

## DISCLAIMER

The OIE, after performing an administrative and technical screening of a self-declaration concerning the disease-free status of a country, a zone or a compartment (“self-declaration”), as described in the standard operating procedures for self-declarations, reserves the right to publish or not the self-declaration on its website. There shall be no right of appeal from this decision nor any recourse of any kind.

The publication by the OIE of a self-declaration on its website does not reflect the official opinion of the OIE.

Responsibility for the information contained in a self-declaration lies entirely with the OIE Delegate of the Member concerned.

Neither the OIE nor any person acting on its behalf may be held responsible for:

- (i) any errors, inaccuracies or omissions in the content of a self-declaration,
- (ii) the use which may be made of the information contained in a self-declaration;
- (iii) any direct or indirect consequences of any nature arising from or relating to the use of the information contained in a self-declaration.

## Self-declaration of freedom from highly pathogenic avian influenza (HPAI) in the Russian Federation

**Self-declaration was submitted to the World Organisation for Animal Health (OIE) in September 2019 by Dr Nikolay Vlasov, Delegate of the Russian Federation to the World Assembly of Delegates of the OIE, Deputy Head of the Federal Service for Veterinary and Phytosanitary Surveillance.**

### 1. HPAI zoning of the Russian Federation territory

The Russian Federation is a federal state consisting of 9 federal districts which are divided into 85 equal constituent entities called either ‘administrative subjects’ or simply ‘subjects’ or ‘regions’ (22 republics, 9 krais, 46 oblasts, 3 federal cities namely Moscow, Saint Petersburg, Sevastopol, 1 autonomous oblast and 4 autonomous okrugs), apart from federal cities, each of these entities is further subdivided into raions.

In the Russian Federation, the principle of HPAI prevention/control strategy is the division of the country territory into five zones based on animal health status of HPAI.

**1. HPAI-free zone (zones I-III)<sup>1</sup>** – administrative Subjects of the Russian Federation where:

- surveillance is carried out in accordance with provisions of Articles 10.4.27. – 10.4.33. of the OIE Code that demonstrates no evidence of clinical AI cases and HPAI virus circulation in poultry in the administrative territory for the past 12 months;

**2. HPAI-free zone (zone IV-V)<sup>2</sup>** administrative Subjects of the Russian Federation where free status was restored 3 months after all poultry were stamped out in the HPAI-infected establishment (including its disinfection) and surveillance in accordance with Articles 10.4.27. – 10.4.33. of the OIE Code was carried out during that three-month period that demonstrated no evidence of clinical AI cases and HPAI virus circulation in poultry kept in the Subject.

For HPAI zoning of the Russian Federation based on the health situation of poultry populations, please, refer to Figure 1 and for the list of the Russian Federation regions included in the 5 self-declared zones, please refer to Annex 1.

<sup>1</sup> - **Zone I** 9 Federal Subjects (FS) of **Far Eastern FD**

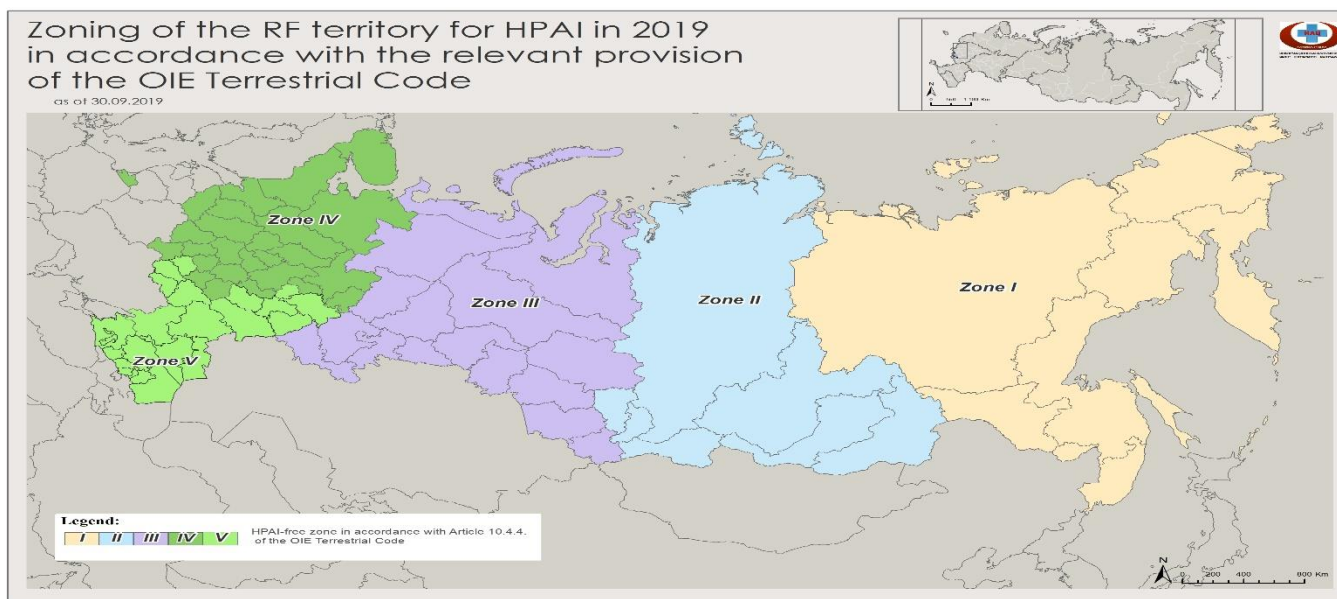
- **Zone II** 2 Federal Subjects on south western part of the **Far Eastern FD**, 5 Federal Subjects on the east part of **Siberia FD**

- **Zone III** 5 Federal Subjects on south western part of **Siberia FD**, 3 Federal Subjects on the southern part of **Volga FD**, **Ural FD**, 2 Federal Subjects on the eastern part of **Northwest FD**

<sup>2</sup> - **Zone IV** 8 Federal Subjects of **Northwest FD**, 6 Federal Subjects on the northern part of **Volga FD**, 12 Federal Subjects of **Central FD**

- **Zone V** **South FD**, **North Caucasus FD** and the rest of Federal Subjects of **Volga FD**, **Central FD**

**Figure 1.** Zoning based on HPAI status of [poultry](#)<sup>3</sup> population, Russia, September 2019



Pursuant to the Decree of the Ministry of Agriculture of the Russian Federation of 14 December 2015 No. 635 «Establishment of Veterinary rules of Regionalization of the Russian Federation territory», regionalization for avian influenza A was conducted on all Russian territory (highly and low pathogenic avian influenza) in accordance to the provisions of the chapter 4.3 of the *Terrestrial Code*. This allowed maintaining the Russian subjects free from avian influenza through disease surveillance. Cartographic data on avian influenza regionalization in the Russian Federation is available on the official website of the Rosselkhoznadzor of the Russian Federation and updated in real-time and is a system open to the public used for informing export partners in Russian and English <http://www.fsvps.ru/fsvps/regional>, [http://www.fsvps.ru/fsvps/regional? language=en](http://www.fsvps.ru/fsvps/regional?language=en).

The change of the regions health situation on avian influenza is legislatively supported by the amended Decision of the Rosselkhoznadzor for the establishment of disease freedom of regions of the Russian Federation for infectious animal diseases and also for the conditions for movement of goods subject to veterinary surveillance (control) by the Rosselkhoznadzor (hereinafter Rosselkhoznadzor-regulated goods) (adopted on 20 January 2017).

## 2. HPAI eradication in Russia

Avian influenza H5N1 was isolated in the Russian Federation for the first time from waterfowl and poultry in Novosibirsk Oblast in 2005. Within the period from 2005 to 2008 and 2016 to 2019 two waves of HPAI spread can be identified in the territory of the Russian Federation.

### HPAI in Russia - 2005 to 2008

In 2005, HPAI outbreaks in West Siberia and South Urals in waterfowl and in Astrakhan Oblast and the Republic of Kalmykia in wild birds were associated with AI H5N1 virus introduction from South East Asia and disease occurrence. Further disease spread pattern apparently depended on two factors:

- migration movements of birds to the south and their crossing during latitudinal migration;
- availability of susceptible poultry in areas located along the referred migratory pathways and their contacts with wild birds.

In 2006, as part of the first wave of HPAI H5N1 spread in the Southern and North-Caucasian Federal Districts, 10 HPAI outbreaks were reported in wild birds and 70 HPAI outbreaks were reported in poultry, 6 of which were reported on poultry farms in Krasnodar Krai, Stavropol Krai and the Republic of Dagestan. In 2007, 12 HPAI

<sup>3</sup> In accordance with Article 10.4.1. of the OIE Code poultry is defined as “all domesticated birds including backyard poultry used for the production of meat or eggs for consumption, for the production of other commercial products, for restocking supplies of game or for breeding these categories of birds as well as fighting cocks used for any purpose. Birds that are kept in captivity for any reason other than these reasons referred to in the preceding paragraph including those kept for shows, races. Exhibitions, competitions or for breeding or selling these categories of birds as well as pet birds are not considered to be poultry”.

outbreaks were reported in poultry in 3 regions of the Southern Federal District, 3 of which occurred on poultry farms (Annex 2).

In 2008 avian influenza A/chicken/Russia/Primorsky/85/08 virus belonging to Asian genetic line (A/H5N1 (A/Gs/Gd/96 line, Mixed/VNM2 subline) was isolated in infected area located in the Ussuriysky Raion of the Primorsky Krai. The full-length genome sequencing allowed the identification of a virus belonging to the genotype circulating in the southern provinces of China and in Vietnam but previously unknown in Russia. The Far East isolate of H5N1 avian influenza virus differed from the Russian isolates recovered in various Russian Federation regions in 2005-2007 that had no significant differences against each other. (Annex 2 and Annex 4 tables 1-3). Anti-epidemic measures taken by the state veterinary service successfully prevented the further spread of the disease. The tightening of legislation concerning poultry-keeping enabled the prevention of new AI cases in poultry. Therefore, no AI cases were reported in poultry in the Russian Federation up until August 2014.

From 2009 to 2010 three HPAI cases in wild birds were reported, namely: Republic of Tyva and in Moscow Oblast. In 2010, 708 waterfowl which had died of AIV H5N1 were found near the Uvs Nuur lake, in the Republic of Tyva. Annual monitoring tests of wild birds revealed HPAI H5N8 in wild birds shot in Yakutia in 2014. Moreover, H5N1 was isolated from clinically healthy wild birds during annual monitoring tests for avian influenza in the Novosibirsk Oblast. As a consequence, in September 2014, two HPAI infected areas were identified in Altai Krai, and in 2015, HPAI H5N1 was isolated from dead wild birds in six infected areas in four Russian Federation Subjects (Annex 3, Fig. 1).

### **HPAI in Russia - 2016 to 2019**

The second wave of HPAI spread in the Russian Federation (2016 - 2019) was associated with H5N8 and H5N2 subtypes.

In June 2016, 17 dead wild birds were found on the shore of the *Uvs Nuur* lake, the Republic of Tyva with HPAI H5N8 isolated from samples of pathological material thereof. Regarding HPAI in poultry, in November-December 2016 HPAI H5N8 was identified in Krasnodar Krai, the Republic of Kalmykia, as well as in Astrakhan and Rostov Oblasts (the Southern Federal District) (Annex 3, Figure 2). In 2017, an HPAI H5N8 epidemic affected several RF Subjects, including Moscow Oblast, Volga and Volga-adjacent regions, Central, Southern, and North-Caucasian Federal Districts. Though most HPAI outbreaks were reported in backyard poultry, commercial indoor poultry farms were affected as well by AI H5N8 in Penza, Rostov and Voronezh Oblasts (Annex 3, Fig 3).

In December 2017, HPAI H5N2 virus was isolated for the first time in the Russian Federation at a commercial indoor poultry farm in Kostroma Oblast.

In 2018, one HPAI H5N2 was detected in poultry in Kostroma Oblast and 82 HPAI H5N8 outbreaks were detected in poultry in the Volga, Central and Southern Federal Districts (in Samara, Kursk, Penza, Smolensk, Orlov, Nizhny Novgorod, Rostov, Saratov, Ulyanovsk and Kostroma Oblasts as well as in the Republics of Chuvashia, Tatarstan, Udmurtia and Mari El). All these outbreaks, including the last outbreak in Rostovskaya Oblast (Urson 2) were notified to the OIE (Annex 4, Fig 4). More than 3 million poultry were destroyed in commercial indoor poultry farms in the Russia Federation since the beginning of the epidemic (Annex 5, Tables 1, 2).

In all outbreak areas, control measures and quarantine were implemented by the State Veterinary Service of the Russian Federation in accordance with Order No 90 of the RF Ministry of Agriculture of March 27, 2006 on Approval of the Veterinary Rules for Avian Influenza Control. The following measures laid down in the Veterinary Rules for Avian Influenza Control were implemented in order to contain and eradicate HPAI outbreaks: infected premises were quarantined, zoning was performed, poultry and poultry products were seized, the stamping-out policy was implemented, AI surveillance was performed in protection and surveillance zones; movement control was ensured; disinfection and cleaning were performed prior to an establishment being released from quarantine (additional information on the epidemiology of HPAI in Russia is provided in Annex 2). In addition, enhanced monitoring aimed at detecting AI cases in both poultry and wild birds was carried out in HPAI-affected subjects. The results of the tests are presented in [Annex 5](#).

## Recovery of freedom

Zone V comprises some regions of the Russian Federation where the disease has not been reported (for over 5 years or never reported, such as Belgorod and Volgograd Oblasts, Ingushetia, Adygea, Dagestan, Karachay-Cherkessia, Kabardino-Balkaria and North Ossetia as well as Stavropol Krai) and the regions that were infected in 2018-2019 (Annex 3, Fig. 4 and 5). As a result from 2018 and 2019 avian influenza monitoring, the absence of avian influenza virus circulation was confirmed in the 23 subjects of the RF which comprise Zone V ([Annex 10](#)).

Rostov Oblast regained AI freedom three months after the last HPAI outbreak in the oblast in Zone V had been resolved on May 20, 2019 (quarantine was lifted pursuant to Order No 125 of the Governor of Rostov Oblast) (in accordance with the provisions of Articles 10.4.27-10.4.33 of the OIE Terrestrial Code). Relevant information on control measures was reported through WAHIS<sup>4,5</sup>. (For more information on the outbreaks and their control, please see Annex 2 and Table 2 of Annex 5).

## 3. Surveillance

Avian influenza type A in the Russian Federation is included in the List of contagious animal diseases including highly dangerous animal diseases subjected to restrictions (quarantine) (Order of the RF Ministry of Agriculture No. 476 of December 19, 2011). Active and passive monitoring is carried out in accordance with the OIE Code recommendations (Article 10.4.27. - 10.4.33.). The results of passive surveillance for HPAI in 2018 can be found in Annex 7. High-risk regions were established taking into account commercial poultry density, wild bird aggregation areas, migratory routes, epidemic situation, areas where preventive vaccination is practiced and potential risk factors. These regions are included in the schedule of annual federal active surveillance. For example, the territory of the Uvs Lake (Republic of Tuva), located at the junction of the administrative borders of the Russian Federation and Mongolia, where the main migration routes of waterfowl pass (Annex 7).

The epidemiological investigation results suggest that migratory birds were the likely cause of HPAI occurrence in the Russian Federation in 2017-2019. The epidemiological investigation found non-compliances with poultry management rules in backyards and non-compliances with biosecurity standards in poultry establishments. Possible spread and routes of transmission by wild birds identified by the epidemiological investigation were confirmed by results of genetic examinations of the isolates recovered in the Russian Federation (Annex 4).

Monitoring tests on highly pathogenic avian influenza (HPAI) in the Russian Federation are carried out only in poultry. The representativeness of the sample during sampling meets the conditions of 5% prevalence and 95% confidence interval. The results of the avian influenza monitoring are given in Annexes 8 and 9.

In the Russian Federation, surveillance in wild birds is based on the principle of incident diagnostics (passive surveillance). Active surveillance in wild fauna is applied during the period when the territory is affected by the disease in poultry. Official avian influenza monitoring in poultry and wild birds is carried out in accordance with annual Orders of the Federal Service for Veterinary and Phytosanitary Surveillance through laboratory tests within the Rosselkhoz nadzor activities for ensuring compliance with the World Trade Organization (WTO) Sanitary and phytosanitary (SPS) Agreement requirements upon Russia accession to the WTO (Order No. 1305 of December 28, 2017 for 2018; Order No. 1519 of December 28, 2018 for 2019).

According to the Methodical Guidelines for laboratory, in the Russian Federation avian influenza monitoring in commercial poultry kept at large and small farms as well as poultry imported to Russia, shall be performed. Samples for testing are collected according to the following criteria:

- at least 25 samples per building (section, poultry house) shall be collected on commercial poultry farms. Broilers shall be sampled at their slaughter, at least 25 samples per consignment (section, poultry house);
- samples from backyard poultry (at least 25 samples per settlement) shall be collected if backyard poultry population in the settlement is more than 100 birds.
- in case of import of embryonated/hatching eggs and live poultry to the Russian Federation 30 embryonated/hatching eggs per consignment or 25 cloacal swabs from live poultry shall be collected. During quarantine at least 25 serum samples per consignment shall be collected when the consignment

<sup>4</sup> [https://www.oie.int/wahis\\_2/temp/reports/en\\_fup\\_0000030576\\_20190521\\_180834.pdf](https://www.oie.int/wahis_2/temp/reports/en_fup_0000030576_20190521_180834.pdf)

<sup>5</sup> [https://www.oie.int/wahis\\_2/public/wahid.php/Reviewreport/Review?reportid=30576](https://www.oie.int/wahis_2/public/wahid.php/Reviewreport/Review?reportid=30576)

comprises more than 1,000 birds, 10 samples per consignment shall be collected when the consignment comprises 10 to 1,000 birds, samples shall be collected from each bird when the consignment comprises less than 10 birds.

Sampling shall be performed in accordance with the monitoring plan.

Testing frequency shall be as follows:

- at least once a quarter in each poultry house in in-door keeping poultry establishments and at least twice a year in free-range keeping poultry establishments
- at least twice a year in settlements where poultry are kept.

Representativeness of tested samples collected in poultry houses shall allow detection of the virus circulation in case of infection of:

- at least 5% of poultry kept in in-door keeping poultry establishments;
- at least 10 % of poultry kept in free-ranged keeping poultry establishments;
- at least 20% of backyard poultry kept in the settlement.

Typing of hemagglutinin and neuraminidase genes shall be performed when the virus RNA is detected in samples. When AI virus-positive sera are detected they shall be typed to determine anti-hemagglutinin subtype-specificity.

Procedure and results of sampling performed within the monitoring programme shall be recorded in sampling certificates. Copy of sampling certificate shall be forwarded to the authorized the Rosselkhoznadzor-subordinate laboratory within one month after sampling. When H4, H5, H6, H7 and H9 AI-virusRNA or antibodies to these viruses are detected, results shall be sent immediately.

### **Monitoring tests of poultry**

Commercial poultry, breeding poultry, backyard poultry and poultry kept in zoos, as well as synanthropic birds living in the poultry farm territory and poultry imported to the Russian Federation as well as poultry intended for sale within the country, hatching poultry eggs imported to the Russian Federation, shall be tested. As part of the federal HPAI surveillance over 86 000 samples and over 81 000 samples were tested in 2017 and 2018, respectively. The results of this HPAI monitoring in poultry population in 2018 - 2019 which substantiate the compliance of the relevant free zones with Article 10.4.4. of the OIE code can be found in Annexes 7, 8, 9 and 10.

### **Monitoring tests of wild birds**

Monitoring is performed in wild birds taking into account avian influenza seasonality in the Russian Federation: spring, summer, autumn (i.e. spring migration, nesting period after hatching, autumn migration) in cooperation with zoologists and specialists of hunting control authorities of the RF Subjects. Sampling in wild birds is performed 3 times a year (in spring, summer, autumn) in AI-free regions and once a quarter in AI-infected regions.

### **Sampling, diagnosis**

Test methods recommended in the Methodical Guidelines for laboratory monitoring of avian influenza in the Russian Federation are as follows: Hemagglutination-inhibition (HI); virus isolation; PCR; complement fixation test (CFT) and enzyme-linked immunosorbent assay (ELISA).

The indirect ELISA is used for testing sera to detect antibodies against the type A avian influenza virus in chickens from poultry establishments, farms, settlements and chickens imported from foreign countries. The competitive ELISA is used for the detection of antibodies against avian influenza H5 subtype in sera of different bird species.

Haemagglutination inhibition test (HI) is used for testing ELISA positive birds (chicken, geese, ducks, turkeys, wild birds, etc.). However, the haemagglutination inhibition test is also used as a standalone diagnostic method.

Polymerase chain reaction (PCR) – tests are conducted:

- when sudden deaths of birds have occurred or clinical signs characteristic of influenza have appeared,
- when birds test positive by ELISA and HI,

- to determine the type of hemagglutinin and neuraminidase of the isolated strains (FGBI ARRIAH, FGBI VGNKI),
- when testing poultry meat, semi-finished products, by-products, eggs, chicken embryos
- when testing compound feed as well as meat and bone meal.

It is recommended to carry out serological and virological tests according to the regulations in force and guidelines to diagnostic kits. HI tests are carried out with obligatory control of serum samples for spontaneous agglutination. The serum must be treated against thermolabile and if necessary against thermostable inhibitors.

#### 4. Prevention, anti-epidemic prevention measures

The HPAI prevention and control measures as well as the contingency plan for the occurrence of notifiable HPAI viruses are legally stipulated by the Veterinary Rules on Combating Avian Influenza established by Decree No. 90 of 27 March 2006 «Establishment of rules for combating avian influenza». Backyards where preventive vaccination against avian influenza is carried out are officially registered by raion stations for animal diseases. After the vaccination has taken place an act on preventive vaccination is drawn up with the indication of place, date of vaccination, number and species of poultry, vaccination doses, name of the preparation, batch, shelf life, residues of the preparation and method for its disposal. In 21-28 days post-vaccination immunity is assessed. Vaccination is deemed effective if antibody titre is 80% and more vaccinated poultry is not less than 4,0 log<sub>2</sub>.

Restriction measures for movement of poultry products are introduced in establishments with a lower biocontainment level in high-risk subjects where vaccination was carried out with due consideration of the regionalization of the Russian Federation. The measures are fixed in Annex No.13 (Rosselkhoznadzor Decision of 20 January 2017, [http://www.fsvps.ru/fsvps/regional?\\_language=en](http://www.fsvps.ru/fsvps/regional?_language=en)).

In Russia poultry kept in backyards is bred for private consumption, consequently, movement of poultry and poultry products outside the boundaries of a vaccination area does not take place.

If avian influenza virus circulation is registered (diagnosis confirmation by laboratory methods), a state veterinary inspector for the assigned service area submits to the State bodies of the Russian Federation, to the Russian Federation subjects and to local authorities proposals for the determination of the boundaries of an epidemic outbreak area as follows:

- Infected settlement: an affected settlement (s) or its part (s), poultry organization and farm with premises, adjacent territories and water basins and other objects on the territory of which a disease outbreak area is established
- Protection zone: settlements, farms, pastures and other territories immediately adjacent to the infected area or having close commercial ties with that area
- Surveillance zone: territories surrounding the protection zone where relevant measures for avian influenza monitoring are carried out, taking into account commercial relations, ecological and geographical conditions, epidemiological factors and particular characteristics of the poultry industry in a certain area.

The radius of the protection zone is not less than 5 km from the boundaries of the infected settlement. The radius of the surveillance zone is not less than 10 km from the boundaries of the infected settlement.

#### 5. Control measures used for disease-free status maintenance

The Federal Service for Veterinary and Phytosanitary Surveillance of the Russian Federation took strong control measures to maintain epidemiological well-being for infectious animal diseases.

##### Disease notification and early reporting system

According to the Decree of the Ministry of Agriculture of the Russian Federation No.189 of 2 April 2008 «Regulation on reporting information to State information system in the agricultural field», if quarantine and highly dangerous animal diseases are detected the following information is provided:

- Immediate report on the detection of quarantine and highly dangerous animal diseases according to the results of laboratory tests (Form 4-vet-B), the time period for reporting information – 12 hours since the

diagnosis has been established or the information has been obtained, frequency of reporting – immediately.

Form 4-vet-B is submitted by veterinary laboratories accredited in the national accreditation system for avian influenza analyses in 12 hours after a positive result has been obtained. A report copy on obtained results is sent to the Head of the executive body of the Russian Federation subject and to the State veterinary service of the Russian Federation subject where a disease has been registered and which sent biological and (or) pathological material for testing.

- Immediate report on the disease emergence and development of the epizootic situation (Form 1-vet-B), the time period for reporting information – immediately, frequency of reporting – each week. Form 1-vet-B is submitted by executive bodies of Russian Federation subjects (governing bodies for the agroindustrial complex of Russian Federation subjects) to the Ministry of Agriculture of the Russian Federation (FGUP «Veterinary Centre»). Information on the epidemiological situation development (Form 1-vet-B) is reported by means of further supplementary reports until quarantine/restrictions lifting. A final report is submitted if an outbreak or outbreaks have been eradicated (quarantine and restrictions are lifted, all measures implemented).

Apart from the above-mentioned forms of immediate reporting, the country introduced an early reporting system. All diagnostic laboratories of the Russian Federation are connected to the state information automated system in the veterinary field - VETIS. The subsystem VESTA is intended for collection, transmission and analysis of the information on laboratory testing of samples during carrying out of analysis in the field of diagnostics, food safety, food and feed quality, quality and safety of veterinary drugs, etc. Thus, the data, protocols of sampling, protocols and results of laboratory testing are downloaded to the system for purposes of control, collection, transmission, information analysis and subsequent reporting.

If an avian influenza case is registered and the diagnosis is confirmed by laboratory testing with subsequent submission of positive testing results, the encoded information is immediately sent to the Chief State Inspector of the Russian Federation, executive bodies of the Russian Federation subjects and concerned state veterinary services. The Rosselkhoznadzor of the Russian Federation immediately changes the status of the region for infected by means of state information system in the veterinary field VETIS in the CERBERUS system which results in introduction of stricter conditions and restrictions (ban) on movement of consignments regulated by the Rosselkhoznadzor and originating from the infected region.

#### **Control of movement/ban on movement of animals and animal products during exports, imports and movement between the five free zones of the Russian Federation.**

The control of movement/ban on movement of animals and animal products is ensured by the State Information System in the Veterinary Field of the Russian Federation VETIS, subsystem ARGUS, MERCURY, CERBERUS (Annex 6). Veterinary rules for organizing the issuance of electronic veterinary accompanying documents (eVADs) in the territory of the Russian Federation were adopted pursuant to Order No 589 of the Ministry of Agriculture of the Russian Federation of December 27, 2016. These veterinary rules were developed to ensure veterinary and sanitary safety of Rosselkhoznadzor-regulated products and animals subject to veterinary control (surveillance), to confirm the freedom of animals from contagious animal diseases in production sites of Rosselkhoznadzor-regulated goods, as well as to ensure identification and traceability of Rosselkhoznadzor-regulated goods during their production and movement.

Since 2018 the electronic certification of all consignments regulated by the Rosselkhoznadzor (animals and animal products) has been performed by issuing electronic veterinary accompanying documents (eVADs) through the «Argus» and «Mercury» subsystems. More detail on the issuance of eVADs can be found in Annex 6. <http://www.fsvps.ru/fsvps/regional>.

The «Argus» information system is intended for electronic certification of consignments regulated by the Rosselkhoznadzor and for the issuance of authorizations for exports and imports of Rosselkhoznadzor-regulated goods. Rosselkhoznadzor-regulated consignments are imported into the Customs Union territory in accordance with the requirements of Decision No. 607 of the Customs Union Commission of April 07, 2011 "On the Forms of Universal Veterinary Certificates Issued for Rosselkhoznadzor-regulated Goods Imported into the Customs Union Territory from Non-member States" while the movement of these products between the Member States of the

Customs Union is carried out in accordance with the requirements of Decision No. 317 of the Customs Union Commission of June 18, 2010 "On the Implementation of Veterinary and Sanitary Measures in the Customs Union".

The «Mercury» information system is intended for electronic certification of consignments regulated by the Rosselkhoznadzor, tracing their transactions and movement routes in the territory of the Russian Federation (between RF subjects) with obligatory compliance of animal consignments with the requirements of the Decision of the Rosselkhoznadzor on the Establishment of Statuses of Regions of the Russian Federation for Infectious Animal Diseases and Conditions for Movement of Goods Subject to Veterinary Surveillance (Control) by the Rosselkhoznadzor (approved on January 20, 2017) as well as in the Customs Union territory with obligatory compliance of animal consignments with the requirements of Decision No. 317 of the Customs Union Commission of June 18, 2010 "On the Implementation of Veterinary and Sanitary Measures in the Customs Union", recommendations of the OIE Code, Decision of the Rosselkhoznadzor (approved on January 20, 2017) and the Codex Alimentarius.

Thus, when eVADs for poultry and poultry products transported between zones (subjects within zones) with different animal health statuses are issued through the «Mercury» information system, the conditions for the transportation of a particular Rosselkhoznadzor-regulated product are selected automatically from the ones listed in the Rosselkhoznadzor Decision on Establishment of Statuses of the Regions of the Russian Federation with Regard to Contagious Animal Diseases and Conditions of Movement of Rosselkhoznadzor-regulated Goods (approved on January 20, 2017) taking into account the place of origin of poultry/poultry products (either originating from within the Russian Federation or imported).

The requirements for the transportation of poultry/poultry products as well as for diagnostic tests laid out by Decision No. 317 of the Customs Union Commission of June 18, 2010, Decision No. 607 of the Customs Union Commission of April 07, 2011 as well as the Decision of the Rosselkhoznadzor on the Establishment of Statuses of Regions of the Russian Federation for Infectious Animal Diseases and Conditions for Movement of Goods Subject to Veterinary Surveillance (Control) by the Rosselkhoznadzor (approved on January 20, 2017) (approved on January 20, 2017) are in full compliance with the requirements of Article 10.4 of the OIE Code and the Codex Alimentarius.

**Avian Influenza surveillance enforcement.** Chief veterinary officers of the Subjects of the Russian Federation of previously infected regions carry out monitoring with regard to avian influenza. The sampling procedure and monitoring results shall be documented in reports, the report copies shall be sent to the Rosselkhoznadzor official laboratory not later than in 1 month after sampling or immediately if RNA of AI viruses subtypes H4, H5, H6, H7 and H9 or antibodies to these virus subtypes are detected.

**Vaccination is practiced only in areas at high introduction risk.** Vaccination against HPAI is carried out in regions at high risk of introduction of the disease. The avian influenza vaccination program is limited, targeted and depends on risk category (migration seasons, previously infected areas, territories around large poultry farms where there are large water reservoirs with resting and nesting areas for wild migratory birds). The distribution and use of vaccines are controlled by the Veterinary Department of the Ministry of Agriculture of the Russian Federation based on risk analysis of avian influenza introduction into the territory of the Russian Federation and avian influenza epidemic situation in the countries of the Asian enclave. Only poultry kept in backyard farms are subject to immunization against AI under official supervision; poultry population from commercial farms (indoor poultry farms (poultry establishments)) is not vaccinated. For more information on the vaccines used and their compliance with the OIE Terrestrial Manual please refer to Annex 9.

## 6. Conclusion

**Taking into account the epidemiological situation with regard to avian influenza, the avian influenza monitoring and based on the avian influenza regionalization in the Russian Federation, the Delegate of the Russian Federation to the OIE declares compliance of the requirements for self-declaring free from HPAI infection in poultry in zones I, II, III, and for recovery of freedom in zone IV and V as of 21 May 2019, in compliance with Chapters 1.6., 4.3. and Articles 10.4.2. and 10.4.4. of the OIE *Terrestrial Code* and consistent with the information provided in WAHIS.**



## HPAI zoning of the Russian Federation

## List of the regions of the Russian Federation included in five zones with different highly pathogenic animal health statuses as of September, 2019

Federal District	No.	Avian influenza free zone (HPAI free RF Subjects)
<b>Zone I</b>		
Far Eastern FD	1.	Republic of Sakha (Yakutia)
	2.	Amur Oblast
	3.	Primorsky Krai
	4.	Jewish Autonomous Oblast
	5.	Khabarovsk Krai
	6.	Sakhalin Oblast
	7.	Magadan Oblast
	8.	Chukotka Autonomous Okrug
	9.	Kamchatka Krai
<b>Zone II</b>		
Far Eastern FD	1.	Zabaikalsky Krai
	2.	Republic of Buryatia
Siberia FD	3.	Irkutsk Oblast
	4.	Republic of Tyva
	5.	Krasnoyarsk Krai
	6.	Republic of Khakassia
	7.	Kemerovo Oblast
<b>Zone III</b>		
Siberia FD	1.	Republic of Altay
	2.	Altai Krai
	3.	Novosibirsk Oblast
	4.	Omsk Oblast
	5.	Tomsk Oblast
Volga FD	6.	Orenburg Oblast
	7.	Republic of Bashkortostan
	8.	Perm Krai
Ural FD	9.	Tyumen Oblast
	10.	Chelyabinsk Oblast
	11.	Kurgan Oblast
	12.	Sverdlovsk Oblast
	13.	Yamalo-Nenets Autonomous Okrug
	14.	Khanty-Mansiysk Autonomous Okrug
Northwest FD	15.	Nenetsk Autonomous Okrug
	16.	Republic of Komi
<b>Zone IV</b>		
Northwest FD	1.	Republic of Karelia
	2.	Murmansk Oblast
	3.	Novgorod Oblast
	4.	Pskov Oblast
	5.	Leningrad Oblast
	6.	Kaliningrad Oblast
	7.	Arkhangelsk Oblast
	8.	Vologda Oblast
Volga FD	9.	Nizhny Novgorod Oblast
	10.	Republic of Mariy El
	11.	Udmurt Republic
	12.	Kirov Oblast
	13.	Bryansk Oblast
	14.	Republic of Mordovia
Central FD	15.	Kaluga Oblast
	16.	Moscow Oblast
	17.	Vladimir Oblast
	18.	Kostroma Oblast
	19.	Yaroslavl Oblast
	20.	Ivanovo Oblast

	21.	Smolensk Oblast
	22.	Tver Oblast
	23.	Lipetsk Oblast
	24.	Tambov Oblast
	25.	Tula Oblast
	26.	Ryazan Oblast
<b>Zone V</b>		
Volga FD	1.	Republic of Chuvashia
	2.	Saratov Oblast
	3.	Samara Oblast
	4.	Ulyanovsk Oblast
	5.	Penza Oblast
	6.	Republic of Tatarstan
Central FD	7.	Voronezh Oblast
	8.	Kursk Oblast
	9.	Oryol Oblast
	10.	Belgorod Oblast
South FD	11.	Volgograd Oblast
	12.	Astrakhan Oblast
	13.	Republic of Kalmykia
	14.	Krasnodar Krai
	15.	Republic of Adygeya
	16.	Rostov Oblast
North Caucasus FD	17.	Stavropol Krai
	18.	Republic of Kabardino-Balkaria
	19.	Karachay-Cherkess Republic
	20.	Republic of Ingushetia
	21.	Republic of North Ossetia
	22.	Republic of Chechnya
	23.	Republic of Dagestan

### HPAI epidemiological investigation in the Russian Federation 2005 – 2019

For the first time avian influenza H5N1 was isolated from waterfowl and poultry in the rural areas of Novosibirsk Oblast in summer 2005. HPAI outbreaks in West Siberia and the South Urals in July-October 2005 were associated with AI H5N1 virus introduction from South East Asia and disease occurrence in waterfowl. Further disease spread pattern apparently depended on two factors:

- migration of wild birds to the south and their comingling with wild birds which followed latitudinal migratory routes
- presence of susceptible poultry population along the said migratory pathways and their contacts with wild birds.

During the first wave of HPAI spread in 2005-2007, 223 HPAI outbreaks occurred in poultry and 13 HPAI outbreaks occurred in wild birds. For the number of HPAI H5N1 outbreaks reported in the Russian Federation in 2005-2007, please, refer to Tables 1-3.

**Table 1. HPAI-infected regions in the Russian Federation in 2005**

Federal District	Republic, Krai, Oblast	Birds	Number of settlements
Siberian (Zone II)	Altay	Poultry	17
	Novosibirsk		64
	Omsk		9
Ural (Zone III)	Kurgan	Poultry	9
	Tyumen		8
	Chelyabinsk		7
Central (Zone IV)	Tula	Poultry	1
	Tambov		2
Southern (Zone V)	Kalmykia	Wild	1
	Astrakhan		1

**Table 2. HPAI-infected regions in the Russian Federation in 2006**

Federal District	Republic, Krai, Oblast	Birds	Number of settlements
Siberian (Zone II)	Novosibirsk	Poultry	3
	Omsk		6
	Altay		2
	Tomsk		2
	Tyva	Wild	1
Southern (Zone V)	Krasnodar	Poultry	33
	Dagestan		28
	Stavropol		5
	Adygeya		1
	Volgograd		2
	Kalmykia		1
	Chechnya	Wild	1
	Kabardino-Balkaria		3
	North Ossetia – Alania		1
	Rostov		1
	Astrakhan		1
	Krasnodar		3

**Table 3. HPAI-infected regions in the Russian Federation in 2007**

Federal District	Republic, Krai, Oblast	Birds	Number of settlements
Central (Zone IV)	Kaluga (Zone IV)	Poultry	1
	Moscow (Zone IV)		9
	Moscow city (Zone IV)		1
Southern (Zone V)	Krasnodar		5
	Adygeya		2
	Rostov		5

In 2008 avian influenza A/chicken/Russia/Primorsky/85/08 virus belonging to Asian genetic line (A/H5N1 (A/Gs/Gd/96 line, Mixed/VNM2 subline) was isolated in the infected area located in Ussuriysky Raion of Primorsky Krai. (Annex 4, Fig.1) The full-length genome sequencing allowed us to identify that the virus belonged to the genotype circulating in the southern provinces of China and in Vietnam and previously unknown in Russia.

In 2014, two H5N1 HPAI outbreaks were detected in backyard poultry in the Altai Krai. An epidemiological investigation found that wild birds hunted in lakes located near the settlement of Dolgovo and settlement of Ilyinsky and taken to the hunters' backyards were the source of HPAI virus. It was supposed that the factors of H5N1 AI agent dissemination were as follows: game bird evisceration in back yards with subsequent contamination the environment with their blood and feces, feeding animals with non-treated innards, economic links with neighbouring backyards and delayed reporting to the Veterinary Service. The virus was predominantly transmitted by alimentary route. Anti-epidemic measures taken when AI was suspected and after the diagnosis was confirmed were found to be effective as no new cases of bird deaths have been reported since October 2014.

No H5N8 AIV - associated disease or deaths were reported in birds in the Russian Federation but the virus was found in wild birds shot off in Yakutia during annual monitoring tests. In May 2016 experts of the FGBI "ARRIAH" examined the Russian part of the lake of Uvs Nuur located in the Republic of Tyva bordering to Mongolia within the official epidemic monitoring since H5N1 HPAI-associated deaths of migratory birds of different species were reported at the lake in 2006, 2009, 2010 and 2015 (Annex 3, Fig. 1). In June 2016, 17 dead birds of the following species were found on the lakeshore: *Larus ridibundus* (black-headed gull); *Aedea cinerea* (grey heron); *Sterno hirundo* (common tern); *Podiceps cristatus* (great crested grebe); *Phalacrocorax carbo* (common cormorant), Anatidae (ducks).

H5N8 HPAI virus was isolated from the pathological material samples taken from the said birds. Comparative analysis of nucleotide sequences of hemagglutinin gene fragment showed that the tested isolate belonged to Asian genetic line of HPAI A/Guangdong/1/96 line, clade 2.3.4.4. The detected isolate was most closely related to type A H5N2, H5N6, H5N8 AI viruses isolated in the South-East Asian countries in 2013-2014 based on the sequence analysis.

In 2017 H5N8 outbreaks in wild birds were reported in Krasnodar Krai, Voronezh and Kaliningrad Oblasts. In 2017-2018, H5N8 outbreaks occurred in poultry in Moscow, Voronezh, Kursk, Nizhny Novgorod, Orel, Penza, Rostov, Samara, Saratov, Smolensk, Ulyanovsk Oblasts as well as in the Republics of Chechnya, Mari-El, Tatarstan, Udmurtia and Chuvashia while H5N2 outbreaks occurred in Kostroma Oblast. No AI outbreaks were reported in wild birds in 2018 (Tables 4, 5, Annex2). Between January and February 2019, HPAI H5N8 outbreaks were reported only in Ust-Donetsk Raion, Rostov Oblast on 2 turkey farms (Annex 3, Fig 5).

In 2017 - 2019, commercial indoor poultry farms were affected in Penza, Rostov, Voronezh and Kostroma Oblasts. In these regions enhanced surveillance for avian influenza was carried out in both poultry and wild birds. For the results of this surveillance, please, refer to Tables 3, 4, Annex 5. These results show that the disease was contained in primary outbreaks.

In May 2019, the Russian Federation submitted to the OIE a final report stating that all HPAI outbreaks in the country had been resolved

[https://www.oie.int/wahis\\_2/public/wahid.php/Reviewreport/Review?reportid=30576](https://www.oie.int/wahis_2/public/wahid.php/Reviewreport/Review?reportid=30576),  
[https://www.oie.int/wahis\\_2/temp/reports/en\\_fup\\_0000030576\\_20190521\\_180834.pdf](https://www.oie.int/wahis_2/temp/reports/en_fup_0000030576_20190521_180834.pdf).

**Table 4.** Chronology of outbreaks of highly pathogenic H5N8 avian influenza in poultry, Zone IV, Russian Federation, 2017.

Date of outbreak	RF Subject	Number of destroyed birds	Farm category
28.02.2017	Moscow Oblast	218,521	Poultry farm (breeding flock)
03.03.2017	Moscow Oblast	28	Backyard farm
03.03.2017	Moscow Oblast	23	Backyard farm
03.03.2017	Moscow Oblast	38	Backyard farm
04.03.2017	Moscow Oblast	227,136	Poultry farm (broilers)
04.03.2017	Moscow Oblast	62	Backyard farm
06.03.2017	Moscow Oblast	94	Backyard farm
10.03.2017	Moscow Oblast	11	Backyard farm
12.04.2017	Moscow Oblast	40	Backyard farm
11.05.2017	Republic of Mari El	40	Backyard farm
12.05.2017	Nizhny Novgorod Oblast	1,856	Backyard farm
17.05.2017	Republic of Mari El	30	Backyard farm
18.05.2017	Republic of Udmurtia	144	Backyard farm
03.08.2017	Moscow Oblast	64	Backyard farm
17.12.2017	Kostroma Oblast	- > 500,000	Poultry farm (laying hens)

**Table 5.** Chronology of outbreaks of highly pathogenic H5N8 avian influenza in poultry, Zone IV, Russian Federation, 2016-2017

Date of outbreak	RF Subject	Number of destroyed birds	Farm category
07.11.2016	Republic of Kalmykia	122	Backyard farm
07.11.2016	Republic of Kalmykia	81	Backyard farm
02.12.2016	Astrakhan Oblast	649226	Poultry farm (laying hens)
08.12.2016	Krasnodar Krai	86	Wild birds
26.12.2016	Krasnodar Krai	5478	Poultry farm (ducks and geese)
26.12.2016	Rostov Oblast	221488	Poultry farm (turkey)
08.01.2017	Republic of Chechnya	80	Backyard farm
13.04.2017	Rostov Oblast	299074	Poultry farm (laying hens)
16.04.2017	Rostov Oblast	99350	Poultry farm (turkey)
21.04.2017	Rostov Oblast	99524	Poultry farm (turkey)
21.04.2017	Rostov Oblast	249200	Poultry farm (turkey)
22.04.2017	Moscow Oblast	13	Backyard farm
02.05.2017	Republic of Tatarstan	175	Backyard farm
03.05.2017	Republic of Tatarstan	528500	Poultry farm
04.05.2017	Republic of Tatarstan	51	Backyard farm
06.05.2017	Republic of Tatarstan	470	Backyard farm
09.05.2017	Republic of Tatarstan	350	Backyard farm
10.05.2017	Republic of Tatarstan	60	Backyard farm
11.05.2017	Samara Oblast	70	Backyard farm
20.10.2017	Rostov Oblast	27	Backyard farm
15.11.2017	Rostov Oblast	3	Backyard farm

Fig. 1. HPAI infected regions (wild birds), Russian Federation, 2015.

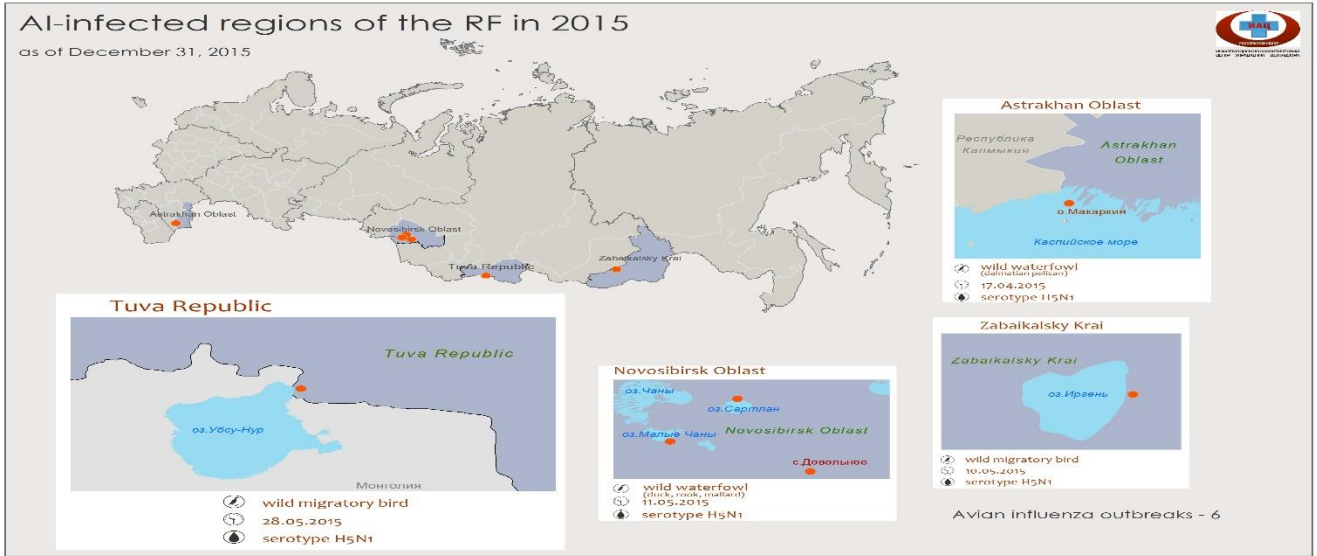


Fig. 2. HPAI infected regions in November-December, 2016

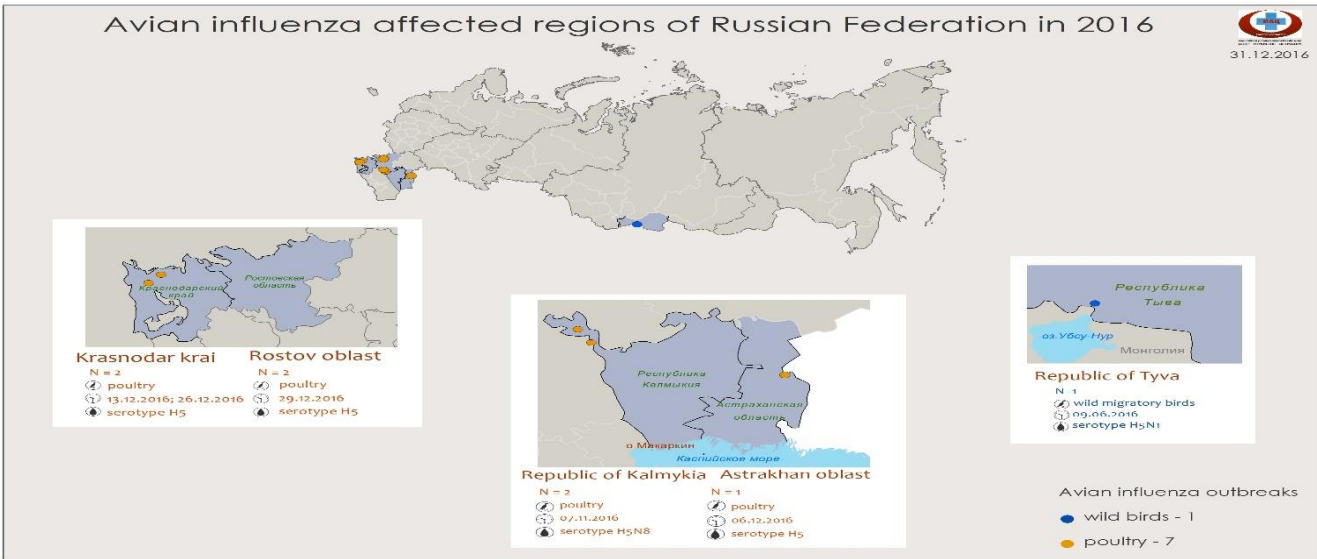
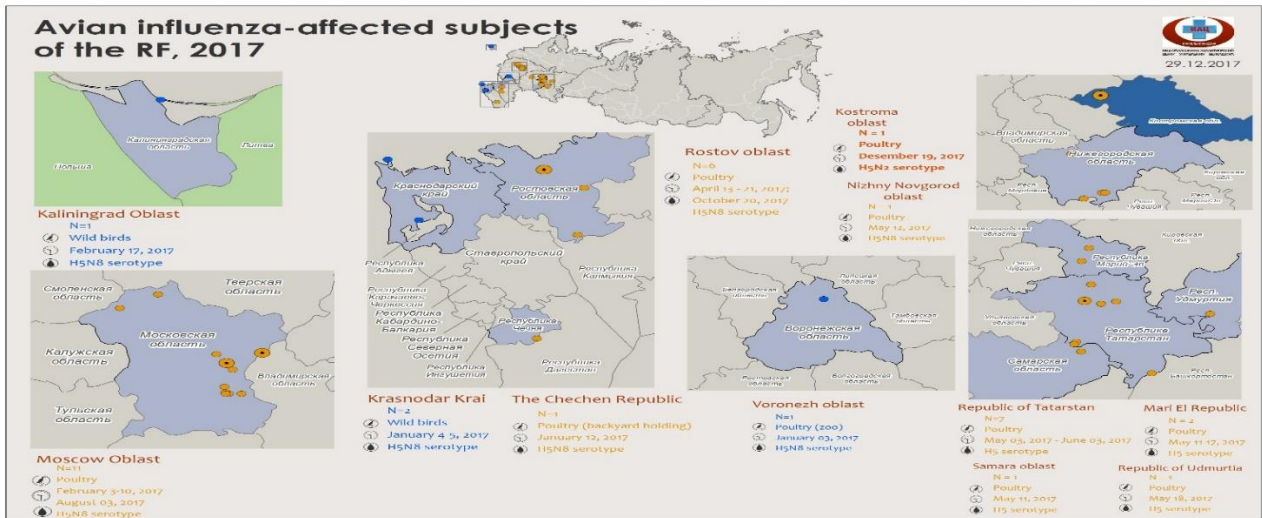
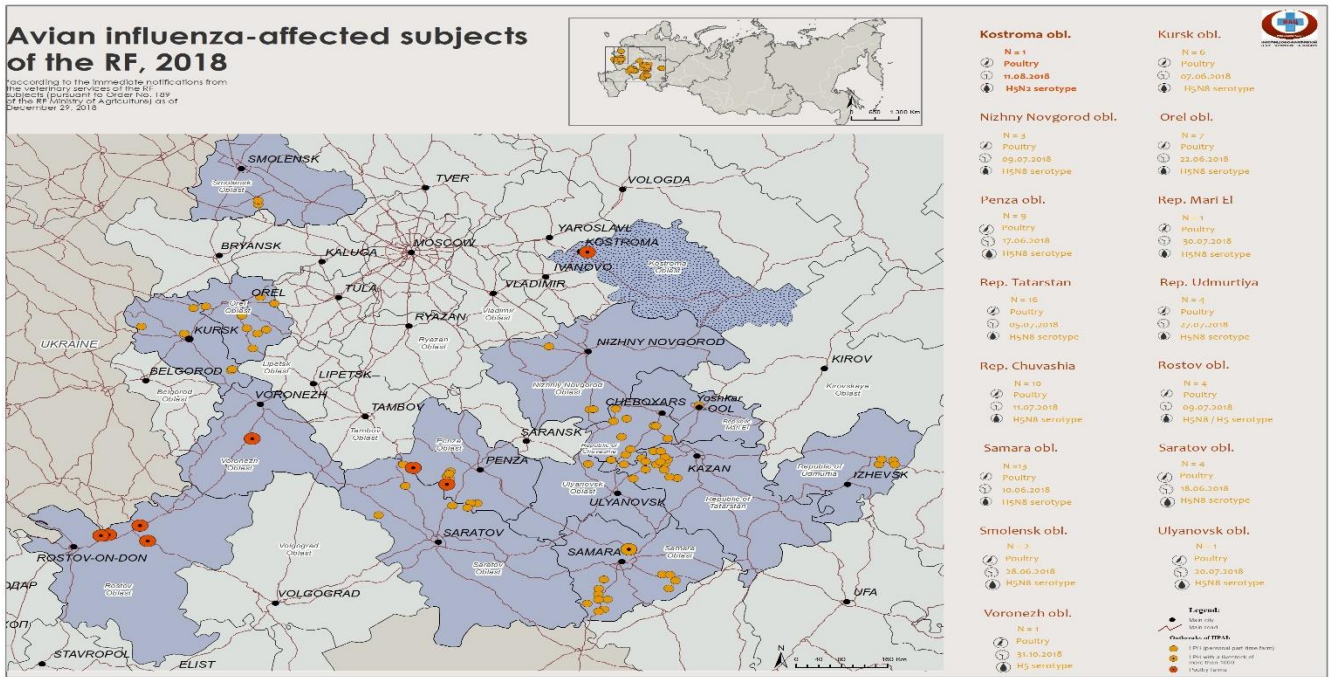


Fig. 3. HPAI infected regions, Russian Federation, 2017



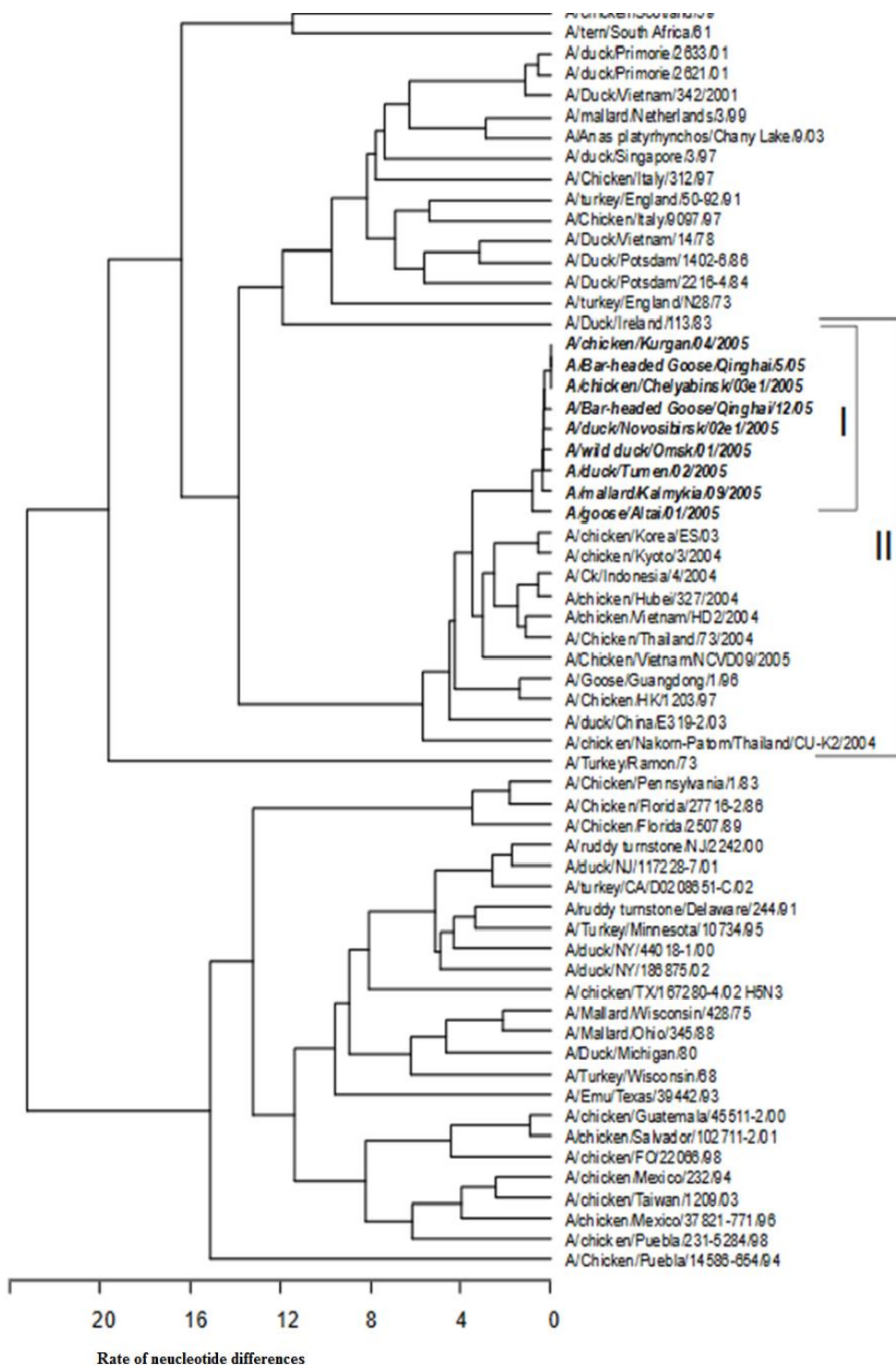
**Fig. 4.** HPAI-infected regions, Russian Federation, 2018



**Fig.5.** HPAI-infected regions. Russian Federation, 2019



**Results and interpretation of phylogenetic analysis of nucleotide sequences of the H5 gene segment from HPAI isolates recovered in the Russian Federation in 2006-2019**



**Figure 1. Results and interpretation of phylogenetic analysis of nucleotide sequences of Gene H5 segment (731-1113 bp) from HPAI isolates. The following groups were isolated: I – Russian isolates Qinghai; II – isolates of genetic lineage A/Guangdong/1/96**

Molecular-biological characterization of avian influenza virus isolates collected in the west of Siberian and Urals Federal Districts and the Republic of Kalmykia in 2005. A.V. Andriyasov, T.B. Manin, I.P. Pchyolkina, L.O. Scherbakova, N.S. Mudrak, N.N. Lugovskaya, M.A. Tsivanyuk, S.N. Kolosov, V.V. Drygin, N.A. Vlasov



Figure 1 shows that haemagglutinin of all recovered isolates belongs to subtype H5 and neurominidase to subtype N1 of the HPAI isolate lineage A/Goose/Guangdong/1/96 (H5N1), recovered in South Eastern Asia (including Indonesia) and China beginning from 1996 up to the present time (Fig. 2).

The closest analogues of the Russian isolates are isolates recovered in May 2005 during the outbreak in the wild waterfowl (geese, gulls) [Lake Qinghai in the Qinghai Province (North –East of Tibet)]. Consensus sequences of Qinghai isolates and Russian isolates coincide. Some isolates (both Chinese and Russian) can have 1-2 amino acid and 2-3 nucleotide substitutions, and as for the Russian isolates their specific substitutions might correlate with the geographic sites where the virus was isolated.

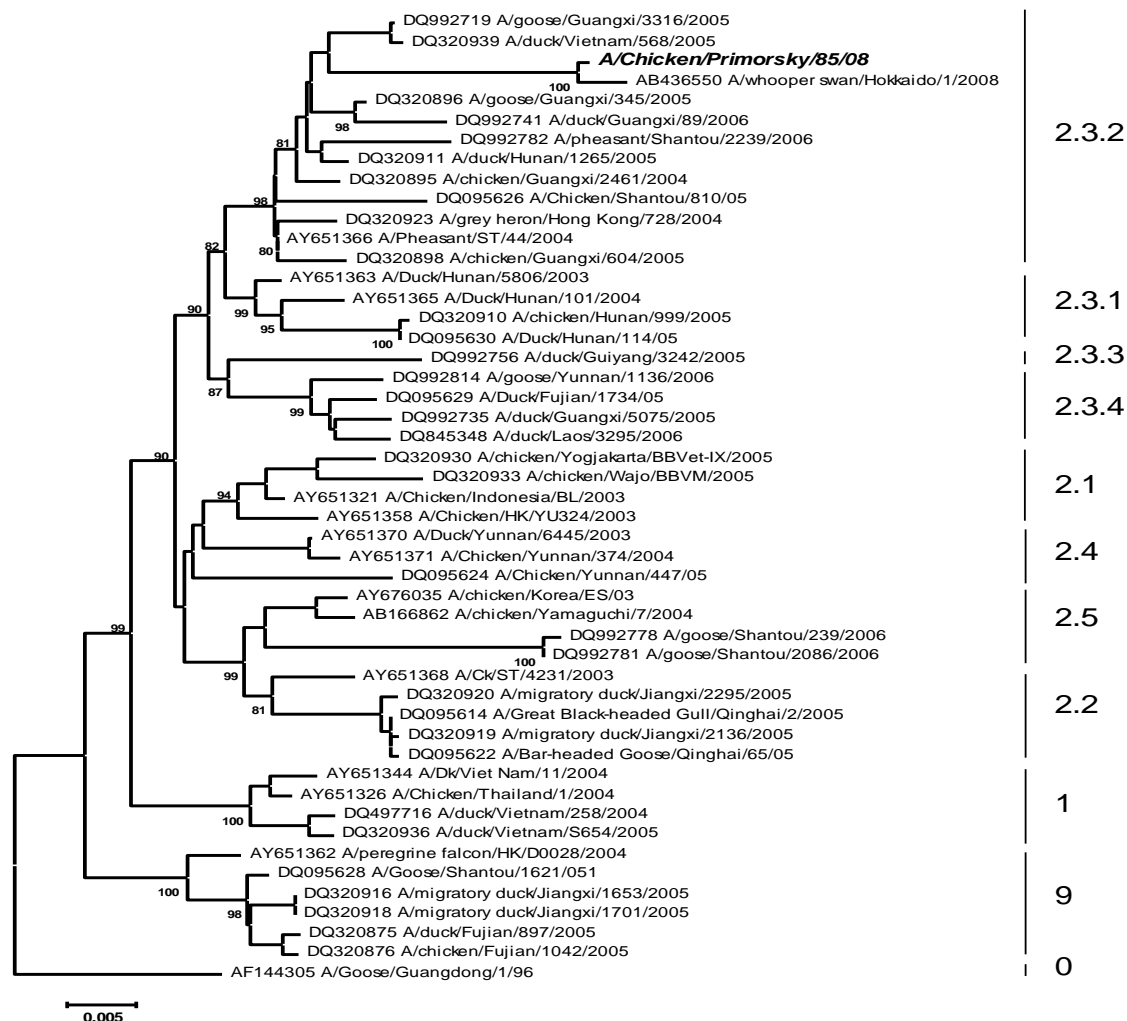
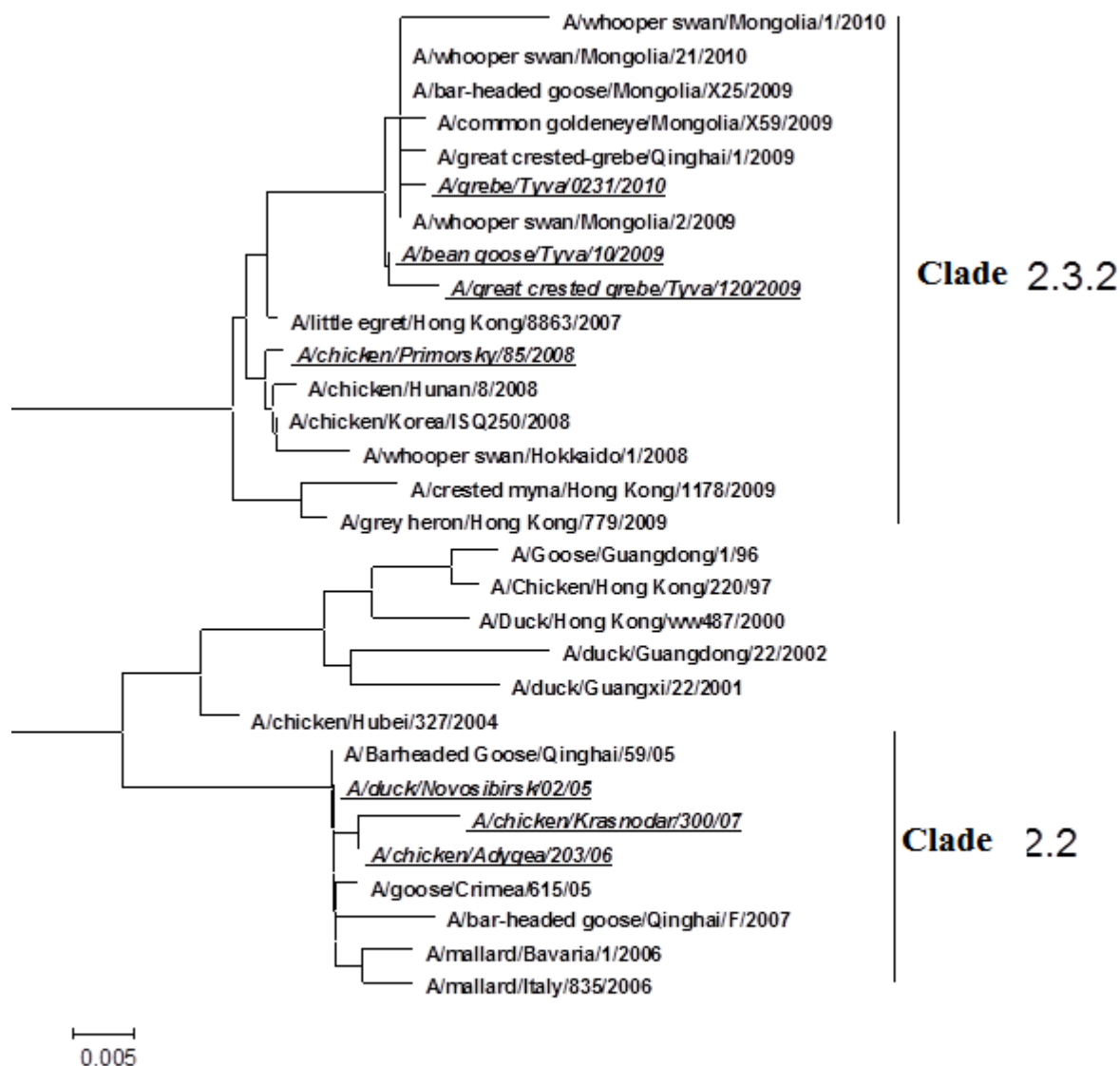


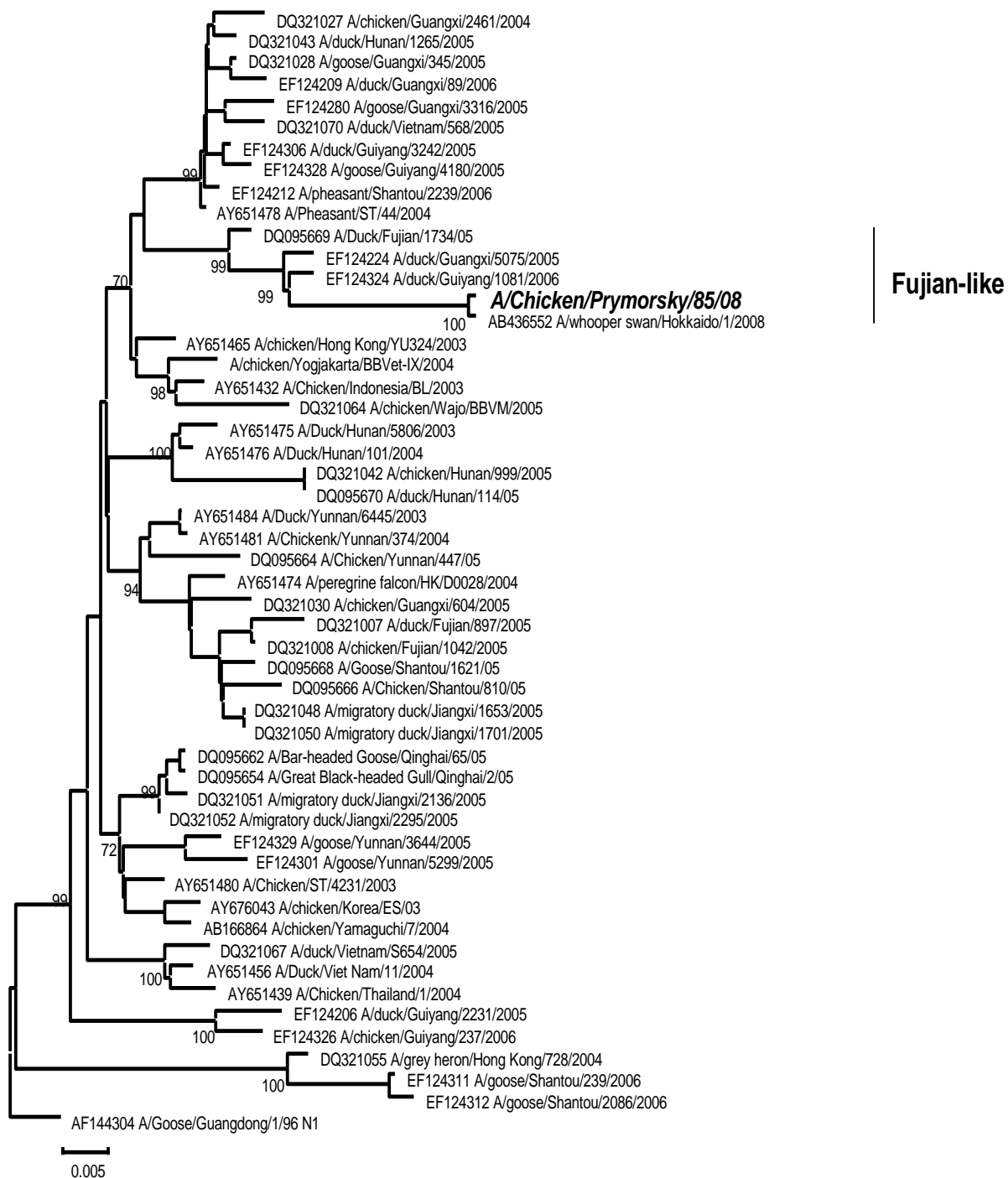
Figure 2. Phylogenetic tree, constructed using NJ method, basing on sequences of Gene H5 segment (77-1072 b.p.) from several H5N1 HPAI isolates of A/Gs/Gd/96 genetic lineage



**Figure 3. Results of phylogenetic analysis of nucleotide sequences of Gene H segment (674-1187b.p.) from A/H5N1 HPAI strains of A/Gs/Gd/96 genetic lineage. Strains recovered in Russia are underlined.**

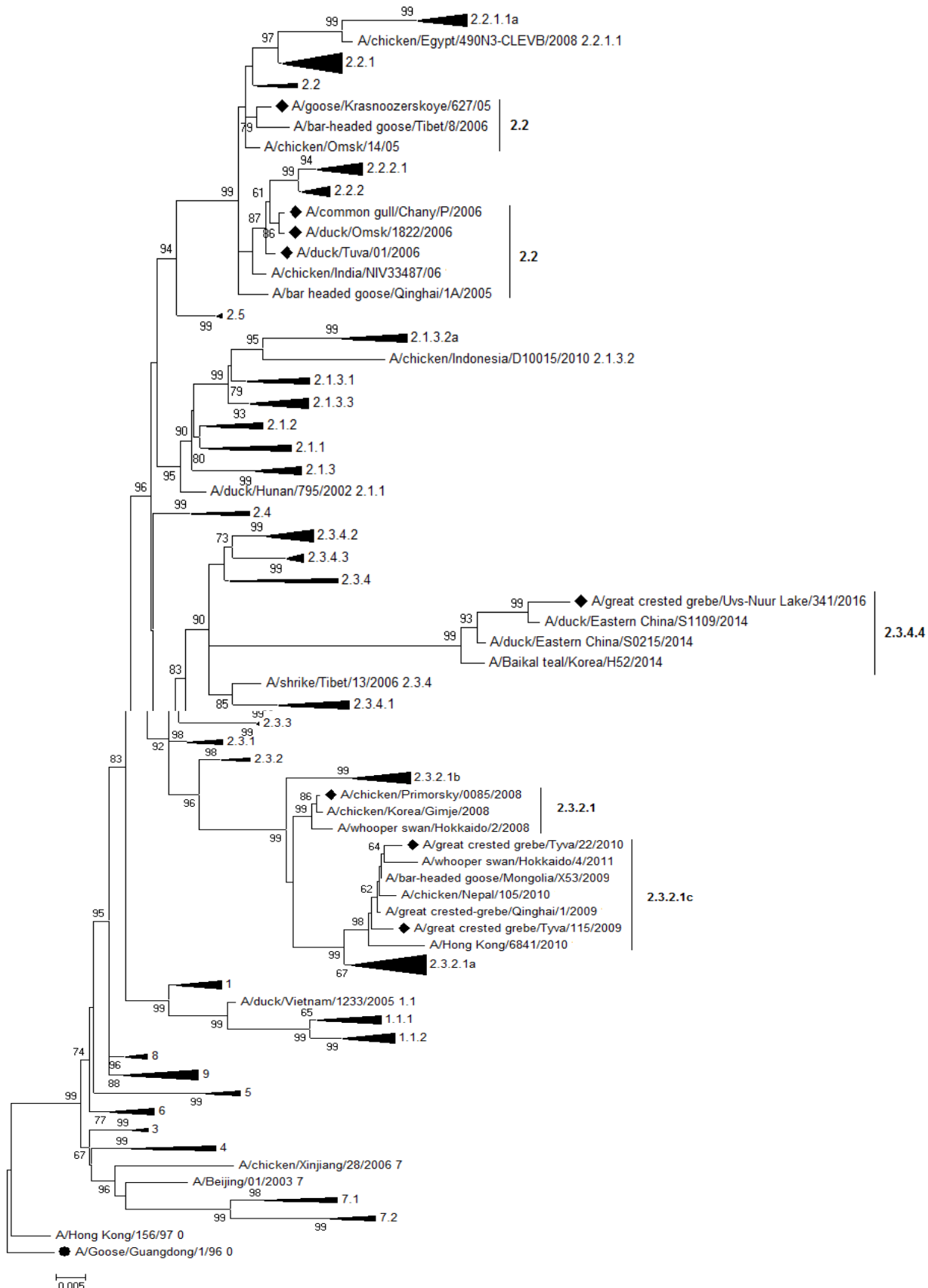
The phylogenetic analysis showed that haemagglutinin of the recovered isolate belongs to subtype H5 of the A/goose/Guangdong/1/96 H5N1 lineage firstly recovered in the South-East Asia in 1996.

Within this genetic lineage haemagglutinin of the A/chicken/Primorsky/85/08 H5N1 isolate was found to be closely related to the strains of clade 2.3.2, which have been recovered in several provinces of China and Vietnam since 2003 (Figures 2, 3).



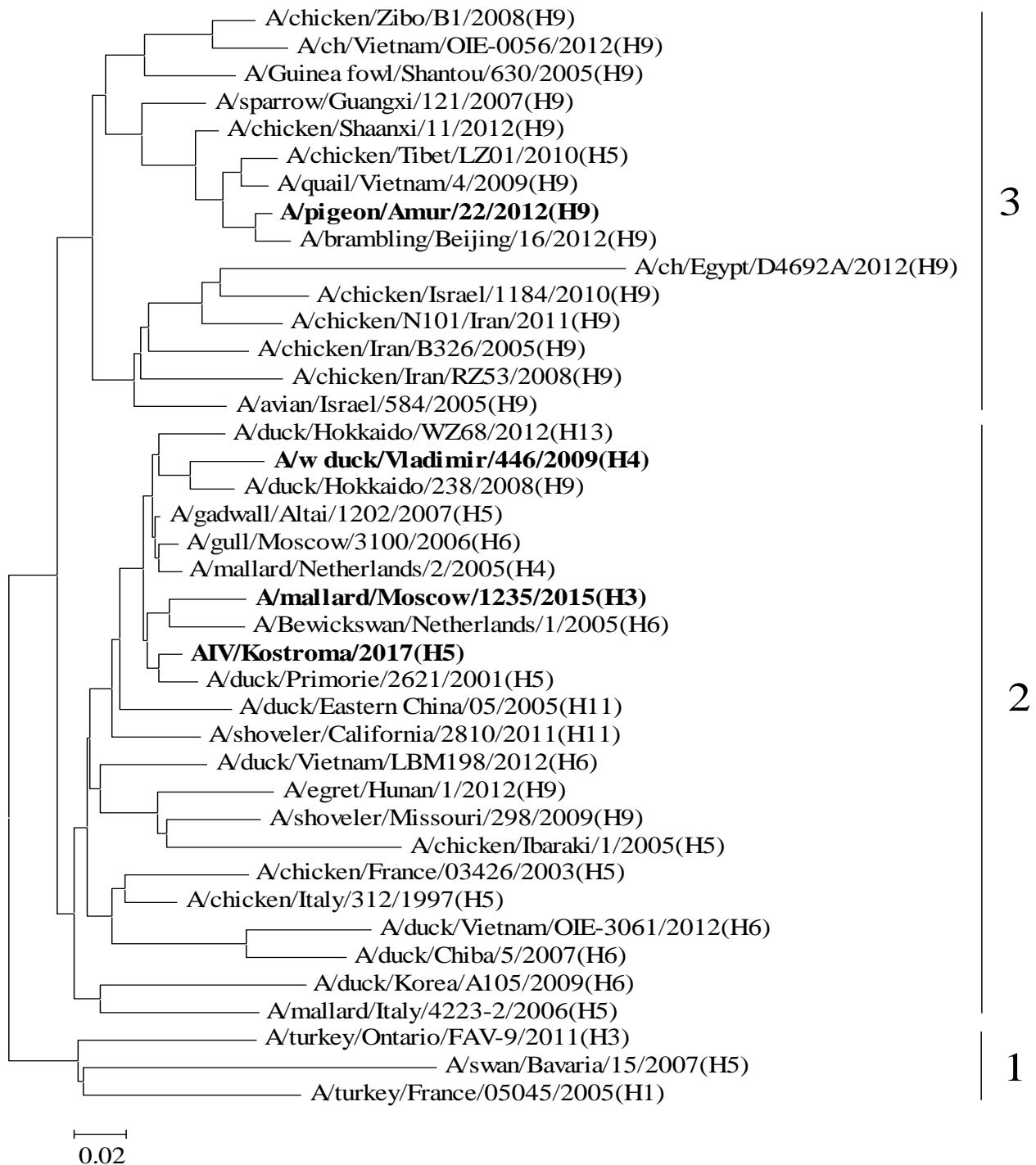
**Figure 4. Phylogenetic tree, constructed using NJ method, basing on sequences of Gene N1 segment (87-1391 b.p.) from several H5N1 HP AI isolates of A/Gs/Gd/96 genetic lineage**

Sequences of all A/whooper swan/Hokkaido/1/08 H5N1 and A/whooper swan/Hokkaido/2/08 H5N1 genes detected in Japan in 2008 are most closely related to the nucleotide sequences (similarity more than 99%). It should be noted that PB1, PB2, PA, NP, NA, M, NS-genes of A/chicken/Primorsky/85/08 H5N1 isolate are most closely related to those of FJ-like strains and the differences are 0.51-1.85% (Figure 3).



**Fig. 5. HA gene phylogenetic tree.** The analysis was performed using MEGA 5.2 software and Neighbor-Joining method within the Maximum Composite Likelihood evolutionary model with 1000 replications (bootstrapping).

The original Russian strains are indicated by diamonds. The sequences and phylogenetic analysis of one of them – A/great crested grebe/Uvs- Nuur Lake/34/2016 – showed that it belongs to HPAI / H5N8 of the Eurasian-American genetic group (2.3.4.4) (Fig. 5). (Results of long-term (2006-2016) avian influenza surveillance in wild birds of Uvs Nuur Lake Alexander M. Shestopalov\*, Kirill A. Sharshov, Andrey V. Varkentin, Yuriy G. Yushkov, Sergey V. Leonov, Irina V. Galkina, Tatiana G. Archimaeva, Victor N. Irza, Mikhail Yu. Shchelkanov, Alimurad A. Gadzhiev, Madina Z. Magomedova)



**Fig. 6. Phylogenetic tree constructed using the sequences of the N gene segment from N2 AIV isolates and strains**

**Figure 7. Phylogenetic links of NA genes of A(H5N2) viruses. Newly recovered isolates in Russia are indicated by diamonds**

Phylogenetic analysis of NA gene of the studied H5Nx viruses showed that the NA segment belongs to the Eurasian AIV lineage (Fig. 6 и 7), and NA originates from the low pathogenic avian influenza strains of the Eurasian HxN2 viruses. Isolation and characterization of H5Nx highly pathogenic avian influenza viruses of clade 2.3.4.4 in Russia

[V.Marchenko](#) [N.Goncharova](#) [I.Susloparov](#) [N.Kolosova](#) [A.Gudymo](#) [S.Svyatchenko](#) [A.Danilenko](#) [A.Durymanov](#) [E.Gavrilova](#) [R.Maksyutov](#) [A.Ryzhikov](#)

Table 1. Highly pathogenic avian influenza, Zone IV, Russia, 2018

No.	RF Subject	Region/Poultry farm	OIE immediate notification		Quarantine		Number of susceptible birds	Diseased birds	Died	Destroyed
			№	date	Imposed on:	Lifted on:				
1.	Smolensk Oblast	Elninsky Raion	3	04.07.2018	05.07.2018	28.08.2018	151	47	47	104
	<b>Total:</b>							<b>151</b>	<b>47</b>	<b>47</b>
2.	Nizhny Novgorod Oblast	Krasnooktyabrsky Raion	4	11.07.2018	11.07.2018	05.09.2018	82	9	9	73
		Krasnooktyabrsky Raion	5	18.07.2018						
		Pavlovsky Raion	8	08.08.2018	07.08.2018	07.09.2018	90	11	2	88
	<b>Total:</b>							<b>172</b>	<b>20</b>	<b>11</b>
3.	Kostroma Oblast	Kostromskoy Raion	Immediate	16.08.2018	11.08.2018	12.11.2018	498,485	416,439	416,439	82,046
	<b>Total:</b>							<b>498,485</b>	<b>416,439</b>	<b>416,439</b>
4.	Republic of Mari El	Medvedevsky Raion	8	08.08.2018	02.08.2018	12.09.2018	163	23	23	140
	<b>Total:</b>							<b>163</b>	<b>23</b>	<b>23</b>
5.	Republic of Udmurtia	Igrinsky Raion	8	08.08.2018	01.08.2018	27.08.2018	180	26	26	154
		Debesky Raion	8	08.08.2018	03.08.2018	27.08.2018	66	26	19	47
<b>Total:</b>							<b>246</b>	<b>52</b>	<b>45</b>	<b>201</b>

**Table 2.** Highly pathogenic avian influenza, Zone V, Russia, 2018 – 2019

RF Subject	Raion	Settlement	Diagnosis made on	Institution performing laboratory diagnosis	OIE notification		Quarantine		Population			
					Notification No	Data	Imposed on	Lifted on	Susceptible	Diseased	Died	Destroyed
<b>Kursk Oblast</b>	Zheleznogorsky	Gromova Dubrova settlement, backyard farm	19.06.2018	Kursk OVL	1	20.06.2018	19.06.2018	16.07.2018	59	3	3	56
		s. Mikhailova, backyard farm	19.06.2018	Kursk OVL	1	20.06.2018	19.06.2018	16.07.2018	41	13	13	28
	Sovetsky	s. Vtoraya Vasilyevka, backyard farm	15.06.2018	Kursk OVL	1	20.06.2018	15.06.2018	12.07.2018	50	20	15	35
		MO N. Graivoronka	09.06.2018	FGBI ARRIAH	Immediate	13.06.2018	09.06.2018	12.07.2018	142	42	42	100
	Korenevsky	s. Lyubimovka	28.06.2018	Kursk OVL	3	04.07.2018	28.06.2018	26.07.2018	152	26	26	126
	Kursky	s. Polyanskoye	04.07.2018	Kursk OVL	4	11.07.2018	04.07.2018	03.08.2018	46	12	12	34
	<b>Total: 6 infected settlements</b>									<b>490</b>	<b>116</b>	<b>111</b>
<b>Penza Oblast</b>	Kolyshleysky raion	s.Kolyshley	18.06.2018	FGBI ARRIAH	1	20.06.2018	18.06.2018	17.07.2018	101	44	44	57
		s.Alfeorova, backyard farm	18.06.2018	FGBI ARRIAH	1	20.06.2018	21.06.2018	23.07.2018	104	7	7	97
		Farm № 1	18.06.2018	FGBI ARRIAH	1	20.06.2018	21.06.2018	13.08.2018	470000	11807	11807	458193
		s.Treskino	18.06.2018	FGBI ARRIAH	1	20.06.2018	21.06.2018	23.07.2018	150	38	38	112
		s.Bereozovka	21.06.2018	Samarskaya OVL	2	27.06.2018	22.06.2018	23.07.2018	40	8	8	32
	Lopatinsky raion	s. Lopatino	19.06.2018	Penzenskaya OVL	1	20.06.2018	21.06.2018	23.07.2018	24	14	14	10
		s. Kozlovka	19.06.2018	Penzenskaya OVL	1	20.06.2018	21.06.2018	23.07.2018	87	60	60	27
	Bekovsky	Farm № 2	19.06.2018	Penzenskaya OVL	1	20.06.2018	21.06.2018	14.09.2018	291829	3000	3000	288829
	Belinsky	Belinsky	21.06.2018	Samarskaya OVL	2	27.06.2018	22.06.2018	23.07.2018	41	5	5	36
	<b>Total: 9 infected settlements</b>									<b>762376</b>	<b>14983</b>	<b>14983</b>
<b>Samara Oblast</b>	Bolshechernigovskiy	Penzeno, backyard farm	17.06.2018	Samarskaya OVL	1	20.06.2018	24.06.2018	24.08.2018	236	92	92	144
		s. B. Chernigovka	19.06.2018	Samarskaya OVL	2	27.06.2018	24.06.2018	24.08.2018	322	45	45	277
		s. Irgizsky	20.06.2018	Samarskaya OVL	2	27.06.2018	24.06.2018	24.08.2018	128	17	17	111

	Bolsheglushizky	s. Morsha	15.06.2018	FGBNI FICViM	1	20.06.2018	15.06.2018	24.08.2018	105	25	25	80
		s. Kobzevka, backyard farm	16.06.2018	FGBNI FICViM	1	20.06.2018	16.06.2018	24.08.2018	111	21	21	90
		s. Bolshaya Glushica, backyard farm	16.06.2018	FGBNI FICViM	1	20.06.2018	16.06.2018	24.08.2018	62	31	31	31
		s. B. Dergunovka	18.06.2018	Samarskaya OVL	1	20.06.2018	24.06.2018	24.08.2018	52	37	37	15
	Volzhsy	s. Kurumoch	18.06.2018	Samarskaya OVL	1	20.06.2018	24.06.2018	24.08.2018	2901	12	2	2899
	Krasnoarmey sky	s. Kochetkovsky	21.06.2018	Samarskaya OVL	2	27.06.2018	26.06.2018	24.08.2018	21	5	3	18
	Borsky	s. Podgornoye	23.06.2018	Samarskaya OVL	2	27.06.2018	26.06.2018	24.08.2018	82	4	4	78
	Otradny	Otradny	23.06.2018	Samarskaya OVL	2	27.06.2018	27.06.2018	24.08.2018	21	5	5	16
	Kinel-Cherkassky	s. Poludny	28.06.2018	Samarskaya OVL	3	04.07.2018	03.07.2018	24.08.2018	98	25	25	73
		Kinel-Cherkasy	30.06.2018	Samarskaya OVL	3	04.07.2018	03.07.2018	24.08.2018	44	5	4	40
<b>Total: 13 infected settlements</b>									<b>4183</b>	<b>324</b>	<b>311</b>	<b>3872</b>
Saratov Oblast	Kalininsky	s. Talovka	21.06.2018	Samarskaya OVL	2	27.06.2018	21.06.2018	23.07.2018	127	51	51	76
	Petrovsky Raion	Petrovsk	23.06.2018	Samarskaya OVL	2	27.06.2018	25.06.2018	23.07.2018	4	1	1	3
		s. Tatarskaya Pokayevka	23.06.2018	Samarskaya OVL	2	27.06.2018	25.06.2018	23.07.2018	73	2	2	71
	Rtischevsky	s. Kamenka	21.07.2018	FGBNI FICViM	6	25.07.2018	21.07.2018	17.08.2018	209	15	15	194
<b>Total: 4 infected settlements</b>									<b>413</b>	<b>69</b>	<b>69</b>	<b>344</b>
Oryol Oblast	Livensky	Livny	22.06.2018	Oryol Reference Centre	2	27.06.2018	22.06.2018	27.08.2018	1321	2	0	1321
	Verhovsky	s. Bolshoy Sinkovets	06.07.2018	FGBI ARRIA	4	11.07.2018	06.07.2018	28.08.2018	71	3	3	68
		s. Degtyaren.	07.07.2018	FGBI ARRIA	4	11.07.2018	12.07.2018	24.09.2018	15	3	3	12
	Sverdlovsky	s. Novopetrovka	06.07.2018	FGBI ARRIA	4	11.07.2018	06.07.2018	27.08.2018	80	7	7	73
	Mcensky	s. Alpakova	06.07.2018	FGBI ARRIA	4	11.07.2018	06.07.2018	27.08.2018	50	35	35	15
		s. Lekhanovka	07.07.2018	FGBI ARRIA	4	11.07.2018	12.07.2018	24.09.2018	64	4	4	60
	Pokrovsky	s. Pokrovskoye	31.07.2018	FGBNI FICViM	8	08.08.2018	06.08.2018	21.09.2018	87	6	6	81
<b>Total: 7 infected settlements</b>									<b>1688</b>	<b>60</b>	<b>58</b>	<b>1630</b>
Smolensk Oblast	Yelninsky	s. Korobets	29.06.2018	FGBI ARRIA	3	04.07.2018	05.07.2018	29.08.2018	64	22	22	42
		s. Pronino	29.06.2018	FGBI ARRIA	3	04.07.2018	05.07.2018	29.08.2018	87	25	25	62
	<b>Total: 2 infected settlements</b>									<b>151</b>	<b>47</b>	<b>47</b>
Rostov Oblast	Belokalitvinsky	Farm № 3	09.07.2018	FGBI ARRIA	4	11.07.2018	12.07.2018	05.09.2018	620474	90452	90452	530022



	Oktyabrsky	Farm № 4	10.07.2018	FGBI ARRIAH	5	18.07.2018	23.07.2018	05.09.2018	78194	424	424	77770
		Farm № 5	14.07.2018	FGBI ARRIAH	5	18.07.2018	23.07.2018	18.09.2018	221 799	23518	23518	198281
	Kamensky	Farm № 6	26.09.2018	FGBI ARRIAH	13	01.10.2018	02.10.2018	11.02.2019	274929	151223	151223	123706
	<b>Total: 4 infected settlements</b>									<b>1195396</b>	<b>265617</b>	<b>265617</b>
<b>Nizhny Novgorod Oblast</b>	Krasnooktyabrsky	s. Ovechy Ovrage	15.07.2018	FGBNI FICViM	5	18.07.2018	11.07.2018	05.09.2018	47	1	1	46
		S. Urazovka	10.07.2018	FGBNI FICViM	4	11.07.2018	11.07.2018	05.09.2018	35	8	8	27
	Pavlovsky	Pavlovo	06.08.2018	Oblast veterinary laboratory	8	08.08.2018	07.08.2018	07.09.2018	90	11	2	88
	<b>Total 3 infected settlements</b>									<b>172</b>	<b>20</b>	<b>11</b>
<b>Republic of Chuvashia</b>	Komsomolsky	s. Polevaye -Yaushi	11.07.2018	FGBI ARRIAH	5	18.07.2018	13.07.2018	10.08.2018	64	51	50	14
	Batyrevsky	s. Batyrevo	11.07.2018	FGBI ARRIAH	5	18.07.2018	13.07.2018	10.08.2018	60	23	16	44
	Civilsky	s. Molodezhny	12.07.2018	Chuvashskaya RBL	5	18.07.2018	18.07.2018	14.08.2018	30	15	9	21
		Civilsk	12.07.2018	FGBNI FICViM	5	18.07.2018	16.07.2018	14.08.2018	53	18	14	39
	Yalchiksky	Yalchiki	12.07.2018	FGBNI FICViM	5	18.07.2018	16.07.2018	14.08.2018	30	25	25	5
	Ibresinsky	Ibresi	15.07.2018	Chuvashskaya RBL	5	18.07.2018	18.07.2018	14.08.2018	31	22	19	12
	Krasnochetaysky	s. Cherepanovo	15.07.2018	Chuvashskaya RBL	5	18.07.2018	18.07.2018	14.08.2018	32	12	12	20
	Shumerlinsky	Shumerlya	25.07.2018	Chuvashskaya RBL	7	31.07.2018	27.07.2018	24.08.2018	54	3	3	51
		s. Kaderkino	25.07.2018	Chuvashskaya RBL	7	31.07.2018	27.07.2018	24.08.2018	44	19	19	25
	Kozlovsky	s. Sirekli	27.07.2018	Chuvashskaya RBL	8	08.08.2018	31.07.2018	24.08.2018	87	5	5	82
<b>Total: 10 infected settlements</b>									<b>485</b>	<b>193</b>	<b>172</b>	<b>313</b>
<b>Republic of Tatarstan</b>	Tetyushsky	s. Vozhzi	16.07.2018	FGBI «TIVL»	5	18.07.2018	21.07.2018	16.08.2018	59	18	18	41
	Drozhzhanovsky	s. Shlanga	16.07.2018	FGBI ARRIAH	5	18.07.2018	21.07.2018	16.08.2018	71	30	30	41
	Kaibicky	s. Ulyankovo	16.07.2018	FGBI «TIVL»	5	18.07.2018	21.07.2018	16.08.2018	35	20	20	15
		s. Araslanovo	19.07.2018	FGBI «TIVL»	6	25.07.2018	28.07.2018	20.08.2018	39	20	20	19
	Apastovsky	s. Malye Kokuzy	19.07.2018	FGBI «TIVL»	6	25.07.2018	21.07.2018	16.08.2018	60	22	16	44
		St. Karatun	17.07.2018	FGBI «TIVL»	6	25.07.2018	21.07.2018	16.08.2018	16	2	2	14
		Verkhneye Kartuzovo	21.07.2018	FGBI «TIVL»	6	25.07.2018	28.07.2018	20.08.2018	46	14	14	32
		Burnashevo	21.07.2018	FGBI «TIVL»	6	25.07.2018	28.07.2018	20.08.2018	20	4	3	17

		s. Apostovo	20.07.2018	FGBI «TIVL»	6	25.07.2018	28.07.2018	20.08.2018	113	113	100	13
		Azbaba	20.07.2018	FGBI «TIVL»	6	25.07.2018	28.07.2018	20.08.2018	80	16	9	71
		s. Verkhny Indyrchi.	25.07.2018	FGBI «TIVL»	7	31.07.2018	28.07.2018	20.08.2018	35	14	14	21
	Kamsko-Ustyinsky	s. Kamskoye Ustye	18.07.2018	FGBI «TIVL»	6	25.07.2018	21.07.2018	20.08.2018	216	22	22	194
		s. Ishimovo	20.07.2018	FGBI «TIVL»	6	25.07.2018	28.07.2018	20.08.2018	71	29	29	42
	Buinsky	s. Kamenny Brod	20.07.2018	FGBI «TIVL»	6	25.07.2018	28.07.2018	20.08.2018	44	4	4	40
		Volny stan	22.07.2018	FGBI «TIVL»	6	25.07.2018	28.07.2018	20.08.2018	104	13	13	91
		s. Nixhni Naratbash	21.07.2018	FGBI «TIVL»	6	25.07.2018	28.07.2018	20.08.2018	26	4	4	22
	<b>Total: 16 infected settlements</b>									<b>1035</b>	<b>345</b>	<b>318</b>
<b>Ulyanovsk Oblast</b>	Sursky	s. Vypolzovo	21.07.2018	FGBI ARRIAH	7	31.07.2018	27.07.2018	15.08.2018	139	139	55	84
<b>Kostroma Oblast</b>	Kostromskoy	s. Kharino	11.08.2018	Kostromskaya OVL	Immediate	16.08.2018	12.11.2018	12.11.2018	498485	416439	416439	82046
<b>Republic of Mary-El</b>	Medvedevsky	s. Novy	31.07.2018	«Respubvetlaboratoriya »	8	08.08.2018	02.08.2018	12.09.2018	163	23	23	140
<b>Republic of Udmurtia</b>	Igrinsky	s. Sepozh	01.08.2018	FGBI ARRIAH	8	08.08.2018	01.08.2018	27.08.2018	130	3	3	127
		s. Zura	01.08.2018	FGBI ARRIAH	8	08.08.2018	01.08.2018	27.08.2018	50	23	23	27
	Debessky	s. Debesy	02.08.2018	FGBI ARRIAH	8	08.08.2018	07.08.2018	27.08.2018	18	10	3	15
		s. Tolyen	01.08.2018	FGBI ARRIAH	8	08.08.2018	03.08.2018	27.08.2018	48	16	16	32
	<b>Total: 4 infected settlements</b>									<b>246</b>	<b>52</b>	<b>45</b>
<b>Voronezh Oblast</b>	Bobrovsky	Farm № 7	01.11.2018	FGBI ARRIAH	14	06.11.2018	01.11.2018	11.02.2019	342300	153868	153868	188432
<b>Total in RF: 82 infected settlements</b>									<b>2807722</b>	<b>852295</b>	<b>852127</b>	<b>1955595</b>
<b>Highly pathogenic avian influenza, 2019</b>												
<b>Rostov Oblast</b>	Ust-Donetsky	Farm № 8	10.01.2019	FGBI ARRIAH	15	11.01.2019	16.01.2019	25.04.2019	17211	6355	6355	10856
		Farm № 9	23.01.2019	FGBI ARRIAH	16	28.01.2019	01.02.2019	20.05.2019	16177	5185	5185	10992
	<b>Total: 2 infected settlements</b>									<b>33388</b>	<b>11540</b>	<b>11540</b>

**Table 3.** Information on the results of avian influenza monitoring tests and vaccination in the zones established around outbreak/outbreaks, ZONE IV, (poultry, wild birds)

RF Subject	Zone	Type of the farm	Address of the farm/Raion	Period of sampling mm/yyyy	Test method	Number of samples	Test results (+/-)	Vaccination		
1. Republic of Mari El	Protection zone	Indoor keeping poultry farm	Not available	08/2018		-	-	-		
		Free-range poultry farm backyard, small scale farm, other	1. Medvedevsky Raion		HI test	43	-	-		
					ELISA	263	-	-		
	Surveillance zone	Indoor keeping poultry farm	1. Medvedevsky Raion ZAO "Mariyskoye"		PCR	2	-	-		
					HI test	1,735	-	-		
					ELISA	1,735	-	-		
		Free-range poultry farm backyard, small scale farm, other	1. Medvedevsky Raion		PCR	77	-	-		
					HI test	150	-	-		
					ELISA	464	-	-		
	Wild birds	4 birds	PCR		4	-	-			
2. Kostroma Oblast	Protection zone	Indoor keeping poultry farm	Not available	09-10/2018	-	-	-	-		
		Free-range poultry farm backyard, small scale farm, other	Kostromskoy Raion		PCR	65	-	3,148		
		Wild birds			PCR	6	-	-		
	Surveillance zone	Indoor keeping poultry farm	Not available		-	-	-	-		
					Free-range poultry farm backyard, small scale farm, other	Kostromskoy Raion	HI test, PCR	114 /10	-	-
						Kostroma	HI test, PCR	25 /5	-	-
		Krasnoselsky Raion	HI test, PCR			46 /66	-	-		
		<b>IN TOTAL</b>	<b>HI test, PCR</b>		<b>185 /81</b>	-	-			
		Wild birds			PCR	2	-	-		
	3. Nizhny Novgorod Oblast	Protection zone	Indoor keeping poultry farm		-	07-08/2018	-	-	-	-
Free-range poultry farm backyard, small scale farm, other			1. Krasnooktyabrsky Raion	ELISA	50		-	-		
			2. Pavlovsky Raion	HI test	50		-	-		
Wild birds				-	-		-	-		
Surveillance zone		Indoor keeping poultry farm	1. Pavlovsky Raion	ELISA	525		-	-		
				Free-range poultry farm backyard, small scale farm, other	1. Krasnooktyabrsky Raion		ELISA	50	-	-
							1. Pavlovsky Raion	HI test	69	-
		Wild birds		PCR	20		-	-		
				PCR	25		-	-		
		4. Udmurt Republic	Protection zone	Indoor keeping poultry farm			08/2018			-
								-		

		Free-range poultry farm backyard, small scale farm, other	1. Debessky Raion		PCR	7	-		
			2. Igrinsky Raion		PCR	6	-		
		Wild birds			PCR	19	-		
	Surveillance zone	Indoor keeping poultry farm						-	
		Free-range poultry farm backyard, small scale farm, other	1. Debessky Raion			PCR	3	-	
			2. Igrinsky Raion			PCR	3	-	
	Wild birds			PCR	6	-			
5. Smolensk Oblast	Protection zone	Indoor keeping poultry farm	-	07-08/2018			-		
		Free-range poultry farm backyard, small scale farm, other	-				-		
		Wild birds	-				-		
	Surveillance zone	Indoor keeping poultry farm	-					-	
		Free-range poultry farm backyard, small scale farm, other	Yelninsky Raion			HI test	56	-	Not performed
		Wild birds	Yelninsky Raion			HI test	1	-	

**Table 4.** Information on the results of avian influenza monitoring tests and vaccination in the zones established around outbreak/outbreaks, ZONE V, (poultry, wild birds)

RF Subject	Zone	Type of the farm	Address of the farm/Raion	Period of sampling mm/yyyy	Test method	Number of samples	Test results (+/-)	Vaccination	
1. Rostov Oblast	Protection zone	Indoor keeping poultry farm	Not available	07-09/18		-	-	-	
		Free-range poultry farm backyard, small scale farm, other	Belokalitvinsky Raion		PCR	101	-	5323	
		Free-range poultry farm, backyard, small scale farm, other	Oktyabrsky Raion		PCR	51	-	-	
		Free-range poultry farm, backyard, small scale farm, other	Kamenskiy Raion		HI TEST	200	-	7228	
	Surveillance zone	Indoor keeping poultry farm	Not available			PCR	166	-	
		Free-range poultry farm, backyard, small scale farm, other	Belokalitvinsky Raion				-	-	-
		Free-range poultry farm, backyard, small scale farm, other	Oktyabrsky Raion			PCR	17	-	607
		Free-range poultry farm, backyard, small scale farm, other	Kamenskiy Raion			PCR	121	-	-
2. Voronezh Oblast	Protection zone	Indoor keeping poultry farm	Not available	11-12/18	-	-	-	-	
		Free-range poultry farm, backyard, small scale farm, other	Bobrovsky Raion		HI TEST	74	-	-	
		Wild birds			PCR	2	-	-	

	Surveillance zone	Indoor keeping poultry farm	Not available		-	-	-	-
		Free-range poultry farm, backyard, small scale farm, other	Bobrovsky Raion, Liskinsky Raion		HI TEST	80	-	
		Wild birds			PCR	13	-	
3. Ulyanovsk Oblast	Protection zone	Indoor keeping poultry farm	Not available	<b>07-08/18</b>			-	
		Free-range poultry farm, backyard, small scale farm, other	Sursky Raion		ELISA	95	-	-
	Surveillance zone	Indoor keeping poultry farm	Not available				-	-
		Free-range poultry farm, backyard, small scale farm, other	Sursky Raion		ELISA	131	-	-
4. Kursk Oblast	Protection zone	Indoor keeping poultry farm	Not available	<b>06-08/18</b>	-	-	-	-
		Free-range poultry farm, backyard, small scale farm, other	Sovetsky Raion		HI TEST	-	-	12718
			Kursky Raion		HI TEST	-	-	12430
					ELISA	1000	-	-
			Zheleznogorsky Raion		HI TEST	-	-	5912
		Sudzhansky Raion	ELISA		200	-	-	
			HI TEST		-	-	5350	
	Wild birds		ELISA		32	-	-	
	Surveillance zone	Indoor keeping poultry farm	Not available				-	-
		Free-range poultry farm, backyard, small scale farm, other	1. Sovetsky Raion		ELISA	89	-	-
			2. Kursky Raion		HI TEST	-	-	2000
			3. Zheleznogorsky Raion		ELISA	306	-	-
					HI TEST	-	-	1535
		4. Sudzhansky Raion	ELISA		194	-	-	
ELISA		20	-	-				
Wild birds		HI TEST	25	-				
5. Republic of Chuvashia	Protection zone	Indoor keeping poultry farm	Tsivilsky Raion	<b>07-08/19</b>	HI TEST	375	-	
		Free-range poultry farm, backyard, small scale farm, other	Alikovsky Raion		PCR	10	-	
					HI TEST	175	-	
			Batyrevskiy Raion		HI TEST	201	-	
					ELISA	52	-	
		Ibresinsky Raion	PCR		14	-		
HI TEST	167		-	-				

				PCR	16	-	-
			Kozlovskiy Raion	ELISA	97	-	-
			Krasnochetaysky Raion	HI TEST	529	-	-
				ELISA	1	-	-
			Urmarsky Raion	PCR	3	-	-
				HI TEST	10	-	-
			Tsivilsky Raion	PCR	15	-	-
				HI TEST	400	-	-
				ELISA	40	-	-
			Shumerlinsky Raion	PCR	1	-	-
			HI TEST	204	-	-	
			ELISA	90	-	-	
		Yalchiksky Raion	PCR	23	-	-	
			HI TEST	15	-	-	
			ELISA	80	-	-	
		Wild birds	PCR	47	-	-	
			PCR	10	-	-	
	Surveillance zone	Indoor keeping poultry farm	Urmarsky Raion	HI TEST	90	-	-
		Free-range poultry farm, backyard, small scale farm, other	Batyrevskiy Raion	ELISA	205	-	-
			Vurnarskiy Raion	HI TEST	124	-	-
				ELISA	120	-	-
			Ibresinsky Raion	PCR	38	-	-
				HI TEST	10	-	-
				ELISA	20	-	-
			Komsomolsky Raion	HI TEST	294	-	-
				PCR	19	-	-
				HI TEST	14	-	-
Kozlovskiy Raion			ELISA	33	-	-	
Krasnoarmeyskiy Raion			ELISA	96	-	-	
Krasnochetaysky Raion			HI TEST	15	-	-	
			ELISA	3	-	-	
			PCR	2	-	-	
Urmarsky Raion			HI TEST	235	-	-	
			ELISA	4	-	-	
	PCR	65	-	-			
Tsivilsky Raion	HI TEST	36	-	-			
	ELISA	419	-	-			
Shumerlinsky Raion	HI TEST	269	-	-			
	ELISA	60	-	-			
	PCR	42	-	-			

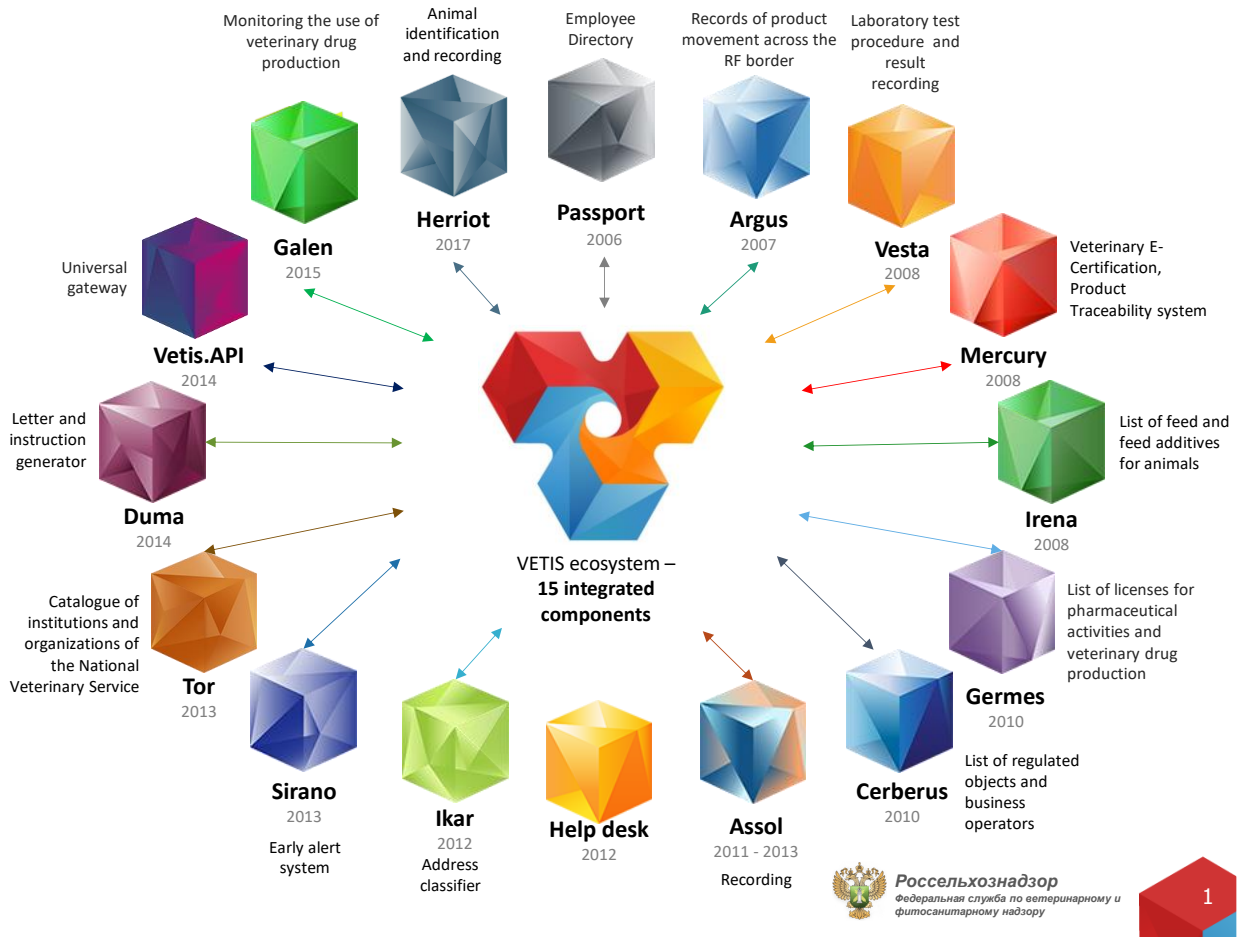
			Yalchiksky Raion		ELISA	140	-	-
					PCR	56	-	-
		Wild birds			PCR	22	-	-
6. Republic of Tatarstan	Protection zone	Indoor keeping poultry farm	Not available	07-08/18	-	-	-	-
		Free-range poultry farm, backyard, small scale farm, other	Apastovsky Raion		ELISA	166	-	-
		Wild birds			PCR	675	-	-
	Surveillance zone	Indoor keeping poultry farm	Not available				-	-
		Free-range poultry farm, backyard, small scale farm, other	Apastovsky Raion		ELISA	15	-	-
		Wild birds	Apastovsky Raion		PCR	353	-	-
	Protection zone	Indoor keeping poultry farm	Not available				-	-
		Free-range poultry farm, backyard, small scale farm, other	Drozhzhanovsky Raion		ELISA		-	-
		Wild birds			PCR	45	-	-
		HI TEST			5	-	-	
	Surveillance zone	Indoor keeping poultry farm					-	-
		Free-range poultry farm, backyard, small scale farm, other			PCR	89	-	-
		Wild birds					-	-
	Protection zone	Indoor keeping poultry farm	Not available				-	-
		Free-range poultry farm, backyard, small scale farm, other	Kaybitsky Raion		ELISA	11	-	-
		Wild birds			PCR	28	-	-
		PCR			3	-	-	
	Surveillance zone	Indoor keeping poultry farm					-	-
		Free-range poultry farm, backyard, small scale farm, other			ELISA	5	-	-
		Wild birds			PCR	1	-	-
	Protection zone	Indoor keeping poultry farm	Not available				-	-
		Free-range poultry farm, backyard, small scale farm, other	Kamsko-Ustyinsky Raion		PCR	104	-	-
		Wild birds			PCR	-3	-	-
		PCR			10	-	-	
Surveillance zone	Indoor keeping poultry farm				-	-		

		Free-range poultry farm, backyard, small scale farm, other			PCR	395	-	
		Wild birds			PCR	41	-	
	Protection zone	Indoor keeping poultry farm			-	-	-	-
		Free-range poultry farm, backyard, small scale farm, other			ELISA	60	-	
		Wild birds			PCR	65	-	
			Tetyushsky Raion		PCR	70	-	
	Surveillance zone	Indoor keeping poultry farm					-	
		Free-range poultry farm, backyard, small scale farm, other			ELISA	61	-	
		Wild birds			PCR	149	-	
					PCR	48	-	
	Protection zone	Indoor keeping poultry farm	Not available				-	
		Free-range poultry farm, backyard, small scale farm, other	<b>Buinsky Raion</b>		PCR	75	-	
	Surveillance zone	Indoor keeping poultry farm	-		-	-	-	-
		Free-range poultry farm, backyard, small scale farm, other	<b>Buinsky Raion</b>		PCR	125	-	
	Protection zone	Indoor keeping poultry farm	-		-	-	-	-
		Free-range poultry farm, backyard, small scale farm, other	Verkhneuslonsky Raion		-	-	-	-
		Wild birds			-	-	-	-
	Surveillance zone	Indoor keeping poultry farm	Verkhneuslonsky Raion				-	
		Free-range poultry farm, backyard, small scale farm, other			ELISA	40	-	-
		Wild birds			HI TEST	20	-	-
					PCR	22	-	-
	Protection zone	Indoor keeping poultry farm	Not available				-	-
		Free-range poultry farm, backyard, small scale farm, other	Zelenodolsky Raion		HI TEST	15	-	-
					ELISA	30	-	-
		Wild birds	Zelenodolsky Raion		PCR	60	-	-
					HI TEST	17	-	-
					PCR	25	-	-
7. Saratov Oblast	Protection zone	Indoor keeping poultry farm	-	<b>07-08/18</b>			-	
		Free-range poultry farm, backyard, small scale farm, other	1. Petrovsky Raion		HI TEST	45	-	Not performed
			2. Kalininsky Raion		PCR	1509	-	Not performed



			3. Rtishchevsky Raion		PCR	124	-	Not performed
		Wild birds					-	Not performed
	Surveillance zone	Indoor keeping poultry farm	-				-	Not performed
		Free-range poultry farm, backyard, small scale farm, other	1. Petrovsky Raion		PCR	75	-	Not performed
			2. Kalininsky Raion		PCR	918	-	Not performed
			3. Rtishchevsky Raion		PCR	99	-	Not performed
8. Samara Oblast	Zone	Type of the farm	Address of the farm	<b>06-08/18</b>	Test method	Number of samples	-	Vaccination
	Protection zone	Indoor keeping poultry farm	-				-	
		Free-range poultry farm, backyard, small scale farm, other	Krasnoarmeysky Raion		HI TEST	40	-	
		Wild birds	Krasnoarmeysky Raion		HI TEST	10	-	
	Surveillance zone	Indoor keeping poultry farm	Not available				-	
		Free-range poultry farm, backyard, small scale farm, other	1. Kinel-Cherkassky Raion		HI TEST	50	-	
		Wild birds	-				-	
					HI TEST	451	-	Poultry were not vaccinated in Penza Oblast
					PCR	38	-	
		Free-range poultry farm, backyard, small scale farm, other	Kolyshleysky Raion		HI TEST	40	-	
			Lopatinsky Raion	PCR	15	-		
			Bekovsky Raion	HI TEST	36	-		
				PCR	16	-		
		Wild birds		HI TEST	177	-		
				PCR	1	-		
	Surveillance zone	Indoor keeping poultry farm	Bekovsky Raion	HI TEST	36	-		
				HI TEST	1535	-		
				PCR	55	-		

		Free-range poultry farm, backyard, small scale farm, other	Lopatinsky Raion		HI TEST	64	-	
		Wild birds					-	
10. Oryol Oblast	Protection zone	Indoor keeping poultry farm	Not available	<b>07-09/18</b>			-	
		Free-range poultry farm, backyard, small scale farm, other	1. Livensky Raion				-	14926
			2. Verkhovsky Raion				-	11736
			3. Mtsensky Raion		PCR		-	2502
			4. Sverdlovsky Raion				-	492
			7. Pokrovsky Raion				-	11054
		Wild birds				-		
	Surveillance zone	Indoor keeping poultry farm	Not available				-	
		Free-range poultry farm, backyard, small scale farm, other	1. Livensky Raion		PCR	33	-	
			2. Verkhovsky Raion		PCR	69	-	
			3. Mtsensky Raion		PCR	53	-	
			4. Sverdlovsky Raion		PCR	82	-	
			7. Pokrovsky Raion		PCR	43	-	
		Wild birds	1. Livensky Raion		PCR	5	-	
			2. Verkhovsky Raion		PCR	5	-	
			3. Mtsensky Raion		PCR	5	-	
			4. Sverdlovsky Raion		PCR	5	-	
			5. Pokrovsky Raion		PCR	5	-	



**Fig. 1.** Diagram of the state information system in the veterinary field of the Russian Federation VETIS, for more detail go to: <http://www.fsvps.ru/fsvps/regional>.

**Issuance of VAD is carried out during**

- production of a Rosselkhoz nadzor-regulated product batch;
  - movement (transportation) of Rosselkhoz nadzor-regulated goods;
  - transfer of ownership of Rosselkhoz nadzor-regulated goods (except for the transfer (distribution) of Rosselkhoz nadzor-regulated goods to the buyer for personal or other consumption not related to business activity).
- Issuance of VAD for Rosselkhoz nadzor-regulated goods is carried out by officials of the competent authority authorized by the Government of the Russian Federation through the federal State Veterinary Information System.
- Issuance of VAD through the federal State Veterinary Information System is carried out electronically, including:
- information on the epidemic situation at the site of origin/shipment of Rosselkhoz nadzor-regulated goods;
  - the results of animal health inspection of this product or raw material from which it is made if such inspection is required for this regulated commodity or raw material for its production by the legislation of the Russian Federation;
  - laboratory tests carried out in laboratories (testing centers) included in the system of bodies and institutions of the State Veterinary Service of the Russian Federation, or other laboratories (testing centers) accredited within the national accreditation system, if these tests are required by the legislation of the Russian Federation;
  - health inspection results (veterinary examination if this regulated product is a live animal);
  - identification information (the animal individual zootechnical number if Rosselkhoz nadzor-regulated goods constitute live animals, or labelling information for products of animal origin subject to collection, transportation, processing, storage and distribution);
  - examination results of the vehicle used for movement of Rosselkhoz nadzor-regulated goods;
  - animal health certificates certifying disease freedom in the territory and a poultry farm, issued by an official of the authority or institution included in the system of the State Veterinary Service of the Russian Federation;
  - other control measures stipulated by the legislation of the Russian Federation.

Fig. 2. Dynamics of eVAD issuance in the Russian Federation in 2018. The number of eVADs issued through the Mercury system by month is stated along the horizontal axis.

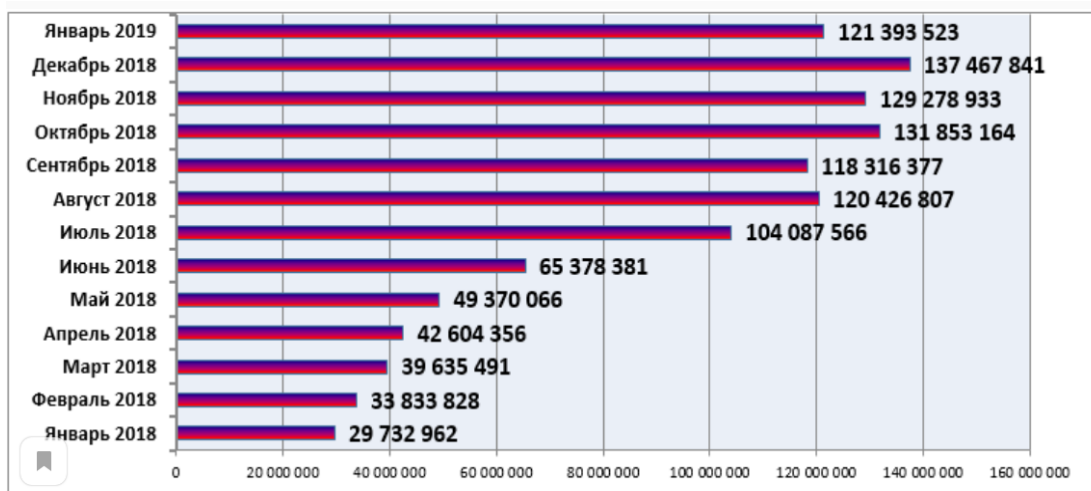
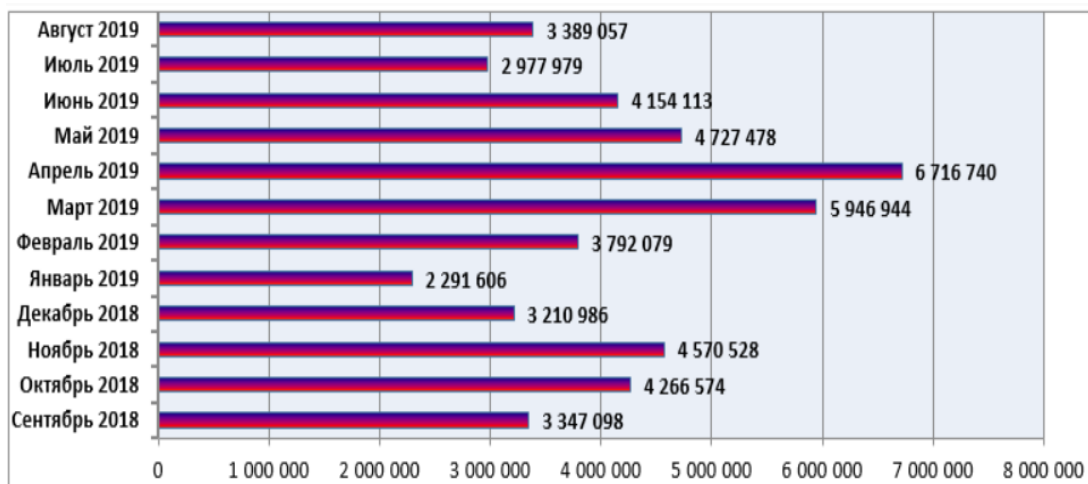


Fig. 3. Dynamics of eVAD issuance in the Russian Federation in March 2018 – September 2019. The number of eVADs issued through the Mercury system by month is stated along the horizontal axis.



The results of diagnostic tests performed by FGBI "ARRAIH" on samples recovered from regions in which HPAI was detected and from some regions in which HPAI was not confirmed. (the tests were carried out as part of the Federal Program for HPAI Surveillance)

**2018 (poultry)**

Regions where highly pathogenic avian influenza was confirmed.	Avian influenza zone	Total number of samples	Number of confirmed positives
Voronezh region.	5	28	10
Orel region.	5	26	20
Kostroma region.	4	120	6
Kursk region.	5	47	43
Smolensk region.	4	5	5
Nizhny Novgorod region.	4	101	1
Saratov region.	5	1	1
Udmurtskaya Republic.	4	60	4
Republic Tatarstan	5	81	27
Mari El Republic.	4	51	1
Penza region.	5	52	19
Ulyanovsk region..	5	2	2
Chuvash Republic.	5	273	10
Rostov region.	5	224	31

**2018 (wild birds)**

Regions where highly pathogenic avian influenza was not detected	Avian influenza zone	Total number of samples (wild bird)	Number of confirmed positives
Zabaikalsky Krai	2	16	0
Altai Republic	3	10	0
The Republic Of Tuva	2	19	0
Khabarovsk Krai	1	23	0
Altai Krai	3	19	0

**The Results of Federal National HPAI Surveillance Performed by the Rosselkhoznadzor Federal Laboratories**  
 (<http://www.fsvps.ru/fsvps/structure/vl>) pursuant to Order No. 1305 of the Ministry of Agriculture “Laboratory Testing  
 to be Performed as Part of the Implementation of the Activities Planned for 2018 to Ensure Compliance with the  
 Requirements of the WTO SPS Agreement” of December 28, 2017

<b>Federal Laboratories</b>	<b>Number of Samples tested</b>	<b>Number of samples testing positive</b>
Kaliningrad Interregional Laboratory	1400	0
Tatarstan Interregional Laboratory	6330	<b>63*</b>
Chelyabinsk Interregional Laboratory	2004	0
Tver Interregional Laboratory	3545	0
Stavropol Interregional Laboratory	2028	0
Primorje Interregional Laboratory	550	40**
Saratov Interregional Laboratory	2964	91*
Sakhalin Interregional Laboratory	561	0
Orel Interregional Laboratory	270	2*
Leningrad Interregional Laboratory	1236	0
Krasnodar Interregional Laboratory	2683	32***
Krasnoyarsk Interregional Laboratory	599	0
Orenburg Interregional Laboratory	1563	0
Bryansk Interregional Laboratory	1816	0
Kabardino-Balkar Interregional Laboratory	102	0
Kemerovo Interregional Laboratory	1600	0
Belgorod Interregional Laboratory	12178	1***
Kamchatka Interregional Laboratory	961	0
Novosibirsk Interregional Laboratory	4138	169**
Irkutsk Interregional Laboratory	502	0
FGBI «Central Scientific and Methodological Veterinary Laboratory»	6019	29*
Orel Interregional Laboratory	647	0
FGBI “ARRIAH”	28000	1553****
<b>Total</b>	<b>81696</b>	<b>1980</b>

**Note:**

\* - tests performed to confirm HPAI outbreaks;

\*\* - tests as a result of which vaccine-induced antibodies against HPAI were detected in poultry populations of free-range poultry farms;

\*\*\* - tests performed on samples submitted from HPAI outbreaks in Rostov Oblast;

\*\*\*\* - tests performed by the OIE Reference Center for Influenza and Newcastle Disease (FGBI “ARRIAH”) in order to confirm/rule out HPAI outbreaks.

A total of 81 000 samples were tested for HPAI by the Rosselkhoznadzor Laboratories as part of federal national HPAI surveillance in 2018.

## Avian influenza vaccines

Only the vaccines registered in accordance with the relevant procedures are permitted to be used in the agriculture of the Russian Federation.

The list of registered vaccines and medicinal products can be accessed on the official website of the Rosselkhoz nadzor at: <https://galen.vetruf.ru/#/registry/pharm/registry?page=1>.

The vaccines used are:

The "POKROV BIO Gripp Ptits" inactivated emulsion avian influenza vaccine produced by the Pokrov biofactory

The "FLU PROTECT N 5" inactivated emulsion avian influenza vaccine produced by Stavropol biofactory.

Both vaccines are produced based on the epidemic strain of AIV H5N1 isolated in 2005.

Backyard farms where preventive vaccination against avian influenza is carried out are officially registered with the raion animal disease control stations. After vaccination, a report of preventive vaccination is compiled in which the place, the date of vaccination, the number and species of poultry, the vaccine dose, the name of the medicinal product, the batch, the shelf life/expiration date, the amount of the medicinal product left and the methods by which it has been disposed of are indicated. Post-vaccination immunity is assessed 21-28 days having elapsed after vaccination.

On free-range backyard farms where vaccination has been carried out, restrictions on the movement of poultry products are imposed taking into account the regionalization of the Russian Federation for avian influenza. These measures are envisaged in Annex No. 13 to the Decision of the Rosselkhoz nadzor of January 20, 2017 which can be accessed at <http://www.fsvps.ru/fsvps/laws/5720.html>. As a rule, poultry are raised for own consumption on site and neither poultry nor poultry products are moved outside the vaccination area.

The avian influenza vaccines are in full compliance with the requirements of Chapter 3.3.4 of the OIE Terrestrial Manual.

In 2017, the FGBI "ARRIAH" conducted a study of the protective properties of these vaccines against a challenge with newly isolated avian influenza subtype H5N8 viruses. As a result, both vaccines were shown to confer protection against this virus subtype in over 80% of vaccinated chickens.

On May 8, 2019, the Rosselkhoz nadzor (FS-KS-2/11654) banned the use of vaccines against low pathogenic avian influenza on commercial poultry farms.

The number and results of tests carried out in poultry vaccinated against AI in 2018 according to the data obtained from the 'Assol' information system (which is a component of VETIS) are shown in Table 1.

**Table 1. Number and results of tests of poultry vaccinated against AI in 2018**

Territorial Subject (regions)	Avian Influenza zone	Number of vaccinated birds			Test results (positive/negative)						Number of tests (serum/cloacal and tracheal swabs or biological material)		
					Backyards		Small farms		Commercial farms				
		Backyards	Small farms	Commercial farms	cloacal and tracheal swabs or biological material	serum	cloacal and tracheal swabs or biological material	serum	cloacal and tracheal swabs or biological material	serum	Backyards	Small farms	Commercial farms
Republic of Sakha (Yakutia)	1	25,804	5,061		0/86	1321/0	0/17	212/3			1,168/86	215/17	
Republic of Altay	3	27,884	440		0/45	481/81	0/5	25/5			562/45	30/5	
Novosibirsk Oblast	3	789,351			0/263	9,152/655					9,807/263		
Rostov Oblast	5	3,321,325	60,151		0/1,107	32,007/0	0/200	195/15			32,007/1107	210/200	
Republic of Dagestan	5	905,038			0/301	1,804/0					1,804/301		
Astrakhan Oblast	5	72,143	10,910		0/240	2,901/611	0/36	111/28			3,511/240	139/36	
Republic of Kalmykia	5	27,031			0/90	395/72					467/90		
Altay Krai	2		35,075				0/117	222/8				230/117	
Karachay-Cherkess Republic	5	534,496	49,477		0/194	799/87	0/164	307/43			799/194	307/164	
Kabardino-Balkar Republic	5	597,172			0/190	797/150					947/190		
Stavropol Krai	5	2,777,107	8,631		0/110	15,049/4,086	0/29	225/45			19,135/110	270/29	
Republic of Chechnya	5	847,271			0/284	3,380/736					4,116/284		
Volgograd Oblast	5	430,601			0/37	16,312/3,500					19,812/37		
Kurgan Oblast	3	11,801		86,200*	0/40	301/44			0/123*	0/170*	345/40		170/123*
Krasnodar Krai	5	6,183,754	793,800	47,570*	0/187	10,235/2,061	0/264	1,582/168	0/1,622*	0/12,838*	12,296/0	1,750/264	45/1,622*
Oryol Oblast	9	47,872	1153		0/164	998/282	0/20	150/14			1,250/164	164/20	
Kostroma Oblast	4	62,458	206		0/274	885/200		25/0			1,085/274	25/0	
Republic of Adygeya	5	382,236	114,979		0/78	1,350/200	0/43	1,286/192			1,550/126	1,478/43	
Kursk Oblast	5	72,537			0/241	1,399/333					1,732/241		
Kirov Oblast	4	148,212	1,444		0/1677	877/181		231/19			1,058/1677	250/25	
Sevastopol city	5	10,000			0/80	248/2					250/80		
Republic of Ingushetia	5	178,687			0/60	1,750/300					2,050/60		
Nizhny Novgorod Oblast	4	30,000			0/100	2,630/400					3,030/100		
Republic of Bashkortostan	3	142,062	45,856		0/473	1,550/65	0/152	371/31			1,621/473	402/152	

\* the data are provided for free-range goose farms and free-range duck farms (on these commercial establishments poultry and poultry product movement restrictions are implemented pursuant to the Decision of the Rosselkhoznadzor on Establishing Statuses of Regions of the Russian Federation for Infectious Animal Diseases and Conditions for Movement of Goods subject to Veterinary Surveillance (Control) by the Rosselkhoznadzor).



## Regional AI monitoring in Zone V in 2018 and the first six months of 2019

No	Year	Region	Number of Raions	Poultry				Wild birds			Number of poultry vaccinated	Number of raions where vaccination is practiced
				HI test	PCR	ELISA	+/-	HI test	PCR	+/-		
1	2018	Voronezh Oblast	33	9208	719	0	80 (PCR)I/9847	10	1033	0/1043	0	0
	2019		33	12498	898	0	0/13396	0	338	0/338	0	0
2	2018	Saratov Oblast		1664	41	0	2II (PCR)/1664	0	0	0	0	0
	2019			598	543	0	0/1141	0	0	0	0	0
3	2018	Republic of Mordovia	23	91	0	6134	0/6225	1149	192	0/1341	0	0
	2019		23	166	0	3369	0/3535	737	196	0/933	0	0
4	2018	Republic of Kalmykia	14	0	0	1541	0/1541	0	0	0	27031	2
	2019		14	0	0	709	0/709	0	0	0	47120	2
5	2018	Republic of Kabardino-Balkaria		797	0	0	0/797	0	0	0	0	0
	2019			0	0	862	0/862	0	0	0	0	0
6	2018	Samara Oblast	16				0/385			0/245	0	0
	2019		7				0/430	10	35	0/45	0	0
7	2018	Republic of Tatarstan	45	0	2968	5190	6/8152	0	628	0/628	0	0
	2019		45	0	3386	7898	0/11284	0	48	0/48	0	0
8	2018	Lipetsk Oblast	20	11710	2215	0	0/13925	528	300	0/828	0	0
	2019		20	11155	2237	4170	0/17562	509	278	0/787	0	0
9	2018	Republic of North Ossetia – Alania	1	0	51	0	0/51	0	0	0	0	0
	2019		2	0	22	215	0/237	0	28	0/28	0	0
10	2018	Ulyanovsk Oblast	19	0	269	3215	2 (PCR)III /3482	0	19	0/19	0	0
	2019		15	0	256	1309	0/1565	0	21	0/21	0	0
11	2018	Kursk Oblast	28	16177	414	0	0/16591	0	300	0/300	72537	
	2019		28	4870	110	0	0/4980	0	108	0/108	0	0
12	2018	Krasnodar Krai			13154		0/13154				7025124	
	2019				6595		0/6595				4902700	
13	2018	Republic of Chuvashia	24	5521	578	2929	14/9014	15	345	0/360		0
	2019		24	3191	149	0	0/3340	0	125	0/125		24
14	2018	Belgorod Oblast	4	0	0	1297	0/1297	0	0	0	0	0
	2019		4	0	0	5004	0/5004	0	0	0	0	0
15	2018	Republic of Chechnya		0	0	0	0	0	20	0/20		
	2019			0	0	0	0	0	0	0		
16	2018	Astrakhan Oblast	12	11846	0	0	4967v/11846	82	0	0/82		13

	2019		12	2584	250	0	1349v/3134	0	134	0/134		11
17	2018	Republic of Dagestan	20	1525	710	0	0/2235	0	0	0		
	2019		8	939	0	0	0/939	0	5	0/5		
18	2018	Oryol Oblast * (Livensky, Verkhovskiy, Mtsenskiy, Sverdlovskiy Raions)	7	0	257	0	0/257	0	25	0/25	47940	7
	2019	Oryol Oblast **	5	168	0	0	0/168	0	0	0	0	0
19	2018	Republic of Adygea	9	62	165	62	0/289	0	40	0/40	497215	9
	2019		9	30	80	30	0/140	0	40	0/40	238242	9
20	2018	Stavropol Krai	30	11691	1506	910	0/14107	0	1	0/1	3004186	30
	2019		28	4128	40	345	0/4353	5	0	0/5	1497510	28
21	2018	Sevastopol City		250	80	0	0/330	0	1	0/1		
	2019			250	0	0	0/250	0	20	0/12		
22	2018	Penza Oblast	28	22166	1205 4	0	0/34220	10	83	0/93	0	0
	2019		28	19145	3622	0	0/22767	110	339	0/449	0	0

\* In 2018, as part of federal monitoring for avian influenza in Orel Oblast, **132 poultry serum samples** (collected in Uritskiy, Maloarkhangel'skiy, Orlovskiy and Livenskiy Raions) were tested by HI assay and **92 wild bird serum samples** collected in 23 raions (Uritskiy, Maloarkhangel'skiy, Orlovskiy, Livenskiy, Pokrovskiy, Glazunovskiy, Soskovskiy, Trosnyanskiy, Khotynetskiy, Shablykinskiy, Kromskoy, Mtsenskiy, Novoderevenkovskiy, Sverdlovskiy, Verkhovskiy, Dolzhanskiy, Znamenskiy, Zalegoshchenskiy, Kolpnyanskiy, Krasnozorenskiy, Dmitrovskiy, Korsakovskiy, Novosil'skiy) were tested by PCR. **All tests were negative.**

\*\* During the first 6 months of 2019, as part of federal monitoring for avian influenza, 78 poultry and 77 wild bird samples were tested using PCR with negative results.

v – positive HI test results (samples from vaccinated birds were tested)

I – the avian influenza virus genome was detected using PCR (commercial poultry farm No 7, 2018);

II - the avian influenza virus genome was detected using PCR (Kamenka Village, 2018);

III - the avian influenza virus genome was detected using PCR (Surskiy Raion, 2018).

### Rostov Oblast

**The 1<sup>st</sup> HPAI outbreak in 2019 occurred in Rostov Oblast** on commercial poultry farm No 8. Quarantine was imposed on January 16, 2019. Quarantine was lifted on April 25, 2019. Pursuant to Order No 17 of the Government of Rostov Oblast of January 16, 2019, 105 038 incubating turkey eggs were seized and destroyed by burning and 10 856 poultry carcasses were destroyed by burning.

The following cleaning, disinfection and deratization [disinfestation/pest control] measures were implemented:

All the facilities of commercial poultry farm No 8 were cleaned. Cleaning, deratization as well as routine and final disinfection of the 7 buildings, egg storage facility, feces disposal and carcass destruction sites and roads located on the farm's premises as well as of other areas of the farm and of all 6 vehicles. which had been used in the outbreak area, were performed.

Monitoring tests for avian influenza in 2018 in accordance with the regional monitoring plan

Regional AI monitoring	Raion	Number of samples		Test Method	Test results (+/-)	Poultry vaccination
		Poultry	Wild birds			
Rostov Oblast	Ust-Donetsky	600	-	HI assay	-	
		2525	35	ELISA	-	
		145	53	PCR	-	

Monitoring tests for avian influenza in 2019 in accordance with the regional monitoring plan

Regional AI monitoring	Raion	Number of samples		Test Method	Test results (+/-)	Poultry vaccination
		Poultry	Wild birds			
Rostov Oblast	Ust-Donetsky	827	-	HI assay	54+*	
		986	-	ELISA	-	
		284	41	PCR	2+*	
		719	43	PCR	-	

+\* - **The 2<sup>nd</sup> outbreak occurred** on commercial poultry farm No 9. Quarantine was imposed on February 16, 2019. Quarantine was lifted on May 20, 2019. Pursuant to Order No 48 of the Government of Rostov Oblast of February 1, 2019, 235 944 incubating turkey eggs were seized and destroyed by burning and 10 992 poultry were bloodlessly killed and destroyed by burning.

The following cleaning, disinfection and deratization measures were implemented:

All the facilities of commercial poultry farm No 9 were cleaned. Cleaning, deratization as well as routine and final disinfection of the 7 buildings, egg storage facility, feces disposal and carcass destruction sites and roads located on the farm's premises as well as of other areas of the farm and of all 6 vehicles, which had been used in the outbreak area, were performed.

The results of monitoring tests for avian influenza as well as of vaccination in the zones established around an outbreak(-s) (poultry, wild birds)

Zone	Type of the farm	Address of the farm	Test method	Number of samples	Test results (+/-)	Vaccination
Protection zone	Indoor keeping poultry farm	1. Commercial poultry farm No 9	HI assay	500	54+*	Not performed
			ELISA	986	-	
			PCR	180	2+*	
	Free-range poultry farm, backyard, small scale farm, other	1. Backyard farm, Rostov Oblast, Ust-Donetsky Raion, Isayevskiy Village, Donskie Zory Village, Kercheksky Village, Melikhovskaya Village, Pukhlyakovskiy Village	HI assay	327	-	16.08.2018 – 460 head
					-	16.08.2018 – 168 head
					-	23.03.2018 – 880 head
					-	16.08.2018 – 3272 head
					-	14.11.2018 – 940 head
					-	21.09.2018 – 240 head
PCR	103	-	14.11.2018 – 320 head			

Surveillance zone	Free-range poultry farm, backyard, small scale farm, other	1. backyard farm, Rostov Oblast, Ust-Donetsky Raion, Razdorskaya Village				26.11.2018 – 480 head
		Wild birds	PCR	41	-	

### Outbreaks in 2018 (Rostov Oblast)

#### 1. Commercial indoor poultry farm No 3

Quarantine was imposed on July 12, 2019. Quarantine was lifted on September 5, 2019.

Monitoring tests for avian influenza in 2018 in accordance with the regional monitoring plan

Regional AI monitoring	Raion	Number of samples		Test Method	Test results (+/-)	Poultry vaccination
		Poultry	Wild birds			
Rostov Oblast	Belokalitvinsky	1100	-	HI assay	-	
		1740	120	ELISA	-	
		176	122	PCR	1+ *	

1+ \* an outbreak on commercial indoor poultry farm No 3 (Rostov Oblast)

The results of monitoring tests for avian influenza as well as of vaccination in the zones established around an outbreak(-s) (poultry, wild birds)

Zone	Type of the farm	Address of the farm	Test method	Number of samples	Test results (+/-)	Vaccination
Protection zone	Indoor keeping poultry farm	Not available				
	Free-range poultry farm, backyard, small scale farm, other	Dorogovsky Village, Belokalitvinsky Raion - 5 backyard farms; Kakitchev Village, Belokalitvinsky Raion – 4 backyard farms; Bogatov Village, Belokalitvinsky Raion - 10 backyard farms; Belaya Kalitva Town – 56 backyard farms; Nizhnepopov Village – 29 backyard farms; Belaya Kalitva Town, Sosny Village – 11 backyard farms;	HI assay	1100	-	
			ELISA	-	-	
			PCR	135	-	
Surveillance zone	Wild birds	The whole raion	HI assay	-	-	
			ELISA	120	-	
			PCR	122	-	

## 2. Commercial indoor poultry farm No 6.

Quarantine was imposed on October 2, 2018. Quarantine was lifted on February 2, 2019.

### Monitoring tests for avian influenza in 2018 in accordance with the regional monitoring plan

Regional AI monitoring	Raion	Number of samples		Test Method	Test results (+/-)	Poultry vaccination
		Poultry	Wild birds			
Rostov Oblast	Kamensky	1300	-	HI assay	-	
		3625	110	ELISA	-	
		522	197	PCR	2+*	

2+\* an outbreak on commercial indoor poultry farm No 6

### Monitoring tests for avian influenza in 2019 in accordance with the regional monitoring plan

Regional AI monitoring	Raion	Number of samples		Test Method	Test results (+/-)	Poultry vaccination
		Poultry	Wild birds			
Rostov Oblast	Kamensky	400	-	HI assay	-	
		182	-	ELISA	-	
		14	25	PCR	-	

### The results of monitoring tests for avian influenza as well as of vaccination in the zones established around an outbreak(-s) (poultry, wild birds)

Zone	Type of the farm	Address of the farm	Test method	Number of samples	Test results (+/-)	Vaccination
Protection zone	Free-range poultry farm, backyard, small scale farm, other	Staraya Stanitsa Village (106 backyard farms); Lesnoy Village (5 backyard farms); Krasnovka Village (39 backyard farms)	HI assay	1300	-	
			ELISA	-	-	
			PCR	317	-	
Surveillance zone	Wild birds	The whole raion	HI assay	-	-	
			ELISA	110	-	
			PCR	160	-	

### 3. Commercial indoor poultry farm No 4

Quarantine was imposed on July 23, 2018. Quarantine was lifted on September 5, 2019.

#### The results of monitoring tests for avian influenza as well as of vaccination in the zones established around an outbreak(-s) (poultry, wild birds)

Zone	Type of the farm	Address of the farm	Test method	Number of samples	Test results (+/-)	Vaccination
Protection zone	Commercial indoor poultry farm	1. Commercial indoor poultry farm No 5.	HI assay	-	-	
			ELISA	940	-	
			PCR	782	2	
		2. Commercial indoor poultry farm	HI assay	-	-	
			ELISA	698	-	
			PCR	552	-	
		3. Commercial indoor poultry farm	HI assay	-	-	
			ELISA	642	-	
			PCR	3	-	
		Backyard farm, Novopavlovka village; Backyard farm, Kalinovka village	HI assay	925	-	
			ELISA	-	-	
			PCR	118	-	
Surveillance zone	Wild birds	The whole raion	HI assay	-	-	
			ELISA	130	-	
			PCR	96	-	

### 4. Commercial indoor poultry farm No 5

Quarantine was imposed on July 23, 2018. Quarantine was lifted on September 18, 2019

#### Monitoring tests for avian influenza in 2018 in accordance with the regional monitoring plan

Regional AI monitoring	Raion	Number of samples		Test method	Test results (+/-)	Poultry vaccination
		Poultry	Wild birds			
Rostov Oblast	Oktyabrsky	440	-	HI assay		
		2179	60	ELISA		
		719	43	PCR		

#### Monitoring tests for avian influenza in 2019 in accordance with the regional monitoring plan

Regional AI monitoring	Raion	Number of samples		Test method	Test results (+/-)	Poultry vaccination
		Poultry	Wild birds			
Rostov Oblast	Oktyabrsky	440	-	HI assay	-	
		2179	60	ELISA	-	
		719	43	PCR	-	

