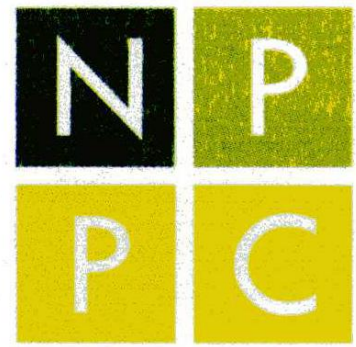


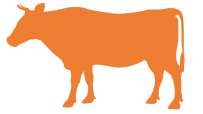
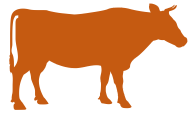
*5th International Scientific Conference „Animal Biotechnology  
Nitra, 7th December 2017*



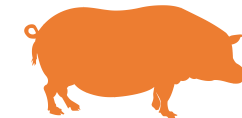
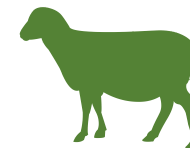
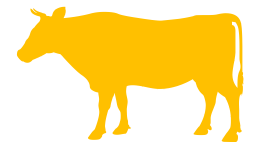
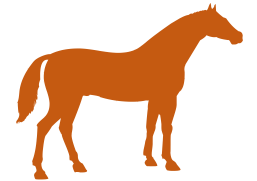
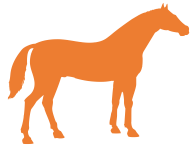
# **Realisation of animal genetic resources conservation programs in Poland**

*Polak, G.M National Research Institute of Animal Production,  
Department of Animal Genetic Resources National Focal Point  
[grazyna.polak@izoo.krakow.pl](mailto:grazyna.polak@izoo.krakow.pl)*





# What we have done to protect animal biodiversity ?



**And the LORD said unto Noah,**

**"Make yourself an ark  
from the cedar tree ...,  
of all the living,  
from every creature,  
enter two to  
The Ark would have survived with  
you,  
they will be male and female,  
with birds according to  
species and animals  
According to their species "**

**Genesis - Noah's Ark**



# Poland



- **Boleslaw Chrobry**  **prohibition of killing beavers and destroying their lodge (XI cent.);**

- **Bolesław IV the Curly**  **restricts hunting on the aurochs (XII cent.);**

- **Casimir III the Great**  **protection of the bee-keeping trees (1347) ;**



- **Władysław II Jagiełło**  **restricts hunting for wild**  **aurochs, bison, elk, beaver (1423);**

- **Stefan Batory**  **decree prohibiting fishing in spawning (1578) ;**





**1878 - The last bear died  
in the Bialowieza Forest**



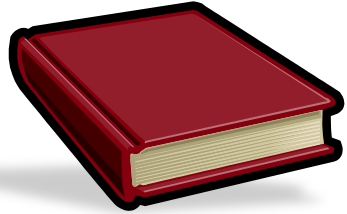
**1627 -  
Fell last  
in the  
world  
aurochs  
in the  
Jaktorow  
Forest**



**1919 -  
killed last  
bison in the  
Bialowieza  
Forest**



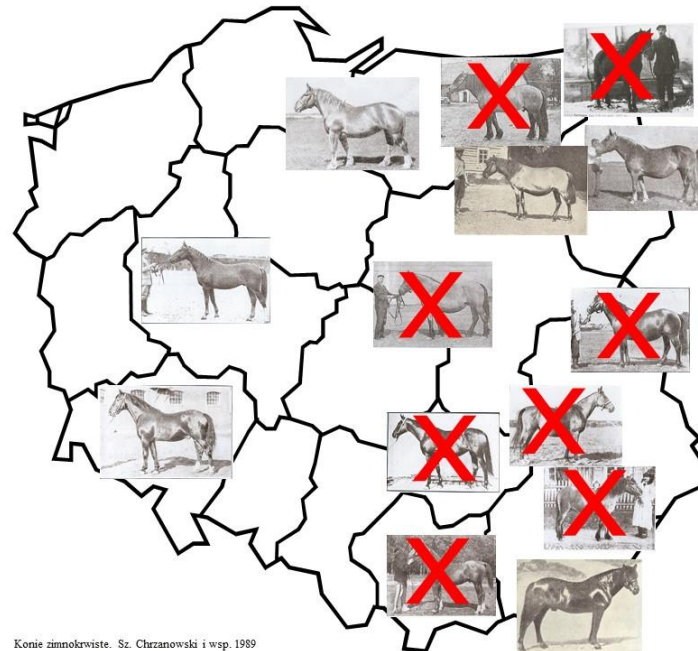
# Polish Animal Red Book



Around 600 species:

- mammals 16.4%,
- birds, fish - 18.1%,
- reptiles - 1.4%,
- amphibians - 2.9%.

The greatest threat to the **elimination of native breeds** occurred in the 70s of the XX century.



## XX century

**1936**

The first program in Poland for the CONSERVATION OF ANIMAL GENETIC RESOURCES developed by prof. Vetulani - Program for the Protection of Polish Konik.



## International actions

1992 – Conference on Diversity Biological - Rio de Janeiro, Brazil

1993 - FAO's World Strategy for the Preservation of Animal Genetic Resources  
*(Global Strategy for Management of Farm Animals Resources)*

2007 - International Conference on Genetic Resources for Animal

Nutrition and Agriculture, Interlaken, Switzerland

*Report on Animal Genetic Resources and World Action Plan for  
Animal Genetic Resources*





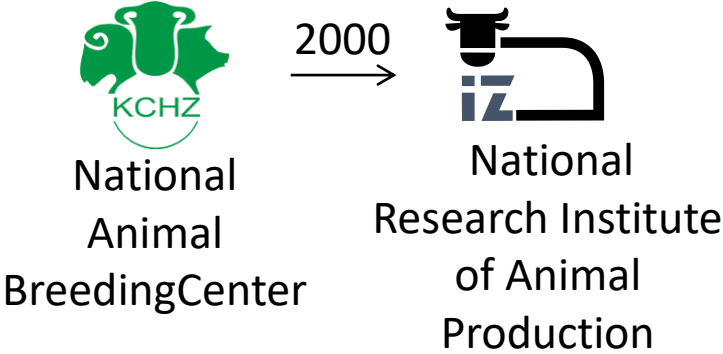
# In Poland

First work undertaken to save and preserve endangered breeds of farm animals was carried out by the National Institute of Animal Production, Institute of Genetic and Animal Breeding of the Polish Academy of Sciences other academic centers :

- inventory of endangered populations;
- restitution or conservation programs;
- establishment of special herd and genetic reserves.

In 1999, the domestic animal genetic resources conservation programs covered

1 cattle breed	– 150 cows
2 breeds of horses	– 400 mares
10 breeds of sheep	– 3645 ewes
3 breeds of pigs	– 575 sows
10 breeds of poultry	– 5500 females
4 breeds of fur animals	– 290 females
<hr/>	
Σ	30 breeds 10.560 females



# LEGAL BASIS IN POLAND

I. Ordinance of the Minister of Agriculture and Rural Development of 09 June 2004 on the institution empowered to implement or coordinate actions for the conservation of farm animal genetic resources

(Journal of Laws No. 152, item 1604) and 06 June 2008 (Journal of Laws No. 108 item 691):

*„National Institute for Animal Production entity implementing or co-ordinating activities in the scope of: protection of genetic resources livestock”.*

II. Act of of the Minister of Agriculture and Rural Development of 29 June 2007, about breeding and breeding organizations livestock (Journal of Laws No. 133 item 921), where

*„Race threatened - a population of livestock of a given breed, whose low or decreasing abundance threatens to extinction.”*

## **Article 28.**

**1. Rare breeds are protected by genetic resources, consisting in the maintenance of living livestock or the accumulation and storage of biological material from these animals.**

**2. The conservation of genetic resources is carried out in the manner defined in the Genetic Resources Conservation Programs.**

# PURPOSE AND AIMS OF CONSERVATION PROGRAMS

Conservation programs determine the **purpose** of running the program:

- **in-situ** conservation (target populations):
- assessment of **usefulness**,
- principles and methods of **breeding work** (eg. selection),
- **cryopreservation** of biological material (ex-situ protection),
- **conditions for participation** of breeders in the program,
- persons/institutions **participating** in the implementation of the program.

Program objectives:

- preserving the population and increasing its **number**,
- maintain the genetic **variability**,
- reconstitution/stabilization of specific **traits**.

In **2016**, the domestic animal genetic resources conservation programs covered:

	No. of breeds	No. of herds	No. of females	No. anim/herd
Horses	7	1.409	6.575	4,4
Cattle	4	797	7.933	9,8
Sheep	15	870	62.279	71,3
Goats	1	4	43	10,8
Pigs	3	98	2.389	24,4
Chickens	11	20	10.891	858,9
Geese	14	15	5.598	331,7
Ducks	10	10	3.986	406,5
Rabbits	1	8	350	43,78
Fur animals	12	28	862	30,8
Honey bees	5	56	1890 family	33,8
$\Sigma$	83	3315	102.796	

Konik Polski



Hucul horse



Sztumski horse



Sokolski horse



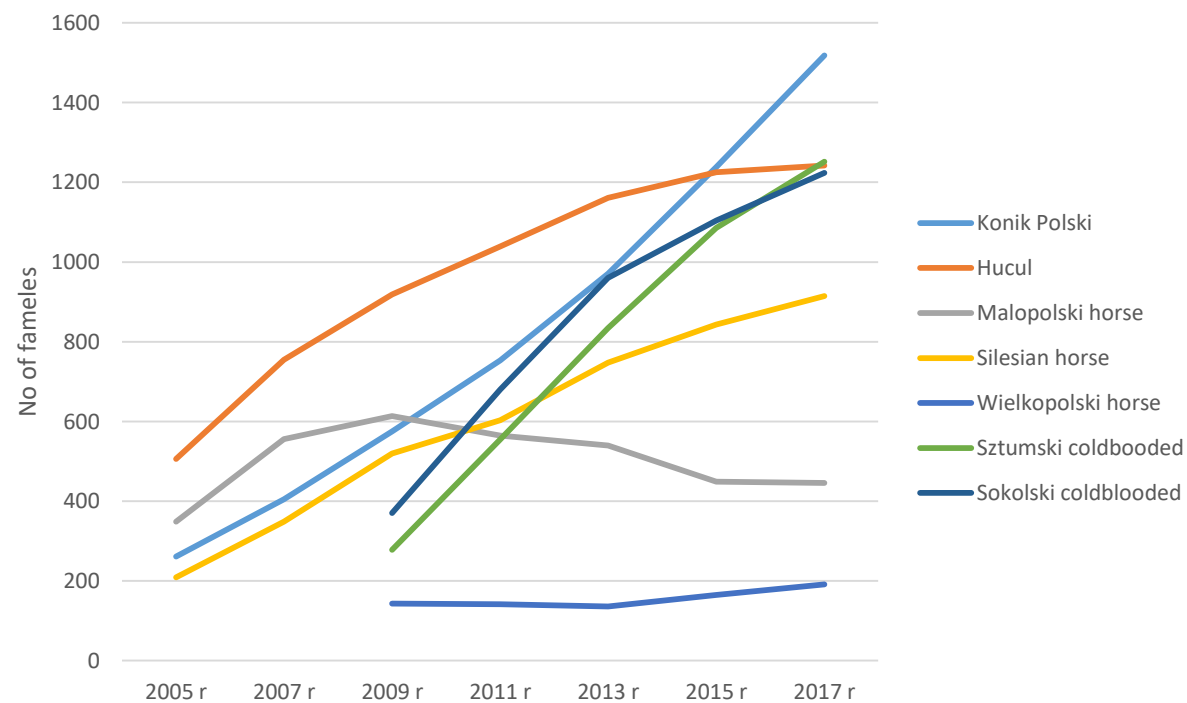
Małopolski horse



Wielkopolski horse



Śląski horse



Polish Red cattle



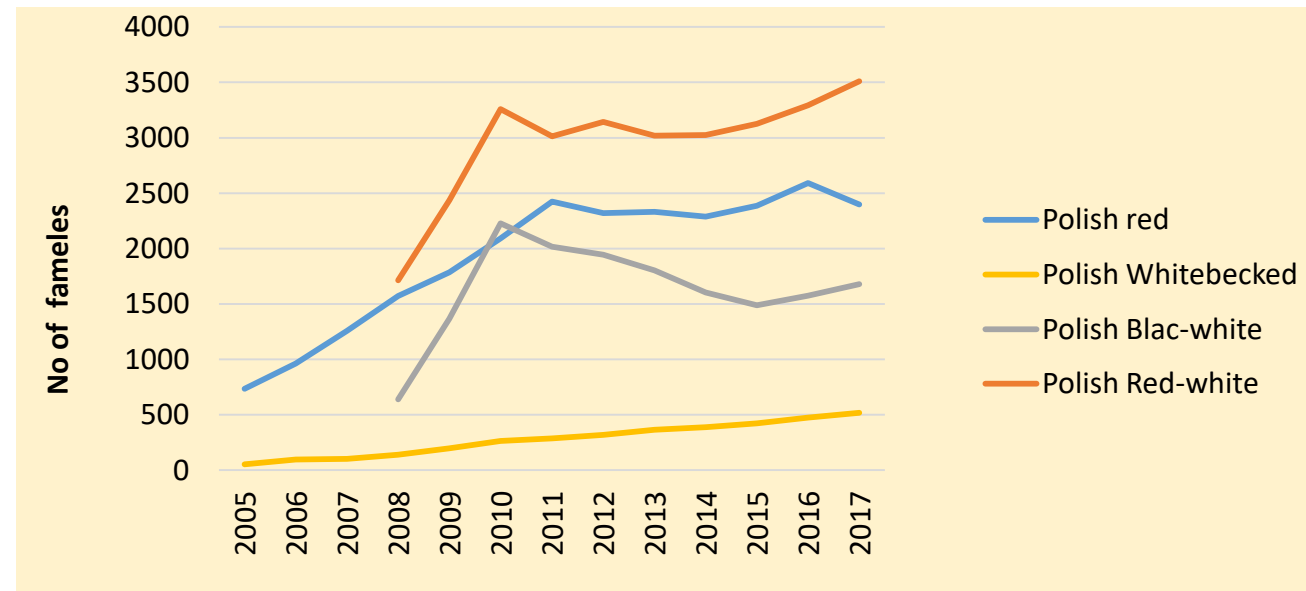
Polish Whitebacked cattle



Polish Red & White cattle



Polish Black & White cattle



Wrzosowka



Swiniarka



Coloured Mountain sheep



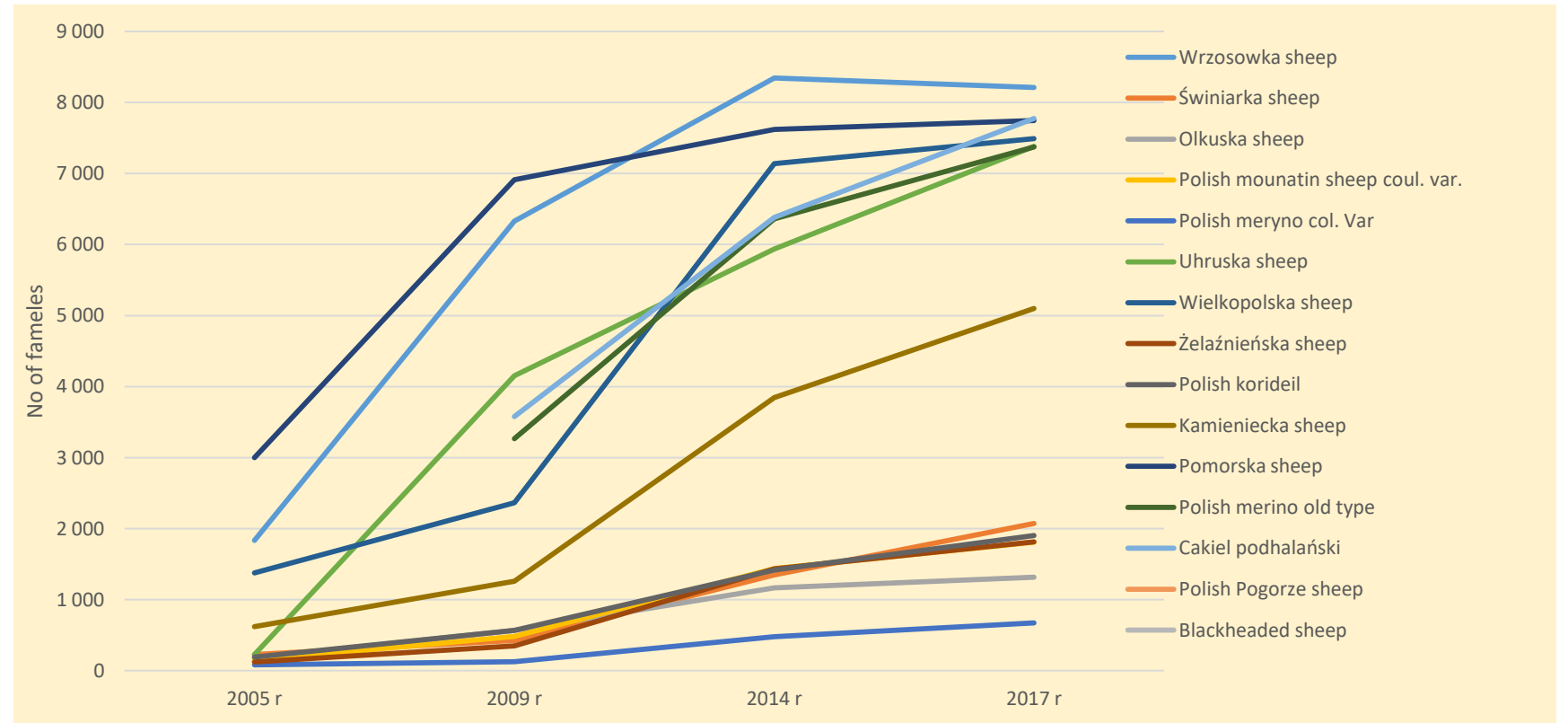
Olkuska sheep



Zelazna sheep



Old type Polish Merino





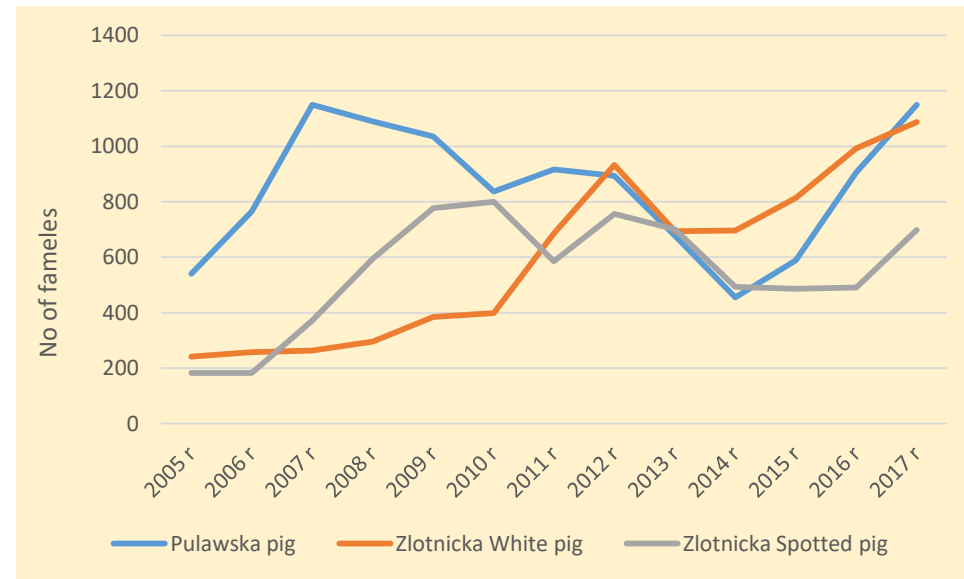
Zlotnicka White pig



Zlotnicka Spotted pig



Puławska pig



Pastel fox



White-necked fox



Polecat (*mustella putorius*)



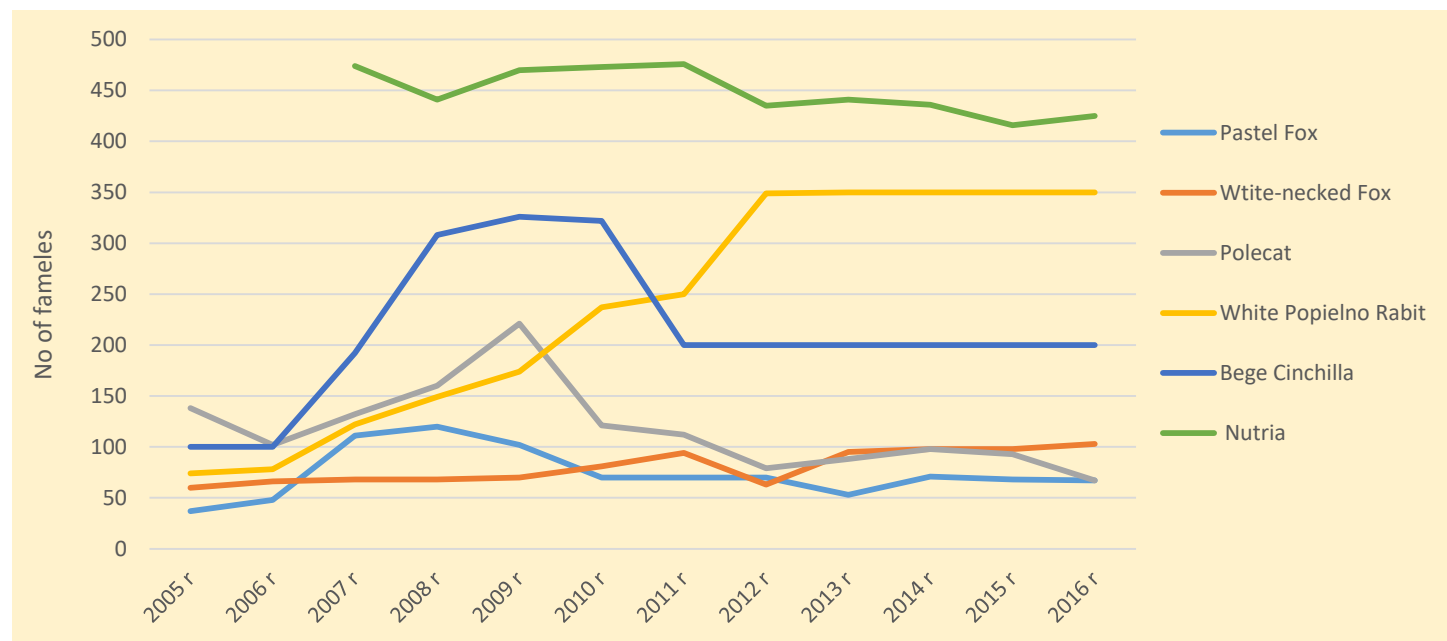
Nutria



Beige Chinchilla



Popielno White Rabbit





## Chicken

2016

no. of ♀

Green-Legged Partridge /Z11/

1166

Green-Legged Partridge /ZK/

800

Yellow-Legged Partridge /Z33

1172

Rhode Island Red (R-11)

949

Rhode Island Red (R-22)

1056

Rhode Island White (A-33)

1107

Leghorn (G-99)

803

Leghorn (H-22)

965

Polbar

800

Sussex (S-66)

952





## Geese (13 breeds)

2016	no. of ♀
Lubelska	308
Kielecka	340
Podkarpacka	356
Kartuska	353
Rypinska	340
Suwalska	325
Pomorska	309
Romanska	345
Slowacka	362
Landes	426
Kubanska	453
Bilgorajska	605
Zatorska	737





# Duck

2016	no. of ♀
Mini Duck (K-2)	209
KhO-1	220
LsA	224
Duński Pekin P-8	223
Francuski Pekin P-9	208
Polski Pekin P-33	223
Polski Pekin P-11	506
Polski Pekin P-22	706
Polski Pekin P-44	761
Polski Pekin P-55	706





## Bees 2016

Middle European (*Mellifera mellifera*):

Lines:	no. of ♀
➤ Augustowska	527
➤ Kampinoska	159
➤ Północna	230
➤ Asta	200

*Mellifera carnica*:

Lines:	
➤ Dobra	408

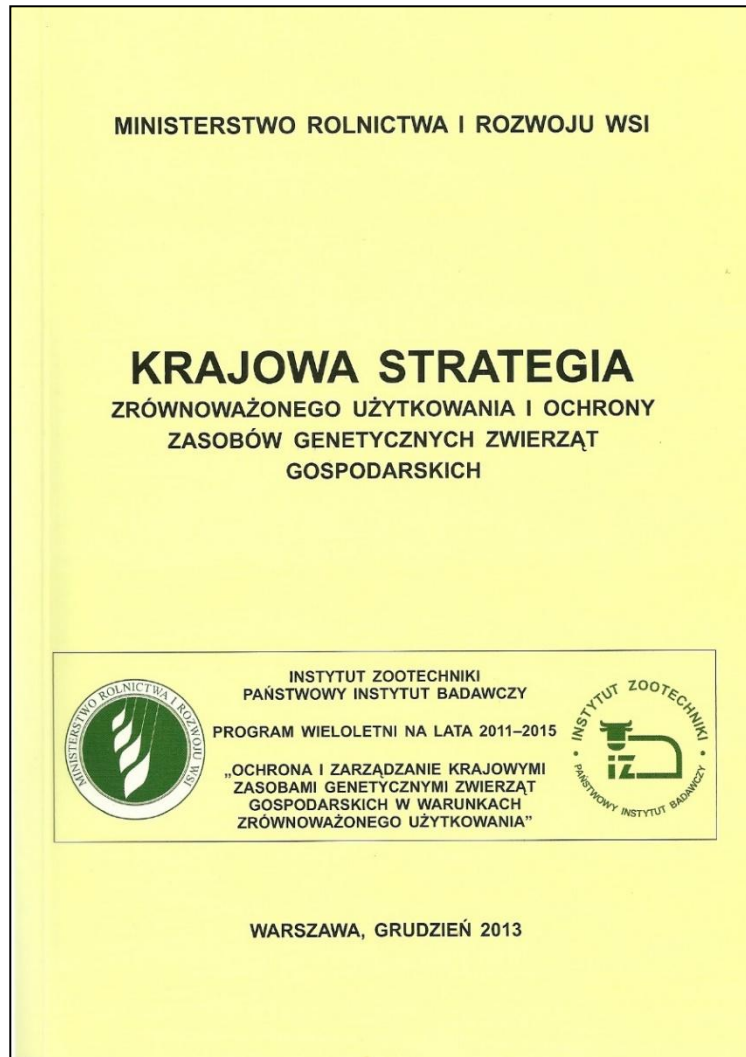




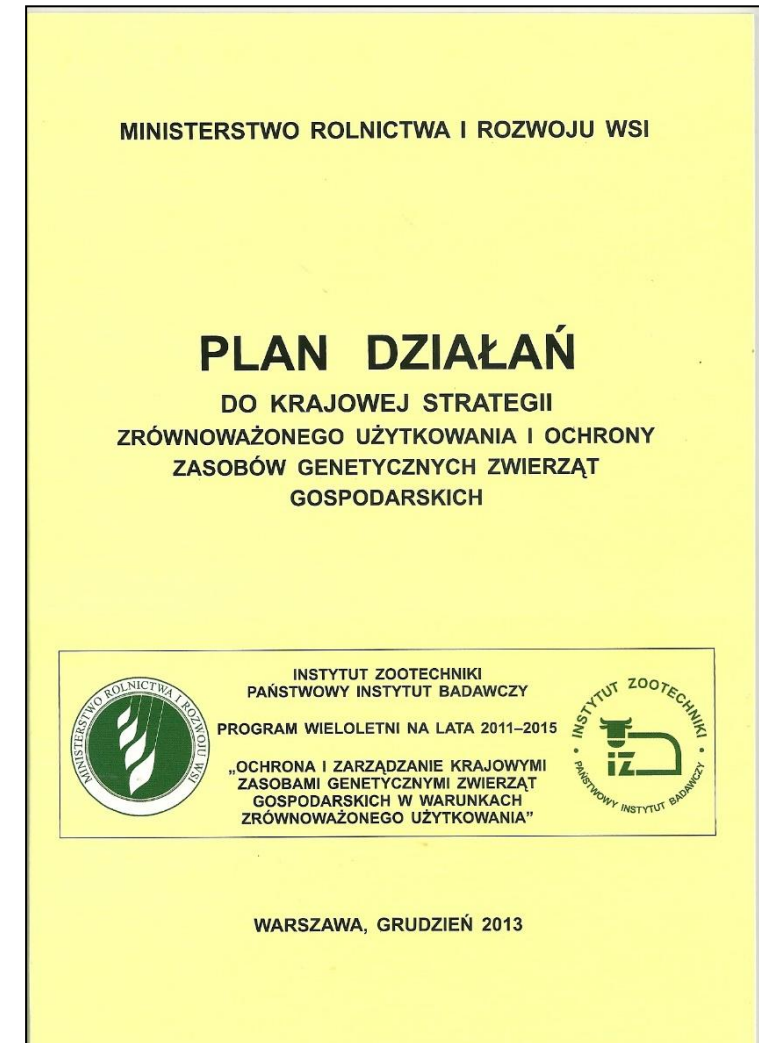
## Fish :

Carp ( <i>Cyprinus carpio</i> ):	no. of ♀
➤ Golyski	96
➤ Litewski	50
➤ Ukraiński	50
➤ Starszawski	50
➤ Zatorski	100
➤ Knyszynski	10

# National Strategy and Action Plan for the sustainable management and conservation of AnGR



Adopted  
in 2013





# Next steps:

1. Promotion of local/native breeds
2. Promotion of local products
3. Support for indigenous and local production systems
4. Raising national awareness of roles and values of AnGR



# LOGO



## ADDITIONAL BENEFITS FOR BREEDERS AND CONSUMERS



Projekt „Kierunki wykorzystania oraz ochrona zasobów genetycznych zwierząt gospodarskich w warunkach zrównoważonego rozwoju” finansowany przez Narodowe Centrum Badań i Rozwoju w ramach Strategicznego programu badań naukowych i prac rozwojowych

„Środowisko naturalne, rolnictwo i leśnictwo” – BIOSTRATEG nr umowy: BIOSTRATEG2/297267/14/NCBR/2016.

In framework of the project, for each species were designed several specific logos to be placed on products.



## Examples of products with quality marks



Fotografie: Urząd Patentowy RP, smakujzycie.pl, forummleczarskie.pl

## Exemplary possible designation "Polish native breeds" placed on products

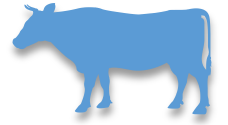


Fotografia: Bronisław Borys

- The logo can only be used for species and breeds that have the status of **native breeds**.
- Only for domestic breed animals registered in **herd books** and participating in the **Conservation Programs**.
- For **all types of products** from animals of all species involved in the Conservation Programs: meat and its products, milk and its products, eggs, honey, wool, leather, etc.

**The logo is compatible with other quality logos**





***Thank you for attention***

