

On reindeer infectious diseases

Nataly Pavelko, Russia

Reindeer herding and diseases



Tundra



Locals



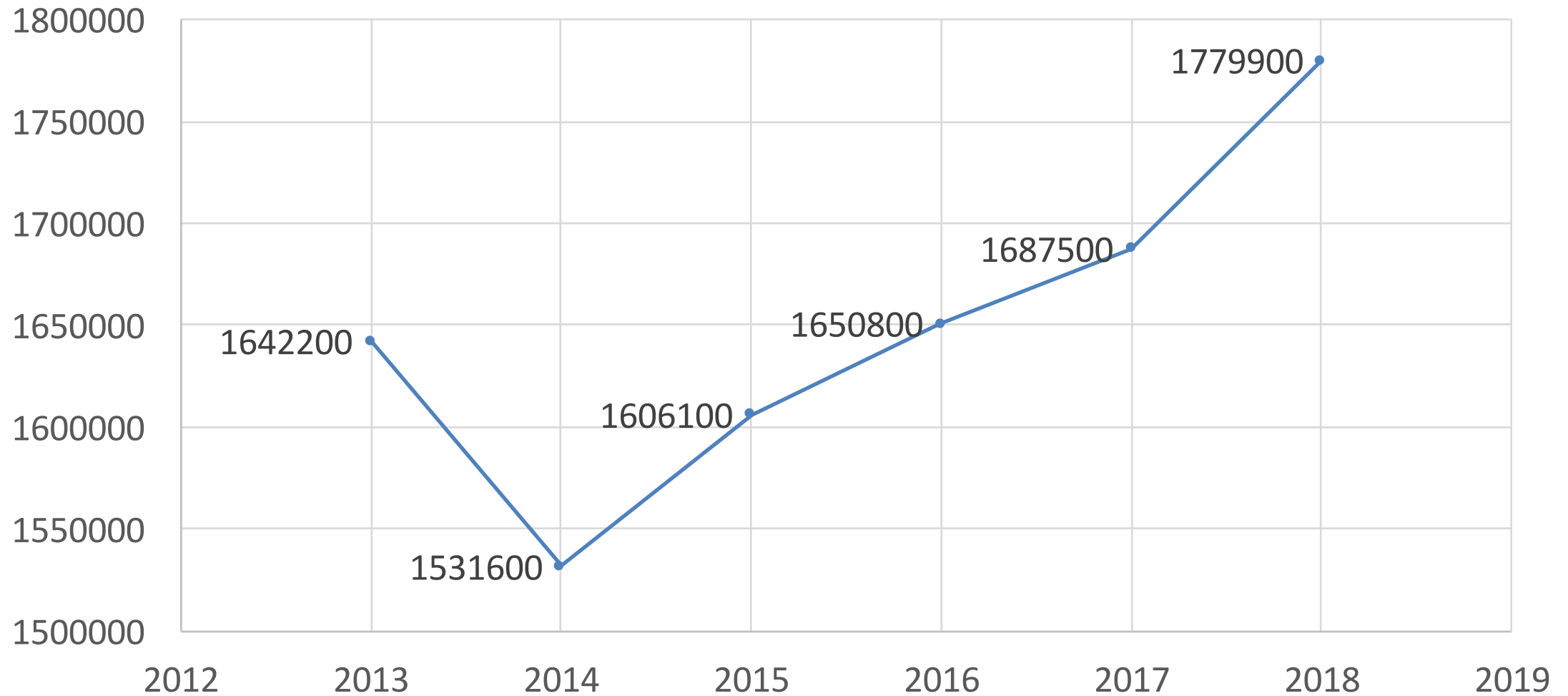
Nowadays (eradication of Anthrax outbreak in Yamal in 2016)



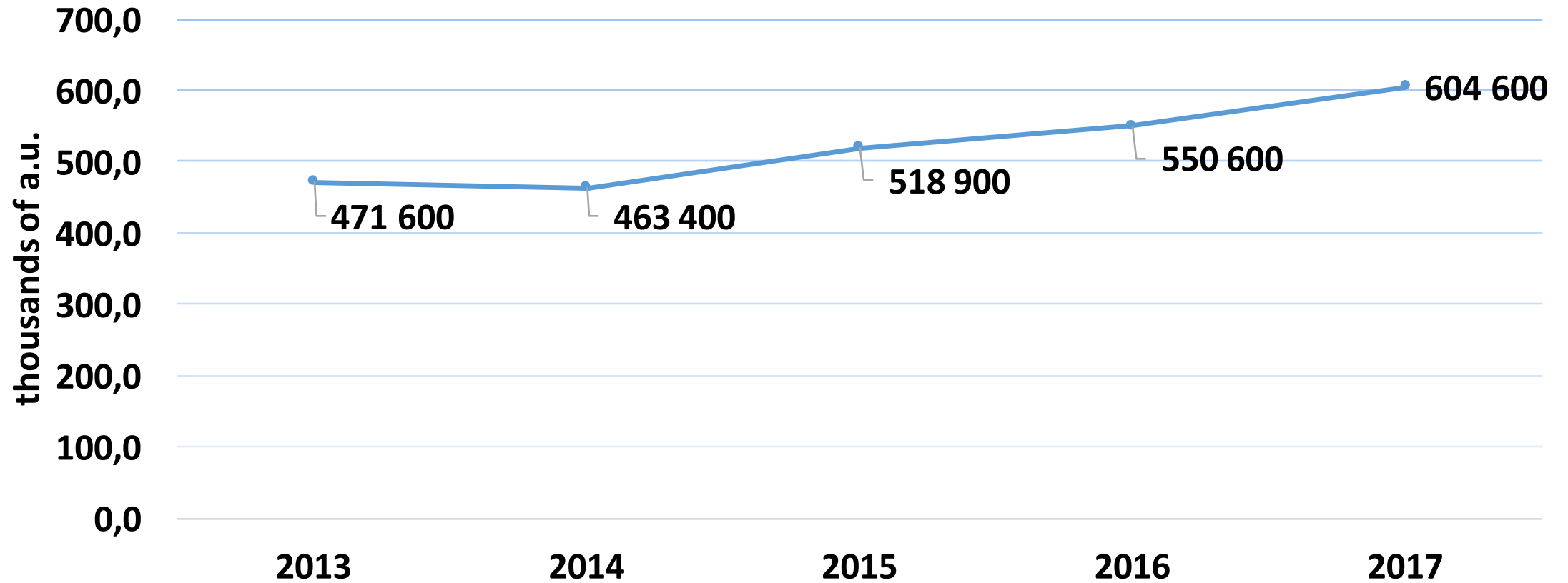
Domestic reindeer population

Year	1961	1981	2017
Population	196 000	924 000	1 687 500

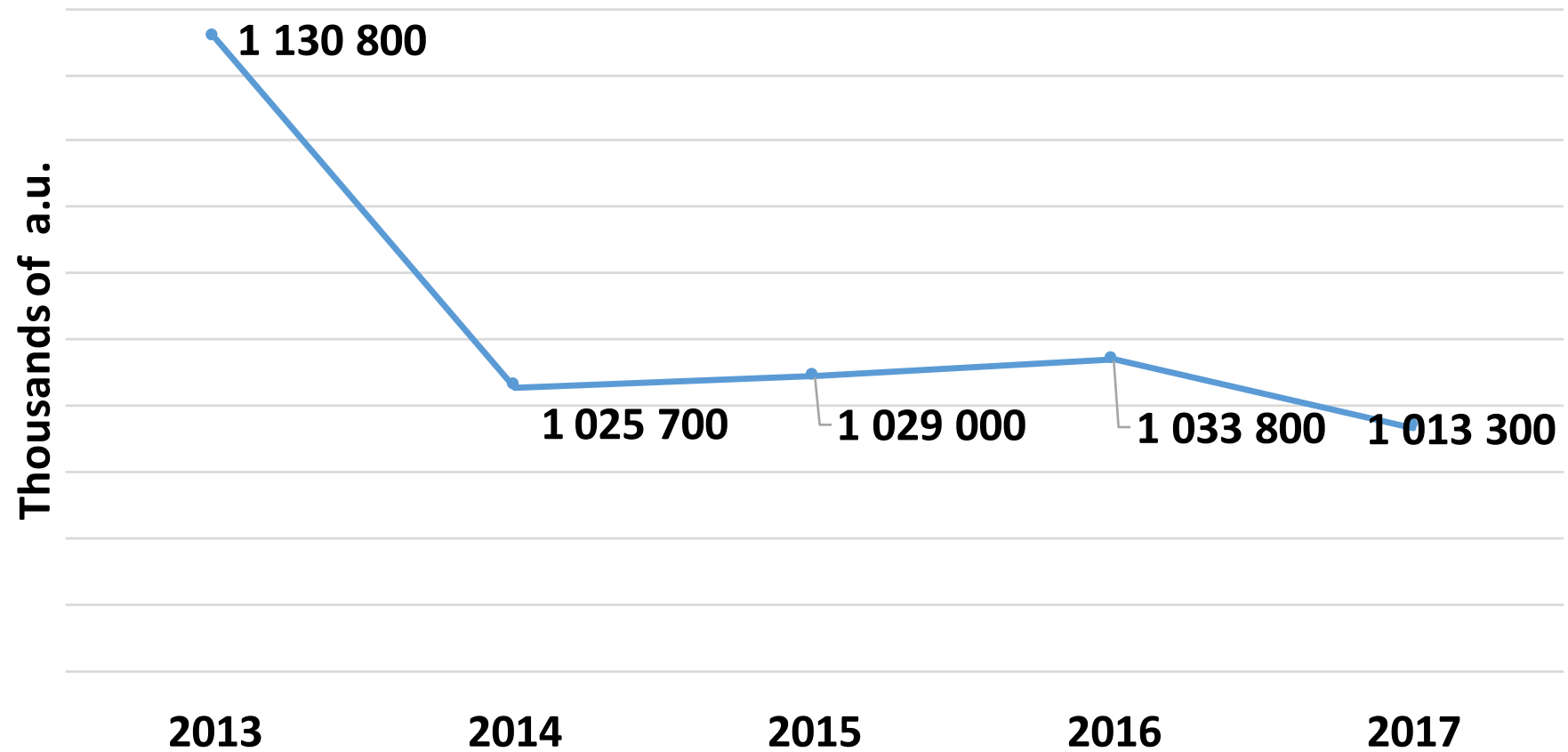
Domestic reindeer population



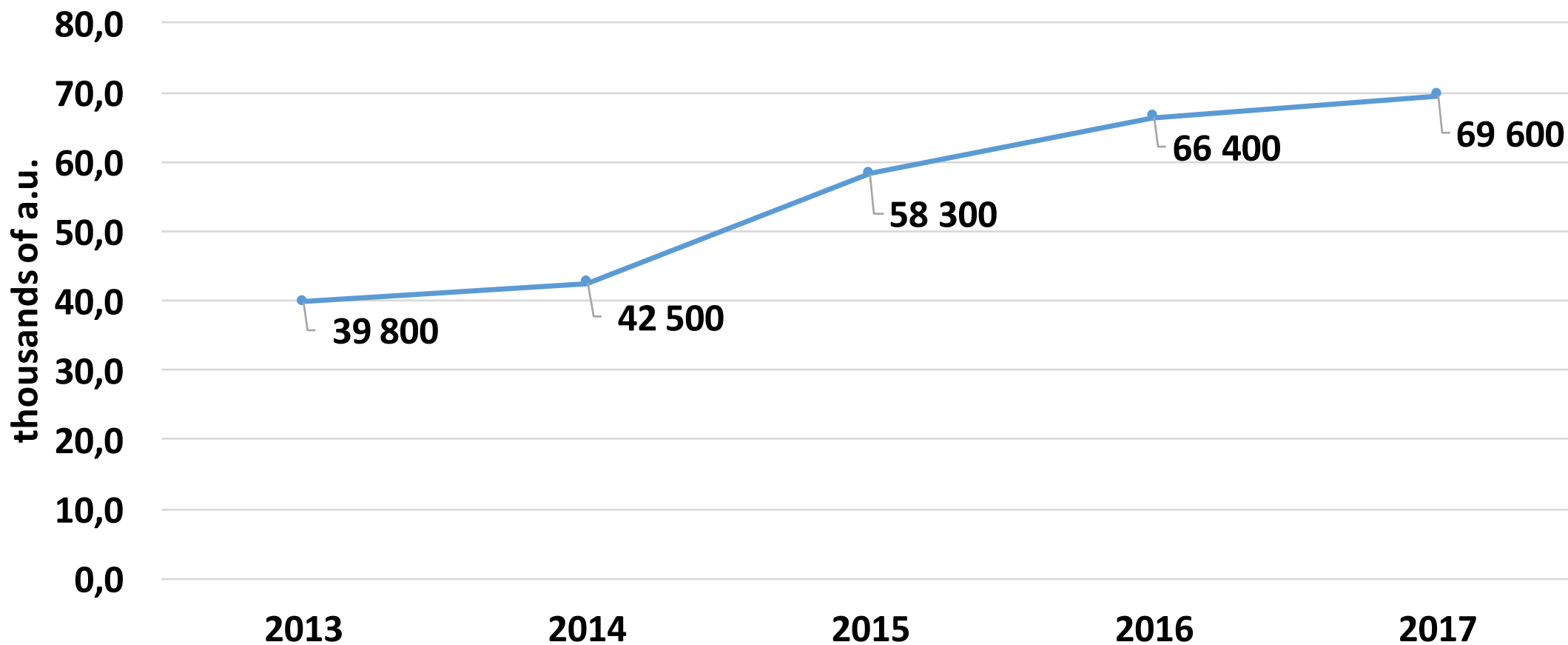
Population at private farms



Population at agricultural organizations

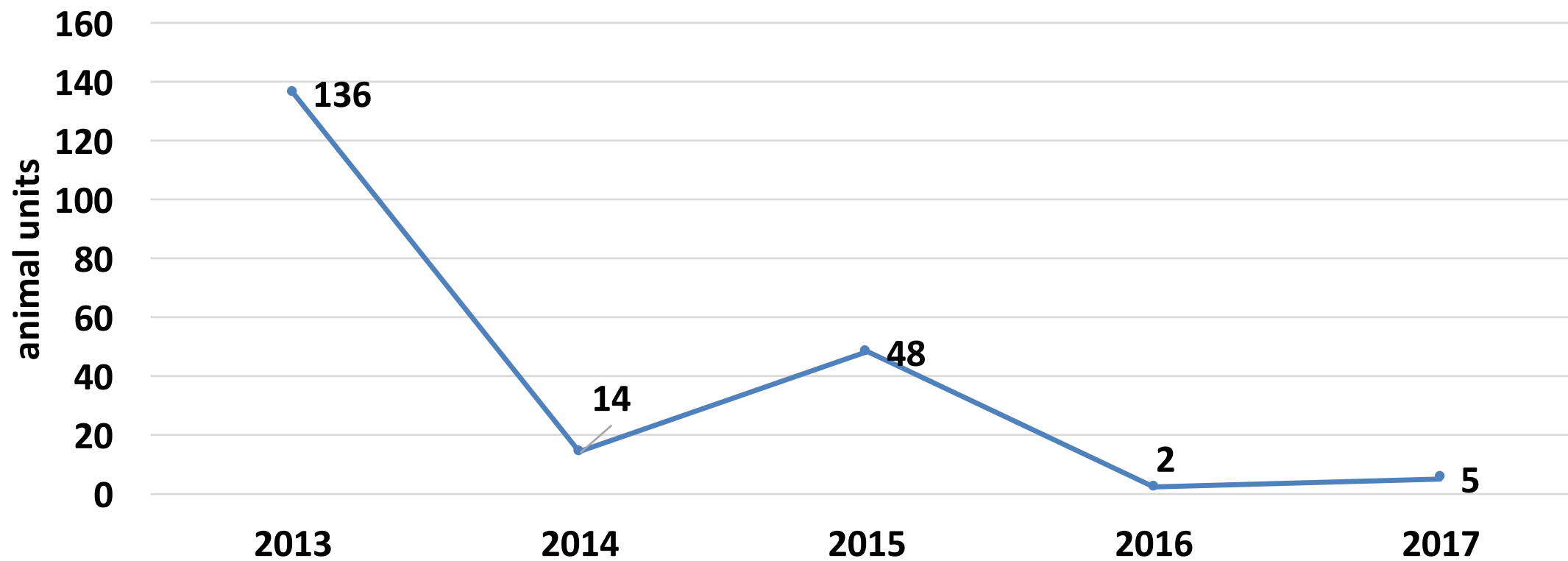


Population at self-employed individuals



Rabies

Amount of infected and dead from rabies



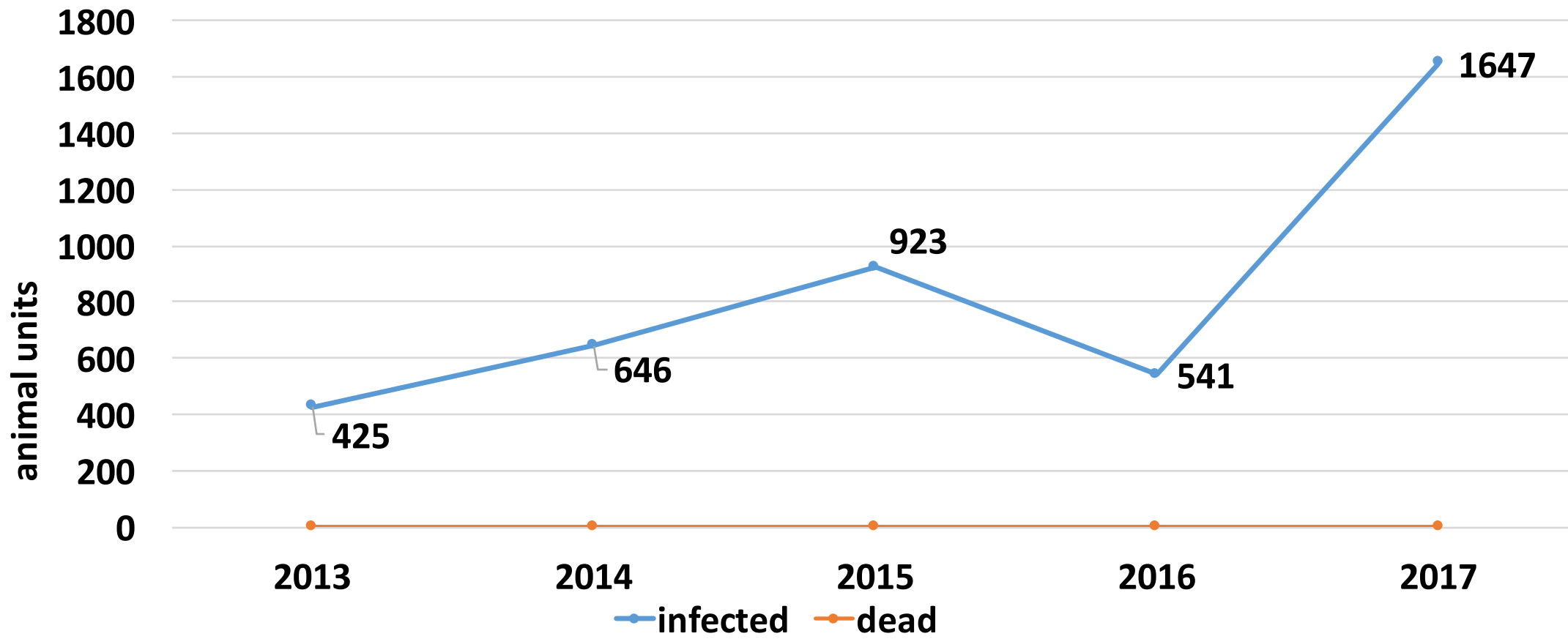
Vaccine «Rabisin», Merial



Preventive measures

- Dogs are not allowed in the reindeer farms
- Vaccination

Brucellosis



Preliminary screening results of Rose Bengal Test for Brucella antibodies, in sera of Russian reindeer (CLINF)

No team	Total amount of sera	Amount of positive sera	Percentage of positive sera for Brucellosis
Flock №3	505	81	16.0
Flock №8	585	91	15.6
Flock №2	172	0	0
Total	1262	172	13.6

Brucella abortus strain vaccine

- Yamal peninsula
- Yakutia

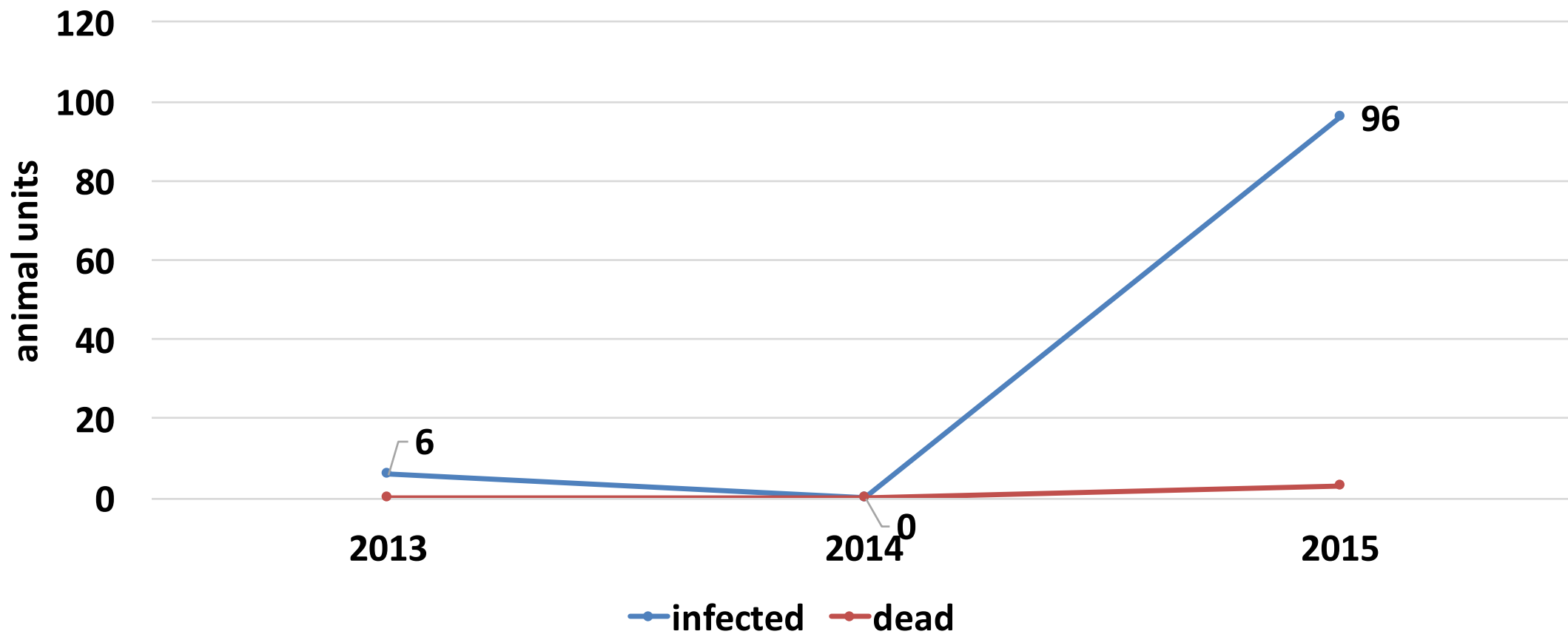
- From 1997
- Brucella abortus 19, 82 strain

- A single vaccination of strain 19 protects 66-94% of vaccinated reindeer for a 8 months.
- The freeze-dried vaccine from strain 82 protects 94% of reinderr after 7 months and 83% after 9 months.

Preventive measures and control

- contact with cattle is not allowed for reindeer;
- early disease detection;
- vaccination;
- reindeer isolation and slaughter infected animals.

Tuberculosis



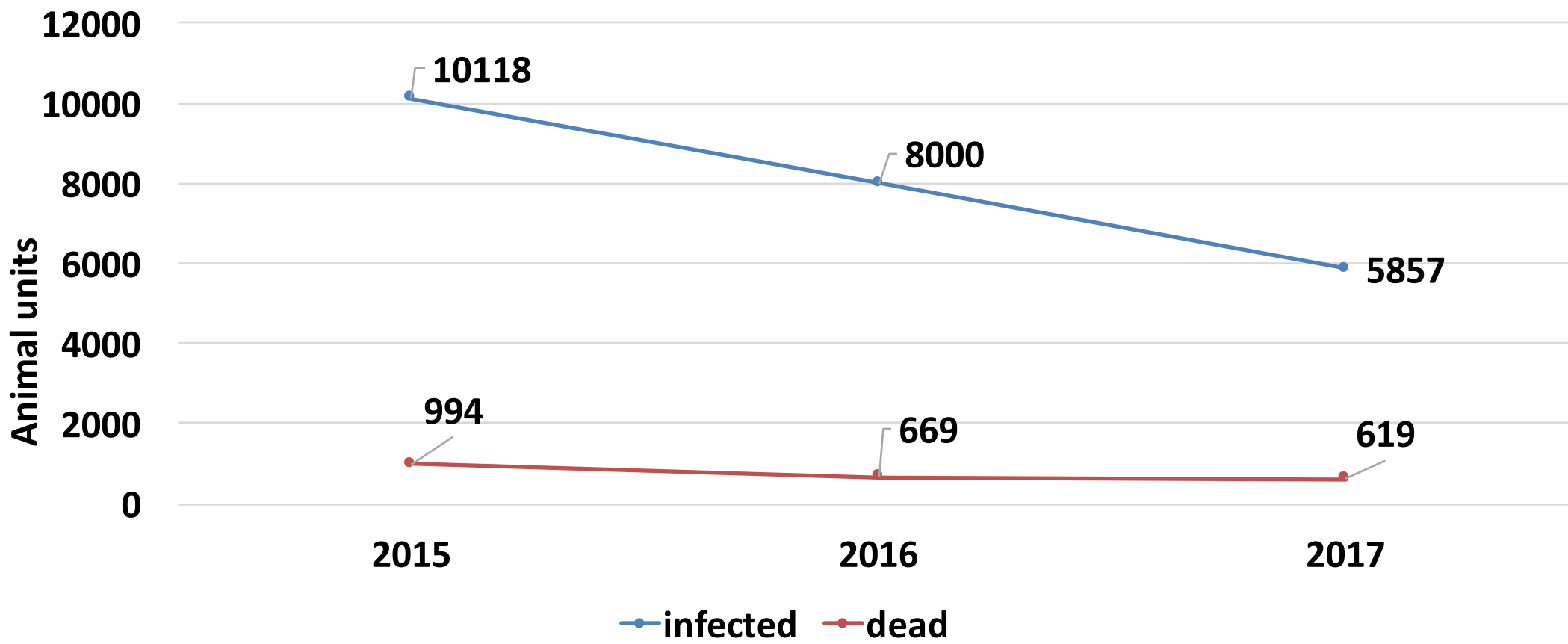
Tuberculin for mammals, strain №8



Preventive measures and control

- appropriate feeding program for reindeer;
- Tuberculin skin testing for new reindeer in the flock;
- reduce
 - a) stress factors,
 - b) vigorous physical activity
 - c) amount of reindeer during the process of cutting antlers for medicine production;
- reindeer isolation and slaughter infected animals.

Necrobacteriosis



Associated vaccine against Brucellosis and Necrobacteriosis

- FRCVM developed experimental associated vaccine against Brucellosis and Necrobacteriosis.
- Suspension of anthrax spores strain
- Water-soluble antigens *F.necrophorum*
- Hydrate oxide aluminum gel

Sachabactisubtil drug, probiotic, Yakutskii Research Institute, oral

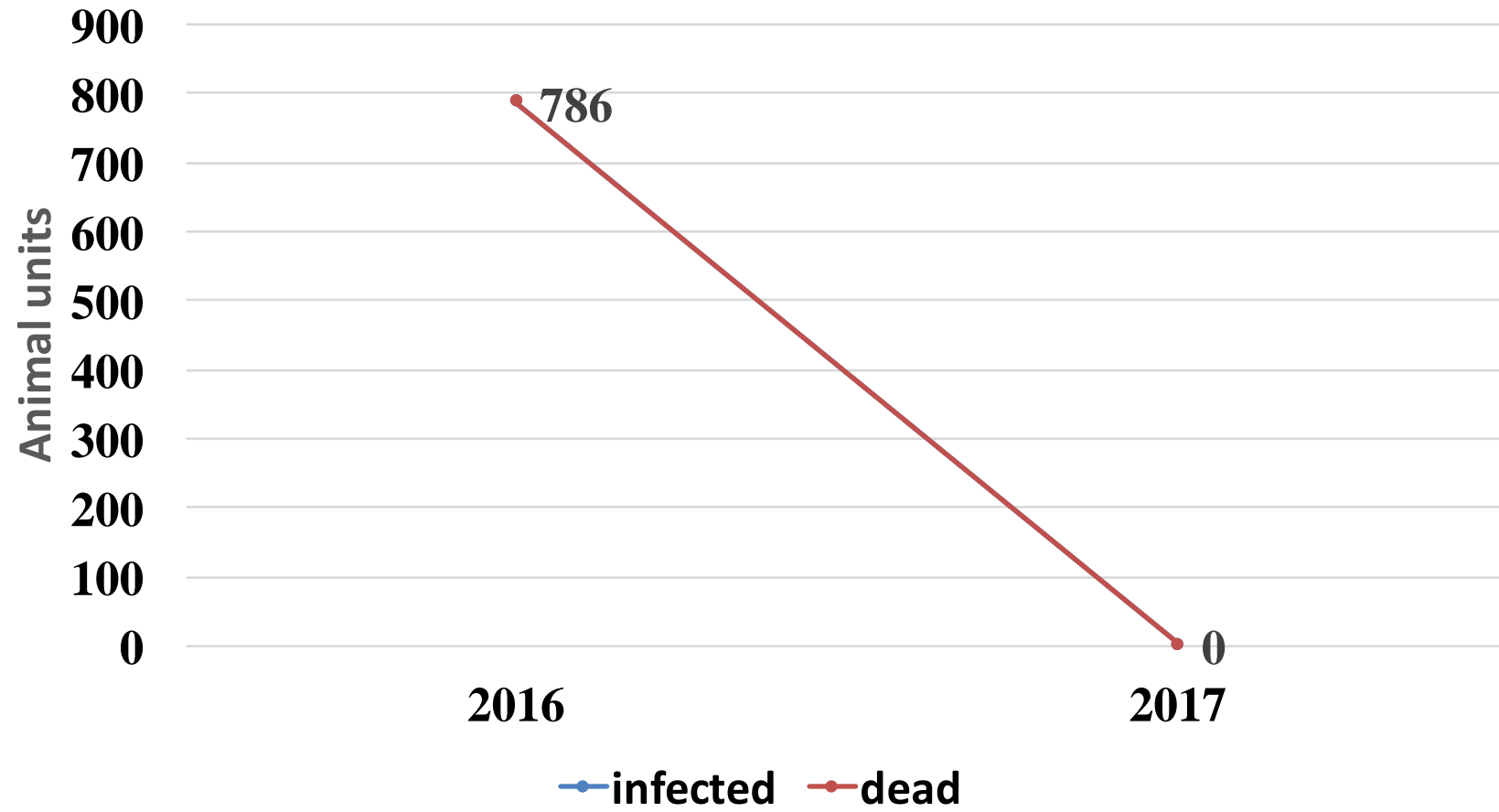
strain №8, Valle or AN5



Preventive measures

- appropriate feeding program for reindeer;
- early disease detection;
- reindeer isolation and immediate treatment.

Pasteurellosis



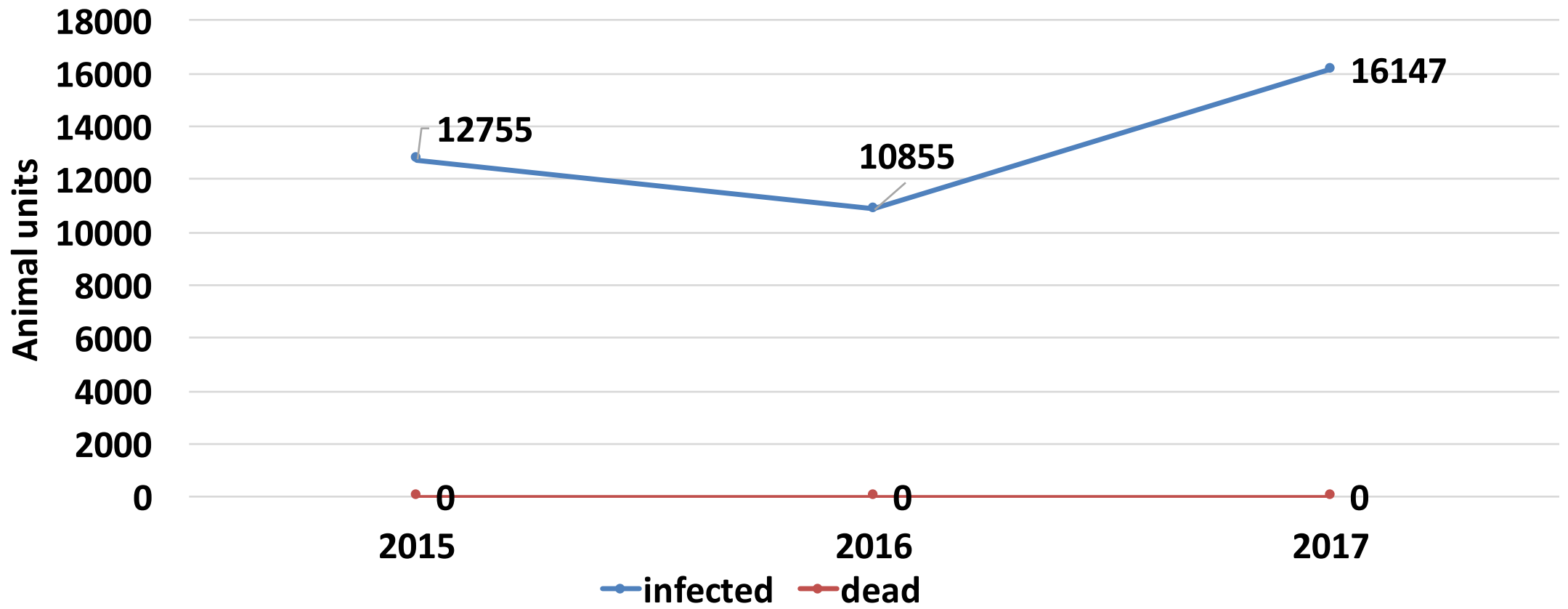
Pasteurellosis treatment with antibiotics



Preventive measures

- early disease detection;
- during the Pasteurellosis cases the rest of the non-infected flock must be daily monitored and treated with anti-pasteurella serum in prophylactic doses of 30-40 ml subcutaneously.

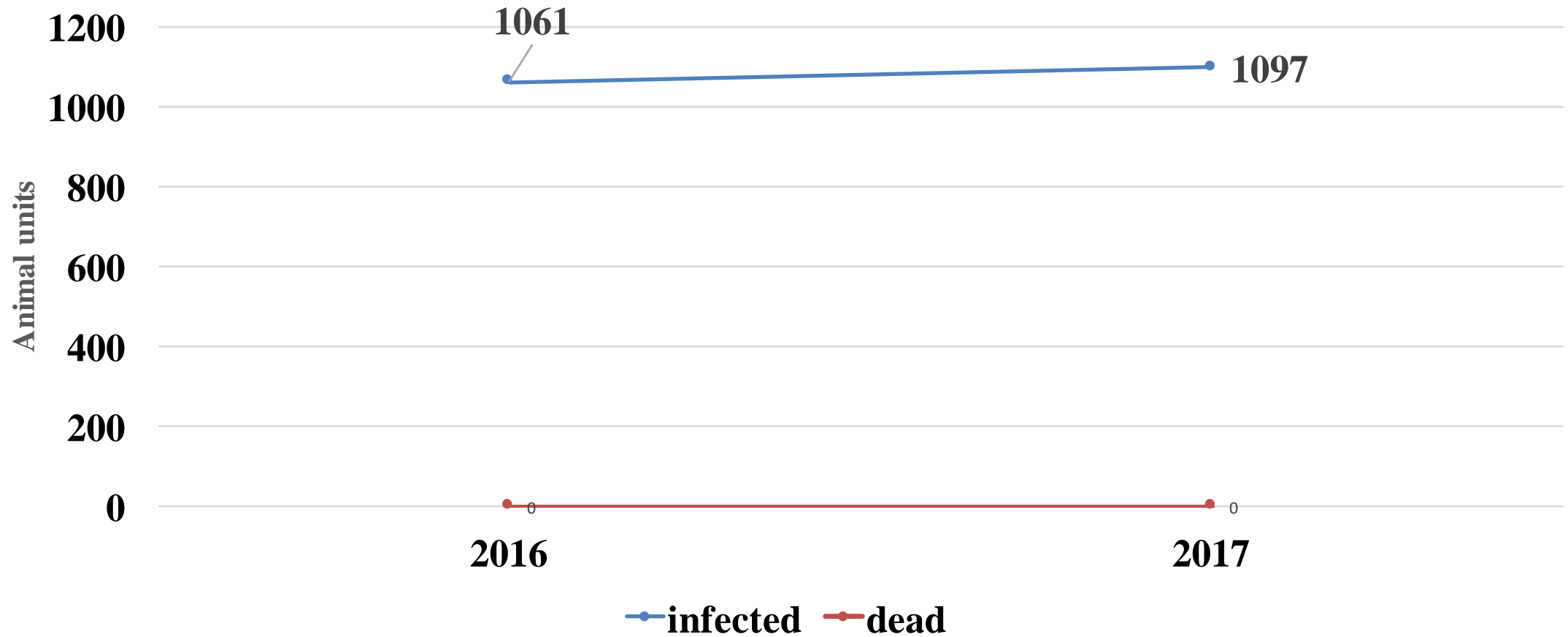
Oedemagenosis



Oedemagenosis medicine «Butox – 50»



Echinococcosis



Echinococcosis- no vaccines or drugs are available



Siberian wolf

- Population is about 55000 in Russia.
- The damage to the Russian agriculture from wolves is 120 000 000 euro per year.
- Wolf hunting is allowed in Russia.



Poaching of reindeer in Siberia

- Antlers of young Siberian stags are used in medicine.



Evenkiysky reindeer project

- 2014-2016
- 10 reindeer were fitted with GPS collars
- Valuable knowledge about reindeer migration and wintering



Natural recovery of reindeer population in Kolguev peninsula in Nenets Autonomous Region

- Reindeer transportation by helicopter
- 2015-2018
- Population increased for 4 times in 3 years
- 450-500 a.u. of reindeer is in 2018.



Thank you for your attention!

info@vniivvim.ru