

INSTITUTE OF PLANT PROTECTION NATIONAL RESEARCH INSTITUTE

OFFER

of the Institute of Plant Protection National Research Institute



History

The Institute of Plant Protection – National Research Institute is a scientific research unit supervised by the Minister of Agriculture and Rural Development, established on January 24, 1951, in Puławy. In 1952, the Institute's headquarters was moved to Warsaw, and in 1956 to Poznań, where a reorganization began, leading to the establishment of branches in various places of the country. In 2008, the Institute was granted the status of a National Research Institute. Since 1999, the Institute has been intensively developing its research infrastructure — including the establishment of the Congress Center and IOR Hotel, the Research Centre of Quarantine, Invasive, and Genetically Modified Organisms, the Plant Disease Clinic and Bank of Pathogens, and the Research Centre for Registration of Agrochemicals. Currently, 226 employees work at the Institute, including 57 research staff employed in ten scientific departments in Poznań, at the Sośnicowice Branch, and at Field Experimental Stations in Białystok, Toruń and Rzeszów. In Winna Góra (Wielkopolska Voivodeship), there are also the Agricultural Experimental Station and the Field Experimental Station.



Fot. 1. The Research Centre of Quarantine, Invasive, and Genetically Modified Organisms.

Priority research projects

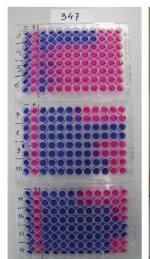
The research conducted at the Institute of Plant Protection – NRI covers a wide range of important issues related to plant protection in various agricultural crops. The Institute actively participates in numerous national and international research projects, including:

- AGROWISE Guideline for farm-specific rules or crop-specific for mitigating pesticide impacts while ensuring sustainable agriculture (LIFE23-PRE-FR-AGROWISE);
- AI4Crop Artificial intelligence for the identification of undesirable phenomena in crops and plant protection (INFOSTRATEG VI - National Centre for Research and Development);
- SYSTROP Intelligent system for the recognition of undesirable phenomena in plantations (INFOSTRATEG VI - National Centre for Research and Development);
- Application to become a Partner in the Science4Business Science for Business project in order to carry out Task 1 (DEVELOPMENT INCUBATOR – Ministry of Science and Higher Education);
- Analysis of the determinants of cucumber green mosaic virus variability and pathogen-hostenvironment interactions as a step towards developing conservation strategies for cucurbit crops (OPUS

 National Science Centre);
- Modernisation of the Research Centre for Quarantine, Invasive and Genetically Modified Organisms
 (Special-purpose Grant for Implementation of Investments Related to Scientific Activities Ministry of
 Science and Higher Education);
- Support for expanding the research potential of laboratories at the Institute of Plant Protection NRI

 innovative laboratories for agricultural research, including food and environmental safety (National Reconstruction Plan Ministry of Agriculture and Rural Development);
- Modern laboratory-greenhouse complex for agrophages diagnosis and plant protection (Subsidy for maintaining research equipment and research stations - Ministry of Science and Higher Education);
- Research Centre of Quarantine, Invasive, and Genetically Modified Organisms (Subsidy for maintaining research equipment and research stations Ministry of Science and Higher Education).

Moreover, the Institute of Plant Protection – NRI is currently implementing: 28 research topics as part of its statutory researches, 7 projects funded by the National Science Centre, 2 projects funded by the National Centre for Research and Development, as well as projects financed by the Ministry of Agriculture and Rural Development, including special-purpose subsidy and tasks within the framework of research for organic farming.







Fot. 2. A bacterial consortium developed to promote plant growth.

Key Achievements

- Assessment of threats to agricultural crops posed by selected pest species and improvement of integrated crop protection methods.
- Development of strategies to counteract pest resistance to active substances in plant protection products.
- Preparation of approximately 20 Pest Risk Analyses annually for Main Inspectorate of Plant Health and Seed Inspection concerning the occurrence of new pests.
- Enhancement of analytical methods based on modern chromatographic techniques, enabling
 continuous monitoring of the quality of plant protection products and the residues of pesticide active
 substances and mycotoxins in agricultural produce, plant-based food products, surface water, and soil,
 conducted in three certified research laboratories.
- Management of the online database "Online Pest Warning System", presenting monitoring results of harmful organisms and crop protection programs for agricultural crops.
- Conducting educational courses as part of postgraduate studies in integrated production and organic farming, as well as training sessions for advisors, State Plant Health and Seed Inspection Service employees and farmers.
- Holding accreditation to confer doctoral and post-doctoral degrees in the discipline of agriculture and horticulture.



Fot. 3. Plant research under greenhouse conditions.

Main areas of the scientific and research activities

- Development of the scientific basis for integrated pest management.
- Study of the biology, ecology and harmfulness of agrophages, as well as their control methods and the phenomenon of their resistance to plant protection products.
- Analysis of the phytosanitary risk from pests.
- Control of food safety, residues and quality of plant protection products.
- Plant protection in organic farming.
- Search for natural plant protection products, growth biostimulants and microorganisms.
- Analysis of the impact of crop protection programmes on the environment, biodiversity and agricultural productivity.
- Use of molecular biology techniques in plant protection.
- Development of effective decision support systems.



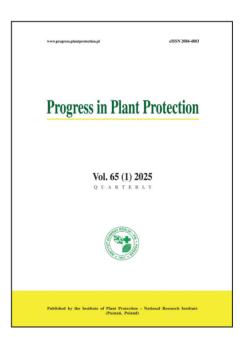
Fot. 5. Plant root system research.

Institute Publications

- Journal of Plant Protection Research (eISSN 1899-007X), MSHE: 100 pts, IF 2023: 0.74. A quarterly
 English-language journal published by IPP NRI and the Committee of Agronomic Sciences of the
 Polish Academy of Sciences. JPPR is an international journal that publishes original papers, reviews,
 and short communications covering all scientific aspects of modern plant protection.
- Progress in Plant Protection (eISSN 2084-4883), MSHE: 40 pts. A quarterly by IPP NRI publishing original scientific papers in Polish and English, as well as short communications, problem-review and implementation articles and book reviews from the field of plant protection in a broad sense.
- The Institute of Plant Protection National Research Institute publishes scientific monographs, scientific dissertations, atlases, handbooks, conference, training and information materials.

The publishers use an anti-plagiarism program and apply to the principles of publication ethics – in accordance with the guidelines of the Committee on Publication Ethics (COPE) and the Code of Ethics for Academic Staff. Articles published in the journals are made available under the Open Access model and are indexed in numerous international databases.





Fot. 6. Covers of scientific journals published by the Institute of Plant Protection – NRI.

Commercial Services

- Registration testing of the efficacy of plant protection products and growth regulators.
- Testing the quality and originality of the plant protection products.
- Determination of plant protection product residues in crops, food, feed, soils and water.
- Determination of mycotoxins in crops and food.
- Identification of pests of crops and vegetables: causing viral, bacterial and fungal diseases, pests, weeds and storage pests.
- Expertises of poisoning of bees with plant protection products.
- Data collection using drone technology precision agriculture.
- Identification of herbicide-related crop damage.
- Identification of the damages caused by herbicides.
- Sales of isolates of plant pathogens (fungi and bacteria).
- Taking pictures of biological and chemical material by means of transmission (TEM) and scanning (SEM) microscope.
- Rental of modern greenhouse cabins, including those adapted for studies on quarantine and genetically modified organisms.
- Training and postgraduate studies.



Fot. 7. Field research using drones.



Fot. 8. Field tests at the Field Experiment Station in Winna Góra.



Institute of Plant Protection - National Research Institute

ul. Władysława Węgorka 20, 60-318 Poznań, Poland

phone: +48 61 864 9000

e-mail: sekretariat@iorpib.poznan.pl