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Conference and Training Centre, National Research Institute of Animal Production

1 Krakowska Street

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The National Research Institute of Animal Production, founded on 1 April 1950, is one of the largest scientific institutions in Poland, supporting the development of agriculture and animal production as envisioned by the Ministry of Agriculture and Rural Development. Its activities focus on both current and future challenges of producing safe, high-quality and environmentally friendly food and animal welfare. The institute also conducts work on the use of livestock for biomedical purposes. In recognition of its scientific achievements, on 23 November 2006, the National Research Institute of Animal Production was granted the status of a State Research Institute. As a specialized scientific unit, the Institute carries out the tasks assigned by the Minister of Agriculture and Rural Development, statutorily defined in the regulations on the organization of breeding and reproduction of farm animals, on feed, and in the provisions of the Regulation of the European Parliament and of the Council (EU) 2016/1012 on animal breeding. In 2006–2010, a multi-year programme was implemented entitled "Biological, environmental and technological conditions for the development of animal production", while in 2011-2015 and 2016-2020, activities were continued under the programme "Conservation and management of national livestock genetic resources under conditions of sustainable use". These programmes, entrusted by the Council of Ministers, included activities related to the functioning of domestic livestock breeding and production competitive in European markets. They used the latest scientific achievements, both Polish and worldwide, in the field of animal breeding and production. Their main goal was to ensure biological progress in breeding while maintaining rich biodiversity, taking into account biotechnological, technological and environmental factors. The unit is authorized to confer degrees of Ph.D. and habilitated doctor of agricultural sciences in zootechnics and fisheries. On 8 May 2019 the Institute entered into an agreement with several scientific institutes to establish a Doctoral School of Natural and Agricultural Sciences, which trains doctoral students in three disciplines: biological sciences, agriculture and horticulture, and zootechnics and fisheries. The institute cooperates with many domestic and foreign partners, both in scientific projects and in other forms of cooperation. In accordance with the decision of the Minister of Education and Science, it was awarded the highest A+ scientific category for 2022– 2025 in the discipline of zootechnics and fisheries, which confirms its leading position in the country.



Core activity of the Institute

- conducting research (basic, applied, industrial), development work in animal production and management of agricultural landscape, and research and development activities,
- applying research findings, development work and the results of research and development activities to practice,
- implementing research findings, development work and the results of research and development activities.

Scope of research and development work carried out

- farming and breeding of cattle, horses, sheep, goats, pigs, poultry and other animals,
- agricultural crops, including cereals, legumes and oil plants,
- food quality research and analysis,
- educational and dissemination activities, including the organization of trade fairs, exhibitions and congresses,
- · publishing activity,
- processing, management and provision of ICT data.

Development directions of the National Research Institute of Animal Production

The Institute's development activity is primarily focused on science and research, as well as implementation, expert and dissemination activities.

The main directions of activities result from:

- current needs of national breeding and animal production, tasks and expectations of the supervising body – the Ministry of Agriculture and Rural Development and other public administration institutions,
- educational and dissemination activities, including the organization of trade fairs, exhibitions and congresses,
- visions and strategies for the development of world and European agriculture,
- strategic documents relating to agricultural production, including the idea of sustainable development and its goals.

Department of Animal Molecular Biology

Head: Prof. Katarzyna Ropka-Molik, Ph.D.

e-mail: katarzyna.ropka@iz.edu.pl, phone: +48 666 081 208

Application of the latest achievements in molecular genetics in breeding practice, including: individual and species identification of animals at the genome and proteome level; characterization of the genetic structure of different livestock breeds and assessment of genetic variability in populations; genome scanning for SNP markers of production traits and monitoring of population biodiversity; search for and identification of the basis of genetic diseases and polymorphisms in genes determining resistance (susceptibility) to diseases; structural and functional genomics at the level of genome, transcriptome, miRNAome, methylome and degradome analysis; research on genome organization based on classical and molecular cytogenetic analyses of somatic and reproductive cells; research in the field of in vitro cell culture (analysis of cell cytotoxicity, hypoxia, apoptosis, cell motility and invasiveness, analysis of transfected and transformed GMM cells), identification of protein markers characteristic of the productive traits of farm animals and disease states.

The Department includes the Laboratory of Genomics, the Laboratory of Molecular Genetics, the Proteomics Laboratory, the Cytogenetics Laboratory and the Genetic Engineering Unit. Detailed information and offer: lgm.izoo.krakow.pl



Department of Reproductive Biotechnology and Cryopreservation

Head: Monika Trzcińska, Ph.D., Prof. of NRIAP

e-mail: monika.trzcinska@iz.edu.pl, phone: +48 666 081 381

Conducting research on issues related to broadly understood animal reproduction biotechnology, both male and female; addressing issues related to cryopreservation of biological material (sperm, oocytes, embryos, tissue bioptates, somatic and stem cell lines) from farm animals, companion animals and free-living animals – for the purposes of reproductive biotechnology and biodiversity conservation; running the Bank of Biological Material (cattle semen storage centre with identification number 12062301) and creating biorepositories of biological material; continuing research on: 1) experimental and applied embryology, 2) the use of the application potential of transgenesis and genetic engineering to develop research models for the needs of regenerative and translational medicine in animals and humans, as well as interdisciplinary research, 3) the use of modern methods of cytometric evaluation of farm animal semen in scientific research and commercial activities.

Department of Production Systems and Environment

Head: Elżbieta Sowula-Skrzyńska, Ph.D. Eng.

e-mail: elzbieta.sowula@iz.edu.pl, phone: +48 666 081 220

Improvement of system solutions based on precise methods of monitoring the production environment; study of interactions between the production environment and animals and the natural environment; determining the most effective methods of mitigation and reduction of GHG and ammonia in animal production as part of the implementation of a low-carbon economy strategy to achieve climate goals; research on the development, implementation and optimization of comprehensive solutions for the needs of domestic organic farms; assessment and evaluation of the effects of raising the minimum conditions for keeping farm animals; assessment of technical and economic efficiency and the degree of innovation in various types of livestock farms implementing the concept of sustainable development; determining the production and economic potential of family farms, taking into account proenvironmental measures and changes in production technologies and product manufacturing techniques in territorial terms; assessment of the economic potential of the market for agricultural raw materials and food products in mountainous and foothill areas, and assessment of the specific nature of the marketing chain in the agri-food market.

Department of Animal Nutrition and Feed Science

Acting Head: Anna Arczewska-Włosek, Ph.D., Prof. of NRIAP e-mail: anna.arczewska@iz.edu.pl, phone: +48 666 081 192

Conducting conceptual work, basic research and animal studies in the field of animal nutrition physiology and feed science, with the main objective of providing research results that serve as a source of knowledge for the creation of new, innovative solutions and technologies in the field of animal nutrition, assessment of the nutritional value and suitability for use in nutrition of new feed materials and additives; striving to improve the possibility of increasing the content of health-promoting substances in raw materials of animal origin, as well as reducing the emission of harmful substances into the environment through nutrition, supporting the ecology of animal production.

Department of Pig Breeding

Head: Mirosław Tyra, Ph.D., Prof. of NRIAP

e-mail: miroslaw.tyra@iz.edu.pl, phone: +48 666 081 242

Conducting breeding value assessment, performance assessment (for line 990) and fattening and slaughter performance assessment of pigs, as well as enhancing methods for their improvement; conducting research on the assessment of polymorphism and expression of genes important for economically significant production traits; searching for genetic factors determining production indicators and the quality of animal products. Conducting activities in the field of coordination, development and supervision of the implementation of programmes for the genetic resources conservation of native pig breeds.

Department of Cattle Breeding

Head: Piotr Wójcik, Ph.D., Prof. of NRIAP

e-mail: piotr.wojcik@iz.edu.pl, phone: +48 666 081 221

Estimating the breeding value of Simmental and Polish Red cattle; searching for new functional traits in Black- and Red-and-White Polish Holstein-Friesian cattle for implementation in selection ensuring sustainable use of dairy cattle; conducting research on the optimization of the chemical composition and technological suitability of milk and meat through the possibility of modifying the chemical composition and quality of animal products using natural methods; developing guidelines for the genomic evaluation of Polish Simmental bulls; conducting research on the breeding value of beef bulls used in insemination; conducting work on the optimization of cattle rearing and breeding in organic conditions; coordinating programmes for conserved breeds of cattle; maintaining a database of genotypes and pedigrees of dairy and beef cattle breeds; participating in the preparation of breeding programmes; parentage verification based on SNP.

Department of Poultry Breeding

Head: Katarzyna Połtowicz, Ph.D., Prof. of NRIAP

e-mail: katarzyna.poltowicz@iz.edu.pl, phone: +48 666 081 195

Improvement of poultry production and reproductive traits and the quality of poultry products through genetic and environmental means; search for genetic markers for economically important poultry traits; use of natural additives to improve poultry production and health; optimization of poultry farming technology; improvement of organic poultry production; analysis of the impact of the environment on the physiological parameters, behaviour, welfare and health of birds; improvement of methods for the protection and use of genetic resources of endangered poultry breeds; maintenance of databases and monitoring of conservation flocks.

Department of Sheep and Goat Breeding

Head: Aldona Kawecka, Ph.D., Prof. of NRIAP

e-mail: aldona.kawecka@iz.edu.pl, phone: +48 666 081 238

Maintaining a database of national genetic resources of sheep and goats; coordinating the implementation of programmes for the conservation of genetic resources of native breeds; estimating the genetic value of sheep; cooperating with national and international organizations and breeders in the field of conservation and sustainable use of sheep and goat genetic resources; conducting research on the quality of products from these species; undertaking activities related to the development of the domestic market for sheep and goat products and the growth of the livestock population in the country; maintaining Carpathian goat herd books; supervising the operation of the Ram Testing Station at the Institute's Experimental Station in Pawłowice and the conservation breeding of sheep and goats at the Institute's experimental facilities.

Department of Small Livestock Breeding

Head: Prof. Dorota Kowalska, Ph.D.

e-mail: dorota.kowalska@iz.edu.pl, phone: +48 666 081 256

Determining the impact of feeding rabbits with pelleted feed mixtures with the addition of pumpkin seed cake and oil on the efficiency of their rearing and the quality of the meat obtained; developing a model for evaluating rabbit farms based on the indicators created; research on heat stress in rabbits; research on the welfare of fish and marine invertebrates; determining the impact of pollution on the development of fish and their welfare in closed-circuit farming; developing filtration systems that improve the welfare of fish farmed in closed circuits.

Department of Farm Animal Biodiversity Conservation and Horse Breeding

Head: Agnieszka Chełmińska, Ph.D. Eng.

e-mail: agnieszka.chelminska@iz.edu.pl, phone: +48 666 081 268

Coordination of the activities of the national network for the conservation of animal genetic resources in the field of in situ and ex situ conservation, improvement of methods for the conservation of genetic resources of native breeds; monitoring and analysis of changes in populations covered by genetic resources conservation programmes; development of methods for assessing the utility value and alternative uses of horses using molecular genetics and population genetics; maintenance and management of a database on national resources of native horse breeds and monitoring of conservation herds kept in Poland. International cooperation in the field of animal genetic resources conservation, including with the European Regional Focal Point for Animal Genetic Resources (ERFP), the European Gene Bank Network for Animal Genetic Resources (EUGENA), and the Food and Agriculture Organization of the United Nations (FAO).

The Institute's Experimental Station in Kołuda Wielka

Director: Kamila Kłos, Ph.D. Eng.

Address: Kołuda Wielka, 88-160 Janikowo, Kujawsko-Pomorskie Voivodeship

1 Parkowa Street

e-mail: koluda@iz.edu.pl, phone: 52 351 33 91

https://www.koluda.pl

Offer:

• sale of pedigree W33 and W11 White Kołuda Geese® for parent flocks; sale of fattening geese and slaughter geese (oat-fed geese); sale of Coloured Merino sheep (genetic reserve) and prolific-dairy sheep of the Kołuda line; sale of slaughter lambs with health-promoting meat quality; sale of white and naturally coloured sheep wool; scientific and research services; expert opinions and advice on the housing, feeding and breeding technology of geese and sheep; training and courses in breeding and production technology of geese and sheep; apprenticeships for vocational and technical school students and students of agricultural universities; sale of plant products: rapeseed, grains (wheat, barley), maize and sugar beets.

The Institute's Experimental Station in Pawłowice

Director: Jarosław Wawrzyniak, M.Sc.

Address: Pawłowice, 64-122 Pawłowice, Wielkopolskie Voivodeship

14 Mielżyńskich Street

e-mail: sekretariat@zdpawlowice.pl, phone: 65 529 92 22, 65 529 91 92, 65 536 82 14

https://www.zdpawlowice.pl

Offer:

• high quality breeding material: in-calf heifers, boars, gilts, rams, ewe lambs; slaughter material: cattle, pigs, sheep, pig half-carcasses, lamb half-carcasses; agricultural crops: wheat, rapeseed, sugar beets.

Laboratory of the Department of Animal Molecular Biology

Head: Prof. Katarzyna Ropka-Molik. Ph.D. Secretariat: Monika Jerzykowska, M.Sc. Eng.

e-mail: monika.jerzykowska@iz.edu.pl, phone: 666 081 327

e-mail: lgm@iz.edu.pl https://lgm.izoo.krakow.pl

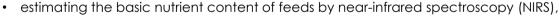
- · individual identification and parentage testing,
- identification of mutations in cattle.
- B-casein gene polymorphism in cattle,
- · animal forensic genetics,
- scrapie genotyping in sheep,
- species identification of animal-derived components,
- · karyotype analysis,
- · sex identification of parrots and other birds,
- detection of honey in food products.

Department of Laboratory Analytics – Central Laboratory of the National Research Institute of Animal Production

Head: Robert Gasior, Ph.D., Prof. of NRIAP

e-mail: robert.gasior@iz.edu.pl, phone: 666 081 354

https://cl.iz.edu.pl



- analysis of iodine in urine, as well as in other organic materials, including feed and food,
- studies devoted to volatile organic compounds (VOC) in samples of animal origin (meat, fat, cured meats, cheese, etc.),
- analysis of amino acid content in feeds and feed premixes and in various materials of plant and animal origin,
- determining the profile of 17–21 fatty acids in feed, food, animal products, plant material and in other types of biological material.





Department of Laboratory Analytics – National Laboratory for Feedingstuffs in Lublin

Head: Waldemar Korol, Ph.D.

e-mail: korol@clpp.lublin.pl, phone: 81 743 63 49

https://klp.iz.edu.pl

Feed testing for feed authorities, external entities and ongoing research with regard to:

- basic nutrients (dry matter, crude ash, crude fat, crude fibre (fibre fractions), crude protein, starch, sugar),
- amino acids (total amino acids, sulphur amino acids and tryptophan),
- lipid fraction (fatty acids composition, parameters of fat quality assessment)
- minerals (chlorides, phosphorus, calcium, magnesium, sodium, potassium, iron, manganese, zinc, copper, molybdenum, cobalt, selenium, iodine),
- undesirable and harmful components of plant origin (trypsin inhibitor activity, urease activity, phytates, undesirable elements and compounds such as fluorine, arsenic, nitrites, cadmium, lead, mercury),
- identification of active substances in feed additives and protein feed materials and their determination in premixes and/or feeds (vitamins: A, E, B1, B2, ionophore coccidiostats),
- evaluation of feed processing parameters (degree of mixing, feed mixer efficiency, pellet durability).

The National Bank of Biological Material

Head: Piotr Gogol, Ph.D., Prof. of NRIAP

e-mail: piotr.gogol@iz.edu.pl, phone: 666 081 282

https://kbmb.iz.edu.pl

- capacity for storing biological material in the form of semen, oocytes and embryos derived from 5 species of farm animals: cattle, pigs, horses, sheep and goats,
- · deposition of biological material from research centres and commercial entities,
- facilities for depositing a portion of the biological material, in cases where factors which might cause the loss of the material occur in the original place of storage.





Experimental stations which operate as commercial companies and form a research and experimental base for scientific units

Experimental Station of the National Research Institute of Animal Production Chorzelów sp. z o.o.

President: Jerzy Fijał, Ph.D Eng.

Address: 39-331 Chorzelów 771, Podkarpackie Voivodeship e-mail: chorzelow@iz.edu.pl, phone: 17 584 10 57, 17 584 14 78

https://zdizchorzelow.pl

Offer:

• sale of breeding material: rabbits, minks, foxes, raccoon dogs, polecats, day-old chicks of conservation breeds, horses and Shetland ponies; assessment of the breeding value and performance of pig breeding stock; calculation of index values for evaluated boars; training and consulting on breeding and rearing of cattle, rabbits, hens and fur animals; internships for agricultural school and university students; recreational horseback riding, horseback riding lessons, sleigh rides.

Prof. Mieczysław Czaja Experimental Station of the National Research Institute of Animal Production Grodziec Śląski sp. z o.o.

President: Dawid Pasiński, M.Sc.

Address: 43-384 Jaworze, Śląskie Voivodeship

116 Zaciszna Street

e-mail: sekretariat@zdgrodziec.edu.pl, phone: 33 815 40 26, 33 815 41 06

https://zdgrodziec.edu.pl

Offer:

• scientific and research services; environmental education; internships for agricultural school and university students; training and consulting in the field of renewable energy sources, cattle rearing and breeding, organic farming, African catfish and carp production; sale of cattle breeding material; sale of beef livestock, sale of milk; sale of grain and rapeseed; sales of commercial carp and stocking material; sales of African catfish, live and processed (carcasses, fillets, smoked).

Experimantal Station of the National Research Institute of Animal Production Kołbacz sp. z o.o.

President: Eugeniusz Malinowski, Ph.D. Eng.

Address: 74-106 Stare Czarnowo, Kołbacz, Zachodniopomorskie Voivodeship

1 Warcisława Street

e-mail: kolbacz@iz.edu.pl, phone: 91 312 40 34, 91 312 42 35

http://kolbacz.pl

Offer:

• sale of breeding material: in-calf heifers, primiparous cows and Holstein-Friesian breeding bulls; sale of breeding material of Suffolk ram lambs; sale of breeding material of Pomeranian ram lambs and ewe lambs; sale of organic slaughter lambs; sale of beef livestock; sale of food and feed grains; sale of technical rapeseed; sale of raw cow's milk; sale of mare's milk; sale of foals of the Sokólski breed (colts); advice on modern technology for the production of high-quality milk; a hotel for horses with the infrastructure necessary for horseback riding, guest rooms for riders.

Experimental Station of the National Research Institute of Animal Production Melno sp. z o.o.

President: Władysław Szymczak, M.Sc.

Address: 86-330 Mełno, Kujawsko-Pomorskie Voivodeship e-mail: zdmelno@list.pl, phone: 56 468 35 91, 56 468 35 28

Offer:

• sale of rapeseed; sale of wheat; grain and maize drying services.

Experimental Station of the National Research Institute of Animal Production Odrzechowa sp. z o.o.

President: Władysław Brejta, PhD. Eng.

Address: 38-530 Zarszyn, Odrzechowa, Podkarpackie Voivodeship

67 Rymanowska Street

e-mail: sekretariat@odrzechowa.com.pl, phone: 13 467 11 72

https://www.odrzechowa.com.pl

Offer:

• sale of Simmental heifers, sale of Hucul horses; horse riding lessons; horse rallies; consulting on breeding of Simmental cattle and Hucul horses and implementation of genetic resources conservation programmes.

Experimental Station of the National Research Institute of Animal Production Rudawa sp. z o.o.

President: Jacek Zieliński, M.Sc.

Address: 32-064 Rudawa, Małopolskie Voivodeship

91 Ks. Kard. Albina Dunajewskiego Street

e-mail: rudawa@iz.edu.pl, phone: 12 285 31 86, 12 285 31 88

Offer:

• sale of cattle breeding material; sale of fodder and consumer grain; sale of technical rapeseed; performance of agricultural services; scientific and research services; internships for agricultural school and university students; sale of milk.

Experimental Station of the National Research Institute of Animal Production Żerniki Wielkie sp. z o.o.

Proxy: Anna Krynicka, M.Sc. - Chief Accountant

Address: 55-020 Żórawina, Żerniki Wielkie, Dolnośląskie Voivodeship

4 Badawcza Street

e-mail: zerniki@iz.edu.pl, phone: 71 316 51 64

http://www.izsbtchzw.pl

Offer:

• sale of Polish Large White, Polish Landrace and F1 breeding gilts with no genetic stress susceptibility; sale of large, balanced batches of fatteners with an average meat yield of 60%; sale of large batches of weaners; scientific and research services; expert advice on pig housing, feeding and reproduction technology; internships for students of zootechnical and veterinary faculties of agricultural universities.



Certification with a native breed mark

To meet the expectations of both breeders and consumers, the National Research Institute of Animal Production has developed a certification system for native breeds and products obtained from raw materials derived from them. This system will promote on local markets the products of a particular Polish native breed, maintained under traditional (natural) housing and feeding systems. The main purpose of using the mark is to popularize and raise public awareness of the role and importance of native breeds as a significant part of our national heritage. By promoting products derived from native breeds, we emphasize their breeding significance, historical, socio-cultural value, the role they play in the restoration of the environment and landscape, and the invaluable potential represented by their genetic resource. At the same time, through the new mark, we are indicating products with higher nutritional and health-promoting value. It will be possible to apply it to all types of products (carcasses, meat and its products, milk and its products, eggs, honey, wool, hides, etc.) from animals covered by the Programmes for the Conservation of Animal Genetic Resources, coordinated by the Institute. The National Research Institute of Animal Production may grant in exceptional cases a quality mark for breeds not covered by conservation programmes (e.g. White Kołuda Goose®) if the tested quality of the products confirms their unique character.

Information for those interested in obtaining the right to use the mark "Native Breed (Rasa Rodzima) is available at: http://ksb.izoo.krakow.pl/site/certification

Conservation of Farm Animal Genetic Resources

The National Research Institute of Animal Production implements and coordinates tasks in the field of farm animal genetic resources conservation under Article 34 (3) of the Law on the organization of breeding and reproduction of farm animals (Journal of Laws 2021, item 36).



















https://bioroznorodnosc.izoo.krakow.pl

Journals

The National Research Institute of Animal Production publishes three journals.



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https://monografie.iz.edu.pl