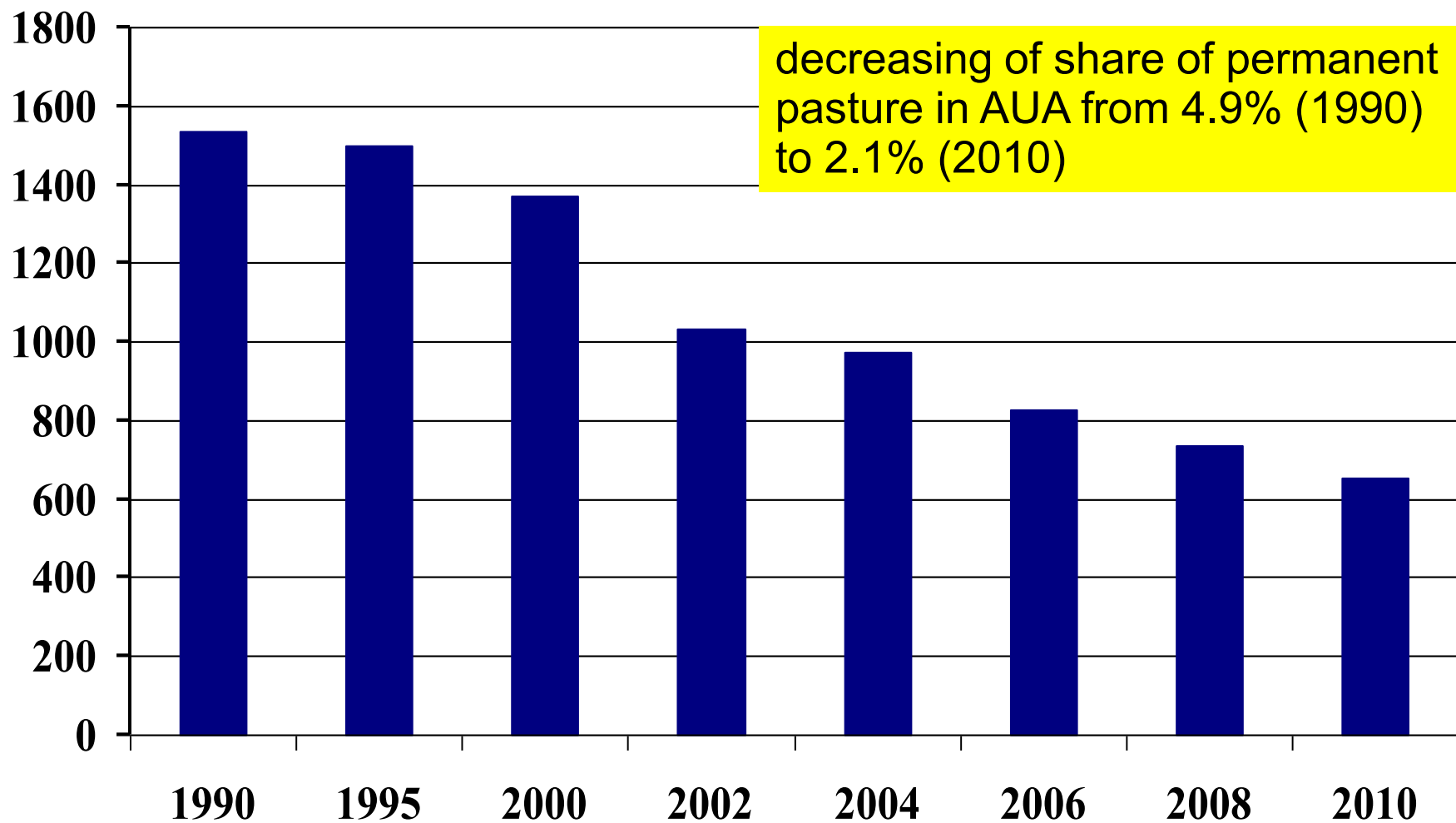


Grazing in Poland

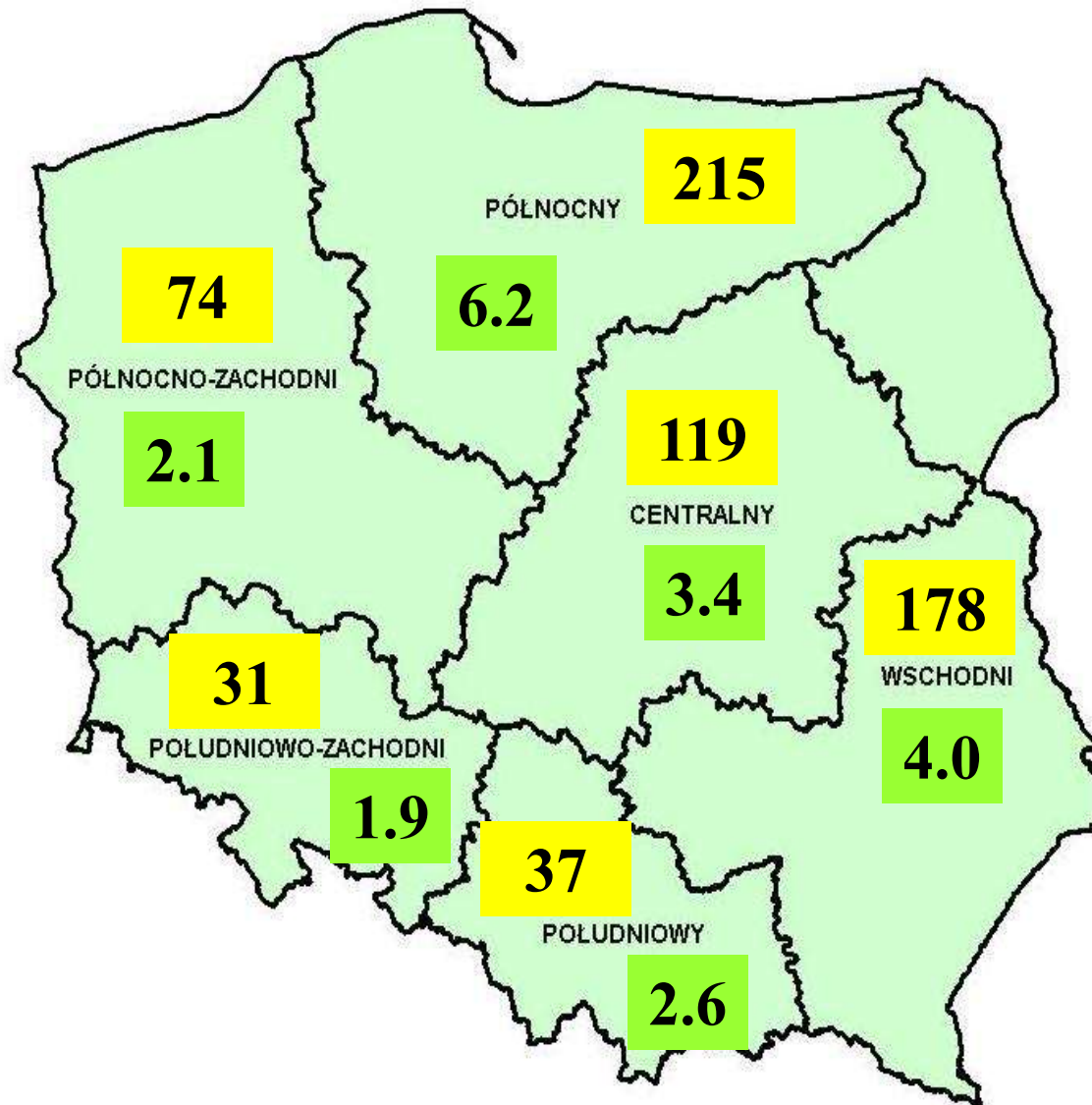
Piotr Goliński



Permanent pasture area in Poland (thousand ha)



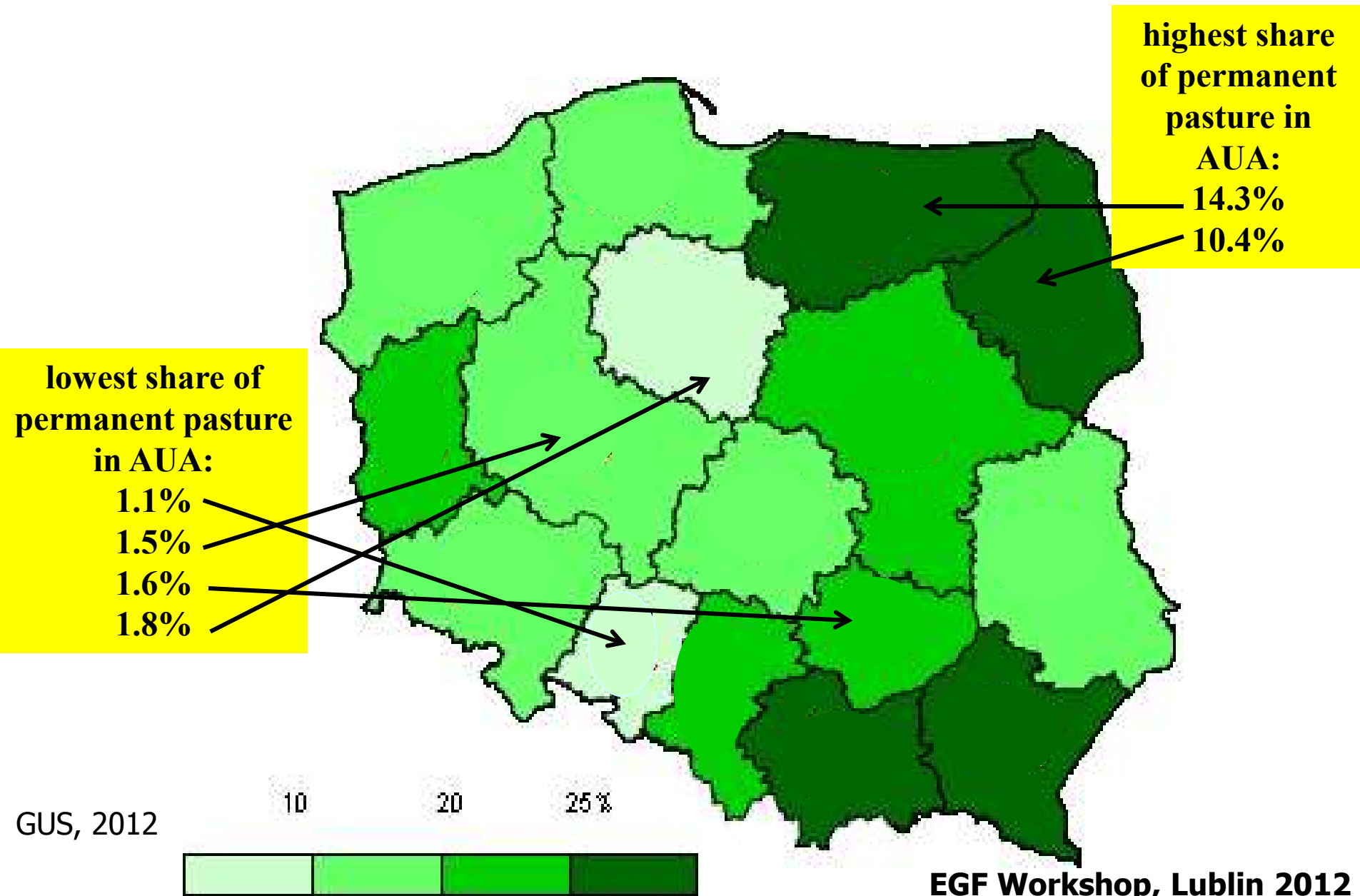
Area of permanent pastures (thousand ha) and their share in AUA (%) in specific regions (NTS 1) of Poland



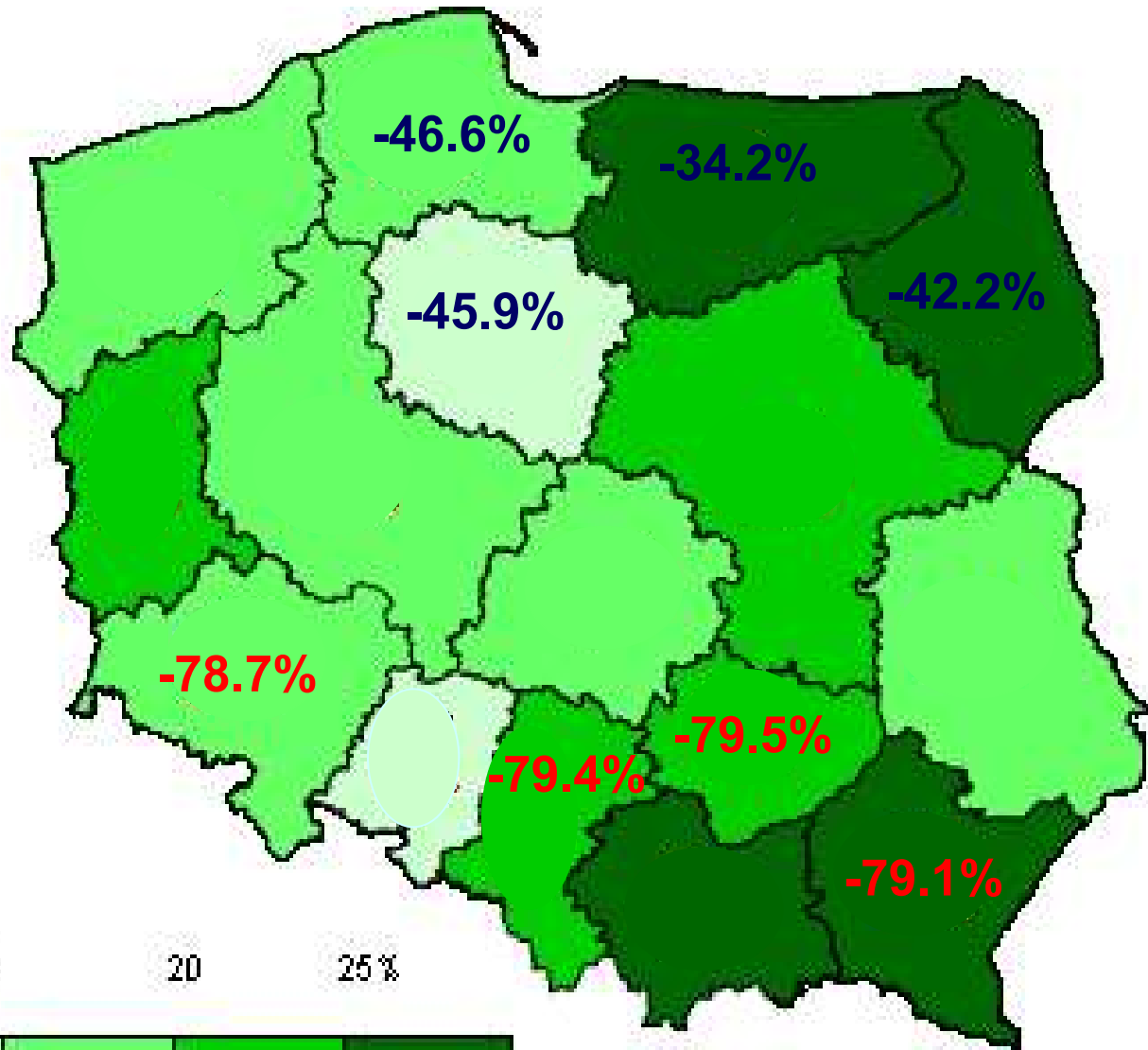
area

share in AUA

Share of grassland in AUA and share of permanent pastures in AUA in selected voivodships in Poland



Decreasing of permanent pastures area in farms in relation to geodesic area of permanent pasture in selected voivodships in Poland



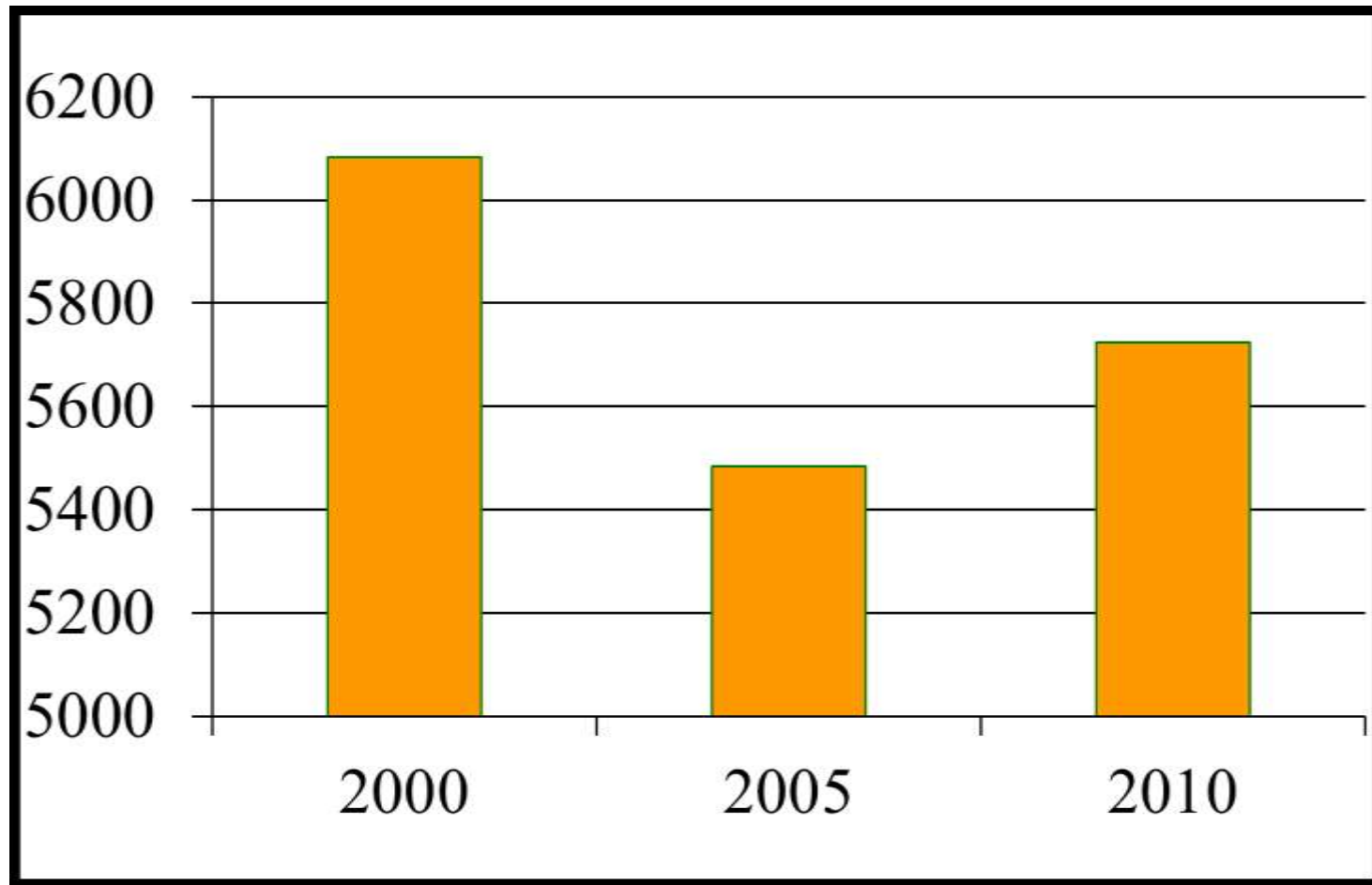
GUS, 2012



EGF Workshop, Lublin 2012

Number of cattle in Poland (in thousand)

In 1990 in Poland was about 10 048 900 cattle



Grazing of dairy cows



Extensive grazing of cattle



Sudety Mountains



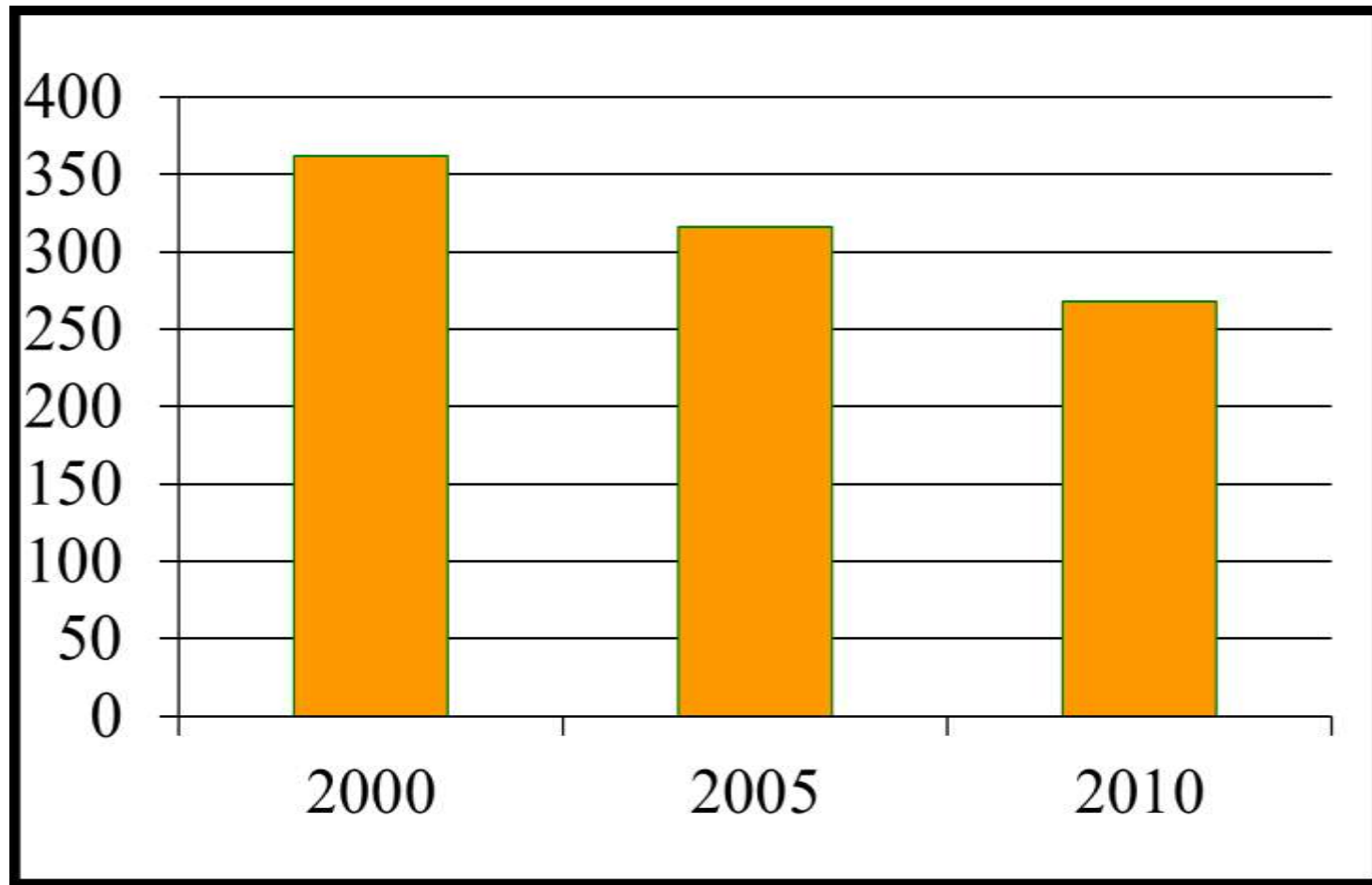
Odra valley



Wielkopolska Lowland

Number of sheep in Poland (in thousand)

In 1990 in Poland was about 4 158 500 sheep



Grazing of sheep in Bieszczady Mountains



Regional Programme „Sheep”

Programme of Economic Development and the Preservation of Cultural Heritage of Carpathians

Duration: 2005-2009

Priorities:

- buying flocks of sheep
- training of farmers
- promotion of natural and landscape values of the Carpathians
- promotion of folklore and culture of mountain lands
- promotion of sheep products
- the protection of local breeds of farm animals
- creating incentives to invest sheep grazing in areas of special natural and landscape values
- protection of mountain meadows

Financed by: Małopolskie Voivodship

Budget: 2 650 000 PLN

Regional Programme „Sheep Plus” Economic Development Programme and the Preservation of Cultural Heritage of Beskid and the Polish Jura



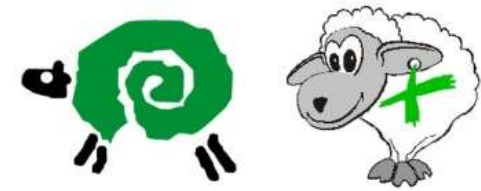
Duration: 2008-2009 and 2010-2014

Main aim: environmental protection and conservation of biodiversity sites identified by the restoration and maintenance of sheep grazing in designated halls and upland meadows and xerothermic grasslands

Additional aims:

- stopping forest succession based on the pastoral economy,
- cultivating cultural identity associated with pastoralism,
- promoting traditional folk culture, crafts and processing of the ovine and caprine
- development of tourism
- increasing the diversity of agritourism farms and local restaurants
- developing the social activity

Regional Programme „Sheep Plus” Economic Development Programme and the Preservation of Cultural Heritage of Beskid and the Polish Jura



Śląskie. Pozytywna energia

Financing by: Śląskie Voivodship
Budget:

- 2010 – 600 000 PLN
- 2011 – 1 200 000 PLN
- 2012 – 1 200 000 PLN
- 2013 – 1 200 000 PLN
- 2014 – 1 200 000 PLN
- **Total – 5 400 000 PLN**

Beneficiaries: NGOs



Regional Programme „The activation of the economic and tourism in Podkarpackie by promoting valuable natural and landscape meadow-pasture areas in connection with maintenance of biodiversity based on the natural grazing”

Duration: 2012-2016

Main aim: preserve, protect and restore of biodiversity, the characteristic landscape and environment based on natural grazing

Additional aims:

- reconciliation of efforts to maintain and protect biodiversity with the implementation of socio-economic activities in the region
- encourage and continue farming in areas difficult to agricultural farmyard (extensive grazing)
- reconstruction or construction and maintenance of pastoral architecture-related with the traditional grazing
- protection of cultural heritage of the region
- sustain the traditions, customs and other cultural folklore associated with pastoralism

Regional Programme „The activation of the economic and tourism Podkarpackie by promoting valuable natural and scenic designated meadow land - pasture of behavior biodiversity based on the natural grazing”

Financing by: Podkarpackie Voivodship

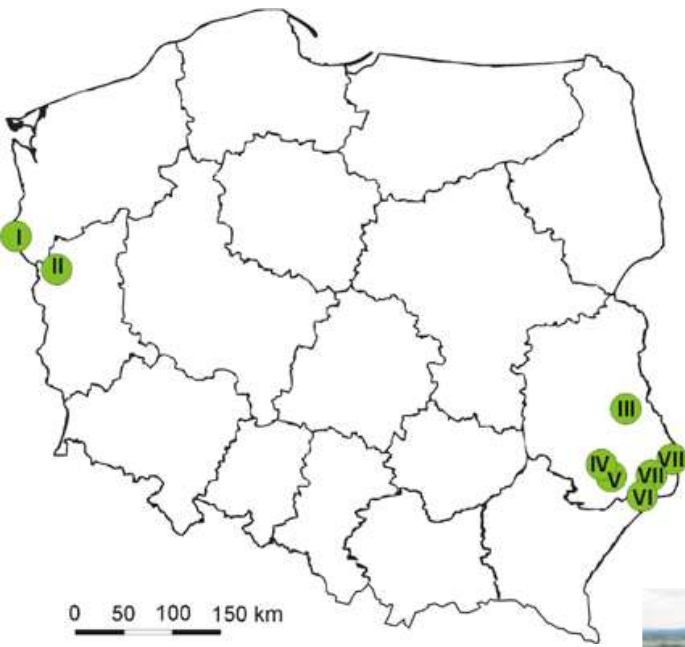
Budget:

- 2012 – 2 000 000 PLN
- 2013 – 2 000 000 PLN
- 2014 – 2 000 000 PLN
- 2015 – 2 000 000 PLN
- 2016 – 2 000 000 PLN
- **Total – 10 000 000 PLN**

Beneficiaries: NGOs



Conservation and restoration of xerothermic grasslands in Poland – theory and practice (LIFE+ project)



implemented by
Naturalists' Club and
Regional Directorate of
Environmental Protection
in Lublin (2010-2013)



Special pastures



Janów Podlaski



near Bydgoszcz

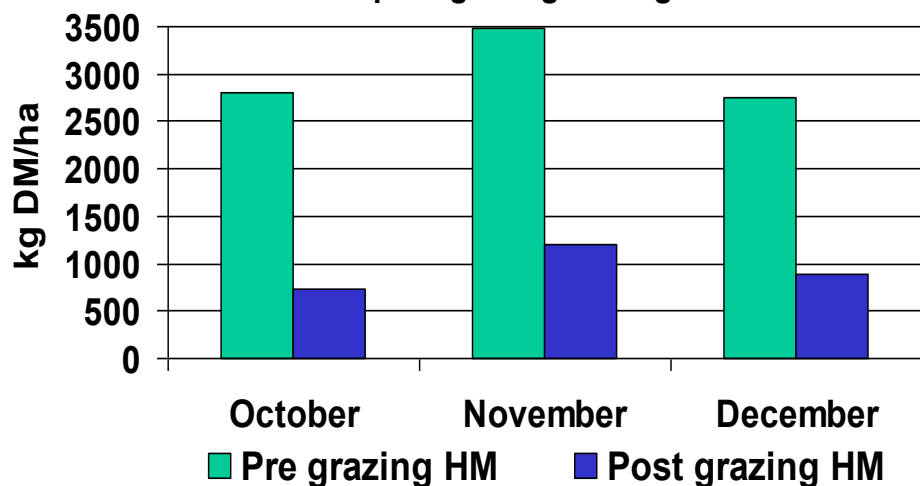
Task 2. Effect of extending the grazing season on sward diversity, soil physical & chemical characteristics, environmental characteristics, animal production & welfare

- Experiment established Oct. 2010, semi-natural lowland pasture, mineral soil
- Three paddocks - 1200 m²
- 5 suckler cows (Angus and Angus × Limousin) grazed each paddock - last week Oct. (24-29/10), last week Nov. (21-26/11) and Dec. (19-24/12)
- Forage from the pasture was the only feed
 - Animals on pasture during the day and indoors at night where fresh water and barley straw was available
- Pre grazing measurements:
 - Sward botanical composition
 - Pre grazing herbage mass
 - Chemical composition of sward
- Post grazing measurements:
 - Post grazing herbage mass
 - Herbage intake per cow
 - Herbage chemical composition
 - Soil physical (e.g. soil compaction) and chemical properties (e.g. nitrate content)
- animal welfare and condition observations

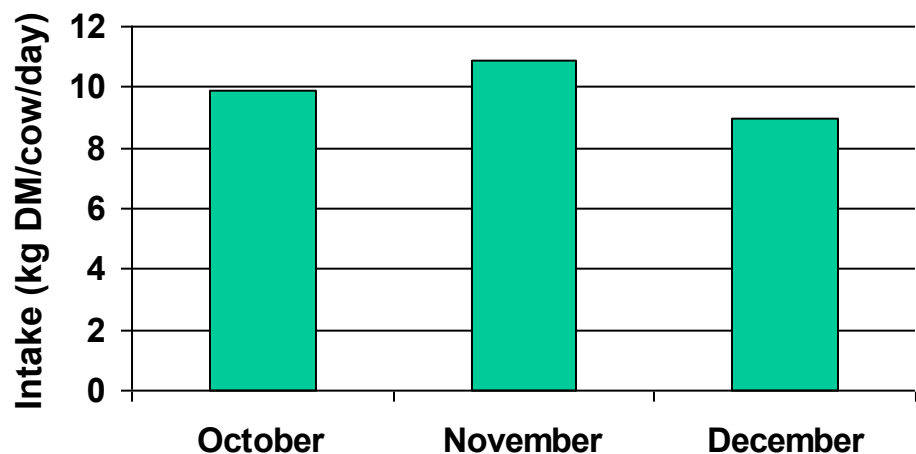


Results

Pre and post-grazing herbage mass



Herbage DM intake (kg DM/cow/day)



Some botanical composition results

Species	Oct.	Nov	Dec.
<i>Lolium perenne</i>	45.0	52.7	44.7
<i>Poa pratensis</i>	7.3	4.0	4.3
<i>Festuca rubra</i>	12.7	18.0	23.7
<i>Festuca pratensis</i>	1.7	2.0	0.3
<i>Agropyron repens</i>	6.0	3.0	6.0
<i>Bromus mollis</i>	4.7	2.7	6.0
<i>Deschampsia coespitosa</i>	+	2.3	
<i>Trifolium repens</i>	9.0	5.3	4.7
<i>Trifolium pratense</i>	1.0	1.3	0.3
<i>Achillea millefolium</i>	1.7	+	2.0
<i>Cichorium intybus</i>	+	+	0.3
<i>Geranium pusillum</i>	1.7	0.7	2.0
<i>Plantago lanceolata</i>	+	1.0	0.3
<i>Taraxacum officinale</i>	+	1.3	1.3
other species	9.3	5.7	4.0
Number of species	25	29	24

Results

Content of selected chemical components in the pasture sward (2010/2011)

Component (g/kg DM)	Oct.	Nov	Jan.	Sign.
Sugars	107.3	72.3	43.9	***
Cellulose	197.5	201.1	203.8	*
Hemicelluloses	199.3	193.8	214.9	*
Lignins	26.6	39.5	25.8	*
Ash	87.8	97.5	128.2	***
Calcium	10.8	13.4	8.2	**
Magnesium	1.3	1.0	0.9	**
Phosphorus	3.6	3.7	4.2	ns
Potassium	24.8	11.0	20.7	ns
Sodium	2.6	1.9	0.8	***
Silica	4.6	3.5	1.8	***



Task 3. Efficiency of lamb production

- Experiment established April 2011, semi-natural lowland pasture, mineral soil
- Four paddocks per 1000 m²
- 20 lambs (aged 4-5 months, initial body weight 26-30 kg) grazed paddocks in continuous grazing system from 30. April to 7. October (160 days)
- Height of sward at level of 5-7 cm by changing the stocking rate, rising plate meter used to measure the height of sward



Task 3. Efficiency of lamb production

- 4 breeds (5 lambs per breeds) on separate paddock: i/ White-headed meat sheep, ii/ Wielkopolska sheep, iii/ Romanov sheep, iv/ Blanc du Massif Central sheep
- Forage from the pasture was the only feed, additionally the fresh water and minerals were served on the paddock
- Measurements:
 - Sward botanical composition
 - Herbage mass
 - Chemical composition of sward
 - weight gains controlled by weighing (5 times per grazing period)



Task 3. Efficiency of lamb production – breeds analyzed

White-headed meat sheep



Wielkopolska sheep



Task 3. Efficiency of lamb production – breeds analyzed

Romanov sheep



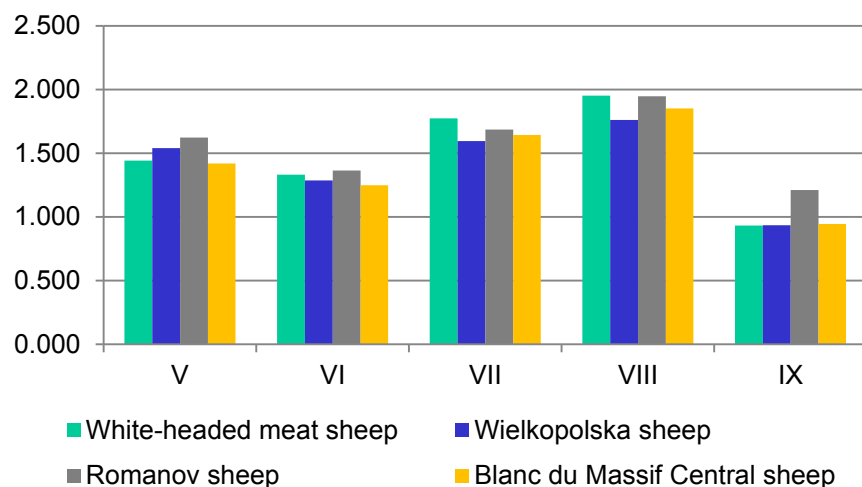
Blanc du Massif Central sheep



Results

Paddocks (P) grazed by;
P1. White-headed meat sheep
P2. Wielkopolska sheep
P3. Romanov sheep
P4. Blanc du Massif Central sheep

Sward DM yield in grazing period (t/ha)

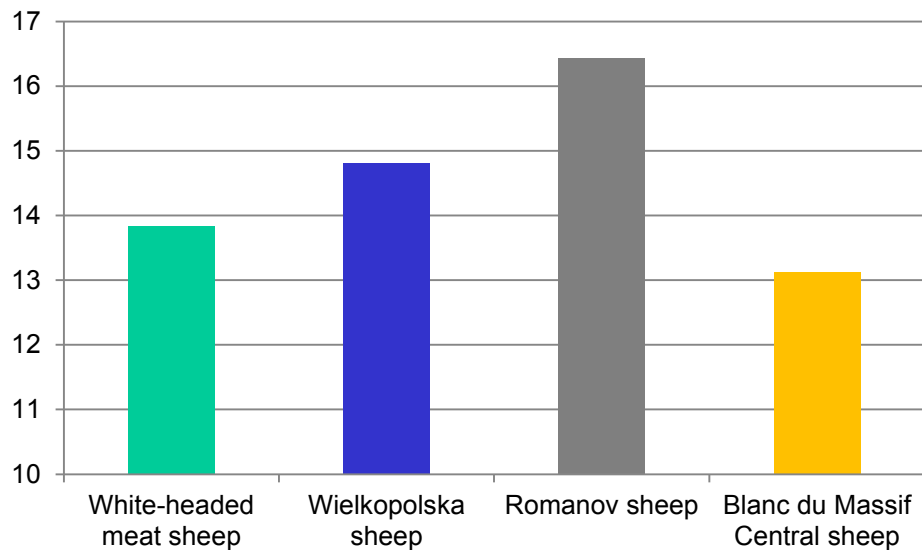


Coverage of paddocks area (%)

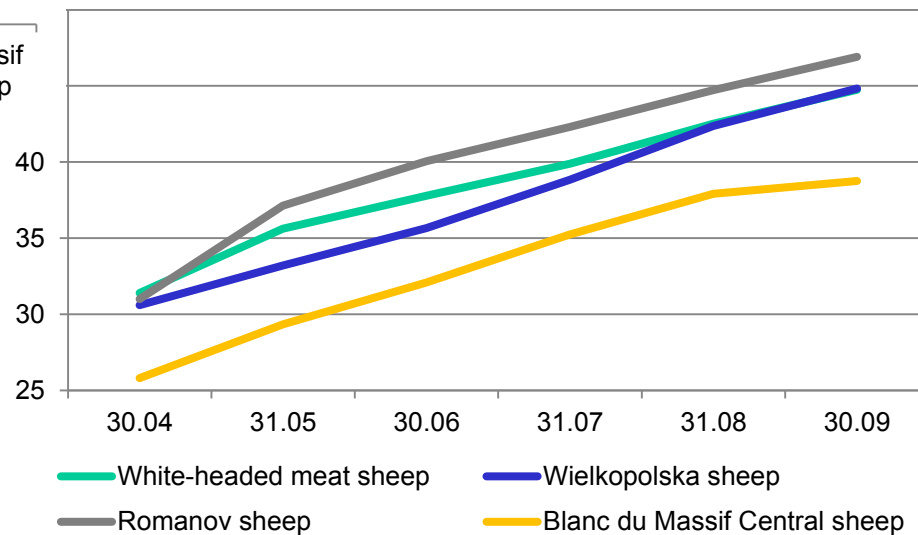
Species	P1	P2	P3	P4
<i>Festuca arundinacea</i>	12.8	8.2	8.3	12.9
<i>Festuca rubra</i>	16.0	17.3	13.7	15.8
<i>Lolium perenne</i>	49.2	52.8	57.1	52.3
<i>Phleum pratense</i>	14.8	13.6	10.3	11.6
<i>Poa pratensis</i>	1.4	1.9	2.4	2.0
<i>Agropyron repens</i>	+	+	0.2	+
<i>Poa trivialis</i>	1.6	2.1	2.0	2.3
<i>Trifolium repens</i>	0.7	0.8	1.7	1.0
<i>Achillea millefolium</i>	0.6	+	1.0	+
<i>Bellis perennis</i>	0.1	+	0.3	+
other species	0.3	0.2	1.1	0.3
gaps	2.6	3.2	1.9	1.8
Number of species	16	15	16	15

Results

Increase of body weight of lambs during grazing period (kg)

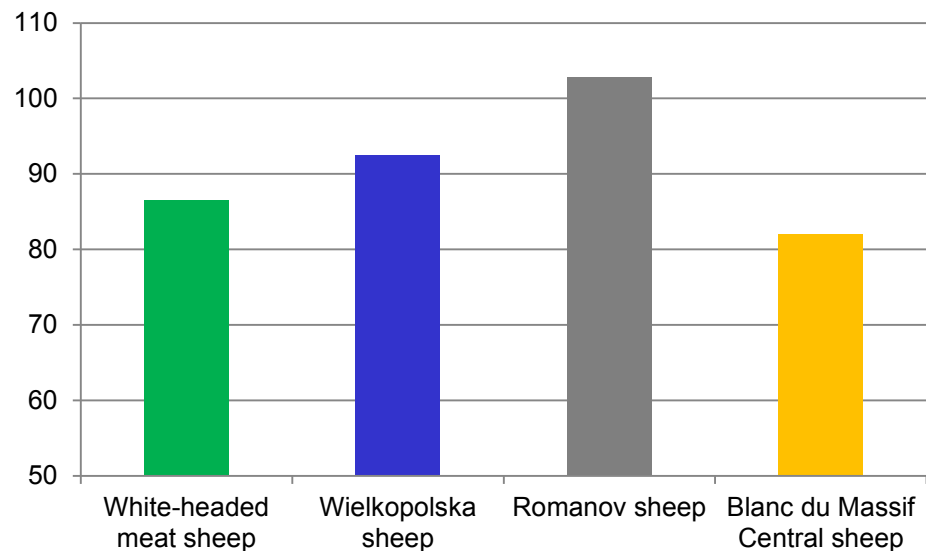


Development of body weight of lambs during pasture period (kg)

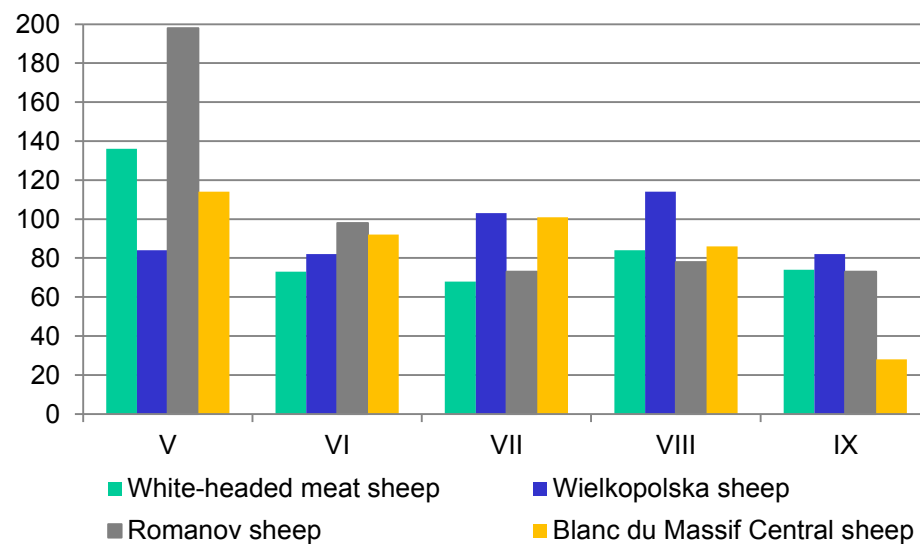


Results

Mean body gains of lambs (g/day)



Body gains of lambs during pasture period (g/day)



Grazing in Poland - Final remarks

- Decreasing role of pasture sward in the nutrition of dairy cows
- Increased use of grassland resources by grazing beef cattle (suckler cows, young beef)
- Growing importance of pastures in horse breeding and rearing
- Dramatic situation in sheep production and pasturing influencing the biodiversity and landscape quality, particularly in mountain regions
- Attempts to restore sheep grazing in mountain regions using the regional programmes
- Innovations in grazing, among others in Multisward project (extension of grazing period for beef cattle, evaluation of lamb production in continuous grazing system regarding to different breeds)