

EXTENSIVE GRAZING OF POLISH HEATH SHEEP ON PASTURES ESTABLISHED ON FALLOW LANDS IN NORTH-WEST POLAND



1

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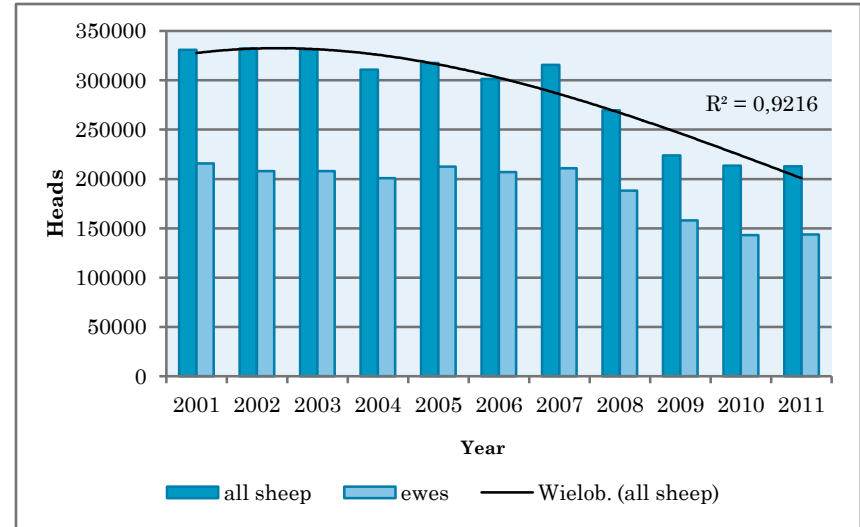
GRAZING SHEEP IN POLAND – SOME FACTS

○ Declining sheep population in Poland:

- Total no of **sheep** in 2011 - 212 740 hds ¹
- Total no of **ewes** in 2011 - 143 823 hds ¹

○ Average flock size in 2010 ² :

- 66.4 registered ewes per flock (1064 flocks in total)



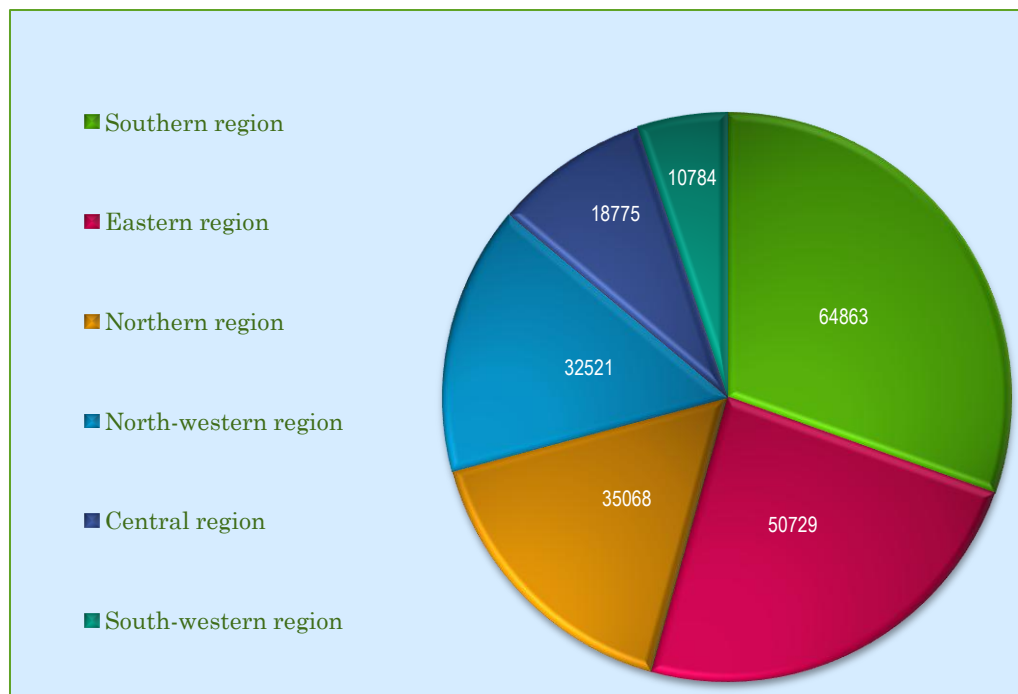
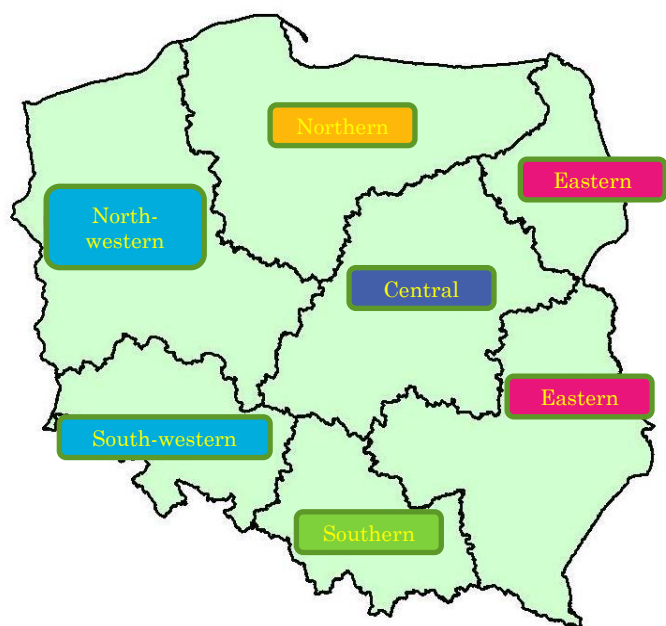
○ Grazing sheep:

- During vegetation period (May→October):
 - Lowlands – 180-200 days
 - Mountains – 110-150 days
- Permanent pastures

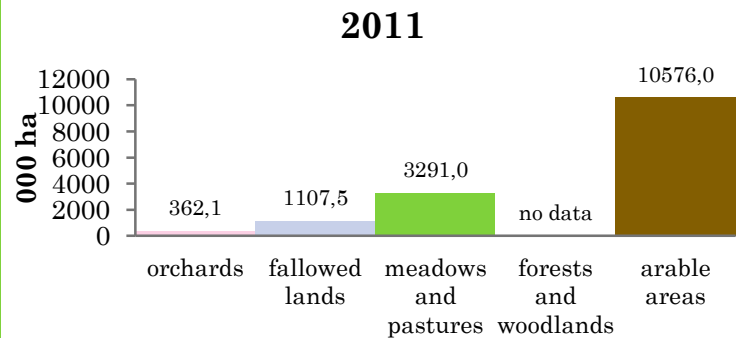
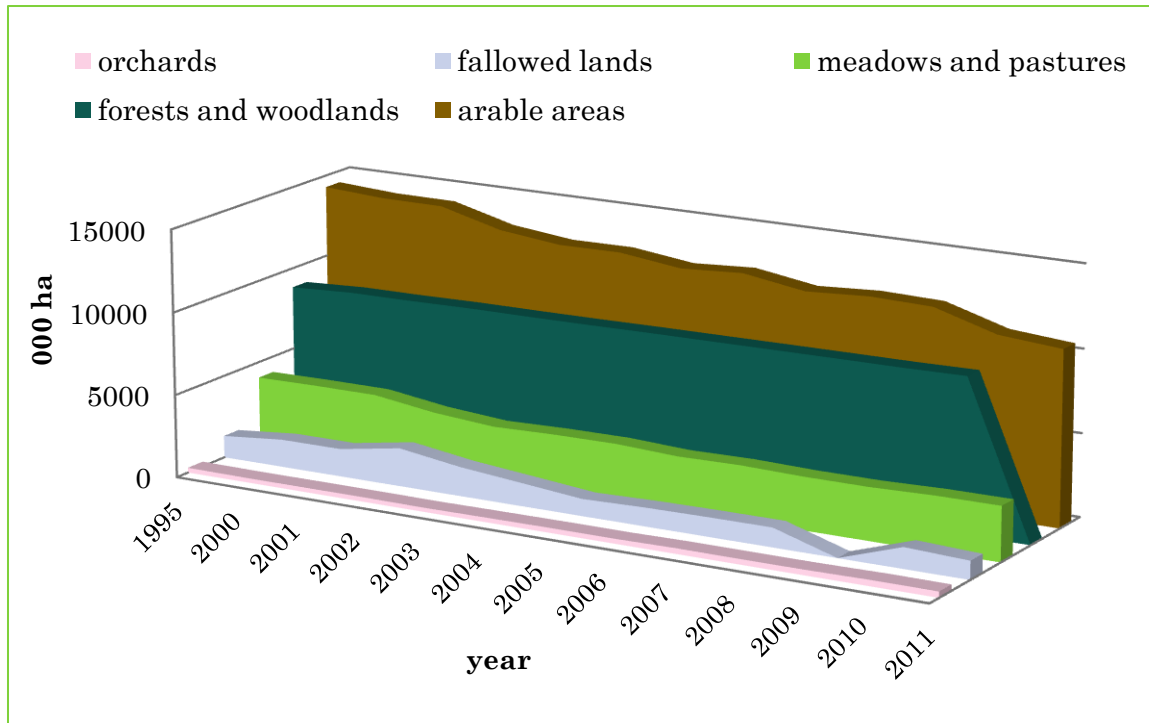
○ Systems:

- Podhale (Tatry mountain) - sheep combined in one flock and grazed on mountain pastures (with guard); gathering in pen for nights
- Lowlands and others – guarding grazing, sheep come to barns for nights

DISTRIBUTION OF SHEEP POPULATION DUE TO THE REGION OF POLAND IN 2011 ¹



LANDS STRUCTURE IN POLAND¹





5

THE RESEARCH

SHORT DESCRIPTION OF RESEARCH IDEA

○ Aim:

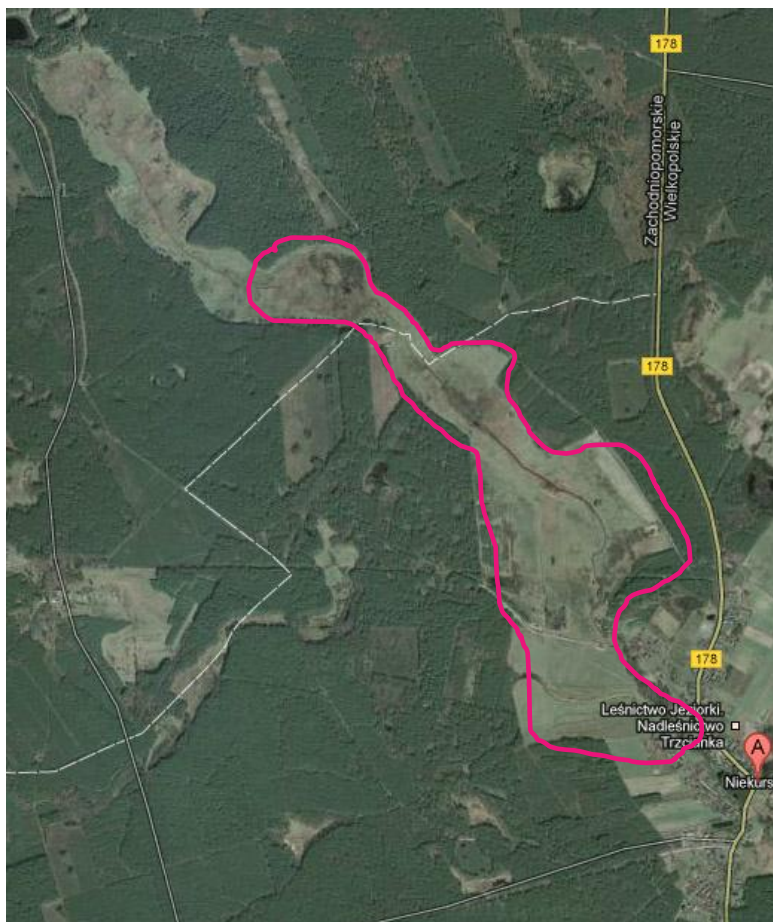
- Investigation of nutritional value of pastures established on fallow lands for extensive grazing of primitive sheep breeds

○ Focal points:

- Analysis of herbage – botanical and chemical
- Estimation of productivity and nutritional value of this areas
- Growth performance of Polish Heath Sheep under extensive conditions of grazing



MATERIALS AND METHODS



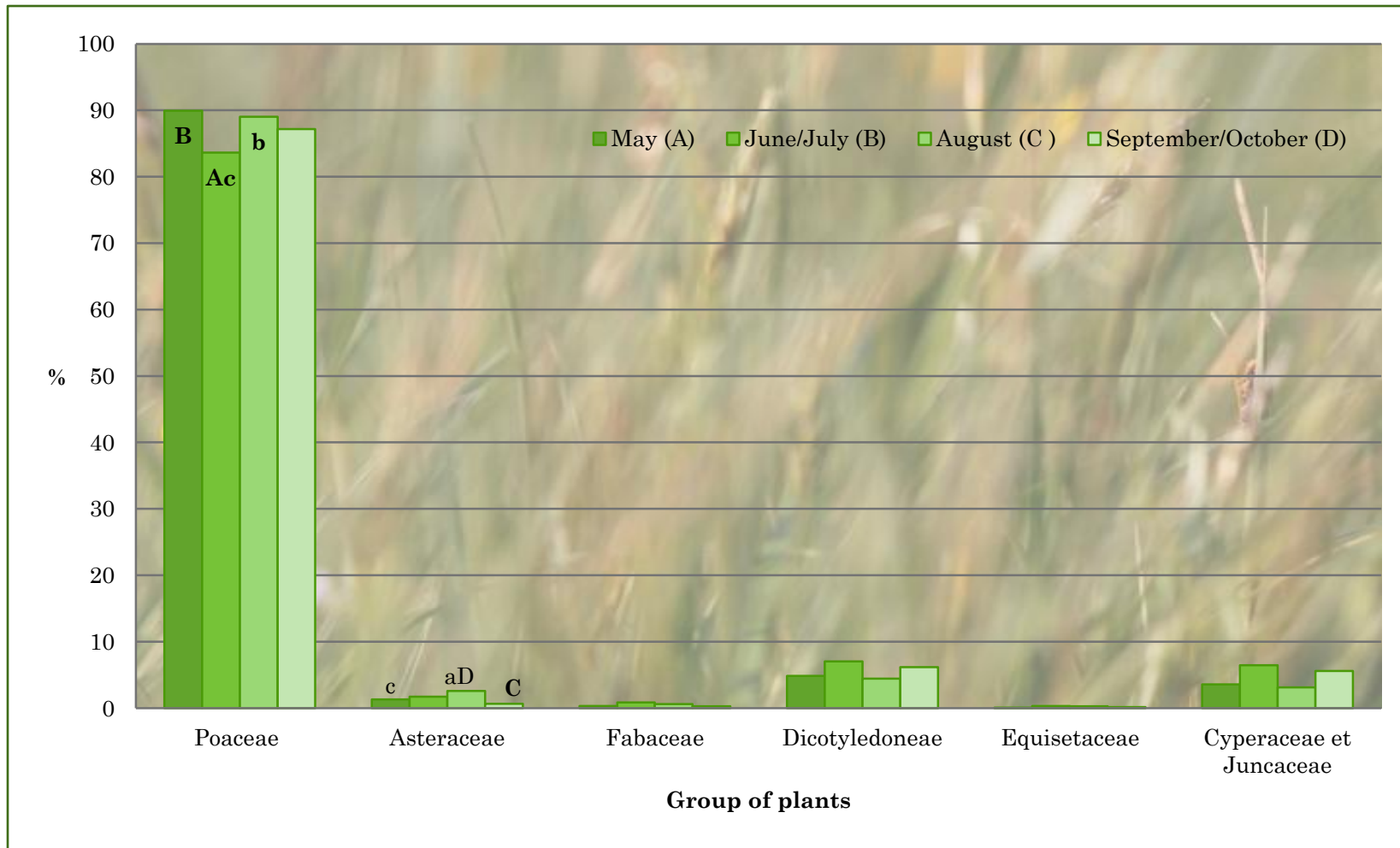
- Polish Heath Sheep (ewes and lambs) – ~100 ewes/yr
- Three repeats: 2006-2008
- North-western part of Poland
- Pastures established on fallowed lands surrounded by woodlands – 50 ha, no additional fertilizations;
- Grazing: 0,2 LSU/ha
- Vegetation period: May \Rightarrow October
- Places of plant sampling: ~5% of total area
- Herbage samples: 4 x yr and 4 x different places per year (48 samples in total)
- Weighting of ewes and lambs: 2 x yr (Spring/Autumn); only ewes with lambs born before grazing season started
- Statistics:
 - General linear models (SPSS v.10)
 - Effects of:
month of vegetation period + year of experiment + place of sampling (herbage) or sex (animals) + double factors' interactions.



8

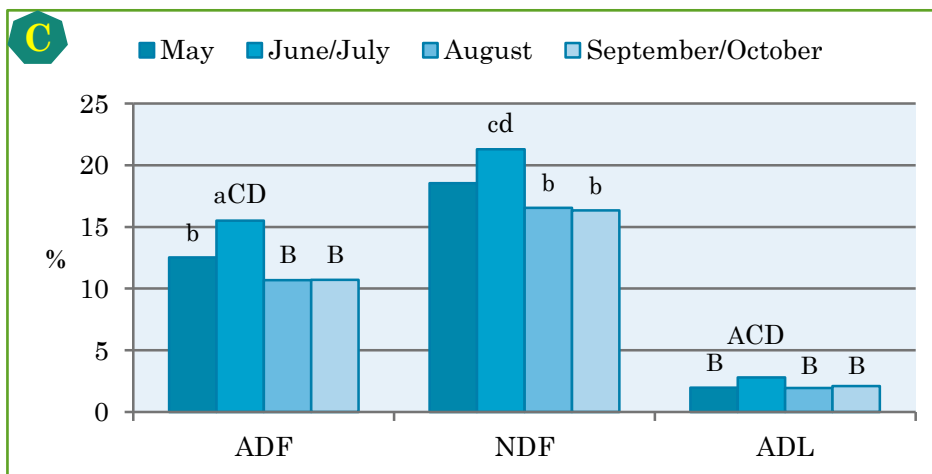
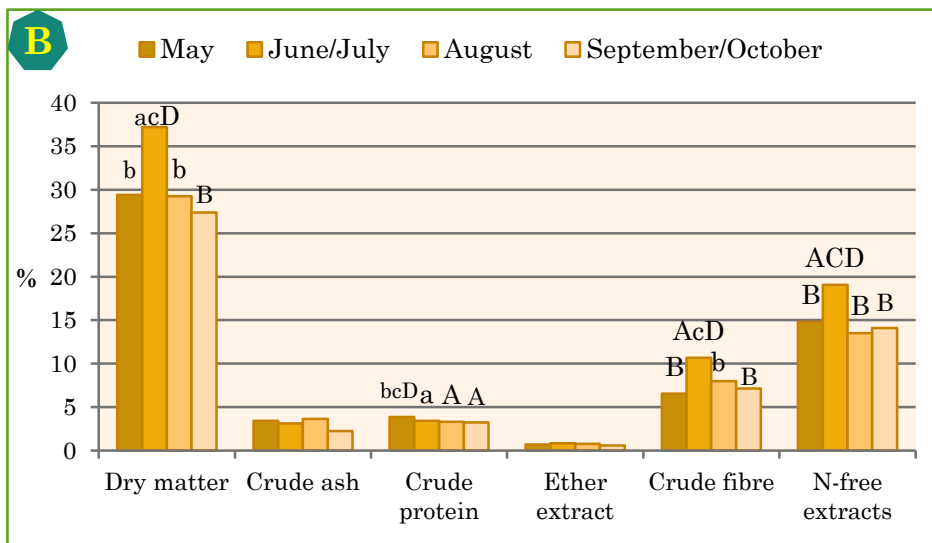
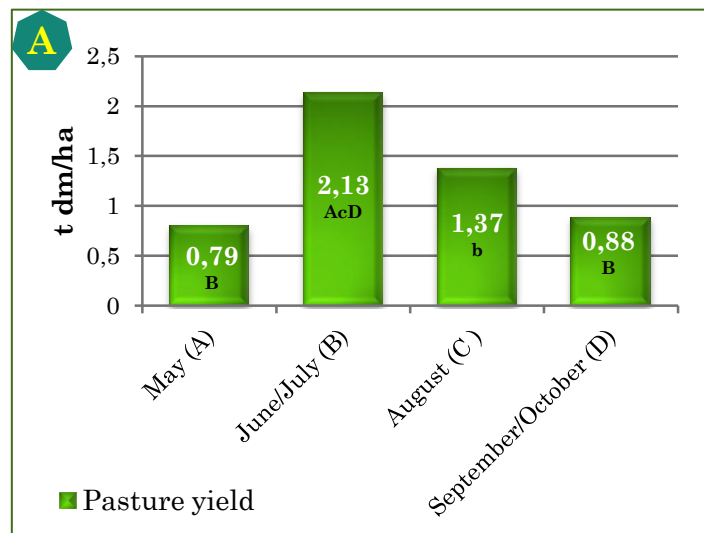
RESULTS

EFFECT OF VEGETATION MONTH ON BOTANICAL COMPOSITION OF HERBAGE



Statistical significance at: a, ..., d – $P < 0.05$; A,...,D – $P < 0.01$

EFFECT OF VEGETATION MONTH ON PASTURE YIELD^(A), CHEMICAL COMPOSITION^(B) AND FIBRE FRACTIONS^(C) OF HERBAGE



Statistical significance at: a, ..., d – $P < 0.05$; A,...,D – $P < 0.01$

EFFECT OF VEGETATION PERIOD ON BODY WEIGHTS OF EWES AND LAMBS

Live body weights of:		Vegetation period:		N
		Beginning	End	
Lambs (kg)	LSM	9,13	19,98**	240
	SE	0,55	0,55	
Ewes (kg)	LSM	31,06	35,68	192
	SE	2,50	2,50	

Statistical significance at: ** - $P < 0.01$



CONCLUSIONS

- Month of vegetative period affected botanical composition of pastures (*Poaceae* and *Asteraceae*) as well as average pasture yield.
- Sufficient environmental conditions for rearing lambs were observed.
- Average body weight of lambs at the end of grazing season was significantly higher comparing to the beginning.
- No significant increase of body weights of ewes during grazing season was observed.
- Maintaining studied area as a permanent grassland could be perfectly realized via extensive grazing of Polish Heath Sheep.

THANK YOU FOR YOUR ATTENTION!

