

# A future for diversity in the seed law reform

## Plant Breeding for Organic Agriculture - Needs and legislative challenges

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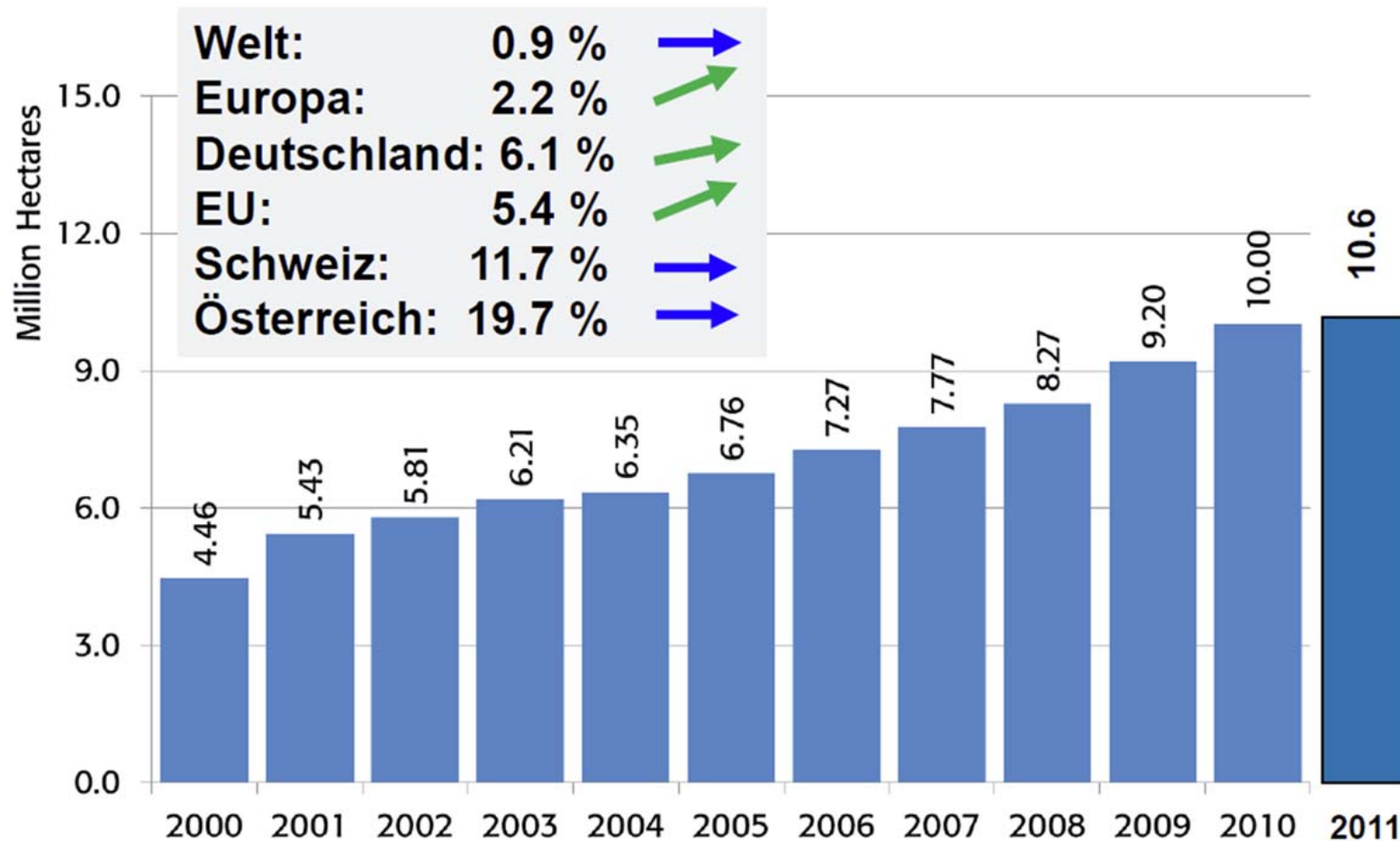
Representation of Lower Saxony, Brussels



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Research Institute of Organic Agriculture  
Istituto di ricerca dell'agricoltura biologica  
Instituto de investigaciones para la agricultura orgánica



# Growth of Organic Farming in Europe



# The IFOAM Organic principles(1) in relation to seed

## ➤ Principle of health

- Closed production cycle with minimum external input
- Fertile soil as basis for the sustainable production of healthy food and feed
- Resilient plant varieties and populations which are adapted to organic farming in locally different pedoclimatic and cultural conditions (tolerant / resistant plants against biotic and abiotic stress, esp. soil born diseases, weed competition, nutrient and water efficient,...)
- Selection need to be done under organic conditions



# The IFOAM Organic principles(2) in relation to seed

## ➤ Principle of ecology

- Agrobiological diversity on landscape, farm and field level (many different crops, crop rotation, mixed cropping systems, agroforestry, intra-varietal diversity,...)
- High plasticity and adaptability to changing conditions
- Optimal plant – rhizosphere interaction (symbiosis with microbes for N fixation, nutrient acquisition, pest suppression, attractance of beneficial organisms, ...)
- Efficient selfregulating systems, agriculture as part of ecosystem





# The IFOAM Organic principles(3) in relation to seed

## ➤ Principle of fairness

- Fair conditions for different actors on the seed market, promote diversity of stakeholders (participatory breeding)
- Stop disproportionate bureaucratic burden for small seed producers
- Open pollinated varieties (farmer's right), no patents (breeder's privilege)

## ➤ Principle of care

- Preserve genetic resources and associated agronomic practices and knowledge for the potential needs of future generations (e.g. Changes of dietary habits, environmental conditions, allergies, etc.)
- Avoid breeding techniques that technically interfere below cell level



## IFOAM EU main demands - seed law revision

- New seed legislation should foster
  - Breeding activities in many crops → improve agrodiversity in Europe
  - Genetic diversity on crop level to be prepared to climate change and new challenges → many different breeding initiatives
  - Breeding innovations like participatory / evolutionary breeding, breeding for local products, for mixed cropping, intra-varietal diversity
  - Diversity of products in the markets and local specialities → satisfy consumer demand



## IFOAM EU main demands - seed law revision

### ➤ Organic Agriculture has special requirements for plant varieties

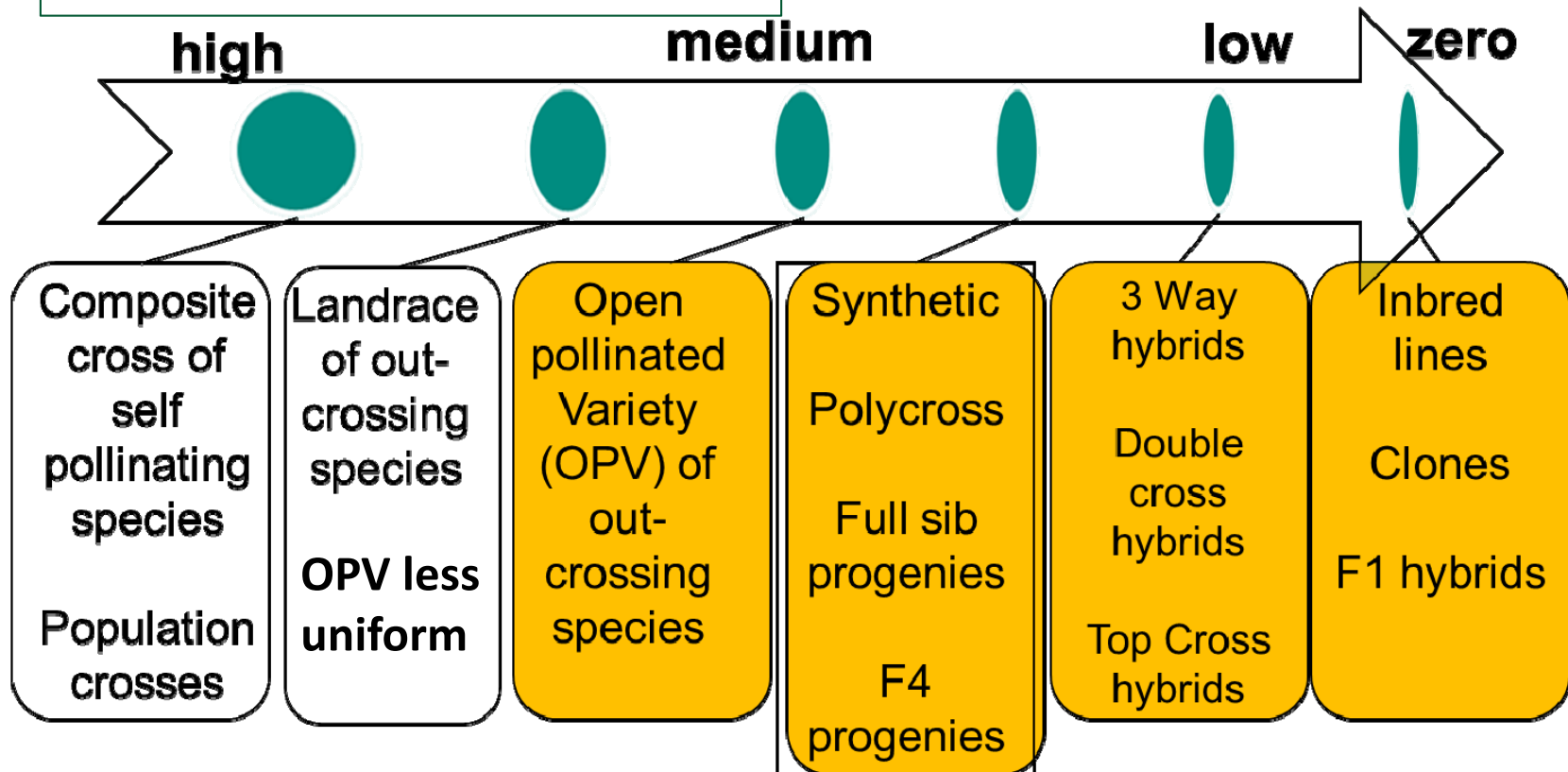
- Breeding and variety testing should be done under organic farming conditions in such locations that correspond to the target situation of use
- Restrict the uniformity levels to a minimum required for product quality and use to allow for potential of OPV higher adaptation and yield stability
- Breeding activities aiming for small, local or speciality market should have easier market access
- Special breeding techniques should be refrained from



# Genetic diversity within varieties

Varieties with ORD not aiming for DUS and variety protection

Adjusted DUS Testing according to cultivar type





## IFOAM EU main demands - seed law reform

- DUS Testing must be adjusted to variety type otherwise OPV will totally diminish from European market despite their ecological potential
  - Less traits, higher tolerance to trait frequency for outcrossing species, comparison with other OPV (not affected by inbreeding depression due to limited multiplication space of gene banks)
- VCU testing should be optional and adjusted to market share and target use
  - Number of locations for testing depending on potential market
  - Testing for sustainable production under target farming conditions and different pedoclimatic conditions
- Adapted rules for registration of less homogenous/stable open pollinated varieties



# IFOAM EU main demands - seed law reform

## ➤ Public service

- registration of varieties, VCU, and seed quality control must remain a public service, accessible to all seed producers

## ➤ Transparency

The following information must be publicly available for registered material:

- species and variety name, origin (region or country), propagation region
- breeding methods, origins of the basic varieties, patents

## ➤ Availability

- GMO-free varieties & genetic resources must remain available
- Varieties whose variety protection right has expired should remain available
- Seed sample of all varieties should be delivered to gene bank also in case of hybrids to safeguard genetic resources





## IFOAM EU main demands - seed law revision

Official testing DUS criteria	Official testing Adapted DUS criteria	Officially recognised description for specific markets	Outside the scope of legislation
Highly uniform varieties <ul style="list-style-type: none"><li>• Inbreds,</li><li>• Clones,</li><li>• F1 Hybrids</li><li>• Synthetic</li><li>• OPV</li></ul> with IPR  VCU voluntary	Open pollinated varieties <b>-Adapted evaluation of uniformity and stability</b> , criteria reduced to homogeneity demand of market  No variety protection VCU voluntary	1) Conservation and new bred varieties (former amateur varieties), niche/heterogeneous material) → simple description of main characteristics, reduced bureaucratic burden 2) Composite Cross Populations → description of history of use and parental lines	<b>Free exchange</b> and direct sale by farmers, gardeners and conservation networks to non professional users

**Adapted requirements for different types of market volume**



**Thank you for  
your attention!**

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