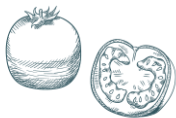




Financing models for organic breeding

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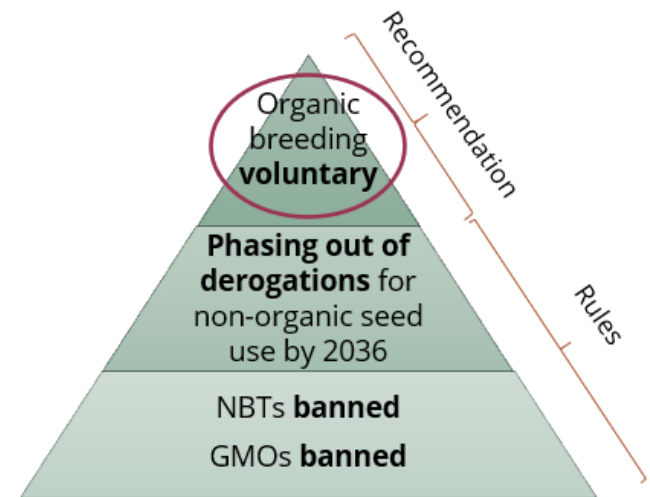


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The new European Organic Regulation 2018/248 and some definitions

Regulation as a framework for the implementation of the organic values with a strong focus on processes, which include also cultivar and seed choice



A representation of the European Organic Regulation (focus here on breeding and seed)

Organic breeding and breeding for organic:

- *In **organic breeding**, plant breeders shall select their varieties under organic conditions*
- *In **breeding for organic**, plant breeders shall select their varieties at least in the final selection steps under organic conditions*

Organisational and financing model in organic breeding

- Dominant model in ‘breeding for organic’ based on refinancing through **royalties** and **seed sales** in arable and vegetable sectors:
 - Focuses on major crops and varieties because more economically efficient to reach a large sales market
 - Minor and niche crops and varieties are neglected
 - Licence income and seed sales cover less than 10% on average of return for breeding for organic
 - Mainly non-organic conditions during the breeding process

Organisational and financing model in organic breeding

- **Public funding / research**

- Usually only short term-funding and mainly for breeding research rather than practical breeding work
- However still important esp. if in partnership with private companies, for breeding for mixed cropping systems, pre-breeding for neglected crops, research of traits for organic

- **Donations**

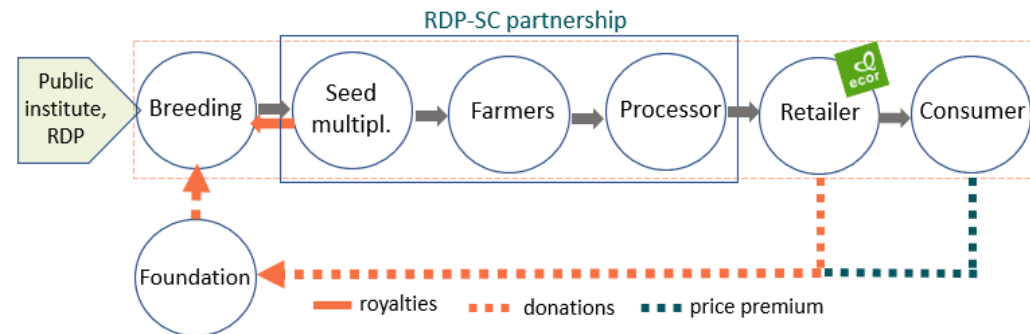
- Unstable source of income for the breeder
- So far happening only in a few countries of Central Europe
- A legal framework doesn't exist because of the danger for market competition distortion

Organisational and financing model in organic breeding for arable and vegetable crops

- **Supply chain partnership:**

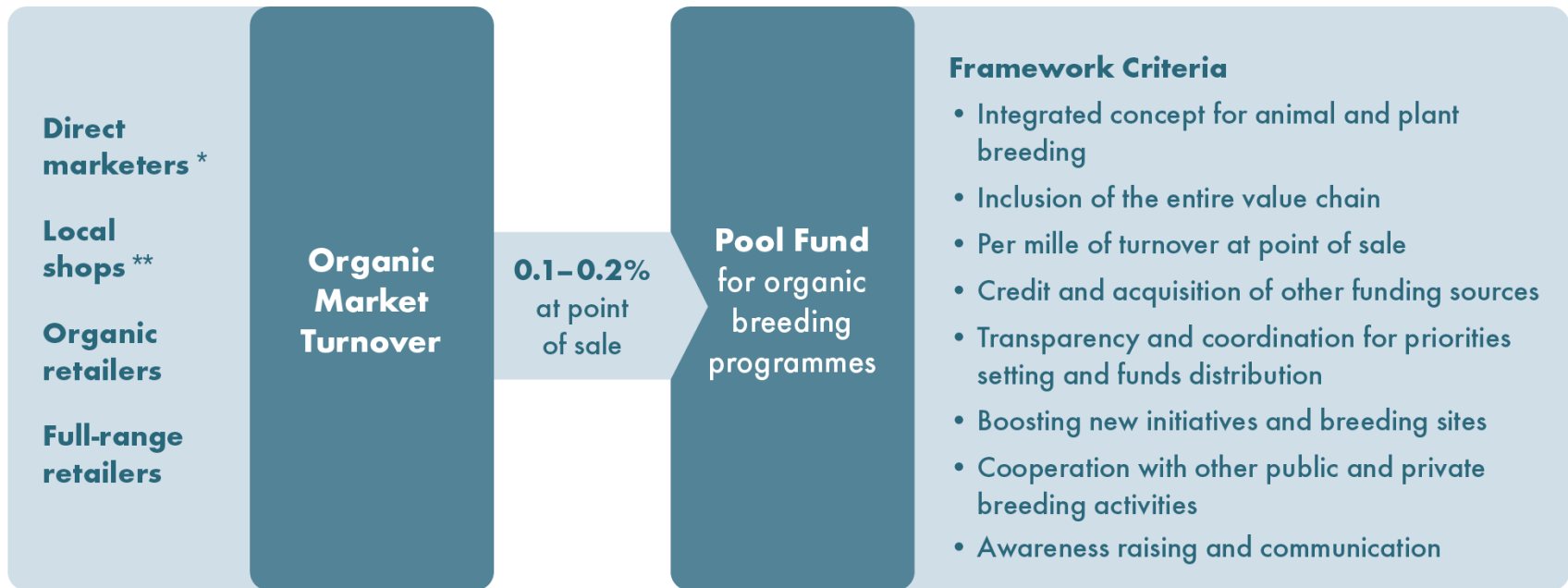
- Collaboration among supply chain members from breeders, processors and traders to identify breeding goals and orientation towards added value for consumers
- Private label can contribute to a marketing strategy and obtain a price premium (e.g. Bioverita)

- Can be further supported by public funding and donations, but engagement / support of downstream players is key, e.g. example of organic durum wheat variety in Italy:



An example of an organic variety of durum wheat developed in Italy

Pool funding for organic breeding



* Farm gate sales, farmers markets, box schemes, farmers markets

** Bakeries, butcheries, specialised vegetable and fruit shops, health shops

(Winter et al 2020)

Hypothetical example organic wash/storage carrots in Germany:

- 51,023 tons yearly production in Germany
- 1,58 €/ton is the average whole-sale price, of which 0.2% would amount 3.16 € → 161,595 € would go into organic breeding