Why plant breeding keeps the EU busy

Presentation for OEYE workshop
Quiz (1/3)

• If you are a farmer, can you just plant any seed that you would like for your production?
• Answer: No
Quiz (2/3)

• How many applications for new varieties were handed in in 2021 at the European plant variety office (fruit, agricultural, vegetables)?
• Answer: 2025
Quiz (3/3)

• How many registered applications are there for potato (*Solanum tuberosum*) at the European plant variety office?
• Answer: [CPVO (plantvarieties.eu)](https://plantvarieties.eu)
The seed market in the EU

- There is a gatekeeper for which varieties/cultivars are used in farming:

1. New variety bred
2. Breeder/company files application at national authority
3. Authority tests varieties
4. If variety checks all boxes, it gets green light
5. Variety can be marketed across EU
6. Farmers can use variety
The seed market in the EU

- Criteria that are applied to varieties are, for example:
  - Yield performance
  - Uniformity, including phenotypical characteristics
  - Stability of plant characteristics over time
The seed market in the EU

• What is the idea behind them?
  • Overview on all varieties available (catalogues).
  • Limit access to the market to protect farmers.
  • Steer breeding towards developing varieties that are 'valuable'.
    – Currently: focus on agronomic performance
    – Future: sustainability goals? Climate change adaptation?
The seed market in the EU

- What does this imply for breeders?
  - Some varieties might not qualify and cannot be marketed (sold) to farmers.
  - Adapt breeding goals and activities to those criteria
    -> double edged sword.
The regulated seed market in the EU

- What does this imply for the seeds that are available to European farmers?

**IN**
- Varieties that pass classical criteria/tests
- Varieties that pass adapted criteria for organic

**OUT**
- Varieties for which special rules apply - with restrictions
- Cultivars that do not fit into categories
Organic breeding

• Why organic breeding?
  • Seed is integral part of organic production process
  • Therefore, seed must be produced under certified organic conditions as well
  • Breeding, so the process of developing new varieties is often happening in conventional conditions
  • Breeding under organic conditions is logical next step, to make sure that we breed varieties that are adapted to the organic conditions at an early stage already.
  • Organic breeding was included in the new Organic Regulation
Organic breeding

• Why define it EU-wide?
  • Standards of organic production are universal in the EU
    – > minimum standard of how organic produce is produced.
  • Common understanding of what organic breeding defines
  • With involvement of the sector, a definition was agreed upon at EU level.
Organic breeding

• What does the definition include?
  • Reflects that in organic production, high uniformity is not necessarily the most important criterion but other attributes
    – > high genetic and phenotypical diversity possible.
  • Conditions of breeding -> organic
Organic breeding

- Goals of breeding:
  - Genetic diversity
  - Natural reproductive ability (seeds result from natural pollination of parent plant; self/insects e.g.; usually similar to parent plant in opposition to hybrid seeds-> seed saving)
  - Agronomic performance (yield, (nutritional) quality)
  - Disease resistance (plant mechanisms to fight disease)
  - Adaptation to local soil & climate conditions (not all varieties grow everywhere)
Our work in Brussels

- Members
- Position Papers
- Communication

Internal:
- coordinate
- draft
- filter

External:
- feedback
- exchange
- build

- Legal texts
- Institutions
- Relationships

IFOAM OE
Our work in Brussels

• Why is it important for organic movement to work on EU seed rules?
  • Availability of suitable seeds crucial to development of organic agriculture.
  • Rules must be workable for organic producers from a production and bureaucratic perspective.
  • Since organic systems are different, organic has its own needs and needs own voice.
  • EU-wide project on development of organic seed and breeding (LIVESEEDing).
Our work in Brussels
Our work in Brussels

Euroseeds
Embracing Nature

Arche Noah

Let's Liberate Diversity!

Copa Cogeca
European farmers European agri-cooperatives

European CoordinationVia Campesina

IFOAM Organics Europe
Questions?
Thank you for your attention!