Priority diseases, control programs, challenges and plans in Uzbekistan

State Committee of Veterinary and Animal Husbandry of the Republic of Uzbekistan

Nursultan - 2019

Main priority directions in animal husbandry in Uzbekistan:

- Milk and milk products
- Meat and meat products
- Poultry and poultry products
- Karakul production, skins and wool production

Production in 2018:

Meat - 2. 417.400 million tons

Milk - 10. 480.700 million tons

Eggs - 7. 360 billion eggs

Karakul - 1.082.600 million pieces

Note: Export of meat and milk products and skins has been banned since 1992. There is a tendency to facilitate export, but it is still subject to permission from the Government and criteria are not clear.

Total number of cattle livestock as of 1 January 2019

Veterinary Service covers the following numbers of livestock of agricultural animals and poultry:

Cattle - 12. 726.600 million

Including:

- cows - 4 522,200 million
- sheep and goats– 21 287,400 million
- poultry - 81 538,900 million
- horses ?
- camels?
- swine ?

<u>Main task of Veterinary Service:</u>

1. Intensive control and prevention of spread of animal diseases;
2. Development of all types of directions of animal husbandry

Brief overview of animal husbandry in Uzbekistan

- Currently, over 95 % of cattle livestock is bread in private households and farms.
- Animal husbandry comprises 43% of total agricultural production output, whereas in Jizzak, Navoi, Kashkadarya, Khorezm and Karakalpakstan regions, it comprises 61,5-52,5 % of total agricultural production.
- Over 30% of population of the Republic is occupied in agrarian sector.

General information on animal diseases in Uz: Statistics of animal diseases in each regions during 2015, 2016, 2017

№	territories	Tuberculosis (big cattle)			Colibacteriosis (big cattle)			Malignant Edema (big cattle)			Pasteurelles (big cattle)		
		2015	2016	2017	2015	2016	2017	2015	2016	2017	2015	2016	2017
Throughout the republic		9	0	7	8	2	1	12	8	5	12	7	4

№	territories	Rabies(dogs)			Brucellosis (cattle)			Brucellosis (small cattle)			Braxy disease (small cattle)		
		2015	2016	2017	2015	2016	2017	2015	2016	2017	2015	2016	2017
Throughout the republic		11	13	9	477	439	293	400	681	454	6	1	1

Vaccination program

Name of the disease	Vaccinated large ruminants	Vaccinated small ruminants	Vaccinated pigs	Vaccinated poultry	Vaccinated dogs	Vaccinated horses
Brucellosis	3894664	1267544				
Tuberculosis	1167769					
Glanders of horses						6650
Leishmaniasis of dogs	5721794					
Blackleg disease	4690299					
Foot and mouth (buffer zone)	1698246	1153306	518			
Foot and mouth (buffer zone)	3777959	2880040				
Foot and mouth	3777959	2880040				
New Caslte (Strain H) New Castle (La Costa)				481767 17864		

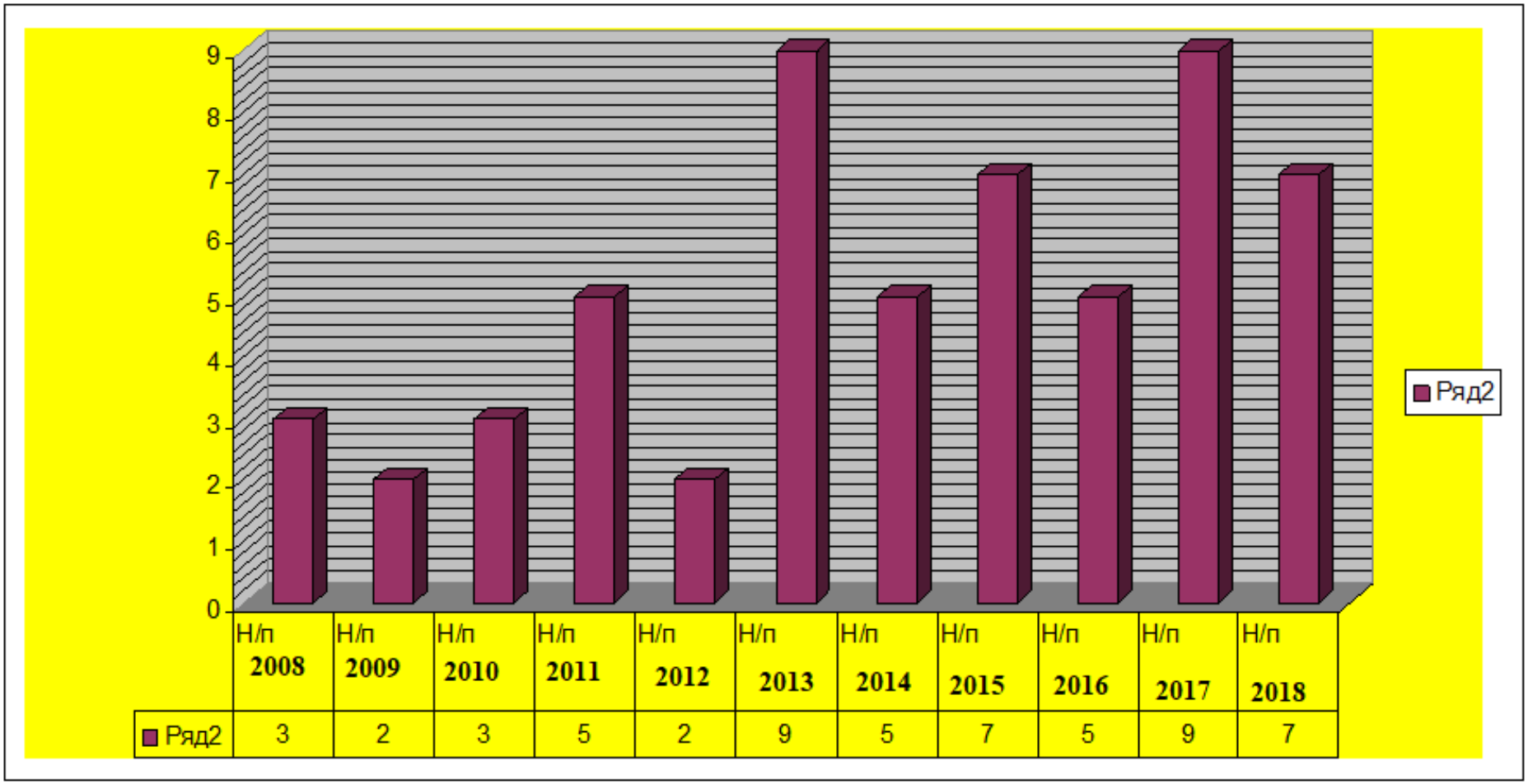
continued

Name of the disease	Vaccinated large ruminants	Vaccinated small ruminants	Vaccinated pigs	Vaccinated dogs	Vaccinated donkeys	Vaccinated camels
Anthrax	10463855	16466376	31477		175024	30062
Small pox		8497284				
Brucellosis Rev-1		17380054				
Braxy	2992502					
Plague						120
Leptospiriosis	379579	78893				
Rabie				1998937		
Dehelminization				5008742		
laryngotracheitis	6657					
Mareka	2358					
Gamboro	2988					

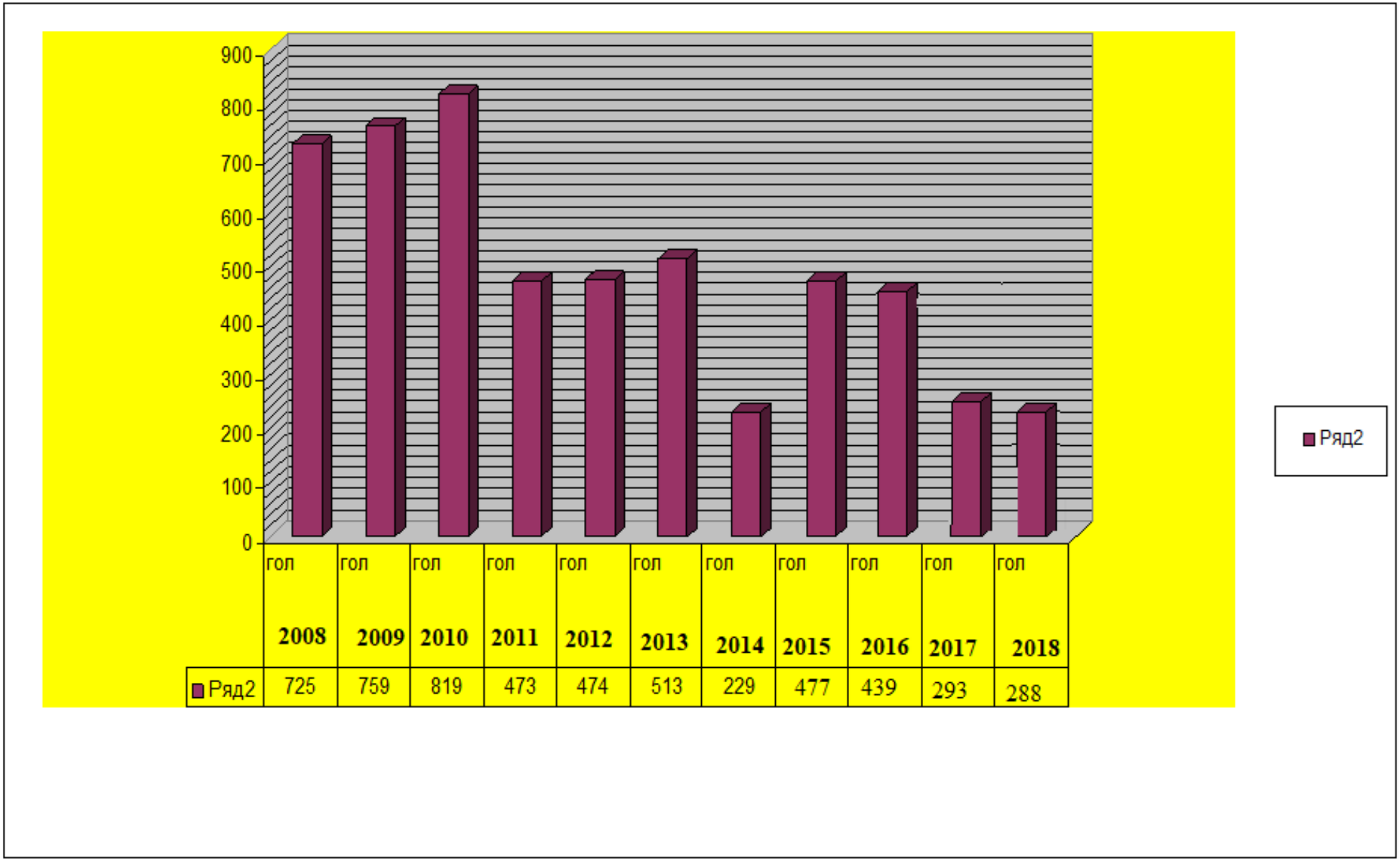
Brucellosis in Uzbekistan: control measures

- Brucella malitensis
- Use of vaccines out of strain 19 Brucella abortus and Rev-1 Brucella melitensis
- 30% of big cattle and 10% of small cattle are subject to monitoring/inspection for brucellosis
- The level of spread of disease over the past years:
  - in 2015 - 471, intensive indicator 1,8;
  - in 2016 - 376, intensive indicator 1,4;
  - in 2017 - 410, intensive indicator 1,5
- The main risk group: shepherds, owners of infected cattle, butchers , veterinary workers, etc.
- Most infected regions with a highest number of outbreaks of brucellosis: Bukhara, Kashkadarya, Jizzak and Navoi

The number of detected outbreaks of brucellosis of big cattle during 2008 -2018 in Uz

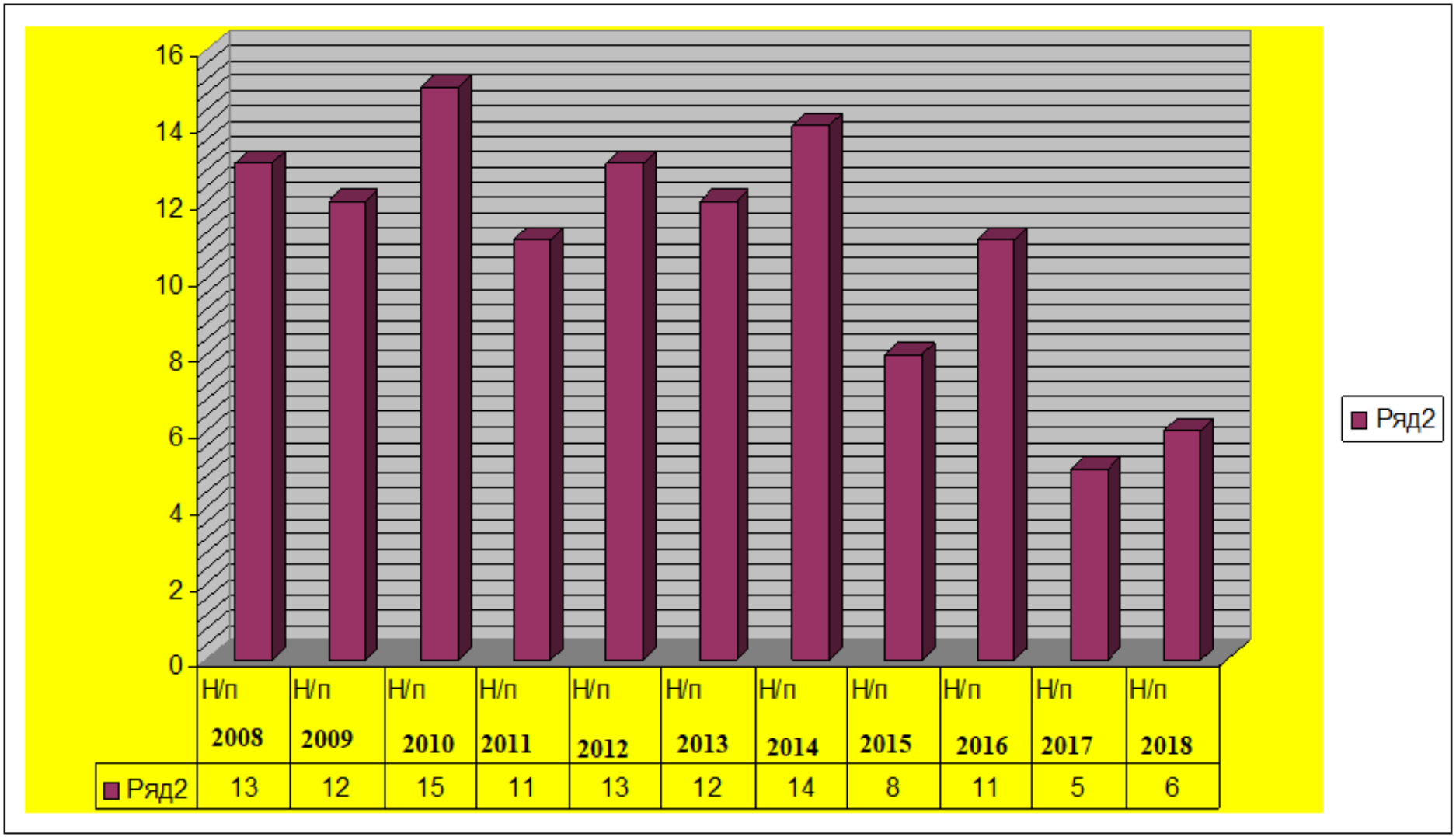


The number of detected big cattle, with brucellosis

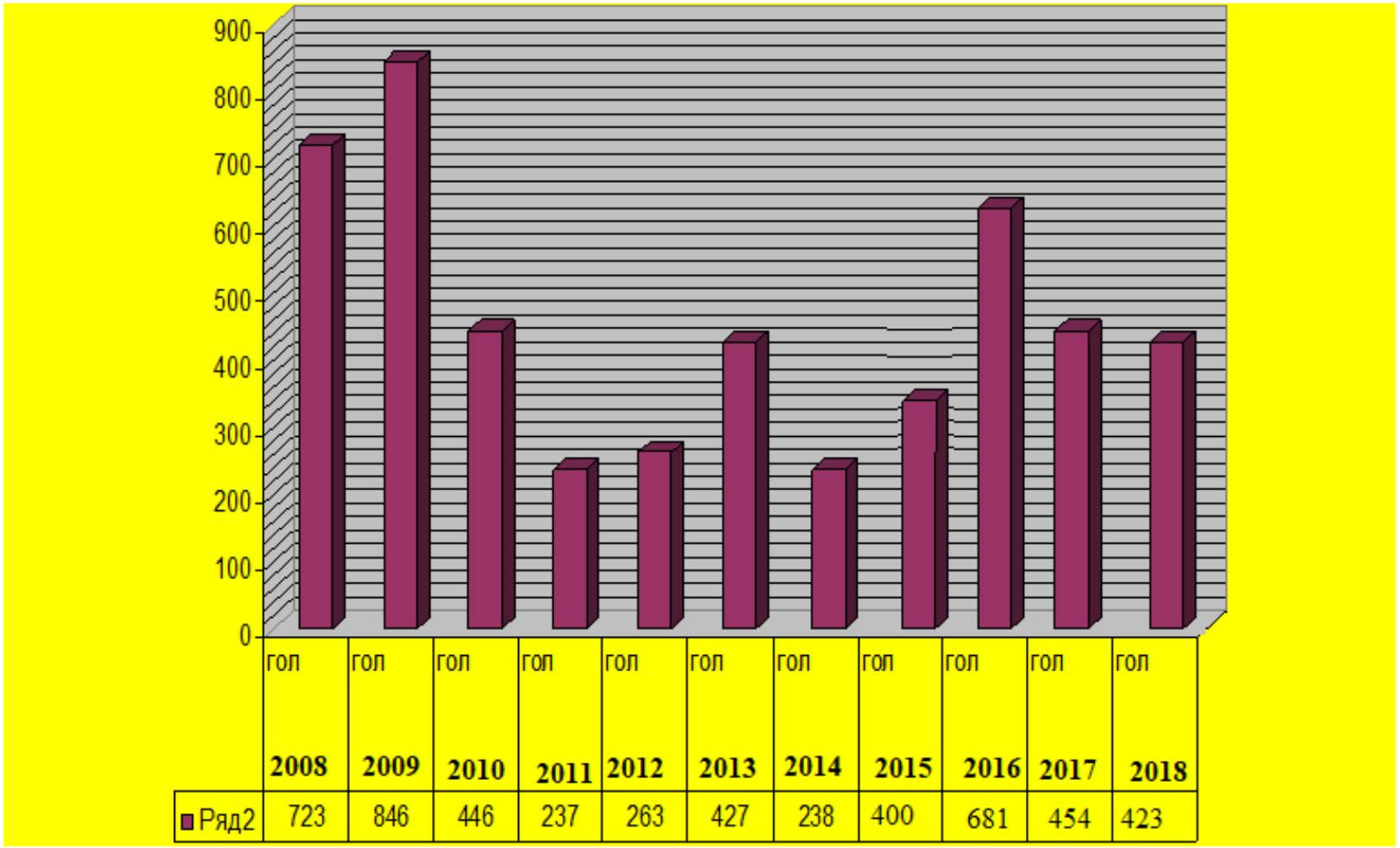


	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
	гол	гол	гол	гол	гол	гол	гол	гол	гол	гол	гол
Ряд2	725	759	819	473	474	513	229	477	439	293	288

The number of detected outbreaks of brucellosis of small cattle during 2008 - 2018 in Uz



The number of detected small cattle with brucellosis



Laboratory capacity

- The country relies on the Republican state veterinary laboratory, 14 regional laboratories and 130 district veterinary laboratories. There are also 268 food markets' internal laboratories in charge of food quality control (for products of animal and plant origin). They do systematic analyses on the meat to be sold in the market and mostly quality analyses on milk and dairy products, eggs, honey and other products of animal origin. Approximately, annually, over 100 million samplestested by the market laboratories. 80% of labs are outdated. Only one lab has a national accreditation from the Uzbek Agency "Uzstandard". No labs with international accreditation for ISO 17025.
- Mainly perform classical methods of diagnosis and do not always implement new methods because of lack of the new diagnostic kits, experience, outdated legislation and lack of awareness of international methodology.
- 45% of tests are serological, about 30% - bacteriological, 20% - parasitological and only 5% - virusology.

Number of diagnostic tests for brucellosis in Uz

Brucellosis of big cattle	Brucellosis of small cattle
3894664	1267544

- Since 2015, practically all small cattle livestock is vaccinated with strain Rev-1 B.melitensis.
- In 2018 the number of vaccinated cattle comprised 17 million

National program on searching for new strain

- New vaccine strains “brucell” against brucellosis have been created in scientific research institute, which have sufficient immunogenicity yet at the same time slightly agglutinogenic
- Based on special breeding works at Uzbek Scientific Research Institute on Veterinary developed a new vaccination strain “Nevsky – 13” with all characteristics of Brucella melitensis.
- Nevsky- 13 has stable, morphological and biochemical characteristics . Stability of a strain was proven during a 20 year cultivation period, 8-time testing on Guinea pigs and 5-time passage on small cattle.
- In Samarkand region, Nurata district, liquid vaccine from strain B.melitensis “Nevsky-13” was tested on 447 big cattle on homologous background and on over 1000 big cattle in three farms of Taylak district of strain 19 on 3-6 months young cattle as a preventive measure.

Challenges and problems in the process of preventive control measures

Brucellosis control problems:

- No full coverage of big cattle livestock and unvaccinated small cattle

General problems with veterinary services:

- No real identification and traceability of cattle
- No insurance system for utilization of diseased cattle
- Lack of capacity building for qualified veterenarian specialists and lab staff based on risk analysis
- Lack of laboratory equipment and capacity and qualified lab staff, very rudimentary types of tests. No international accreditation of any vet lab for ISO 17025.
- Primary and secondary veterinary legislation is not compliant with OIE standards and principles of WTO SPS
- No food safety specialization in the structure of the Veterinary Service, therefore no special training of food inspectors among veterinary inspectors on HACCP and other international methods/standards of food safety control, monitoring, inspection
- Lack of participation in regional initiatives on TAD prevention
- Difficulty in accessing international expertize (inviting internaitonal experts on animal health) for development of animal disease programs
- Weak role of the Scientific Research Institute of Veterinary in development of new schemes and methods of control measures

Thank you for your attention!