMC 1 they will have to be REACH registered, which will raise costs and could lead to producers abandoning these materials and thus multiplying the amount that is treated as waste. Alternately, it is likely such costs would be passed on to farmers through higher farm-gate prices, which would reduce demand.



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Case 2: Plant & seaweed extracts

- **Production processes:** Mechanical treatments (such as cutting, grinding, centrifugation, pressing, drying, freeze-drying, etc.) and/or extraction with water or other solvents. Sourced from different vegetal sources (brown seaweed, microalgae, aromatic plants, "yeasts", sugar beet residues, etc.).
- **Agronomic or technical interest of the material:** can have high content of N, P₂O₅, K₂O, and/or organic carbon; may have biostimulant properties; can be used in organic farming
- **Concerns under the draft regulation:** The closed list of approved transformation processes in CMC 2 could lead to obligations for REACH registration for materials and substances that are today outside the scope or subject to exemptions. For example, **many plant extracts are produced in small quantities (< 1 t/y), yet would have to bear the costs of registration foreseen for production of 10 t or more per year per site.** This will raise the costs of raw materials, which will either lead to raw materials being abandoned, of farmers facing higher farm-gate prices, which is likely to decrease demand.



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Case 3: Hydrolysed proteins (from plants)



- **Production processes:** Hydrolysis may be thermal (less used), enzymatic and chemical. Mostly produced starting from leguminous plants or other vegetal sources with naturally high N content than other plant species (up to 4-6% w/w). They also contain organic C (10-25% w/w).
- **Agronomic or technical interest of the material:** High N and carbon content; interesting source of N for liquid fertilizers; may have biostimulant properties. Also used for animal feed. Can be used in organic farming
- **Concerns under the draft regulation:** Some hydrolysed plant proteins are **exempted from REACH registration because they are "natural polymers"**. These natural polymers do not fit into CMCs 2, 9 or 10 as proposed by the Commission. **Polymers are explicitly excluded from CMC 1, which, in any case, does not respect the full range of exemptions from REACH registration that have been built into REACH and apply to other sectors**, including cosmetics which are directly applied on the skin. This means that most hydrolysed vegetable proteins today could not be used in a CE-marked fertilizing product.



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Potential safety issues and how they are managed for all 3 cases

- **Alien plant species, heavy metals** (i.e. Cd, As, Pb, Ni, Hg), **pathogens** (e.g. mycotoxins in cereals and molds growing during drying), and **by-products/residues of chemical treatment**
 - are controlled by each producer after a risk analysis through a combination of **pre-screening raw materials (chemical, microbiological analysis, traceability of batches of raw materials and suppliers) and production processes**. In some cases, it may be necessary to **monitor specific compounds (e.g. ricin) that are toxic/dangerous/undesirable in high concentrations**.
- As in almost any factory, **fumes from solvents** can be noxious or irritation to humans, requiring proper **ventilation** (many sites are open air)
- Furthermore, **dust** from vegetable cakes **must be controlled** to prevent combustion. The risk of fire when fermentation is restarted requires **temperature control and fire extinction** precautions. (These are common risks to feedmills, warehouses, siloes, etc.)
- According to CLP regulation, **labels mention such risks** when present
- For the plant-based materials also used in food production, very strict controls/monitoring are in place for the materials (often upstream)



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In conclusion

→ Encouraging the use of vegetable cakes, plant & seaweed extracts and hydrolyzed proteins can contribute greatly to the Circular Economy and is already common practice at national level. Unfortunately, the draft fertilizing product regulation raises barriers to their use instead of fostering them.

- Measures in place today, combined with contaminant limits in the draft fertilizing products regulation, are sufficient to ensure safe production and use and should allow for the permitted materials to be much more inclusive.



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ECOFI's recommendations

- Adopt the **EP amendments for CMC 2** that would **include all plant-based materials and substances** that are **not subject to REACH registration**
- Apply **normal REACH requirements** wherever they are cross-referenced, including all exemptions, especially for natural polymers
- Adopt the **Council and EP amendments expanding CMC 6, broaden language** where possible (**for example, for vinasse, the "i.e." should be "e.g."**), identify other **classes of materials that can be considered safe, such as all vegetable cakes that are considered safe for animal feed, give COM delegated powers** to update the list regularly



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Thank you for your attention

- For more information, including ECOFI's detailed comments on the draft regulation:
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