European Consortium
of the Organic-Based Fertilizer
Industry

Future of the EU organic fertiliser industry – Chances and Challenges

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New Fertilizer Regulation – Chances and Challenges for the EU Fertilizer Industry

Warsaw, Poland

An abbreviation

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

- Not to be confused with ‘fertilisers allowed for organic agriculture’
  - *‘Fertilisers approved for use in organic farming’ are almost always ‘organic-based fertilisers’, but not all ‘organic-based fertilisers’ are approved for use in organic farming*

OBF Market Growth

European OBF market projected to reach $ 3 260 million by 2023*

- Annual growth rate of 4.2% from 2017 to 2023

OBF market valued at $ 2 451 million in 2016

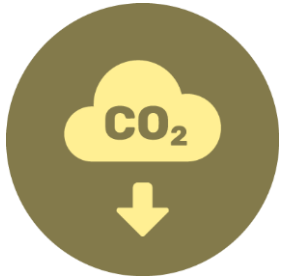
Factors driving growth

- organic farming
- precision farming
- various initiatives to render farming more sustainable
- specialised farming such as viticulture or cut flowers or vegetables
- proliferation of green spaces like golf courses

Europe Organic Fertilizer Market by Source (Plant, Animal, and Mineral), by Crop Type (Cereal & Grain, oilseed & Pulse, Fruit & Vegetable, and Others), by Form (Dry and Liquid) and by Country (Germany, France, Italy, Spain, UK, and Rest of Europe) - Opportunity Analysis and Industry Forecast, 2017-2023 -* ***Allied Market Research*

OBFs help farmers use OBFs to combat climate change and foster sustainability & soil biodiversity

OBFs increase soil carbon which helps fight climate change and improves water retention



A healthy soil microbiome needs to feed on organic matter

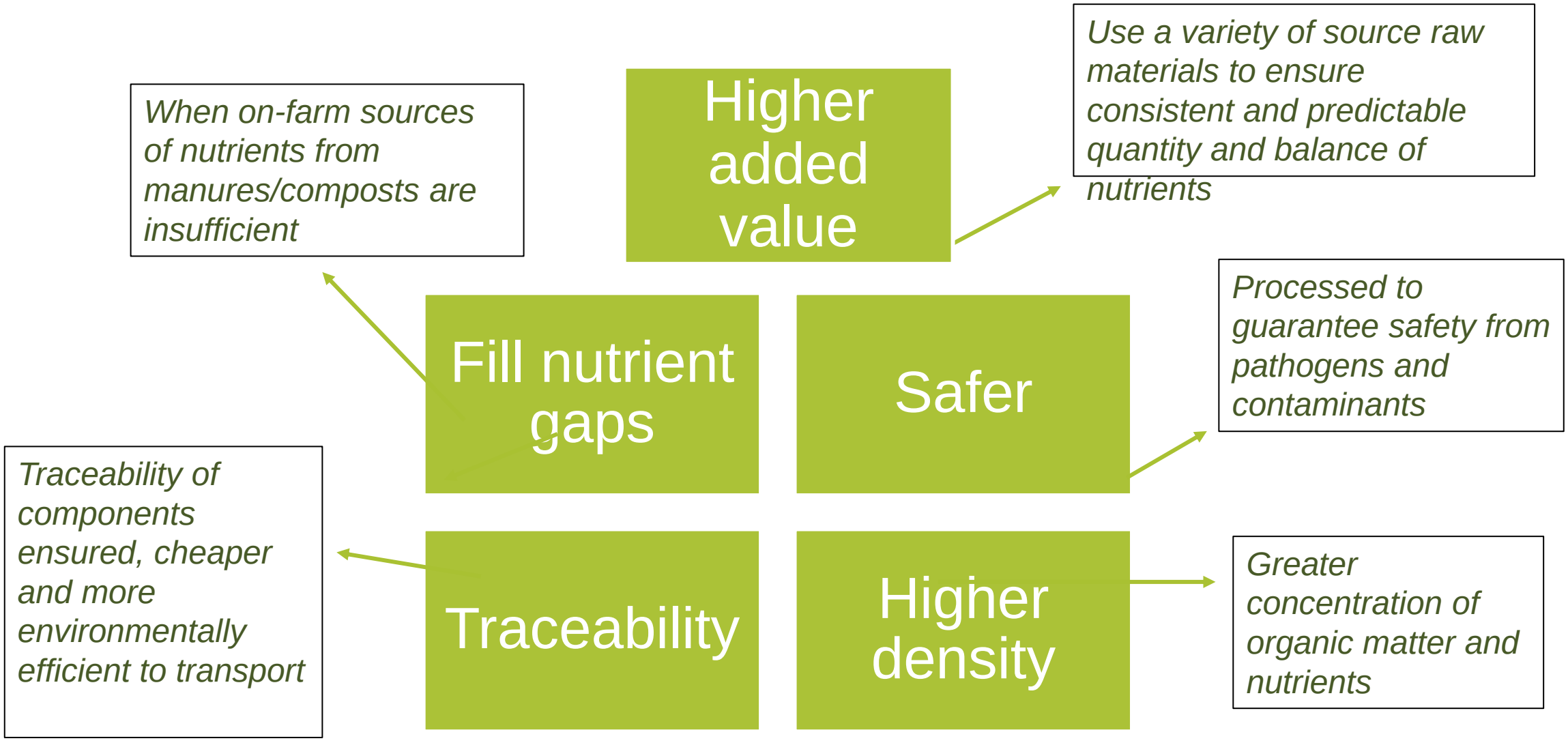
Biodiversity makes soil more fertile and productive

ecofi

The ‘C’ in OrganiC stands for ‘carbon’

Organic Fertilisers (OFs)	**Carbon + organic forms of nutrients** Provide nutrients in organic forms derived from biological materials of plant and/or animal origin, often by-product materials.
Organo-Mineral Fertilisers (OMFs)	**Carbon + organic forms + mineral forms** Industrial co-formulations made up of one or more mineral fertilisers with one or more organic fertilisers and/or organic soil improvers.
Organic soil improvers (OSIs)	**Carbon** Carbon-rich materials of plant and/or animal origin and aim to maintain or increase the soil organic matter content and make it more fertile.

Benefits of **refined** OBFs versus on-farm sources



When most people think of organic fertilisers, they imagine this:

…but in reality, the OBF sector looks more like this:

ILSA SpA laboratory – ECOFI member

What does R&D cover in the OBF industry?

- Production tech
- Safety of raw materials
- Identifying secondary raw materials from different value chains
- Customising formulations for different market niches
- Field testing for reliability
- New formulations to increase efficiency when use with mineral nutrients
- Fostering positive effects on soil microorganisms activity
- Mineralisation rates of organic N

Examples of materials used in OBFs

Vegetal raw material for OMFs

Vegetable meal

Seaweed extracts

Protein hydrolysate

From animal sources

Protein hydrolysate

From both plant and animal sources

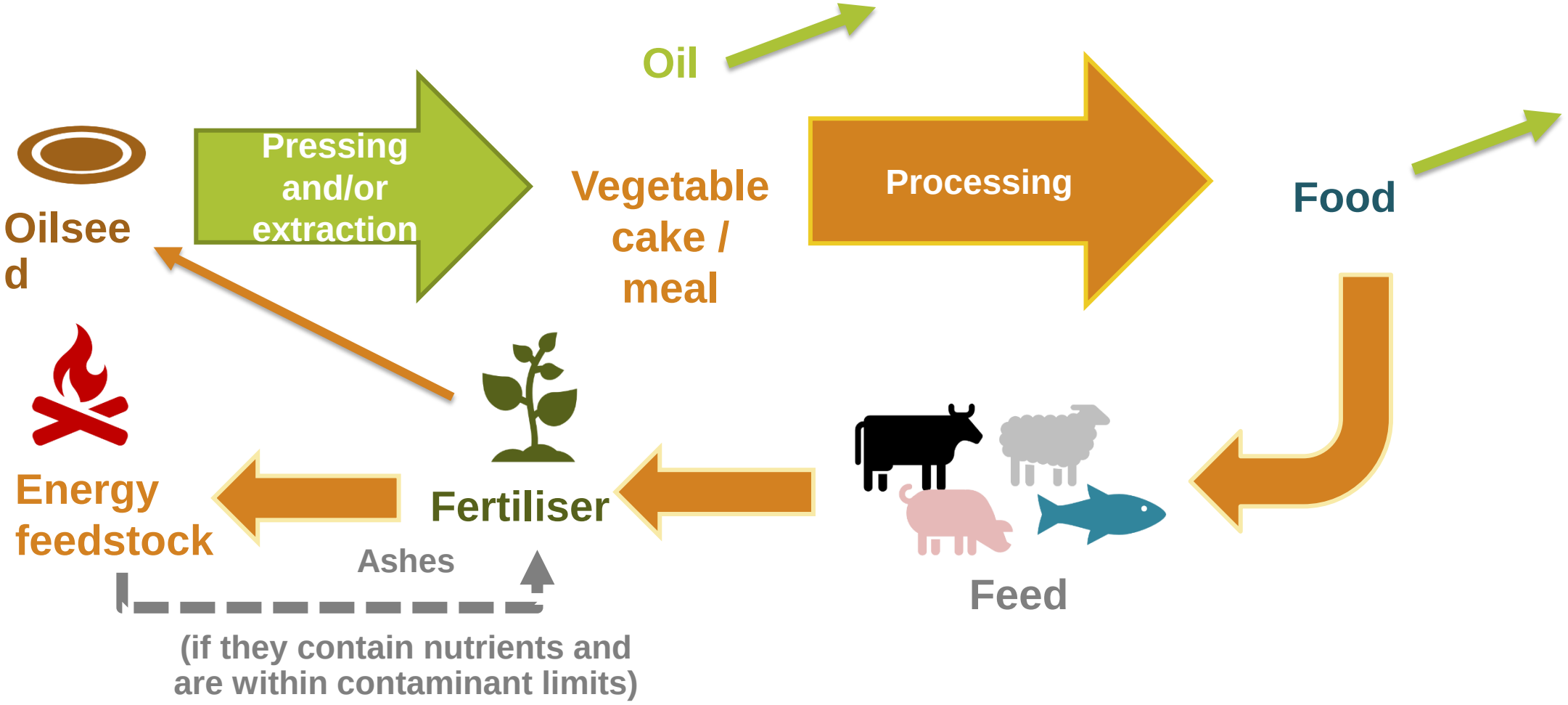
The Circular Economy is part of the DNA of the OBF industry as demonstrated by the wide number of value chains from which secondary raw materials are sourced

Value Chain	Common raw materials
Directly sources	Seaweed and plant extracts, seaweed, vegetable cakes, peat, natural polymers
Livestock	Manure
Poultry flocks and wild bird colonies	Poultry litter, seabird guano, eggshells
Slaughterhouse	Feather meal, bone, blood, meat meal, horns, pig bristles, intestinal contents
Fish and seafood processing	Fish meal, fish bones, shells
Food/feed processing	Seaweed and plant extracts, seaweed, starch derivatives, vegetable cakes, coconut fibre, chaff, vegetable tops, husks, mushroom composts, fats and oils, yeasts
Sugar	Molasses, vinasse
Wine making	Marc, vegetable cakes, grape seeds, stalks, vinasse, yeasts
Vegetable oil processing	Vegetable cakes, pulps, pomaces
Petroleum	Lignite, leonardite
Cosmetics, medicines and perfumes	Seaweed and plant extracts, vegetable cakes
Textile industry	Flax shives, fibres, vegetable cakes, vegetable stones
Leather and fur production	Leather rejects, wool, fur, skins, feathers, bristles
Lumber and paper	Bark, cellulose, pulp, paper, cardboard, wood fibre, sawdust, wood chips, twigs
Packaging	Recycled plant materials

ECOFI and its members can help increase knowledge and develop expertise of how to revalorise these industrial side streams in countries where these opportunities are not yet fully realised

- How to **convert secondary raw materials** into high-value, refined OBFs
- How to **ensure safety** by controlling pathogens and contaminants
- How to formulate **products for specific market** niches

Because of the hierarchy for re-using organic materials, organic fertilisers do not displace food or feed uses



Organic materials move downstream only if they are not appropriate for a "higher order" use

How an organo-mineral fertiliser (OMF) is made

Organic materials are mixed into a paste with mineral fertilisers and then extruded into the product form

Examples of OMFs

Organo-mineral NPK fertiliser (pellet)

Organo-mineral NP fertiliser (granule)

Unique features of OMFs

- Organic N with natural slow release;
- Higher uptake of P thanks to organic phosphates presence and interaction between mineral phosphate and humic substances;
- Presence of humic organic C able to complex and chelate the micronutrients;
- Protective action of organic matter and humic substances for macro- and micronutrients;
- Organic C action on the microbial biomass development in soil;
- Higher stimulation of microbial activity;
- Lower cost of distribution in field in comparison to mineral fertilisers (less distributions and higher NUE)

The Fertilising Products regulation opens up new opportunities for the OBF sector

FPR will give OBFs access to the Single Market and the CE-mark for the first time

Only mineral fertilisers and liming materials were covered by for Reg (CE) 2003/2003

Benefits of including OBFs in the FPR

For Industry

- CE-mark for all types of fertilising products and access to Single Market
- Reduced market distortion
- Less administrative burden

For farmers and other users

- Level playing field for farmers across the EU in terms of inputs
- Reduced market distortion for farmers

For environment & safety

- Defined safety thresholds
- Increase uptake of OBFs and therefore their societal benefits
- Promotion of Circular Economy

The FPR opens the door for more integrated plant nutrition management by farmers

Organic-based fertilisers and mineral fertilisers are stronger together

Mineral

Organic

- Proven to produce higher yields than either alone

Benefits of combined use:

- ✓ Higher quality
- ✓ Greater profitability
- ✓ Increased food security
- ✓ Better land use
- ✓ Lower application rates

Especially where low soil carbon constrains the uptake of mineral nutrients

To maximise the potential of FPR's opportunities, ECOFI advocates:

Ensuring **safety** and **traceability** of raw material components

Delivering and developing **high-quality** products which provide **added value to farmers**

Ensuring farmers **know how** to use products for **optimal benefits**

Helping stakeholders understand **the role of OBFs** in policy objectives

But there are still **challenges** to overcome

Still no visibility on animal by-products at the moment

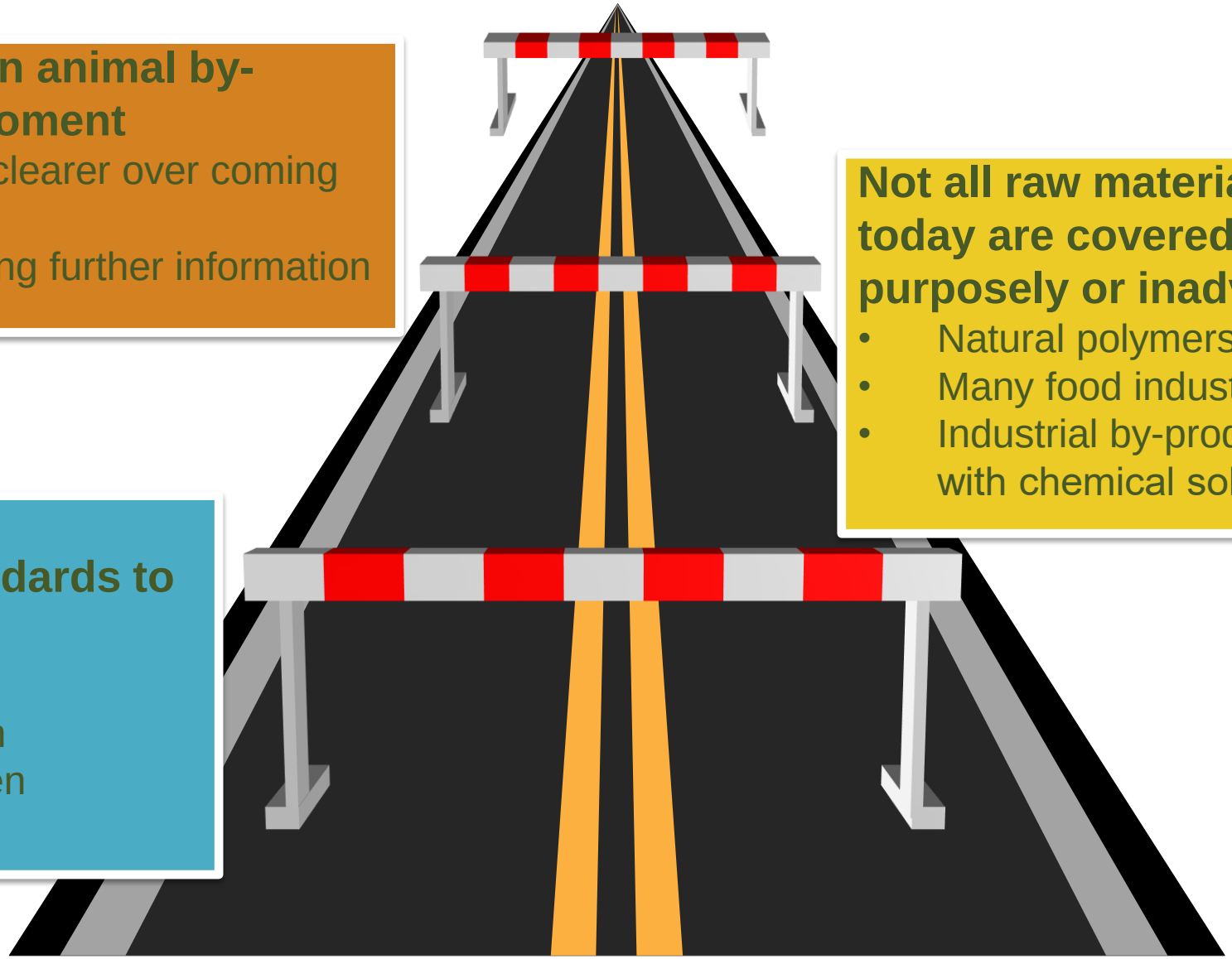
- Should become clearer over coming months
- ECOFI is pursuing further information

Not all raw materials used for OBFs today are covered by the FPR – either purposely or inadvertently

- Natural polymers
- Many food industry by-products
- Industrial by-products including oilcakes with chemical solvents…

Need to develop harmonised standards to evaluate crucial parameters

- Organic Carbon
- Organic Nitrogen
- …



The EU FPR provides the incentive for the emergence of a pan-European organic fertilisers industry

- ✓ **Common safety and quality requirements** make it easier for farmers to compare products from different countries
- ✓ The CE-mark facilitates **cross-border trade** in OBFs
- ✓ By **recognising and promoting the Circular Economy nature of OBFs**, the regulation will foster their use in integrated plant nutrition and soil fertility management

ECOFI is the platform for the European OBF industry to seize this opportunity and **grow**

- ✓ A forum for the entire European OBF industry to **debate, develop and advocate** messages and positions on key issues
- ✓ A network for **developing new relationships, exchanging knowledge on technical issues and promoting value-added production**
- ✓ **Communicates about the agronomic, environmental and societal benefits** of OBFs
- ✓ Membership is open to **any OBF producer active in Europe and committed to high quality and transparency**
- ✓ Providing experts for the development of relevant **harmonised European standards** that will be used for the implementation of the FPR
- ✓ Advocates for high-quality, refined products to **provide the greatest value per unit to farmers**

To learn more about ecofi

- ECOFI promotes the role of organic-based fertilising products (see our blog on **www.ecofi.info** or follow us on Twitter **@OrganiCarbon**)
- **ECOFI Membership** is open to **any producer** of OBFs active in Europe who can **ensure the traceability** of their components
- We are looking to develop opportunities for closer cooperation with **suppliers of raw materials**
- **SIGN UP** for **ECOFI's public newsletter:** https://www.surveymonkey.com/r/ecofi-news
- **Contact** the ECOFI secretariat on **info@ecofi.info**

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Thank you for your attention

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