Revision of the Fertilisers Regulation – benefits of biodegradable mulch films

Kristy-Barbara Lange, European Bioplastics, 12 October 2016
Who we are & how we define bioplastics

- European Bioplastics (EUBP) was founded in 1993.
- We offer more than 20 years of ‘bioplastic’ expertise.
- We represent 70 companies along the entire bioplastics value chain at EU level.
The Problem

- Every year thin (< 25 µm) Polyethylene (PE) mulch film causes approx. **15,000 tonnes of microplastics in European soils**

<table>
<thead>
<tr>
<th>Mulch film market</th>
<th>Size (t)</th>
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<tbody>
<tr>
<td>Total European mulch film market</td>
<td>80,000</td>
</tr>
<tr>
<td>Thereof certified biodegradable mulch films</td>
<td>4,000</td>
</tr>
<tr>
<td>Thereof PE mulch films</td>
<td>76,000</td>
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<tr>
<td>Thereof remaining as microplastics in soil</td>
<td>&gt; 15,000</td>
</tr>
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<td>Thereof dumped or burned alongside fields</td>
<td>&gt; 30,000</td>
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Source: APE, BASF
The solution – a biodegradable mulch film

- Advantages of plastic mulch films:
  > Improve physical soil conditions: increase of soil temperature and humidity
  > Increase yield and improve crops’ quality compare to bare soil
  > Control weed
  > Reduce irrigation water (up to 30% compared to bare soil), pesticides and nutrient leaching (better use of nutrients)
  > Mitigate wind and water soil erosion

After harvest plastic mulches should be removed from the field and disposed of properly according to local legislation, while biodegradable materials can be incorporated into the soil.
High yields without ′microplastic burden′

- Biodegradable mulch films do not accumulate in the soil over multiple harvest cycles

Which requirements for a biodegradable mulch film?

- The label **OK biodegradable SOIL** guarantees that a plastic mulch film can completely biodegrade without leaving toxic residues into the soil.

- Requirements:
  - Biodegradation (mineralization): 90 % in 24 months (test in soil, at room temperature)
  - Ecotoxicology: test on plants growing
  - Fullfil requirements concerning heavy metals: no heavy metals released in the soil

- Two national standards: France and Italy
- **CEN (TC/249)** is working on a new standard specifically target on biodegradable mulch film
The EU mulch film market – ready for innovation

- The European mulch film market is amounting to approximately 80,000 tonnes / year
- 5% are currently certified biodegradable plastics mulches
- Main user countries: Italy, France, Germany, Benelux, Spain, Portugal.

Source, Novamont
When revising the Fertiliser Regulation...

- EUBP recommends to consider certified biodegradable mulch films as soil improver and include them in the revised regulation.
- This would create a level playing field for these innovative materials and products within the EU, and implement the internal EU market.
- And would help to secure efficient food production while considering innovative sustainable approaches using less resources.
Thank you for your attention!

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