

REVIEW • PEER-REVIEWED • OPEN ACCESS • SERIES C • HAC/OAK 16.00.00 — VETERINARY SCIENCES •
UDC: 619:616.981.42

Animal brucellosis: the current global epizootic situation, distribution, and control measures

Hayvonlar brusellyozi. Dunyoda mavjud epizootik holat, tarqalishi va nazorat choralari

Бруцеллёз животных. Современная эпизоотическая ситуация в мире, распространение и меры контроля

BAKHRIDDINOV Doniyor Ilkhomovich^{1*}, ULUGMURADOV Azamat Daminovich¹, SAIDOV Akmaljon Akramovich¹, RUZIMURODOV Mukhiddin Akhrorovich¹

¹ Scientific-Research Institute of Veterinary, Samarkand, Uzbekistan

* Corresponding author: doniyorboy1505@gmail.com

ARTICLE INFO

ARTICLE TYPE

Review

LANGUAGE OF FULL TEXT

O'zbekcha (UZ)

SCIENTIFIC FIELD / OAK

☒ 16.00.00 – Veterinary Sciences

Veterinariya fanlari

HAC Presidium decision No. 371/5, 13.06.2025

Series C

UDC / UDK

619:616.981.42

ARTICLE HISTORY

Received: 2026-09-07

Revised: 2026-09-15

Accepted: 2026-09-22

Published: 2026-09-30

DOI

<https://doi.org/10.66073/ReFocus.V5I9.0916>

CONTACT

ReFocusJournal@gmail.com

LICENSE



Creative Commons Attribution 4.0 International (CC BY 4.0). This is an open access article distributed under the terms of the CC BY 4.0 licence.

AUTHOR, TITLE AND ABSTRACT METADATA (EN / UZ / RU)

ENGLISH

BAKHRIDDINOV Doniyor Ilkhomovich^{1*}, ULUGMURADOV Azamat Daminovich¹, SAIDOV Akmaljon Akramovich¹, RUZIMURODOV Mukhiddin Akhrorovich¹

¹ Scientific-Research Institute of Veterinary, Samarkand, Uzbekistan

Abstract. This article focuses on the global prevalence of animal brucellosis, its major species, particularly the course of the disease in cattle, clinical signs, modern diagnostic methods, and control measures. In addition, based on data from the World Organisation for Animal Health (WOAH), the epizootic situation was analysed across different continents and regions, including the Middle East, Mediterranean countries, sub-Saharan Africa, as well as China, India, Peru, Mexico, and countries of Central and South-West Asia. The article also presents findings from recent scientific studies indicating significant shortcomings in diagnostic approaches and epizootological surveillance, which make it difficult to accurately determine the true prevalence of brucellosis. Therefore, the article emphasises the importance of an integrated approach to brucellosis control based on the One Health concept, regular serological testing, laboratory confirmation, vaccination, biosecurity measures, and the identification of infected animals.

Keywords: brucellosis; Brucella abortus; Brucella melitensis; Brucella suis; cattle; sheep; goats; epizootology; zoonosis; diagnosis; vaccination; biosecurity

O'ZBEKCHA

BAXRIDDINOV Doniyor Ilxomovich^{1*}, ULUGMURADOV Azamat Daminovich¹, SAIDOV Akmaljon Akramovich¹, RUZIMURODOV Mukhiddin Akhrorovich¹

¹ Veterinariya ilmiy-tadqiqot instituti, Samarqand, O'zbekiston

Annotatsiya. Mazkur maqolada hayvonlar brusellyozining dunyo bo'ylab tarqalish darajasi, turlar, ayniqsa qoramollarda kasallikning kechishi, klinik belgilari, zamonaviy diagnostikasi va qarshi kurash chora-tadbirlariga alohida e'tibor qaratilgan. Bundan tashqari maqolada Jahon hayvonlar salomatligi tashkiloti (JHST-WOAH) ma'lumotlari asosida qit'alarda, jumladan Yaqin Sharq, O'rtaer dengizi mamlakatlari, Sahroi Kabirdan janubdagi Afrika, Xitoy, Hindiston, Peru va Meksika, Markaziy va Janubi-G'arbiy Osiyo mamlakatlaridagi epizootik vaziyat tahlil qilingan. Shuningdek, maqolada so'nggi ilmiy tadqiqotlar brusellyozning haqiqiy tarqalish darajasini aniqlashda diagnostika va epizootologik monitoringda jiddiy kamchiliklar mavjudligi sababidan kasallikka qarshi kurashda «Yagona salomatlik» (One Health) yondashuvi, muntazam serologik tekshiruvlar, laboratoriya tasdiq'i, vaksinatsiya, bioxavfsizlik va kasal hayvonlarni aniqlashga asoslangan kompleks chora-tadbirlar muhim ahamiyat kasb etishi to'g'risida ma'lumotlar keltirilgan.

Kalit so'zlar: brusellyoz; Brucella abortus; Brucella melitensis; Brucella suis; qoramol; qo'y; echki; epizootologiya; zoonoz; diagnostika; vaksinatsiya; bioxavfsizlik

РУССКИЙ

БАХРИДДИНОВ Дониёр Илхомович^{1*}, УЛУГМУРАДОВ Азамат Даминович¹,

How to cite / Iqtibos keltirish / Как цитировать: BAKHRIDDINOV, D. I., ULUGMURADOV, A. D., SAIDOV, A. A., RUZIMURODOV, M. A. (2026). Animal brucellosis: the current global epizootic situation, distribution, and control measures. Research Focus International Scientific Journal, 5(9), 118–122.
<https://doi.org/10.66073/ReFocus.V5I9.0916>

© 2026 The Author(s). Published by Research Focus International Scientific Journal. Open access article under the CC BY 4.0 licence.

HAC / OAK: On the HAC list of national scientific publications (Academy of Sciences of the Republic of Uzbekistan) for 06.00.00 Agricultural Sciences and 16.00.00 Veterinary Sciences. O'zbekiston Respublikasi FA huzuridagi OAK ro'yxatida: 06.00.00 – Qishloq xo'jaligi fanlari; 16.00.00 – Veterinariya fanlari.

САИДОВ Акмалжон Акрамович¹, РУЗИМУРДОВ Мухиддин Ахрорович¹

¹ Научно-исследовательский институт ветеринарии, Самарканд, Узбекистан

Аннотация. В данной статье особое внимание уделено распространённости бруцеллёза животных в мире, его видам, особенностям течения заболевания у крупного рогатого скота, клиническим признакам, современным методам диагностики и мерам борьбы. Кроме того, на основе данных Всемирной организации по охране здоровья животных (ВОАН) проанализирована эпизоотическая ситуация на различных континентах, в том числе в странах Ближнего Востока, Средиземноморья, Африки к югу от Сахары, а также в Китае, Индии, Перу, Мексике и странах Центральной и Юго-Западной Азии. В статье также представлены данные последних научных исследований, свидетельствующие о наличии серьёзных недостатков в диагностике и эпизоотологическом мониторинге, препятствующих точному определению истинной распространённости бруцеллёза. В связи с этим подчёркивается важное значение комплексного подхода к борьбе с заболеванием, основанного на принципах концепции «Единое здоровье» (One Health), регулярных серологических исследований, лабораторного подтверждения, вакцинации, обеспечения биобезопасности и выявления инфицированных животных.

Ключевые слова: бруцеллёз; *Brucella abortus*; *Brucella melitensis*; *Brucella suis*; крупный рогатый скот; овцы; козы; эпизоотология; зооноз; диагностика; вакцинация; биобезопасность

1. KIRISH

Introduction

Brusellyoz-*Brucella* avlodiga mansub bakteriyalar tomonidan chaqiriladigan yuqumli kasallik bo'lib, chorvachilik va veterinariya sohasidagi eng muhim transchegaraviy infeksiyalardan biri hisoblanadi. Jahon hayvonlar salomatligi tashkiloti brusellyozni iqtisodiy ahamiyati yuqori bo'lgan, odamlar uchun ham xavf tug'diradigan kasallik sifatida baholaydi. Qoramollarda asosan *B.abortus*, qo'y va echkilarda *B.melitensis*, cho'chqalarda esa *B.suis* muhim epizootologik ahamiyatga ega.

Kasallikning asosiy klinik belgisi reproduktiv buzilishlar, xususan, homila tashlash, bepustlik, sut mahsuldorligining kamayishi va podaning reproduktiv ko'rsatkichlari yomonlashishi bilan namoyon bo'ladi. Shu bilan birga, infeksiyalangan hayvonlar ba'zan tashqi klinik belgilsiz ham kasallik qo'zg'atuvchisini tarqatishi mumkin.

2. DUNYODAGI MAVJUD EPIZOOTIK HOLAT

Current global epizootic situation

Bugungi kunda brusellyoz dunyoning ko'plab mamlakatlarida saqlanib qolayotgan endemik infeksiyalardan biri hisoblanadi. JHST ma'lumotlariga ko'ra, kasallikning yuqori darajada uchrashi Yaqin Sharq, O'rta dengizi mamlakatlari, Sahroi Kabirdan janubdagi Afrika, Xitoy, Hindiston, Peru va Meksikada kuzatiladi. Ayniqsa Markaziy va Janubi-G'arbiy Osiyoda holatning ortib borayotgani veterinariya xizmatlari uchun dolzarb masala bo'lib qolmoqda.

Shu bilan birga, ayrim mamlakatlar va hududlarda uzoq yillik nazorat dasturlari natijasida brusellyozdan ozod maqomga erishilgan. G'arbiy va Shimoliy Yevropaning bir qator mamlakatlari, Kanada, Yaponiya, Avstraliya va Yangi Zelandiya kasallik qo'zg'atuvchisidan ozod hududlar sifatida qaraladi. Biroq bunday hududlarda ham infeksiyaning tashqi kirib kelishi, yovvoyi hayvonlar orqali qayta tarqalishi yoki nazoratdan chetda qolgan hayvonlar tufayli xavf saqlanib qoladi.

Muhim jihat shundaki, dunyo miqyosida brusellyozning aniq tarqalishini faqat rasmiy xabarlar asosida baholash qiyin. 2025-yilda e'lon qilingan tahlillarda chorva hayvonlarida brusellyoz diagnostikasi bo'yicha 349 ta tadqiqot o'rganilgan va ularning faqat 16 foizi namuna olish, diagnostik usul, protokol va natijalarni talqin qilish nuqtai nazaridan JHST tavsiyalariga to'liq mos kelgan. Bu holat ayrim mamlakatlarda kasallikning haqiqiy epizootik holati rasmiy ma'lumotlarda to'liq aks etmasligi mumkinligini ko'rsatadi.

3. QORAMOLLAR BRUSELLYOZI

Bovine brucellosis

Qoramollarda brusellyozning asosiy qo'zg'atuvchisi *B.abortus* hisoblanadi. Infeksiya asosan reproduktiv tizimga ta'sir ko'rsatib, bo'g'ozlikning ikkinchi yarmidagi abort, yashovchanligi past nasl tug'ilishi, yo'ldoshning ushlanib qolishi, endometrit, bepustlik va sut mahsuldorligining pasayishiga sabab bo'ladi.

Qoramollar orasida kasallikning tarqalishi chorva hayvonlarining intensiv ko'chirilishi, yangi hayvonlarni podaga veterinariya nazoratisiz qo'shish, tug'ish va abortdan keyingi biologik materiallarni veterinariya-sanitariya talablariga rioya qilmagan holda yo'qotish hamda fermada bioxavfsizlik choralarining yetarli emasligi bilan bog'liq bo'lishi mumkin.

So'nggi tadqiqotlar qoramollar brusellyozida xo'jalikni boshqarish usullari, hayvonlarning harakati, bioxavfsizlik va poda tarkibi kabi omillar infeksiya xavfiga ta'sir qilishini ko'rsatmoqda.

4. QO'Y VA ECHKILAR BRUSELLYOZI – ASOSIY XAVFLI YO'NALISHLARDAN BIRI

Brucellosis of sheep and goats

Qo'y va echkilarda *B.melitensis* eng muhim qo'zg'atuvchi bo'lib, u nafaqat chorvachilikka, balki aholi salomatligiga ham jiddiy xavf tug'diradi. Qo'y va echkilar brusellyozi dunyoda keng tarqalgan bo'lib, ayrim mamlakatlarga ushbu infeksiyadan ozod deb hisoblanadi.

2025-yilda chop etilgan global tahlilda 2010-2023-yillarda e'lon qilingan tadqiqotlar asosida *B.melitensis* infeksiyasining qo'y va echkilardagi tarqalishi baholangan. Hisob-kitoblarga ko'ra, qo'ylarda seropozitivlik ko'rsatkichi 8,07%, echkilarda 2,46%, ikki tur hayvon birgalikda baholaganda esa 5,54% ni tashkil etgan. Mintaqalar o'rtasida juda katta farqlar mavjudligi aniqlangan.

Bu raqamlarni butun dunyo chorva populyatsiyasiga to'g'ridan-to'g'ri tatbiq etish mumkin emas, chunki tadqiqotlar turli mamlakatlar, hayvon guruhlari va diagnostik usullar asosida o'tkazilgan. Biroq, ular *B.melitensis* infeksiyasi hali ham global veterinariya muammosi ekanini ko'rsatadi.

5. AFRIKA, OSIYO VA BOSHQA MINTAQALARDAGI VAZIYAT

Situation in Africa, Asia and other regions

Afrika qit'asida kichik kavsh qaytaruvchilar brusellyozi chorvachilik va aholi salomatligi uchun muhim muammo bo'lib qolmoqda. 2000-2025-yillardagi tadqiqotlarni qamrab olgan yangi tahlilda Afrikaning 28 mamlakati bo'yicha 151 ta tadqiqot ma'lumotlari umumlashtirilgan. Bu qit'ada brusellyoz bo'yicha

epidemiologik ma'lumotlar mavjud bo'lsa-da, mamlakatlar kesimida monitoring intensivligi va diagnostik imkoniyatlar bir xil emas.

Osiyoda ham brusellyozning epizootologik ahamiyati yuqori. Masalan, Xitoyda 2025-yil avgustgacha o'tkazilgan tadqiqotlarni qamrab olgan tahlilda qo'y va echkilarda umumiy seropozitivlik 3,0% deb baholangan, ammo hududlar o'rtasida sezilarli farqlar aniqlangan.

Amerika mintaqasida esa qoramollar bilan bir qatorda yovvoyi hayvonlar, jumladan bizon, bug'u va yovvoyi cho'chqalar infeksiyaning tabiiy rezervuari sifatida epizootologik ahamiyat kasb etishi to'g'risida ma'lumotlar mavjud. Yovvoyi hayvonlar bilan chorva hayvonlari o'rtasidagi kontakt infeksiyaning qayta kirib kelishiga sabab bo'lishi ehtimoli mavjud.

6. ODAMLAR UCHUN ZOONOZ XAVFI

Zoonotic risk for humans

Brusellyozning eng muhim xususiyatlaridan biri-uning hayvonlardan odamlarga yuqishidir. Insonlar asosan infeksiyalangan hayvonlar bilan bevosita kontakti, abort materiallari, yo'ldosh va biologik suyuqliklar bilan ishlash, shuningdek, xom yoki termik ishlov berilmagan sut va sut mahsulotlarini iste'mol qilish orqali zararlanishi mumkin. Veterinarlar, chorvadorlar, go'sht-sut mahsulotlarini qayta ishlash bilan shug'ullanuvchilar va laboratoriya mutaxassislari yuqori xavf guruhlari kiradi.

Shu sababli hayvonlarda brusellyozga qarshi kurash faqat veterinariya vazifasi emas, balki aholi salomatligini muhofaza qilishning muhim qismi hamdir. Hayvonlarda infeksiyani nazorat qilish insonlardagi brusellyoz xavfini kamaytirishning eng samarali yo'llaridan biri hisoblanadi.

7. DIAGNOSTIKADAGI ZAMONAVIY YONDASHUVLAR

Modern approaches to diagnosis

Brusellyozni aniqlashda serologik usullar, jumladan Roz Bengal va boshqa klassik serologik testlar, IFT va boshqa immunologik tekshiruvlar keng qo'llaniladi. Ayrim holatlarda bakterilogik usullar va PZR infeksiyani tasdiqlashda muhim ahamiyat kasb etadi.

Biroq, faqat bitta serologik test natijasiga asoslanib yakuniy xulosa chiqarish har doim ham to'g'ri emas. JHST diagnostikada klinik, epizootologik, allergik va laboratoriya ma'lumotlarini kompleks baholashni nazarda tutadi. Infeksiyani tasdiqlashda qo'zg'atuvchini ajratib olish yoki ijobiy diagnostik natijani epizootologik bog'liqlik bilan birgalikda baholash muhim. 2025-yilgi global tizimli tahlil ham diagnostika standartlariga rioya qilish muammosini ko'rsatdi. Tadqiqotlarning katta qismida laboratoriya usullari turlicha qo'llangani sababli mamlakatlar va hududlar o'rtasidagi ma'lumotlarni to'g'ridan-to'g'ri taqqoslash qiyin.

8. KASALLIKKA QARSHI KURASH VA PROFILAKTIKA

Control and prevention

Brusellyozni nazorat qilishda eng muhim choralar quyidagilardan iborat:

1. Muntazam monitoring va serologik skrining. Podani rejali tekshirish infeksiyani erta aniqlash imkonini beradi.
2. Infeksiya yuqtirgan hayvonlarni aniqlash. Ijobiy natija bergan hayvonlarni sog'lom podadan ajratish kasallik tarqalishini cheklash imkonini beradi.
3. Vaksinatсия. Endemik hududlarda emlash infeksiya darajasini pasaytirish uchun muhim vosita hisoblanadi. JHST bir

qator vaksina variantlaridan foydalanishni nazarda tutadi va bu borada turli davlatlarning o'z dasturlari mavjud.

4. Bioxavfsizlikni kuchaytirish. Yangi keltirilgan hayvonlarni karantinda saqlash, podaga kiritishdan oldin tekshirish, abort va tug'ish materiallarini xavfsiz yo'qotish hamda xo'jalikda veterinariya-sanitariya holatini me'yorda ushlash zarur.

5. Hayvonlar harakatini nazorat qilish. Identifikatsiyalash tadbirlarini to'liq amalga oshirish.

6. Sut mahsulotlarini termik ishlov (pasterizatsiya) berish. Bu odamlarga infeksiya yuqish xavfini sezilarli kamaytiradi.

7. Veterinariya va tibbiyot xizmatlarining hamkorligi. Brusellyoz zoonoz kasallik bo'lgani sababli odamlar va hayvonlar salomatligi bo'yicha ma'lumotlarni birgalikda doimiy tahlil qilish talab etiladi.

8.1. «Yagona salomatlik» konsepsiyasi doirasida

Bugungi kunda brusellyozga qarshi kurashda «Yagona salomatlik» konsepsiyasi tobora muhim ahamiyat kasb etmoqda. Ushbu yondashuv inson, hayvon va atrof-muhit salomatligini o'zaro bog'liq holda baholashni nazarda tutadi. Chorva hayvonlarida infeksiya saqlanib qolsa, insonlarda kasallanish xavfi ham davom etadi. Shuning uchun veterinariya xizmati, tibbiyot muassasalari, oziq-ovqat xavfsizligi tizimi va laboratoriyalar o'rtasida axborot almashinuvi kuchaytirilishi zarur.

9. XULOSA

Conclusion

Dunyoda hayvonlar brusellyozni hanuz dolzarb epizootologik va iqtisodiy muammo bo'lib qolmoqda. Ayrim mamlakatlar kasallikdan holi hudud maqomiga erishgan bo'lsa-da, ko'plab mintaqalarda, ayniqsa Yaqin Sharq, Afrika, Osiyoning ayrim qismlari va boshqa endemik hududlarda infeksiyaning aylanishi davom etmoqda. JHST ma'lumotlarida Markaziy va Janubi-G'arbiy Osiyoda holatning o'sishi alohida qayd etilgan.

Hozirgi bosqichda asosiy muammolardan biri nafaqat infeksiyani bartaraf etish, balki uning haqiqiy tarqalishini aniq baholashdir. So'nggi ilmiy tadqiqotlar diagnostika usullarining bir xil emasligi va epizootologik monitoringdagi kamchiliklar global epidemiologik manzarani baholashni qiyinlashtirayotganini ko'rsatmoqda.

Shu bois brusellyozga qarshi samarali strategiya - muntazam monitoring, standartlashtirilgan laboratoriya diagnostikasi, vaksinatсия, bioxavfsizlik, hayvonlar harakatini nazorat qilish, infeksiyalangan podalarni boshqarish va insonlar orasida profilaktik choralarni birlashtirishi lozim. Brusellyozni nazorat qilishda veterinariya va tibbiyot xizmatlarining hamkorligi kasallikning iqtisodiy hamda zoonoz ta'sirini kamaytirishning asosiy sharti hisoblanadi.

DECLARATIONS

Declarations

Author contributions *CRedit*

Conceptualization; Methodology; Investigation; Data curation; Writing – original draft; Writing – review & editing. All authors have read and agreed to the published version of the manuscript.

Funding

This research received no external funding.

Ethics approval

The article is a review of published scientific literature and official data. The work involved no experiments on animals and no human participants, and therefore required no separate ethics committee approval.

Informed consent

All authors have read and approved the final version of the manuscript and have given their consent to its submission and publication. The study involved no human participants and no personal data.

Data availability statement

All sources analysed in this review are listed in the reference list of this article.

Conflict of interest

The authors declare no conflict of interest.

Generative AI disclosure

Generative AI (Claude, Anthropic) was used in the editorial preparation of this article: for language editing, translation of the title, abstract and keywords between Uzbek, Russian and English, preparation of the extended English summary from the authors' text, and formatting of the reference list. No data, results or conclusions were generated by AI. The authors are responsible for the content of the publication.

EXTENDED SUMMARY IN ENGLISH

Kengaytirilgan inglizcha xulosa / Расширенный реферат на английском языке

Purpose and research problem

Brucellosis is an infectious disease caused by bacteria of the genus *Brucella* and one of the most important transboundary infections in livestock farming and veterinary medicine. The World Organisation for Animal Health (WOAH) regards it as a disease of high economic importance that also poses a risk to humans. In cattle the main causative agent is *B. abortus*, in sheep and goats *B. melitensis* and in pigs *B. suis*. The main clinical manifestations are reproductive disorders — abortion, infertility, reduced milk yield and deterioration of herd reproductive indicators — while infected animals may also spread the pathogen without visible clinical signs. The aim of the review is to analyse the global prevalence of animal brucellosis, the course of the disease in different species, modern diagnostic approaches and control measures on the basis of WOAH data and recent scientific publications.

Materials and methods

The article reviews WOAH data, international guidelines, national regulatory documents of Uzbekistan and recent systematic reviews and meta-analyses on the global epizootic situation, the epidemiology of brucellosis in cattle, sheep and goats, its zoonotic importance, diagnostic standards and control strategies.

Results and discussion

Brucellosis remains endemic in many countries: according to WOAH, high incidence is observed in the Middle East, the Mediterranean, sub-Saharan Africa, China, India, Peru and Mexico, and the situation is worsening in Central and South-West Asia, whereas several countries of Western and Northern Europe, Canada, Japan, Australia and New Zealand have achieved freedom from the disease, though the risk of reintroduction remains. A 2025 systematic review of 349 diagnostic studies in livestock found that only 16% fully followed WOAH recommendations on sampling, test choice, protocol and interpretation, so official data may not reflect the true situation. In cattle, *B. abortus* causes abortion in the second half of pregnancy, weak offspring, retained placenta, endometritis, infertility and reduced milk yield, and its spread is associated with intensive animal movement, introduction of animals without veterinary control, improper disposal of birth and abortion materials and insufficient farm biosecurity. A 2025 global meta-analysis of studies published in 2010–2023 estimated the seroprevalence of *B. melitensis* at 8.07% in sheep, 2.46% in goats and 5.54% in both species combined, with large regional differences. A review of 151 studies from 28 African countries showed uneven monitoring and diagnostic capacity, the overall seroprevalence in sheep and goats in China was estimated at 3.0%, and in the Americas wild animals such as bison, elk and feral pigs act as natural reservoirs. Humans are infected through direct contact with infected animals, abortion materials and biological fluids and through consumption of raw milk and dairy products, so veterinarians, livestock keepers, meat and milk processors and laboratory staff are at high risk. Diagnosis relies on serological tests such as the Rose Bengal test, ELISA and other

immunological assays, with bacteriological methods and PCR for confirmation, but a final conclusion should not be based on a single serological result: WOAH requires a combined assessment of clinical, epizootological, allergic and laboratory data. The main control measures are regular monitoring and serological screening, identification and isolation of infected animals, vaccination in endemic areas, strengthened biosecurity, control of animal movement and identification, heat treatment of milk and cooperation between veterinary and medical services within the One Health concept.

Conclusion and contribution

Animal brucellosis remains an urgent epizootological and economic problem worldwide: although some countries have achieved disease-free status, circulation of the infection continues in many regions, particularly the Middle East, Africa and parts of Asia, and WOAH data indicate an increase in Central and South-West Asia. One of the main current problems is not only eliminating the infection but also accurately assessing its true prevalence, since differences in diagnostic methods and gaps in epizootological monitoring complicate the global epidemiological picture. An effective strategy should combine regular monitoring, standardised laboratory diagnosis, vaccination, biosecurity, control of animal movement, management of infected herds and preventive measures among people, and cooperation between veterinary and medical services is the key condition for reducing the economic and zoonotic impact of the disease.

ADABIYOTLAR RO'YXATI

References (original language)

- [1] O'zbekiston Respublikasi Veterinariya va chorvachilikni rivojlantirish davlat qo'mitasining 10.10.2022 yildagi "Hayvonlar brusellyoz kasalligining oldini olish va bartaraf qilish bo'yicha yo'riqnomani tasdiqlash haqida"gi qarori.
- [2] World Organisation for Animal Health (WOAH). Brucellosis-kasallikning global tarqalishi, diagnostikasi va nazorat choralari.
- [3] Саидов, А. А., Улугмуродов, А. Д., Куватов, Б. Х., & Мухтаров, Ф. Н. (2023). ИСТОРИЯ ДИАГНОСТИКИ БРУЦЕЛЛЕЗА СЕЛСКОХОЗЯЙСТВЕННЫХ ЖИВОТНЫХ. World of Science, 6(5), 85-88.
- [4] WOAH. Terrestrial Animal Health Code, Chapter 8.4 — Infection with *Brucella abortus*, *B. melitensis* and *B. suis*.
- [5] Food and Agriculture Organization of the United Nations (FAO). Brucellosis.
- [6] Vection S., Laine C.G., Arenas-Gamboa A.M. What do we really know about brucellosis diagnosis in livestock worldwide? A systematic review. PLoS Neglected Tropical Diseases, 2025, 19(6): e0013185. doi:10.1371/journal.pntd.0013185.
- [7] Das S., Das P., Das A., Hasib F.M.Y., Chowdhury S. A Systematic Review and Meta-Analysis on the Prevalence of *Brucella melitensis* in Sheep and Goat. Veterinary Medicine and Science, 2025, 11(6): e70667. doi:10.1002/vms3.70667.
- [8] Rehman S. et al. A detailed review of bovine brucellosis. Open Veterinary Journal, 2025, 15(4): 1520–1535. doi:10.5455/OVJ.2025.v15.i4.2.

REFERENCES (ROMAN SCRIPT)

Transliterated list — required by Scopus and Web of Science

- [1] O'zbekiston Respublikasi Veterinariya va chorvachilikni rivojlantirish davlat qo'mitasining 10.10.2022 yildagi "Hayvonlar brusellyoz kasalligining oldini olish va bartaraf qilish bo'yicha yo'riqnomani tasdiqlash haqida"gi qarori [Resolution of the State Committee for Veterinary Medicine and Livestock Development of the Republic of Uzbekistan of 10 October 2022 "On approval of the instruction on the prevention and elimination of brucellosis in animals"]. (in Uzbek)
- [2] World Organisation for Animal Health (WOAH). Brucellosis-kasallikning global tarqalishi, diagnostikasi va nazorat choralari [Brucellosis: global distribution, diagnosis and control measures]. (in Uzbek)
- [3] Saidov, A. A., Ulugmuradov, A. D., Kuvatov, B. Kh., & Mukhtarov, F. N. (2023). ISTORIYA DIAGNOSTIKI BRUTSELLEZA SELSKOKHOZYAYSTVENNYKH ZHIVOTNYKH [History of the

- diagnosis of brucellosis in farm animals]. *World of Science*, 6(5), 85-88. (in Russian)
- [4] WOAH. Terrestrial Animal Health Code, Chapter 8.4 — Infection with *Brucella abortus*, *B. melitensis* and *B. suis*.
- [5] Food and Agriculture Organization of the United Nations (FAO). Brucellosis.
- [6] Vection S., Laine C.G., Arenas-Gamboa A.M. What do we really know about brucellosis diagnosis in livestock worldwide? A systematic review. *PLoS Neglected Tropical Diseases*, 2025, 19(6): e0013185. doi:10.1371/journal.pntd.0013185.
- [7] Das S., Das P., Das A., Hasib F.M.Y., Chowdhury S. A Systematic Review and Meta-Analysis on the Prevalence of *Brucella melitensis* in Sheep and Goat. *Veterinary Medicine and Science*, 2025, 11(6): e70667. doi:10.1002/vms3.70667.
- [8] Rehman S. et al. A detailed review of bovine brucellosis. *Open Veterinary Journal*, 2025, 15(4): 1520–1535. doi:10.5455/OVJ.2025.v15.i4.2.