



Prospects for the use in Poland native breeds of cold-blooded horses – illusions or reality?

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In the countries of Central-East Europe there are more than half of the population of cold-blooded horses although in intensive agriculture **draught horses** have long since been **eliminated**. In the EU, including the countries of Central-East Europe have been taken **Animal Genetic Resources Conservation Programs** financed under Common Agricultural Policy. In Poland, from 2008 are implemented programs for local and native populations of cold blooded horses: **Sokolski and Sztumski**. Already in the first half of XX century this two population have been highlighted and references in the animals production manuals. The data indicate that the number of cold-blooded horses in Poland tends to **decline**, but within the population included in conservation programs Sokolski and Sztumski **increases**.

The question is: what are the prospects for use these horses?



Background

- in the beginning of XX century in Poland local type of cold-blooded horses was used for working purposes: in agriculture, army and city transport;
- after II World War, with mechanization of agriculture the significance and number of working horse decreased;
- since the 1990's under the influence of movements related to environmental and biodiversity protection, appeared the necessity to preserve typical features of local breeds;
- currently in Europe they are 870 horse breeds (EFABIS). As a part of human heritage they are working horses.
- EU: *Examples of commitments covered by national/regional agri-environmental schemes are*
 - ***environmentally favourable extensification of farming;***
 - *management of low-intensity pasture systems;*
 - *integrated farm management and organic agriculture;*
 - *preservation of landscape and historical features such as hedgerows, ditches and woods;*
 - *conservation of high-value habitats and their associated biodiversity.*



FECTU - European Draught Horse Federation

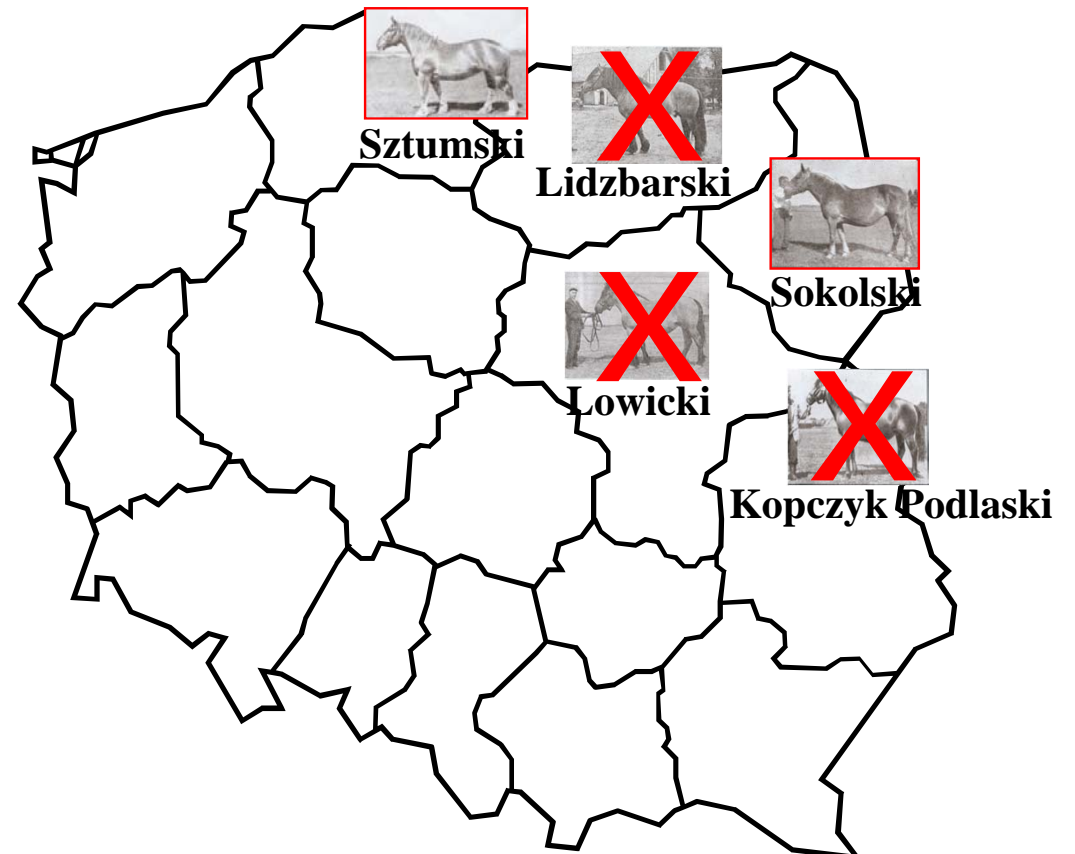
„The draught horse is being seriously re-evaluated as an energy source that has already been in use for thousands of years, and moreover one that is at the same time infinitely renewable and totally eco-friendly.”

- FECTU was established in 2004 with initiative of 3 countries: Luxembourg, France and Germany
- aims:
 - *participate in the **preservation of the draught horse heritage***
 - ***promotion of working and leisure use** of horses, with particular attention to welfare of the animals and the humans involved, and the environment*
 - *encourage cooperation between European organizations involved*
 - **research project: source of "pure" energy, environmental impact, modern harnesses**
- in 2014 – **5.000 members** from, 16 organizations from **11 countries: Germany, France, Great-Britain, Switzerland, Ireland, Austria, Sweden, Belgium, Norway, Finland, Portugal, Spain and Poland** - **only organization from East Europe** – PSUiPKRKPZZ (Polish Association of Friends of the Working Horses and Healthy Food Producers).



Poland

- The cold blooded horses lokal type has been created from the beginning of XX century.
- Influence of Ardennes, Breton, Belgian and German horses.
- environmental influences the north-eastern Poland
- Five local type: Sztumski, Sokolski, Lidzbarski (ex Oszmianski), Lowicki, Kopczyk Podlaski.



Sokolski



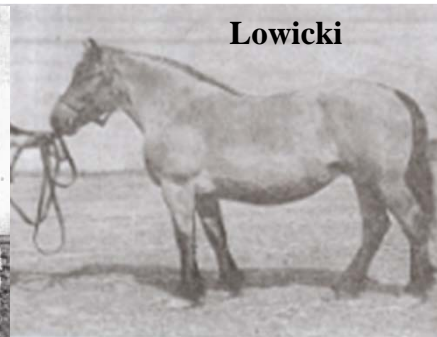
Lidzbarski



Sztumski



Lowicki

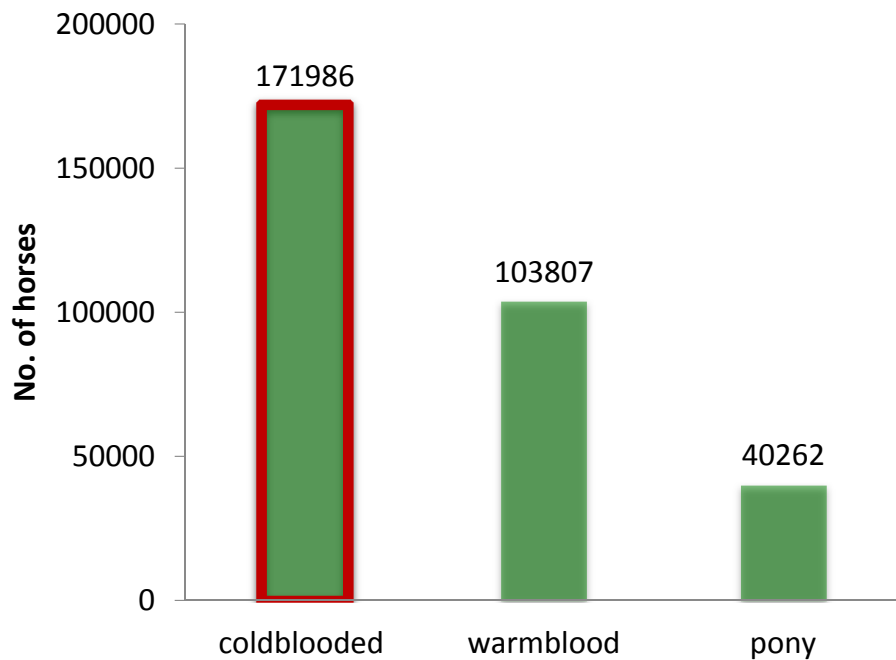


Kopczyk Podlaski

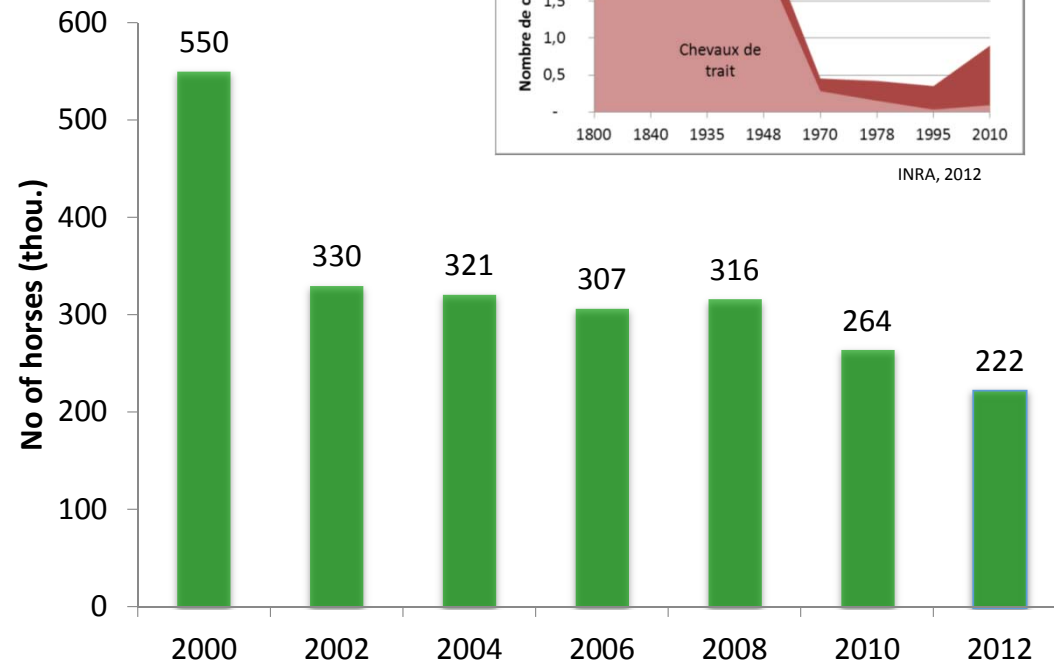


In 2012 in Poland they were 1 477 852 farms; only in 29 170 cases (2%) they were the farm with superficie > 50 ha. The number of horses in 2012 was 316 000:

- 54% was the cold blooded horses;
- 70% of them was the horses kept in the farms.

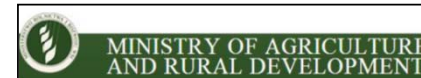


Total number of horses in Poland in 2012. (Polish Horse Breeders Association, 2014)



Number of horses in agriculture sector from 2000 to 2012 (Central Statistical Office, 2013)

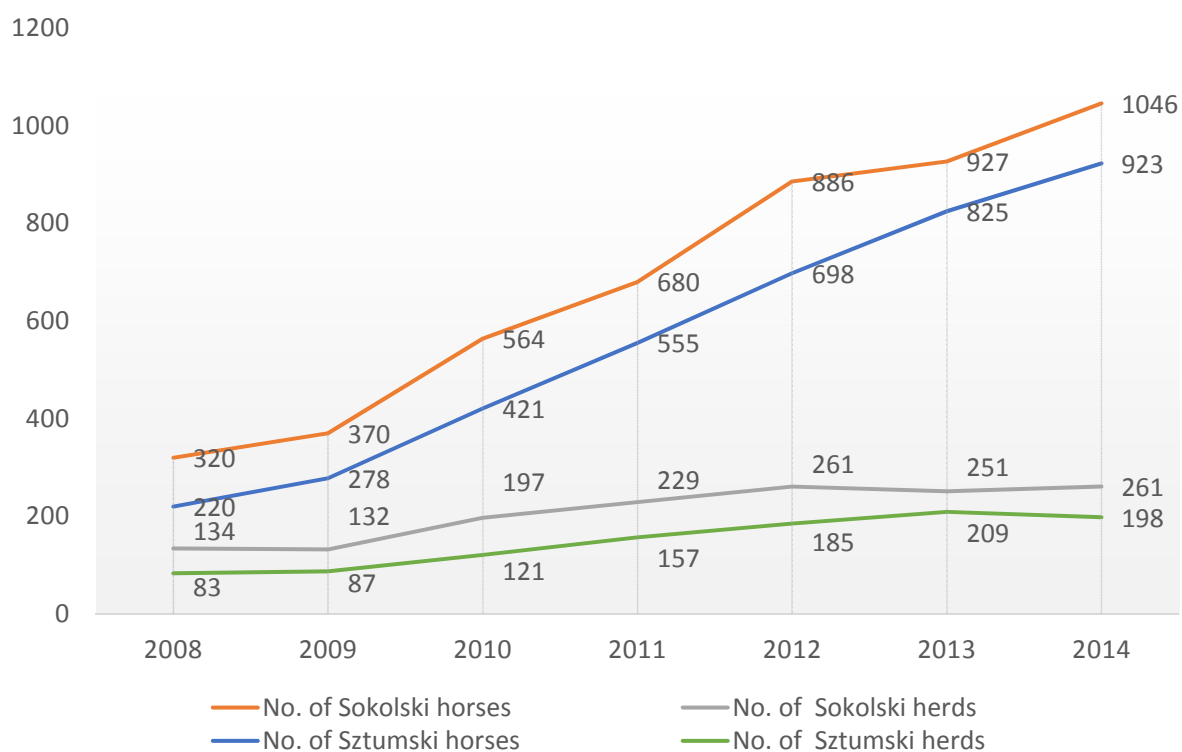
In 2008 has been created two **Genetic Resources Conservation Programs** of coldblooded horses.



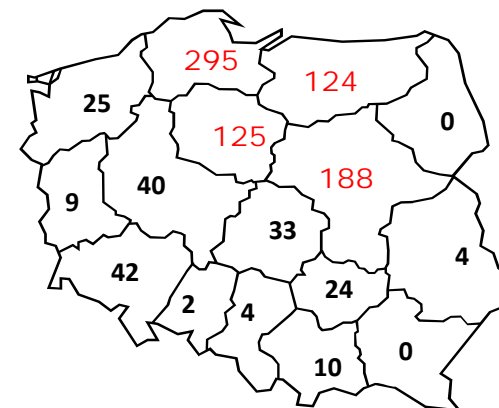
The general criteria for participation in the conservation programme include:

- typical morphological traits;
- pedigree requirements;
- at least two mares of a given breed recorded in the Stud Book of cold blooded horses.

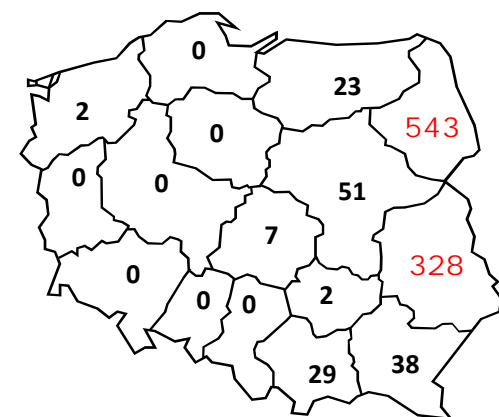
Number of Sokolski and Sztumski horses participating in Animal Genetic Resources Conservation Programs from 2008 to 2014



Data: Nationale Research Institute of Animal Production, 2014



Distribution of Sztumski horse in 2014



Distribution of Sokolski horse in 2014

What is the reason to maintain Sztumski and Sokolski horses? Who are the people keeping ? How they use this horses?



Enquiry:

The aim of the study is better understand motivation of breeders maintaining Sztumski and Sokolski horses. The analysis based on the results of **questionnaire** conducted among 460 breeders participating in the conservation program.

Results

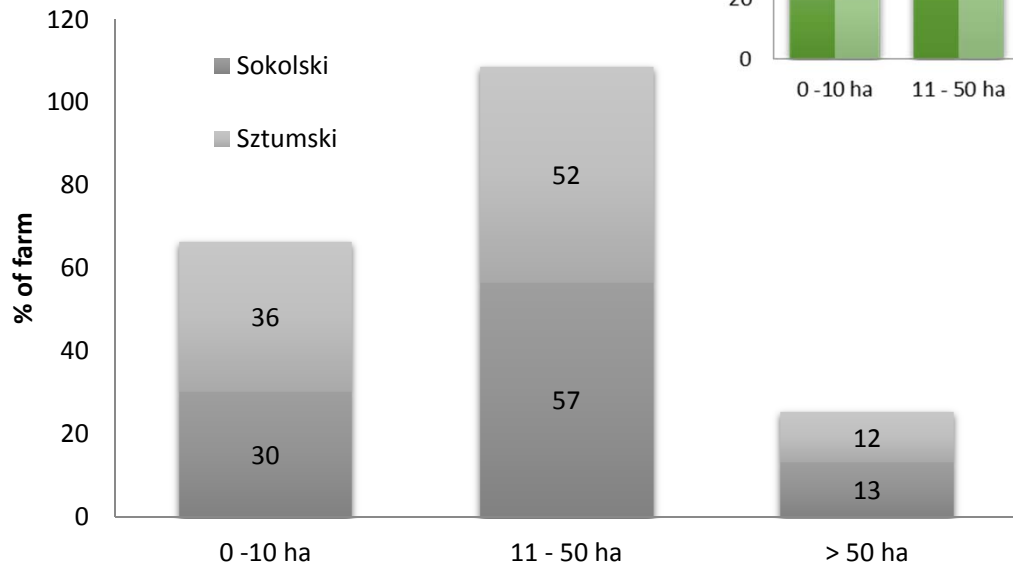
We received 126 (27%) completed questionnaires : 76 (30%) from breeders of Sokolski horses and 50 (23%) from breeders of Sztumski horses.

To find a relationship between participation in conservation programs, and other aspects of farms and farmers work, was carried out statistical analysis of the results using the chi-square (χ^2) test.

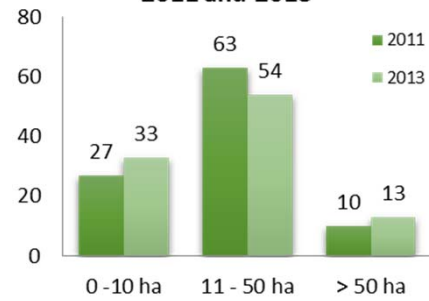
The results has been confronted with the result obtained from enquiry carried out in 2011.

Question 2

Farm size

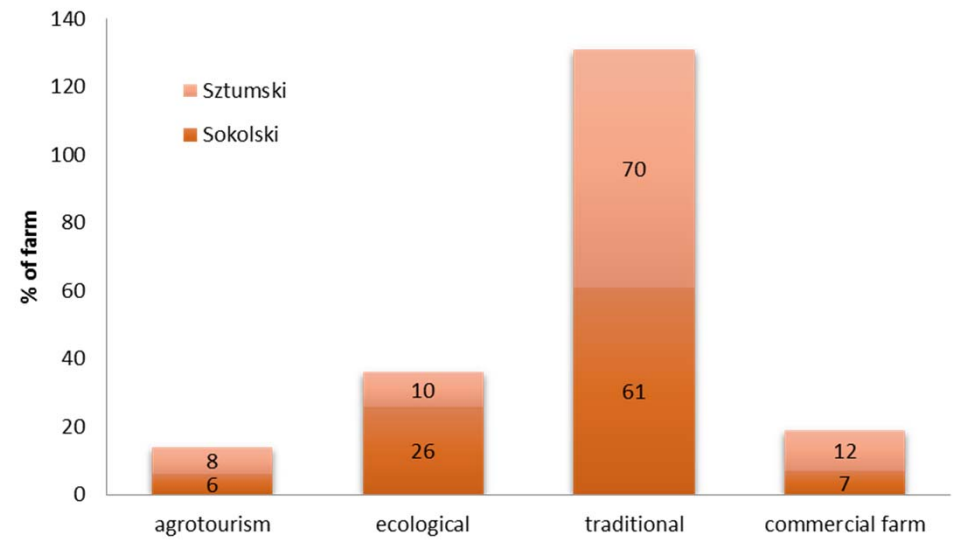


2011 and 2013



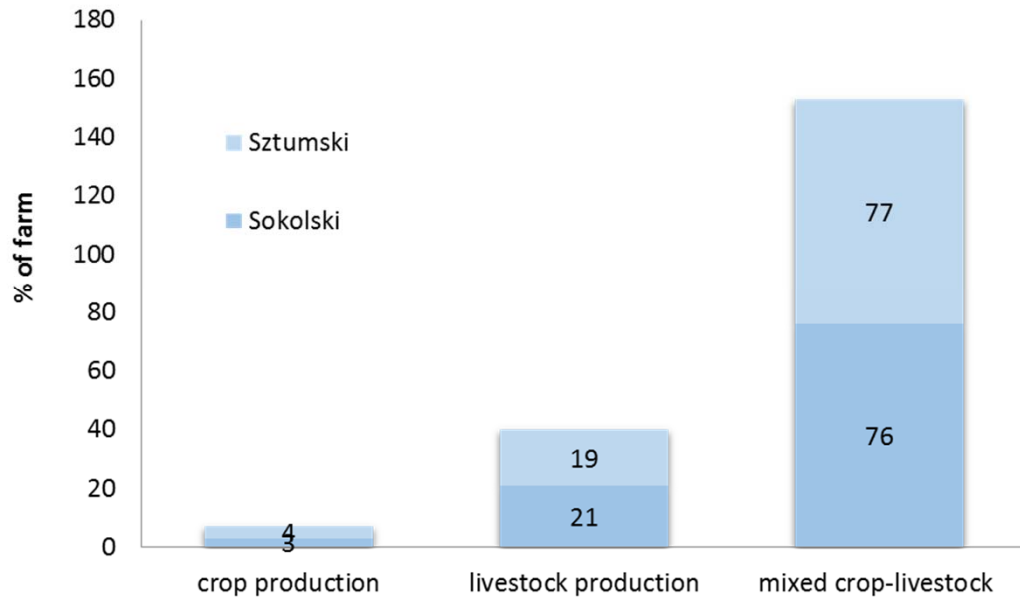
Question 3

Type of farm



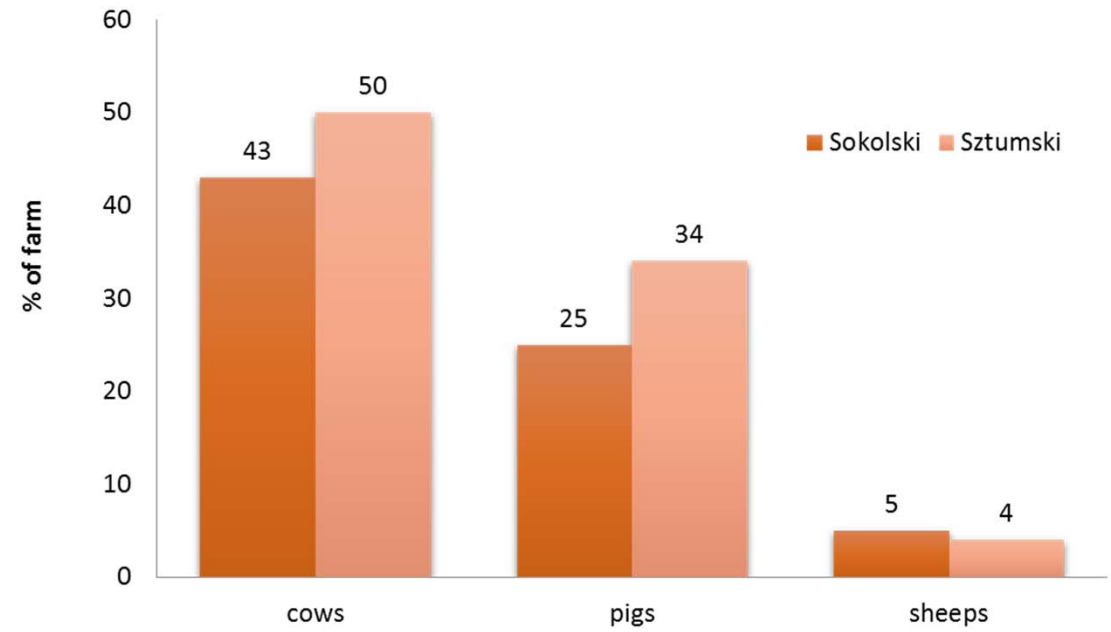
Question 4

Main direction of production



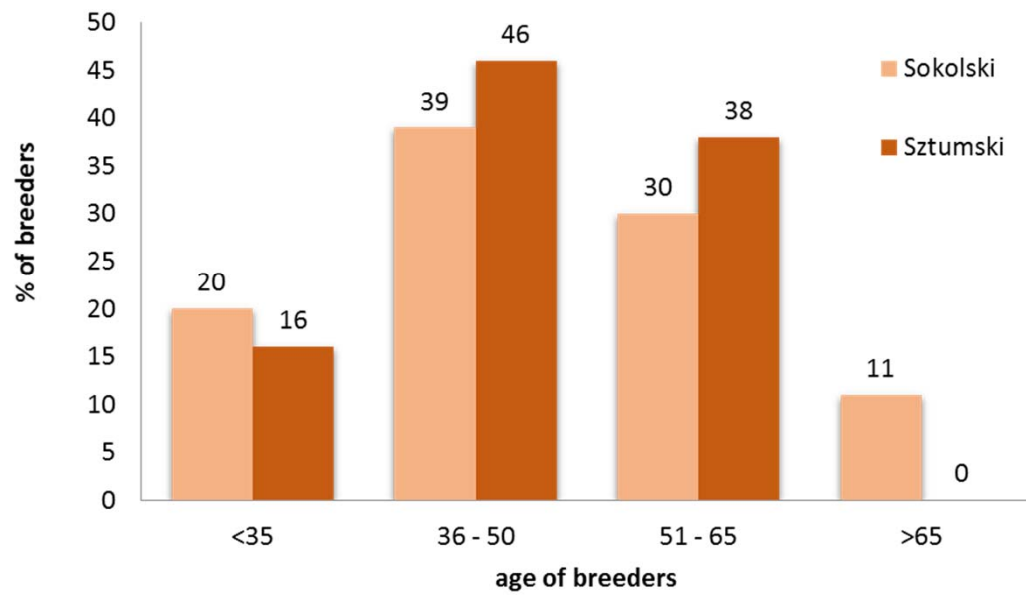
Question 5

Additional farm animal species



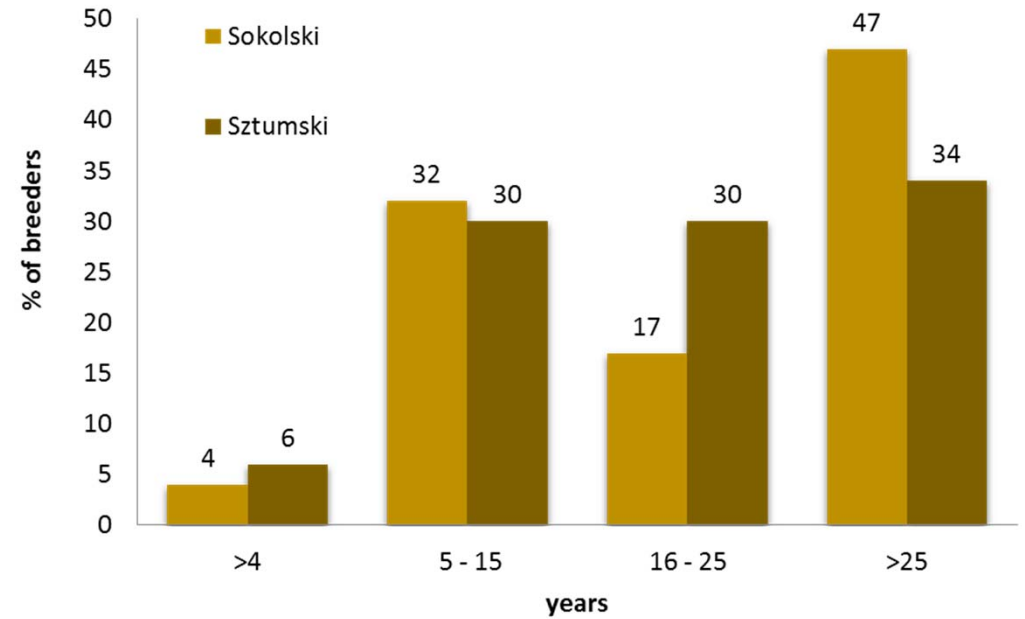
Question 6

Age of breeders



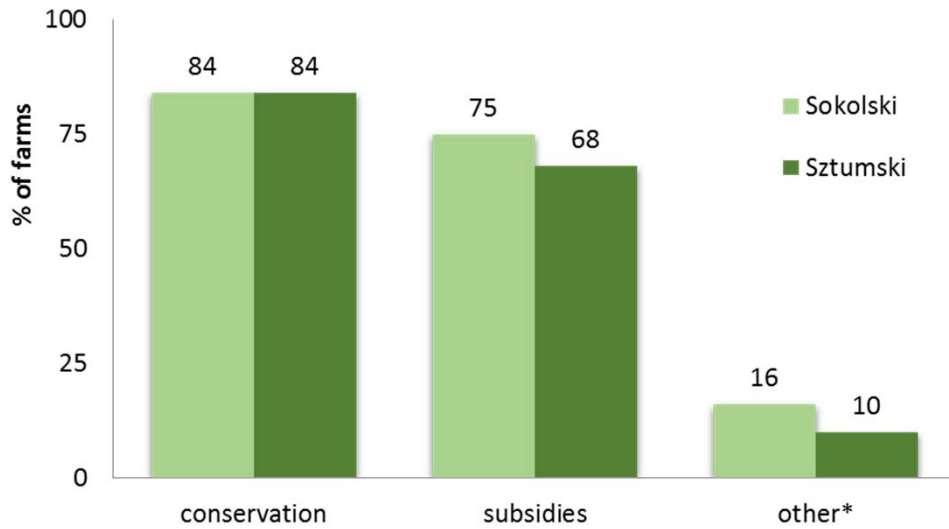
Question 7

Breeding experience



Question 8

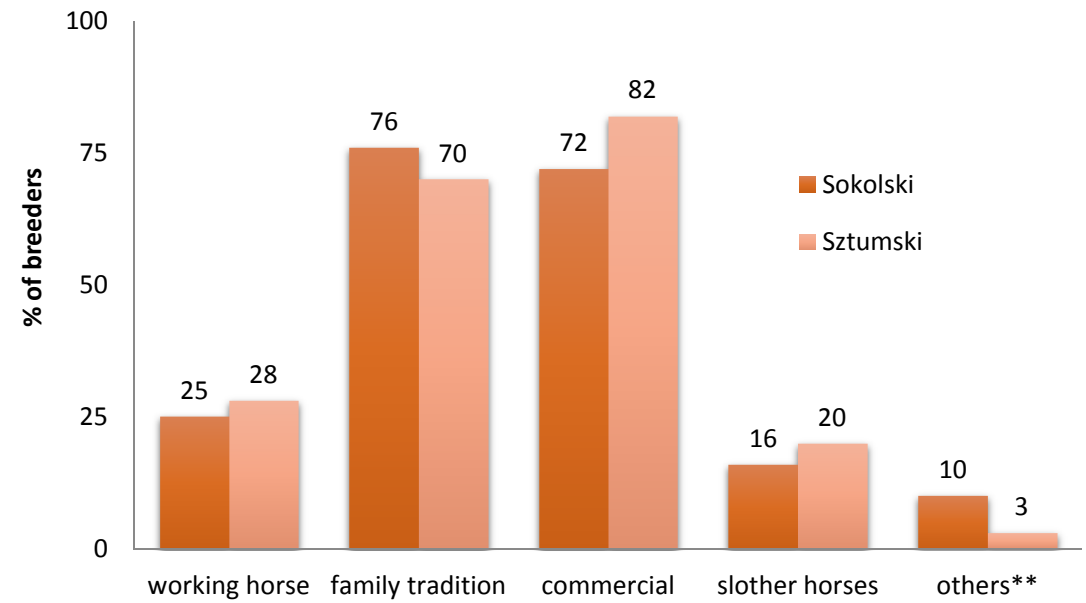
Reason of participation in Conservation Program



* - folkloristic events, traditional show, sleigh ride, the carriage, love for horses

Question 9

Motives of breeding horses



** - tradition, dissemination of knowledge, breeding culture

2011



2013

- more than **90%** have a small and medium size farm (<50 ha).
- most of the breeders keep horses for commercial causes (**73%**) and
- desire to save the breed (**65%**);
- for **63%** of breeders a key reason to participate in the conservation programme is the possibility to receive subsidies;
- **near 1/3** of breeders declared to use the horses in agriculture for draft purposes;
- **high number** of breeders keep another species of domestic animals: cows (**66%**); pigs (**32%**) and very rarely the sheep (**6%**)



- **87 %** have a small and medium size farm (<50 ha).
- most of the breeders keep horses for commercial causes (**76%**);
- for **84%** of breeders a reason to participate in the conservation program is the protection of native breed and
- possibility to receive subsidies (**72%**);
- **25%** of breeders declared to use the horses in agriculture for draft purpose;
- **decreased** the number of breeders keep another species of domestic animals: cows (**46%**); pigs (**29%**) and very rarely the sheep (**3%**)

The statistical tests showed a significant relationship between:

1. traditional farm and farm size (for the test value of $\chi^2 = 11,461$ and level of significance of $p = 0.003$);
2. production of the slaughter horses and possession of largest farms ($\chi^2 = 9,270$ and $p = 0.010$), long breeding experience ($\chi^2 = 10,590$ and $p = 0.014$); possibility of obtaining subsidies ($\chi^2 = 8,339$, $p = 0.002$);
3. working horses use the long breeding experience (over 25 years) ($\chi^2 = 12,175$ and $p = 0.007$);
4. desire to protect the native breed and possibility of obtaining subsidies ($\chi^2 = 9,144$, $p = 0.001$);
5. desire to protect the native breed and family tradition ($\chi^2 = 4,351$, $p = 0.037$);
6. the other motives for breeding horses and other reason of participation in Conservation Program ($\chi^2 = 20,928$, $P = 0.000$).

Thank you for attention