

Session 2 'How is diversity applied in practice and what innovation tendencies emerge?'



'Diversity – a strategic key issue for future European agro, food and bio-economy research'

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Is diversity really a solution?

It is a challenge for....



... farmers,



value chain actors,



consumer,



policy makers!

Diversity at risk?

1. On farm genetic and crop diversity

Long standing trend of decreasing genetic diversity

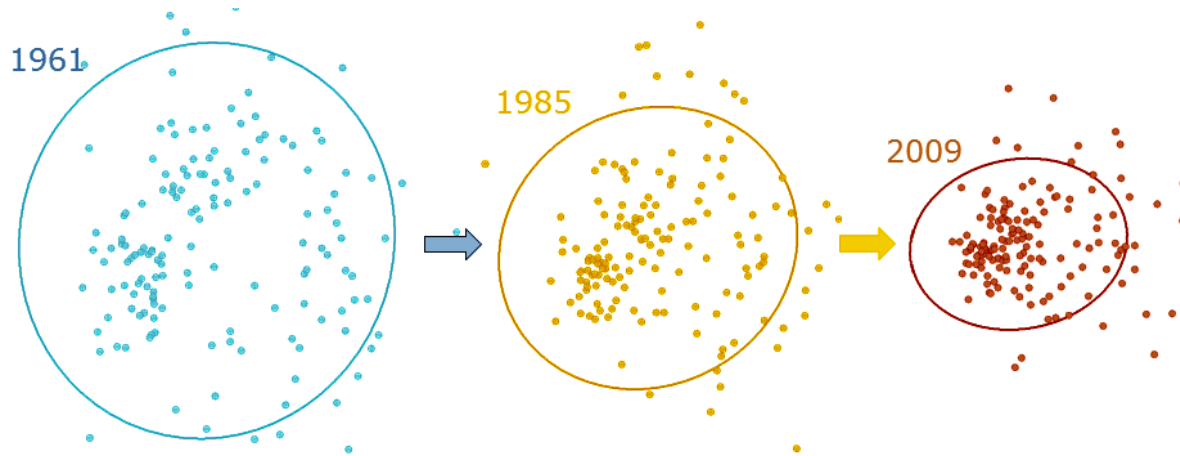


photo: <https://geneticliteracyproject.org/2017/05/22/myth-busting-modern-agriculture-really-led-75-drop-crop-diversity/>



photo: Marco Clausen / flicker

Diversity at risk?

2. Production systems

- Increasing intensification, monocultures, large plots to use economies of scale

Intensive Olive production in Spain

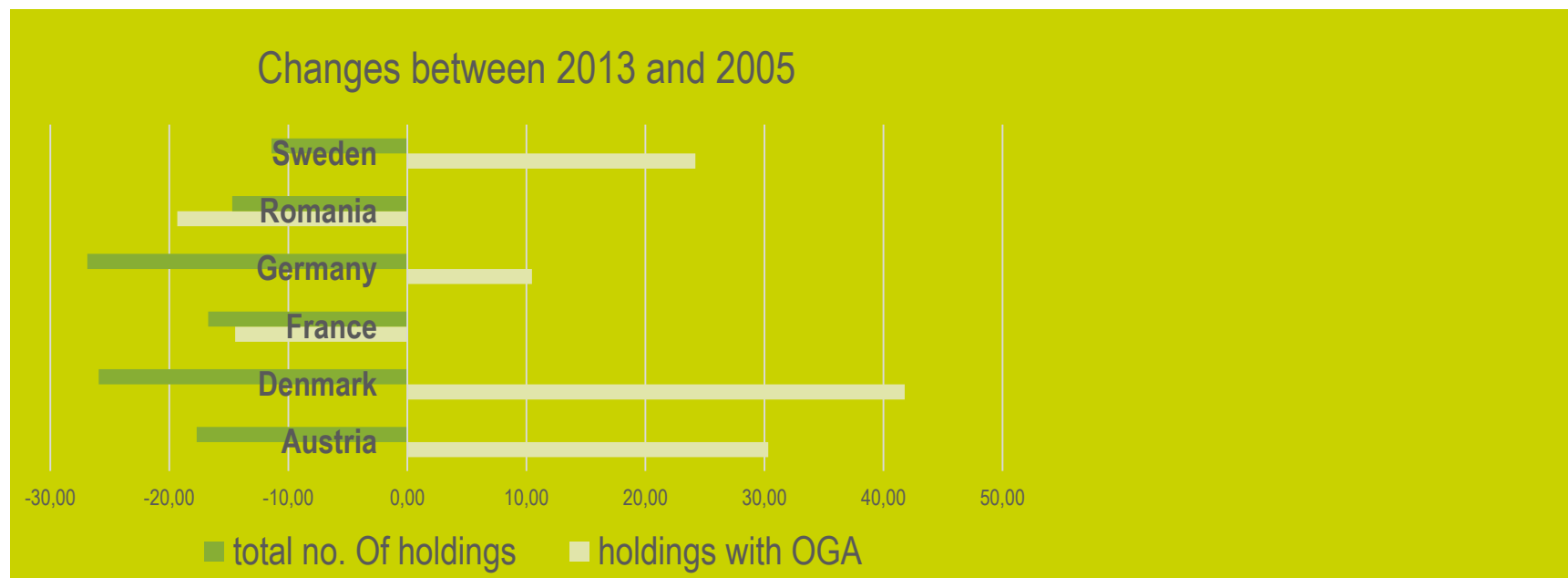


Traditional and new urban gardens in Ljubljana
(photo: *Avantgardens*)

Diversity at risk?

3. Income diversification: “Other gainful activities on-farm”

- Diverse trends in diversification in EU Member States
- female managed farms tend to have more diverse activities



Source: EUROSTAT

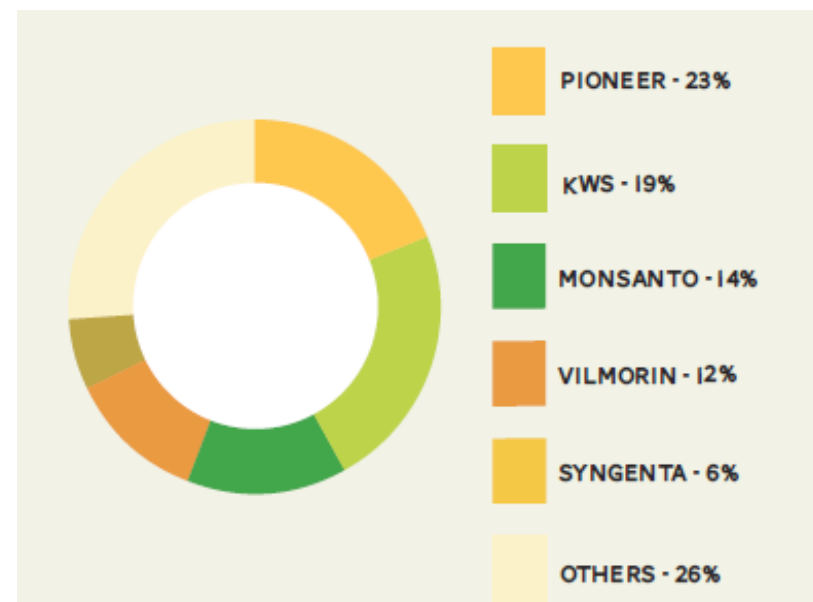
Diversity at risk?

4. Value chains

- **Dominance of multi-nationals as input suppliers and in food trade**
- **Example seed market:**
 - France , Italy , Germany , Netherlands , Slovakia have only between 120 to 350 seed companies (incl. maintainers, multipliers and traders)
 - But still around 2000 companies in Poland and Romania

- **Market shares of the top 5 companies in the EU maize seed market, 2012/2013**

Source: Mammana, I., 2014. Concentration of market power in the EU seed market.



Diversity at risk?

5. Dominant land uses and intensities in Europe (PEGASUS project)

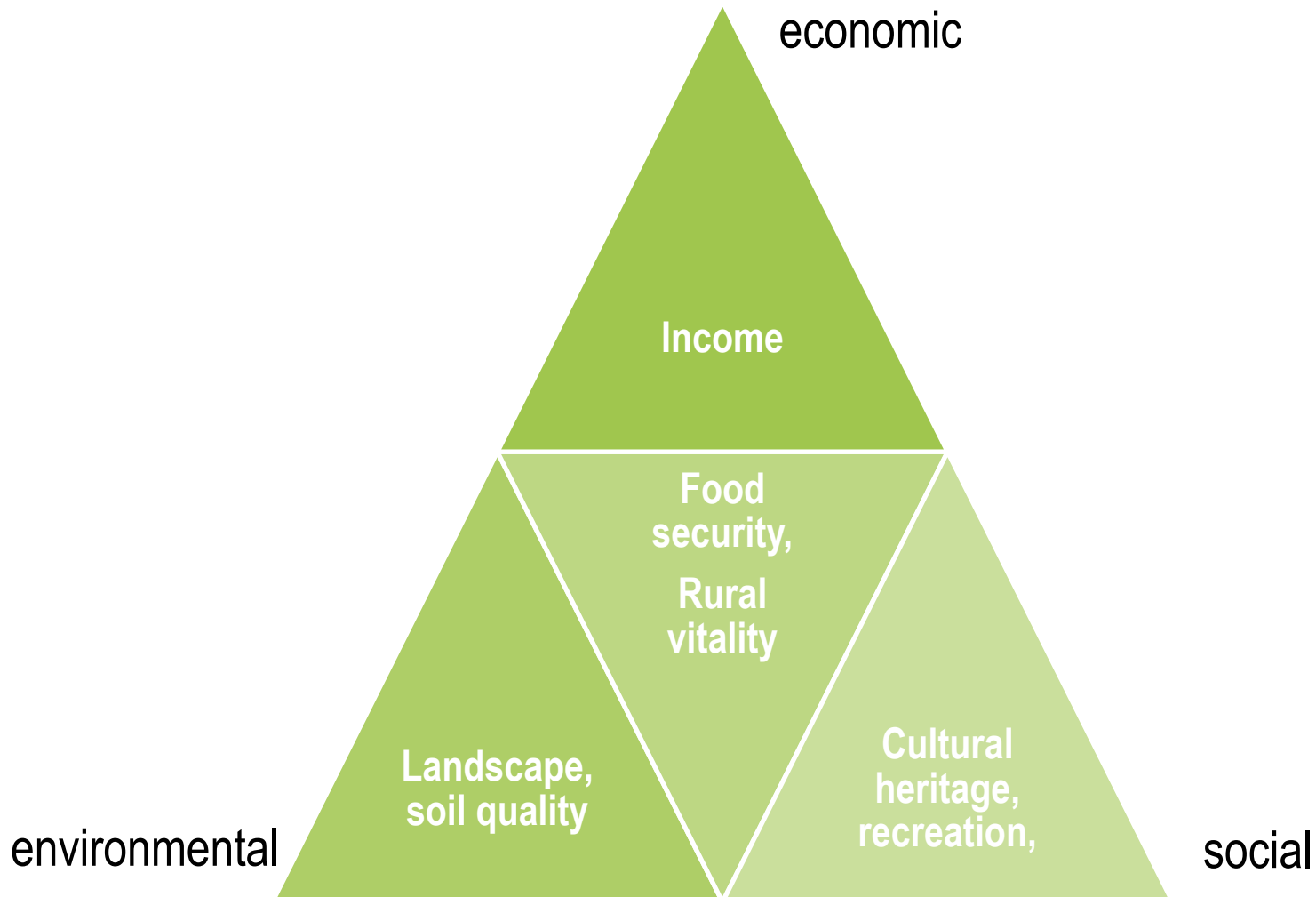
Area of Pegasus Crop Systems

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105



- Specialist forage crops - High Intensity
- Specialist forage crops - Medium Intensity
- Specialist forage crops - Low Intensity
- Grasslands and meadows - Medium Intensity
- Grasslands and meadows - Low Intensity
- Grasslands and meadows - High Intensity
- Mixed systems with prevalence of arable a
- Mixed systems with prevalence of arable a
- Mixed systems with prevalence of arable a
- Specialist field crops - Low Intensity
- Specialist field crops - High Intensity
- Specialist field crops - Medium Intensity
- Mixed systems with prevalence of perman
- Mixed systems with prevalence of perman
- Specialist Vegetables- flowers and horticult
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- Mixed systems with prevalence of perman
- Specialist fruits and citrus fruits - Low Inten
- Specialist fruits and citrus fruits - Medium I
- Specialist fruits and citrus fruits - High Inte
- Specialist vineyards - Medium Intensity
- Specialist vineyards - Low Intensity
- Specialist vineyards - High Intensity
- Specialist Olives - Low Intensity
- Specialist Olives - Medium Intensity
- Specialist Olives - High Intensity
- Agroforestry systems - Low Intensity
- Agroforestry systems - High Intensity
- Agroforestry systems - Medium Intensity

Diversity can be a solution!
Benefits and potentials



Diversity is a solution!

How diversity can be innovative

- development of **heterogenous cereal (wheat) population** to improve ability to cope with changing and erratic wheater conditions
- Diversifying **financing and income modalities**: citizen shareholder corporations, CSA,
- **Additional incomes**: care farms, landscape maintenance
- New cooperations between diverse value chain actors: **bioenergy regions**
- Farmers, advisory, companies and researchers as partners in innovation projects – **EIP operation groups**



Thank you for your attention!



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