



Input of agriculture to a sustainable land use

Anton Reinl
Austrian Chamber of Agriculture

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New global challenges

Food demand



- 2050: 9 billion population
- increase of production + 70%

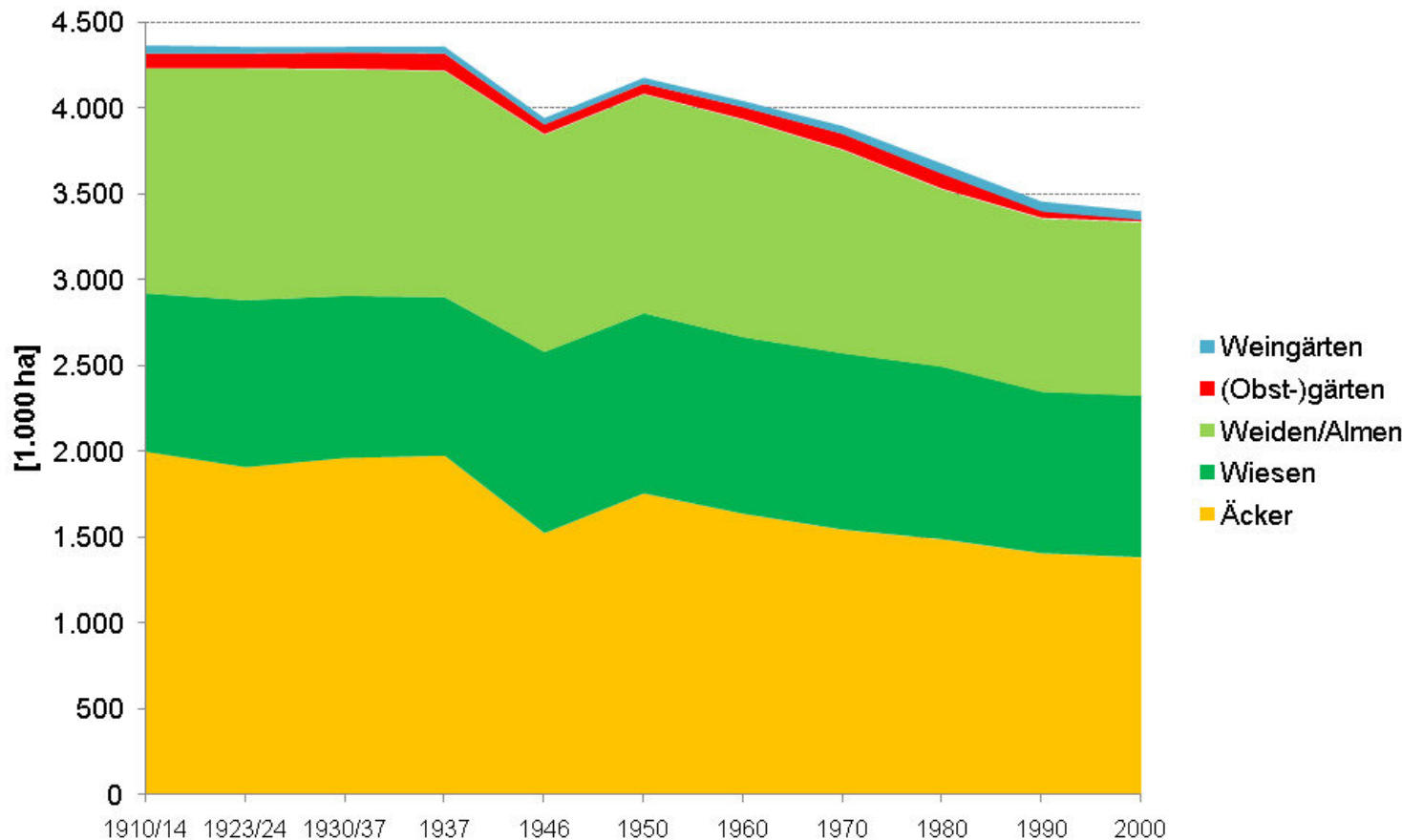
Food production under pressure

- land & water resources diminishing
- climate change:
 - more risks of extremes -floods, drought
 - long-term changes in climate



Land use in Austria 1910 - 2000

Bodennutzung in Österreich 1910 - 2000 (in 1.000 ha)



Agricultural area :
 1950 = 4,2 Mio. ha
 2000 = 3,4 Mio. ha
Diff. = - 0,8 Mio. ha

Arable land:
 1950 = 1,8 Mio. ha
 2000 = 1,4 Mio. ha
Diff. = - 0,4 Mio. ha

Land use (ia Sealing) :
 ca. 20 ha / day !

Forest :
 61/70 = 3,7 Mio. ha
 00/02 = 4,0 Mio. ha
Diff. = +0,3 Mio. ha

Source: Bruckmüller, E. et. al (2002)



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Land use and soil sealing

- **Soil sealing:** demand of agricultural areas for housing and infrastructure (EU 27: 275 ha per day)
 - Unsealed area is a carbon sink
 - **Sealed area is a carbon source:** 181-453 t CO₂/ha and year
- **Compensation area:**
 - Example (Austria): S 10: 22 km, 70 ha sealed area, 180 ha compensation for nature protection etc)

Foodstuffs and waste

Each Austrian Ø 18 kg foodstuffs/year

= wheat area necessary (Ø 5.130 kg / ha)

Orig. packaging.	Opened packaging	leftover		other
50.000 ha				
	92.000 ha			
		153.000 ha		
				Insgesamt: 160.000 ha

Common Agricultural Policy 2014-2020

Proposals from the European Commission concerning

- October 2011: Common Agricultural Policy 2014-2020
 - National allocation of 1 and 2 pillar ?
- February 2013: EU Budget proposal - Multiannual Financial Framework 2014-2020
 - Discussion between European Parliament und Council – Decision in June 2013?

CAP Reform proposal: Greening

- Set-aside: 10 % (Mc Sharry Reform 1992 to 2009)
- 2014: Greening

Obligatory and 30 % of 1 pillar payments (according to EC proposals)

- 7% environmental focus area
- freeze in permanent grassland
- 3 crop requirement (between 5 and 70 % of each crop)

- 7 % environmental focus area = cereal export of EU (26 Mio t)



Agri-environmental measures: impact on soil protection and climate

- ❑ Offered in all Member States
- ❑ Accepted by farmers
- ❑ According to evaluation report successful to obtain environmental improvements
- ❑ Examples of measures:
 - Soil erosion: catch crops, buffer strips, crop rotation
 - Soil structure: reduced tillage, permanent grass coverage
 - Reduction of inputs on soil: fertilisers, plant protection products, organic farming



Austrian agri-environmental program (2010): soil related measures

- **116.122 farms participate at agri-environmental program**
- **Out of 135.388 farms (= 86 %)**

	participants	hectars
Greening arable land in winter	49.905	433.640
Mulch and direct trilling	15.225	140.337
Preventive soil and stretch of water conservation	4.409	157.007
Organic farming	20.789	414.148





thank you for your attention!

Dr. Anton Reinl
a.reinl@lk-oe.at



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