



NATIONAL AGRICULTURAL  
AND FOOD CENTRE

RESEARCH INSTITUTE FOR ANIMAL  
PRODUCTION NITRA

## ***Animal genetic resources in the Slovak Republic***



**Jan Tomka, Jan Huba**

Institute for Animal Husbandry Systems,  
Breeding and Product Quality,

NPPC – RIAP

# Breed diversity

- Slovakia – part of Hungary, Austria-Hungary (11<sup>th</sup> – 20<sup>th</sup> century), part of Czechoslovakia (1918-1992)
- most of the breeds – transboundary (present in more than one country)
- only few local breeds (present in one country)
- native and locally adapted breeds
- exotic breeds (increasing number in last years)



# Breed diversity

- monitoring of the AnGR - yearly basis
- cooperation with Breeding Services of SR, s.e. – population sizes
- authorized breeders` organizations – data from breeding books
- only „established“ breeds entered into EFABIS

	EFABIS	Monitored (2011)	Monitored (2016)
Cattle	16	15	15
Goose	4	4	3
Duck	3	2	2
Goat	5	4	8
Rabbit	43	64	46
Chicken	20	28	17
Horse	11	11	11
Sheep	14	16	23
Pig	10	6	6



# Cattle

	2011		2016	
	Population	Purebred females	Population	Purebred females
Slovak Pinzgau	12 409	1 763	<b>9 895</b>	1 674
Slovak Spotted (Simmental)	152 463	15 515	<b>161 550</b>	<b>16 686</b>
Holstein (black and white)	153 874	47 398	<b>133 111</b>	39 054
Holstein (red and white)	74 398		<b>56 752</b>	13 024
Aberdeen-Angus	2 138	37	<b>6 220</b>	<b>181</b>
Beef Simmental	3 363	158	<b>5 161</b>	<b>290</b>
Blonde D'aquitaine	1 466	35	1 575	<b>81</b>
Charolais	30 060	1 400	<b>50 023</b>	<b>2 740</b>
Hereford	857	65	1 148	<b>3</b>
Limousin	20 955	880	<b>39 617</b>	<b>2 594</b>
Piedmont	1 610	5	1 212	<b>67</b>



Purebred females – with up to 12.5% blood of other breed

- increase in beef cattle and dual-purpose Slovak Spotted cattle
- even in Slovak Pinzgau population trend in transformation to beef production

# Sheep

	2011		2016	
	Population	Purebred females	Population	Purebred females
Askanian	714	24	<b>345</b>	<b>39</b>
Tsigai	144 777	10 602	<b>123 660</b>	<b>5 571</b>
Merino	25 477	507	<b>12 937</b>	<b>27</b>
Valachian	2 640	102	2 437	<b>553</b>
Improved Valachian	147 602	13 578	<b>131 573</b>	<b>7 641</b>
Berrichon Du Cher	1 113	163	<b>1 735</b>	148
Charollais	2 033	220	1 927	163
Ile-De-France	5 436	352	<b>6 525</b>	<b>531</b>
Lacaune	25 507	1 151	<b>44 626</b>	<b>2 470</b>
Oxford Down	1 915	244	<b>838</b>	128
Romanov	1 291	7	941	7
Romney	699	56	<b>2 050</b>	<b>244</b>
Suffolk	4 964	332	<b>8 351</b>	<b>490</b>
East Friesian	2 429	133	<b>3 031</b>	100

- decrease in traditional breeds
- increase in specialized breeds
- import of „fashionable“ breeds



# Sheep

New breed of sheep officially recognized by the Ministry of Agriculture and Rural Development of Slovak Republic – May 26<sup>th</sup>, 2017



# Goats

	2011		2016	
	Population	Purebred females	Population	Purebred females
White Shorthaired Goat	6 321	934	8 036	634
Brown Shorthair Goat	703	50	1 627	116
Anglo-Nubian	58	16	736	100
Boer	186	40	417	115



# Pigs

	2011		2016	
	Population	Purebred females	Population	Purebred females
Large White	5 800 – 10 400	2 161	6 500 – 11 600	2 000
Duroc	50 – 100	10	70 – 120	30
Hampshire	70 – 120	34	50 – 80	20
Landrace	1 700 – 3 000	584	<b>800 – 1 400</b>	<b>300</b>
Pietrain	70 – 120	42	50 – 90	35
Yorkshire	160 – 280	65	<b>80 – 140</b>	<b>48</b>

- stable or decreasing population
- decreasing trend in production of purebred animals





# Horses

	2011		2016	
	Population*	Purebred females	Population	Purebred females
Furioso-Northstar	500 – 600	156	400 – 550	<b>175</b>
Shagya Arab	600 – 700	171	600 – 700	<b>128</b>
Hutsul	460 – 550	129	500 – 600	<b>106</b>
Lipitsa	630 – 750	152	700 – 850	<b>165</b>
Nonius	100 – 110	22	80 – 130	28
Noric of Murany	480 – 550	100	400 – 550	114
Slovak Warmblood	3 900 – 4 300	1650	3 000 – 3 500	<b>863</b>
Slovak Sport Pony	300 – 400	92	200 – 300	109
English Thoroughbred	800 – 900	105	1 800 – 1 900	<b>80</b>
Arab	300 – 400	74	300 – 500	81
Haflinger	320 – 400	88	300 – 400	<b>119</b>

\* Estiamtion for the end of 2010



- more-less stable populations
- different reasons for keeping (hobby, sport, agro tourism, work)

# Poultry and rabbits

	2011		2016	
	Adults			
	F	M	F	M
Oravka (chicken)	295	42	<b>237</b>	<b>29</b>
New Hampshire (chicken)	484	53	<b>312</b>	<b>34</b>
Amrock (chicken)	166	22	212	22
Plymouth Rock (chicken)	497	47	<b>392</b>	<b>40</b>
Sussex White (chicken)	152	15	116	13
Welsummer (chicken)	218	34	<b>26</b>	<b>3</b>
Wyandotte (chicken)	378	64	<b>69</b>	<b>9</b>
Rouen (duck)	13	4	3	9
Slovak white (goose)	29	13	9	24
Suchovy (goose)	25	10	5	11
Pomorian (goose)	10	7	1	2

	2011		2016	
	Adults			
	F	M	F	M
Blue of Holitz	122	45	<b>60</b>	<b>25</b>
Liptovský lysko	n.a.	n.a.	30	5
Nitra	143	32	<b>240</b>	<b>40</b>
Slovak Pastel Rex	n.a.	n.a.	15	10
Slovak Greyblue Rex	125	92	<b>95</b>	<b>30</b>
Zemplin	135	28	100	30
Zobor	n.a.	n.a.	35	10
Belgian Giant	1 260	315	<b>400</b>	<b>90</b>
Burgundy	84	32	<b>500</b>	<b>70</b>
New Zeland Red	62	25	<b>270</b>	<b>55</b>
New Zeland White	490	235	500	150
Big Light Silver	1 156	265	<b>320</b>	<b>100</b>



- mostly hobby breeders (risk of losing diversity with loss of the farmers)
- fashion effect

# „Motivation of farmer“ survey

- **Aim:** Identifying the motivation of farmer for breeding the endangered (less productive and competitive) breed of sheep
- 11 breeders of Valachian sheep
- 1 breeder of Askanian merino
- questionnaire – 30 questions (motivation, subjective evaluation of the breed, future plans, herd management, production)



# „Motivation of farmer“ survey



- farms started since 2005
- main work activity:
  - „yes“ (2x) vs. „no“ (10x)
- reasons for the breed choice:
  - hobby (6x), patriotism (2x), agrotourism (2x), production (1x), landscape management (1x)
- RDP support:
  - „yes“ (10x) vs. „no“ (2x)
- subjective evaluation – most valuable characteristic:
  - hardiness (6x), exterior (2x), low demanding (2x), adaptability (1x), temperament (1x)
- plans for the future:
  - increase (5x), sustaine(6x), decrease (1x)

# „Motivation of farmer“ survey

- selection and breeding aimed on exterior
- milking:
  - „yes“ (8x) vs. „no“ (4x)
- processing of milk into traditional products:
  - „yes“ (4x) vs. „no“ (4x)
- meat / lambs:
  - own consumption (2x), local consumers (5x), trader (4x)
- processing of wool:
  - „yes“ (3x) vs. „no“ (9x)



# „Motivation of farmer“ survey

## Conclusions:

1. not primary work activity, mostly hobby or agro tourism – **risk of loosing animals with loss of the interest (change of owner)**
2. RDP compensates the income loss – **appropriate motivation for the farmer**
3. plans for increasing or sustaining the number of animals – **good message for the near future (what about long term?)**
4. lack of orientation towards production and finalization of animal products – **need for the connection between the breed and final products**
5. hardiness and adaptability appreciated – **opportunity to use the breeds in changing climate**



Thank you.

