

GOOD PRACTICES

HAVING AN IMPACT ON RURAL DEVELOPMENT

Examples of operations
implemented under the operational plan
of the Polish Rural Network in 2021



Ministerstwo Rolnictwa
i Rozwoju Wsi



Krajowa Sieć
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Dear Readers!

We are pleased to present you the fourth edition of a publication devoted entirely to selected operations implemented in 2021 under the Operational Plan of the Polish Rural Network. We believe that the examples it contains will serve as inspiration for you to undertake identical initiatives in your own local communities. We hope that this publication will prove to be an important driving force for the successive implementation of similar solutions on an increasingly wider scale.

It should be made clear that the development of rural areas is undoubtedly a priority for improving the economic situation of our country. The changes to the Common Agricultural Policy which are becoming apparent bring with them the need to work out the best ways to continually modernise the Polish countryside. This is because new investment and development in the countryside will be followed by the effective elimination of disparities between rural and urban areas. In this way it will be possible to significantly minimise the proportion of people migrating from the countryside to larger agglomerations in search of better living conditions.

An important role played by NRN continues to be the promotion of measures undertaken in the field of rural development and dissemination of good practices from different parts of Poland. The descriptions of operations included in this publication prove that activities aimed at increasing the level of innovativeness of rural areas and gradual building of competitiveness of domestic farms, especially on a micro scale, are not left without support. This is also evidenced by the fluidity and effectiveness of the projects undertaken under the Operational Plan for 2020-2021, successfully carried out despite the COVID-19 pandemic, which significantly paralysed many sectors of our economy.

Dear readers, by presenting examples of our actions realised in 2021, we hope that they will motivate you to work for the development of rural areas and encourage you to make investments both on your own farms as well as in your local communities.

With best wishes for a pleasant reading
Ministry of Agriculture and Rural Development

More knowledge, less chemistry per hectare

Title of operation:	More knowledge per hectare, less chemistry per hectare
Implemented by:	Department of Genetics, Nicolaus Copernicus University in Toruń
Completion date:	December 2021
Form of implementation:	research study, report with findings, seminar
NRN Activity:	Activity 6: Facilitate the exchange of knowledge between actors in rural development, exchange and dissemination of the results of rural development activities
RDP Priority:	Priority 1: Fostering knowledge transfer and innovation in agriculture, forestry, and rural areas
Target group:	Farmers, rapeseed producers, agricultural advisors, scientific community interested in research on agricultural biologisation
Objective of the operation:	Developing an innovative biological product for seed preparation of dicotyledonous plants (rapeseed, also known as rape, or oilseed rape) and replacing commonly used neonicotinoids in crops

The list of problems in modern agriculture is still long. It is enough to say about prolonged droughts, soil depletion, new pests or various plant diseases. An important issue in this context appears to be the search for new biological solutions for agriculture, which could provide an alternative to chemical plant growth stimulants. The project 'More knowledge per hectare, less chemistry per hectare' carried out by the Department of Genetics at Nicolaus Copernicus University in Toruń was an important step towards achieving this goal.

The operation consisted in the creation of an innovative biological product for seed preparation of dicotyledonous plants included in Annex I to the Treaty on the Functioning of the European Union (rapeseed), and the replacement of neonicotinoids commonly used in crops. Indeed, these substances have been the subject of much controversy for years, arousing opposition particularly among beekeepers concerned about the negative impact of neonicotinoids on bee populations. The scientific research undertaken provided an opportunity to address this issue. Another step taken as part of the operation was to popularise the results of the research conducted at the NCU Department of Genetics by organising a seminar.

Who took part in the project?

The project was addressed to the scientific community interested in research work on agricultural biologisation, as well as farmers, rapeseed producers and agricultural advisors.

Important step for agriculture

Under the project agreement concluded with NCU in Toruń, a scientific team was established in the Department of Genetics at the Faculty of Biological and Veterinary Sciences. As part of the first stage

of the study, a plant germination experiment on solid and liquid microbiological media under sterile conditions was carried out, led by dr hab. Grażyna Dąbrowska, NCU's professor. During the study, the growth capacity and germination rate of seeds in the presence of hydro fertiliser were analysed using a spectrophotometric method. The study was conducted in Q2 and Q3 of 2021. As a result, it was possible to check the effect of the hydro fertiliser on the viability of oilseed rape seeds and their ability to germinate.



Scientific seminar, NCU campus in Toruń, Photo: NRN Regional Unit Archive.

A scientific team from the NCU Department of Genetics compiled the results of the study into a report. The results obtained were presented at a scientific seminar organised in November 2021 at the NCU campus in Toruń. The event was attended by 57 persons, including scientific representatives, agricultural advisors and direct rapeseed producers.

IT'S GOOD TO KNOW ...

Agricultural biology is a holistic soil management system that also includes water retention and absorption activities. This set of treatments, activities and processes, embedded on the foundations of regenerative agriculture, is intended to improve soil fertility.

Neonicotinoids are the collective name for synthetic chemicals that are used as plant protection products. They are characterised by a structure and action similar to nicotine, which was used as early as the 1930s as an insecticide. Neonicotinoids are neurotoxins, i.e. toxins that act on the nervous system and, more specifically, on receptors, i.e. channels in cell membranes. Thus, they enable the flow of stimuli in the nervous system. Neonicotinoids readily bind to them and, in higher doses, block them, causing paralysis and death of the insect.

Project results and future prospects

The project was the first stage of research into biological solutions for agriculture as an alternative to the use of chemical plant growth stimulators. The study carried out confirmed the thesis that hydrogels stimulate the germination growth of dicotyledonous plants, which, under conditions of rainfall and soil water shortage, can have a significant impact on rapeseed yields. The results of the experiment conducted under laboratory conditions have determined the continuation of the research work. This is because the conclusions obtained must be confirmed under field conditions, which will be the subject of the second stage of research in 2022. Once the field tests will be completed, this innovative solution can be applied in agriculture, contributing to the protection of human health and the environment.

Need more information?

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Precision irrigation of horticultural plants

Title of operation:	Precision irrigation of horticultural plants
Implemented by:	Silesian Agricultural Advisory Centre in Częstochowa
Completion date:	January - December 2021
Form of implementation:	video
NRN Activity:	Activity 2: Networking activities for advisers and services supporting the implementation of innovation in rural areas
RDP Priority:	Priority 1: Fostering knowledge transfer and innovation in agriculture, forestry, and rural areas
Target group:	Farmers, horticulturists, representatives of Agricultural Advisory Centres and universities, representatives of branch companies as well as teachers from agricultural schools and residents of rural areas
Objective of the operation:	Facilitating knowledge transfer in agriculture for the implementation of innovative solutions in precision irrigation of horticultural plants

Poland has extremely limited water resources, which may in the future be a barrier to economic development, having a negative impact on the environment. One of the key water consumers is agriculture. To compete on world markets, Polish farmers are forced to significantly increase the area of irrigated crops. This fact makes it necessary to take steps to apply rational methods of water management.

In Poland, the primary source of water for plant cultivation is still atmospheric precipitation, the amount and distribution of which in time proves to be insufficient. In many regions, irrigation of horticultural crops is therefore becoming a necessity, which is also influenced by the intensification of production. To increase water use efficiency and reduce losses, farmers should use economical irrigation methods. The implementation of irrigation automation is of key importance in this context. The implementation of the operation entitled 'Precision irrigation of horticultural plants' was a response to these issues.

As part of the project, an information and training video was produced on behalf of the Silesian Agricultural Advisory Centre. The National Institute of Horticultural Research, for which the issue of plant irrigation remains an important topic of research work, was responsible for the production of this material. The realisation of the movie was aimed at disseminating, among those interested, the knowledge developed at the Irrigation Laboratory of the Agroengineering Department of the NIHR, as well as the applied innovative solutions and good practices in the field of precision irrigation of horticultural plants.

Who took part in the project?

The project was aimed directly at farmers and horticulturists, as well as representatives of Agricultural Advisory Centres and universities, representatives of branch companies, teachers from agricultural schools and rural residents interested in this topic.

Valuable knowledge contained in the video

The project has produced information and training material in the form of a video, which has been divided into three thematic sections (each lasting 20 minutes). The following parts of the prepared material focus on:

- Part I - issues related to water scarcity, evapotranspiration and the strategic importance of water resources for horticultural production,
- Part II - ways to reduce the effects of droughts in horticultural production - both in terms of agrotechnical treatments and procedures to supplement soil deficiencies through the use of irrigation systems,
- Part III - irrigation criteria and possibilities of using automation in irrigation control.

The video ends with a summary, and a series of interviews with representatives of the MARD, State Water Holding Polish Waters and AAC. Experts specialising in the broad area of horticultural plant irrigation were involved in the production of the material: Prof. Waldemar Treder and Prof. Stanisław Kaniszewski. The script for the movie was reviewed by Prof. Roman Rolbiecki, representing Bydgoszcz University of Science and Technology.



frames from the films

DO YOU KNOW THAT...

Horticultural plants use 80m³ of water/1 ha per day during the growing season. The first model of a sprinkler system was developed in Europe in 1912, and designed by Mr Szczepkowski from Łęg village in the Duchy of Poznań.

Poland has one of the worst water balances in Europe. This is due to low annual precipitation (about 650 mm on average), high evapotranspiration (450 mm) and a small share of river inflow from outside the country (13%).

Evapotranspiration is the process of field evaporation including transpiration (evaporation from plant cells) and evaporation (movement of water to the air directly from soil).

Project results and future prospects

The video is an effective form of transferring knowledge and good practices in the field of modern crop irrigation solutions which can be implemented on Polish farms. Prepared material introduces issues related to the Innovation Network in Agriculture and Rural Areas (SIR) and presents the possibilities of obtaining support under the Co-operation measure.

The video has been published on YouTube and on the filmmaker's official website, making it freely available to the public and providing valuable teaching material for a wide audience. Universities and commercial companies have shown interest in the completed video and have also made it available.

Need more information?

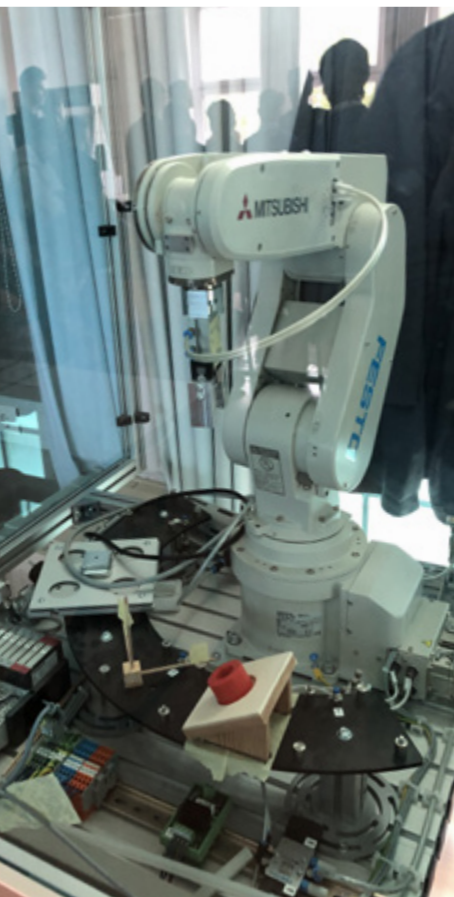
Feel free to contact us:

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Robotics - the future for agriculture

Title of operation:	Automation and Robotics in Agriculture
Implemented by:	Strefa Edukacji Sp. z o.o.
Completion date:	February - October 2021
Form of implementation:	study visit
NRN Activity:	Activity 6: Facilitate the exchange of knowledge between actors in rural development, exchange and dissemination of the results of rural development activities
RDP Priority:	Priority 1: Fostering knowledge transfer and innovation in agriculture, forestry, and rural areas
Target group:	Students and teachers of the Technical Secondary School of Automation and Robotics in Łódź
Objective of the operation:	Familiarisation of the participants with the current level of agricultural automation in Germany, broadening their knowledge of modern technologies used in agriculture and orienting them towards finding new solutions to increase the international competitiveness of the Polish countryside



Automation is growing in all sectors of the economy, including rural areas, as a way of improving work in agriculture. However, looking at the condition of Polish farmers, it has to be said that automation and robotics are not as advanced in Poland as in other Western European countries. This fact causes numerous difficulties in achieving productivity at the level required by the market, which is also compounded by a growing labour shortage in agriculture. All this makes agriculture in Poland in need of new solutions and development paths towards greater automation. In connection with this demand, an operation entitled 'Automation and Robotics in Agriculture' was carried out by the Łódź Education Zone. Partners in the project were the Incubator Foundation, Top Banker Tomasz Sidek and the society of Polish farmer's wives' association from Kotkowo named Koło Gospodyń Wiejskich 'Baziowe Kotki'.

As part of this operation, a study trip to Germany took place from 16 to 19 September 2021. In line with the programme, participants met there with farmers and specialists in the field of automation and robotics in agriculture. The trip included thematic presentations in the form of lectures, seminars and practical visits. An important idea of the operation was to draw the attention of young people interested in the subject to the problem of the growing demand on the Polish countryside for innovative technologies improving work in agriculture. Domestic farmers are increasingly open to modern solutions aimed at



Participants of a study trip to Germany

improving the efficiency of their farms, often facing the problem of a lack of access to appropriate technologies or a lack of qualified specialists necessary for the automation of the Polish countryside. To change this, as a first step, greater awareness is needed among those involved in this area of activity. The programme was designed to increase participants' knowledge about modern technologies in agriculture and to guide them in developing new solutions to increase the competitiveness of the Polish countryside on the international arena.

Who took part in the project?

Organised study trip was attended by 30 students and six teachers from the Technical Secondary School of Automation and Robotics in Łódź.

Visiting our western neighbours

During the study trip to Germany, participants had the opportunity to see the following places:

- agri-food farms specialising in cultivation and processing using modern technologies: Ziltendorfer Baurngesellschaft GbR and Neuzeller Agrargenossenschaft G.,
- farms using automation and robotics in animal husbandry: Agrargenossenschaft Ranzige G. and Furstenwalder Agraprodukte GmbH Buchholz.

The operation also included a visit at the Department of Automation and Electronics of the German Oberstufenzentrum Oder-Spree college. Participants of the trip received training in the use of modern automation methods and IT programmes to control robotic processes in the field of agriculture. The workshop was led by dr Jana Käthner from the Leibnitz Institute in Potsdam.

DO YOU KNOW THAT...

Robotics is an interdisciplinary field of research, combining mechanical and electrical engineering, automation and computer science, with the aim of creating robots, including controlling their movement. Thanks to advances in robotics, intelligent machines are designed to help people in their daily lives. Robots have mastered many sectors of industrial production worldwide. They are used in the agri-food sector to reduce time and effort and increase production efficiency.



Trip participants during a visit to the Oberstufenzentrum Oder-Spree

Implementation of the operation was financed from NRN funds in the amount of PLN 116,000 earmarked for the comprehensive organisation of the study tour, including: transport costs from Łódź to Germany, accommodation, food and insurance for participants, costs of training and meetings held, and training materials.

Project results and future prospects

The direct result of the project is an increase in knowledge and skills in rural automation among the participants. Students learned how to plan the development of local farms in a way that does not upset the environmental, social and economic balance of the area. The initiative helped to increase job creation opportunities in the countryside through a modern approach to agriculture. The trip was also an excellent opportunity to establish contacts with the owners or representatives of the sites visited, as well as with the staff of educational establishments training in subjects related to agricultural automation. The trip's participants, as a young generation of qualified, modern-thinking people, will have a significant impact on the development of automation in the Polish countryside. Participation in the project has successfully instilled in them the idea of promoting life in the countryside as a place for professional development.

Need more information?
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ART - processing of fermented products

Title of operation:	ART - processing of fermented products
Implemented by:	Łódź Agricultural Advisory Centre in Bratoszewice
Completion date:	September 2021
Form of implementation:	study visit
NRN Activity:	Action 2: Networking activities for advisers and services supporting the implementation of innovation in rural areas
RDP Priority:	Priority 1: Fostering knowledge transfer and innovation in agriculture, forestry, and rural areas
Target group:	Farmers, ART processors, representatives of Farmer's Wives' Associations, rural residents, academics, agricultural advisors, employees of agricultural advisory units
Objective of the operation:	Popularise rarely used innovative solutions in the processing and production of fermented foods and the possibility of selling them using ART

Innovation and technological progress are revolutionising more and more branches of modern economic activity. Innovative solutions also apply to the area of processing and fermented foods, but are still relatively rarely used in domestic farms. An important task is therefore to successively popularise the possibility of using modern solutions in this field and the benefits resulting from this. These demands have become a key objective of the 'ART - processing of fermented products' operation carried out by the Łódź Agricultural Advisory Centre.

The primary aim of the trip was to increase knowledge among participants about processing and fermented food innovations and the opportunities to sell these products through ART. The idea was that the implementation of this operation would lead to an increase in the number of agricultural producers engaged in fermented food processing and production in the Łódzkie Voivodship, as well as an increase in their competitiveness on the market and their visibility among consumers.

Who took part in the project?

The three-day study tour was attended by 30 persons. Participants included mainly farmers and ART processors, as well as representatives of Farmer's Wives' Associations, academics and agricultural advisory units, and rural residents.

Grapevines in the Garlicki Lamus vineyard





Participants of the ART study trip

Meetings with experts and practitioners

The project included a study trip to Małopolska (Little Poland), which took place on 13-15 September 2021. The event included both lectures entirely devoted to the topic of fermented food processing and properties, as well as practical visits directly on farms engaged in such activities.

DO YOU KNOW THAT...

Abbreviation ART stands for agricultural retail trade. It is an activity related to the production and sale of food by farmers. Under ART, it is possible i.a. to process and sell the food produced to the final consumer, as well as to retail establishments serving the final consumer, including shops, restaurants, canteens and other establishments with similar activities.

The possibility of running ART presupposes the fulfilment of three basic conditions:

1. Food must come in whole or in part from own cultivation, breeding or rearing.
2. Sales must respect the limits indicated in the Regulation of the Minister of Agriculture and Rural Development of 16 December 2016 on the maximum quantity of food sold within the framework of agricultural retail trade and the scope and manner of its documentation.
3. The production and sale of food must not take place with the participation of an intermediary (the exception is the sale of food originating from ART during exhibitions and other events organised to promote food).

The trip, organised as part of the operation, began with a visit to the 'Winnica na Dziole' shop in Świdnik and the farm of Anna Woźniak, who cultivates traditional varieties of cereals (emmer, spelt and einkorn) and runs a bakery whose main speciality is sourdough bread.

The second day of the trip was devoted to lectures given by dr. inż. Dorota Litwinek and dr. inż. Ireneusz Maciejaszek representing the Hugo Kołłątaj University of Agriculture in Kraków. The topic of the lecture was 'Food and human health - ways of preserving and processing food'. It provided an introduction to the practical aspects of natural cheese production, which was presented by Magdalena Krężółek-Ryszka, owner of the Magdalenka Cheese Factory. During the workshop, participants had the opportunity to prepare fresh rennet cheese and fabricate an oscypek cheese in a traditional wooden mould.

The last day of the trip helped participants learn the secrets of setting up and caring for a vineyard on the example of the Garlicki Lamus vineyard of the University of Agriculture in Kraków. Dr hab. inż. Maciej Gąstoł talked about grapevine cultivation and wine production. The culmination of the trip was a visit to the Jurajski Koziołek farm, which produces goat cheese. During the trip, participants gained knowledge about the different forms of processing fermented products within the ART, which is expected to be a stimulus for the development of such farms in the Łódzkie Voivodship.



Study trip participants during the workshop

Project results and future prospects

The operation served to establish contacts between the participants of the trip and representatives of counselling and science, which is an important platform for exchanging knowledge in this field. The network of contacts created has the potential to generate cooperation in the future, which will contribute to the introduction of innovative solutions on farms in the Łódzkie Voivodship.

The project discussed the possibility of implementing the processing of fermented products (i.a. cheese, wine, sourdough bread, various types of silage) on educational farms in the Łódzkie Voivodship, which would be a good way to effectively expand their existing operations.

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Innovations in the rearing and breeding of beef cattle

Title of operation:	Innovative solution in the rearing and breeding of beef cattle
Implemented by:	Pomeranian Agricultural Advisory Centre in Lubań
Completion date:	September 2021
Form of implementation:	conference
NRN Activity:	Activity 2: Networking activities for advisers and services supporting the implementation of innovation in rural areas
RDP Priority:	Priority 1: Fostering knowledge transfer and innovation in agriculture, forestry, and rural areas
Target group:	Farmers, beef cattle breeders, representatives of agricultural advisory services, employees of companies and institutions operating in the field of agriculture, residents of rural areas and other persons interested in this area of activity
Objective of the operation:	Improving knowledge and competence on innovative solutions in the rearing and breeding of beef cattle

Today's increasingly modern agricultural machines operate on the basis of innovative mechatronic solutions, which are also used with similar success in the automotive industry, aerospace and even in medical apparatus. The increasing sophistication of agricultural equipment necessitates a new approach to its operation. This in turn implies the need for intensive training not only in the construction and use of machinery, but also in sensorics, actuators or electronics. This is because competence in this area will become increasingly desirable on the market every year. The programme entitled 'Agrotronics and computerisation in agricultural mechanisation - challenges in diagnostics, service and repair of modern agricultural equipment - a chance for success in the profession of the future', carried out by the Warmian-Masurian Agricultural Advisory Center, was an important step towards their improvement.

The project included a two-day workshop training combined with a lecture part. The event took place on 5-6 October 2021 in Stare Jabłonki in the Warmian-Masurian voivodship. The key objective of the training was to familiarise participants with the latest methods of diagnosing, servicing and repairing modern machinery and equipment used on an increasingly large scale in modern agriculture.

DO YOU KNOW THAT...

Husbandry and breeding are closely related concepts. Breeding is about ensuring that animals are able to reproduce and develop from embryonic to adult form, while husbandry is about maintaining animals and benefiting from the goods obtained from them.

During the training course, experienced specialists showed participants the latest solutions used in agrotronics, also discussing the principles of mechatronic systems in agricultural vehicles and machinery (i.e. agrotronics, sensorics, actuators, electronics, automation and programmable

controllers). The event was also aimed at supporting networking of potential employees with employers, manufacturers and distributors of agricultural equipment.

Who took part in the project?

The conference was addressed to those involved in the beef cattle sector. Participants therefore included farmers, breeders, entrepreneurs, agricultural advisors and AAC specialists, as well as representatives of scientific and local government institutions interested in innovations in the rearing and breeding of beef cattle.



Opening of the conference by Ms Ewa Szymańska, Deputy Director of the PAAC in Lubań

A day full of valuable knowledge

Among the speakers of the conference held as part of the 'Innovative solution in the rearing and breeding of beef cattle' programme were:

- Katarzyna Radke, innovation broker from the Pomeranian Agricultural Advisory Centre in Lubań, with a lecture entitled 'Innovation Network in Agriculture and Rural Areas (SIR) - networking in the agricultural sector and the opportunities provided by the Co-operation measure';
- Dr hab. Marcin Gołębiewski, representative of the Faculty of Animal Sciences, Department of Comprehensive Animal Husbandry, WULS, who gave a lecture on 'Nutritional requirements of suckler cows during pregnancy, reproduction and calf feeding' and 'Nutrition and the quality of obtained meat';
- Jacek Zarzecki, President of the Polish Association of Meat Cattle Breeders and Producers, with a presentation on 'Innovative solutions in the rearing and breeding of beef cattle'.

Project results and future prospects

The implementation of the operation in the form of a conference has made it possible to bring together people from the various fields of activity of which agriculture is composed. This provided an opportunity to flow of information and exchange of experiences as a driving element for the creation of new solutions.

The project participants acquired new knowledge and competencies in the area of rearing and breeding of meat cattle, which provided a significant incentive for them to implement innovative technologies on their farms. This opens up new development prospects for the Polish beef cattle sector, and the growth of individual farms based on innovations raises the general living standards of farmers. Such a fact is also important for the development of rural areas. Participation in the event has activated the networking environment, bringing together breeders, processors, advisors and other agricultural professionals with the aim of undertaking cooperation contributing to the development of the sector. Educating farmers and pointing them to modern solutions motivated by sound research and analysis encourages producers to make greater use of modern technologies.

Need more information?

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Technical innovations in horticultural production

Title of operation:	Technical innovations in orchard care and mechanical fruit harvesting
Implemented by:	Świętokrzyski Agricultural Advisory Centre in Modliszewice
Completion date:	July - December 2021
Form of implementation:	videos on the subject of the operation
NRN Activity:	Activity 2: Networking activities for advisers and services supporting the implementation of innovation in rural areas
RDP Priority:	Priority 1: Fostering knowledge transfer and innovation in agriculture, forestry, and rural areas
Target group:	Individual farmers (fruit producers), fruit producer groups, horticultural producers, representatives of advisory units and agricultural schools
Objective of the operation:	Presenting in digital form the latest technical solutions used in orchard care and mechanical fruit harvesting, which will increase the competitiveness of horticultural holdings, and providing the latest specialised knowledge regarding orchard cultivation

Fruit production is an important issue for the Świętokrzyskie Voivodship, with fruit plantations covering more than 40,000 K ha in this region. Despite the favourable climatic and soil conditions in this part of Poland, the shortage of hired labour is still a significant problem for professional fruit farmers. This translates into untimely harvesting, which makes it much more difficult to obtain a product of high quality. This fact determines the need for education on modern machinery and equipment that can be used in horticultural production.

The programme entitled 'Technical innovations in orchard care and mechanical fruit harvesting' was a response to this problem. The operation produced a series of three videos presenting modern technical innovations in this field. All movies have been made available via freely accessible digital media, making them accessible to a wide audience and able to be used as teaching materials, e.g. during training courses conducted by agricultural advisors.

Who took part in the project?

The programme was targeted at both individual farmers and fruit producer groups, as well as horticultural producers and representatives of advisory units and agricultural schools. The area specifically targeted by the operation was the Sandomierz Region, the third largest horticultural production area in Poland.

Knowledge as a basis for effective development

The video series produced as part of the programme provides specialised sector knowledge for fruit producers on innovative machinery and equipment to support work in the horticultural sector. All movies were presented by experts on the subject, fruit producers with many years of experience and direct users of the machines showed.

The first video opening the series is entitled 'Mechanical soil cultivation under fruit tree crowns'. The aim of developing this material was to present innovative technical solutions that are used for soil cultivation under the tree crowns in commercial orchards.



Keyframes from the video 'Mechanical soil cultivation under fruit tree crowns'

The second video, entitled 'Innovative machines for mechanical harvesting of pome or stone fruit', presents the latest knowledge on mechanical harvesting of apples (produced both for the dessert and industrial markets) and hazelnuts. The choice of these fruits was dictated by the fact that apples are produced on the largest scale in the Świętokrzyskie horticultural sector. Hazelnuts, on the other hand, have an extremely high growth potential.



Keyframes from the video 'Innovative machines for mechanical harvesting of pome or stone fruit'

DO YOU KNOW THAT...

In Europe, Italy is the largest producer of hazelnuts, but nuts from Poland are healthier than those grown in the south of Europe because they contain more unsaturated fatty acids.

The European Commission's latest report shows that in the 2022/2023 season, apple production in the European Union will be around 12.2 M tonnes. At the same time, it is estimated that in Poland as much as 75% of apples will go for processing.

The third video concluding the series is entitled 'Mechanical tree cutting using contour saws and cutter bar mowers'. The subject matter is not accidental - the correct pruning of fruit trees in large-scale orchards is one of the basic maintenance jobs.

The previously mentioned shortage of hired labour is a major difficulty in this respect. The lack of professionals and the failure to carry out the necessary operations on time make it increasingly difficult for farmers to produce a top-quality product. Meanwhile, it is a good product that determines the profitability of production. Therefore, it is worth having knowledge of innovative machinery and equipment to improve the whole process.



Keyframes from the video 'Mechanical tree cutting using contour saws and cutter bar mowers'

Project results and future prospects

As a direct result of the 'Technical innovations in orchard care and mechanical fruit harvesting' programme, a series of three videos providing the latest industry knowledge in this field have been made available. The solutions presented will help to improve the orchard production process, optimise its costs, and improve product quality. This will ultimately contribute to making Świętokrzyskie farms more competitive on the market.

The videos provided are a valuable source of knowledge and inspiration for gardeners. Because they have been published on public channels (on YouTube and on www.sodr.pl), they are accessible to a wide audience and can be played from anywhere at any time. The implementation of the programme will help to spread awareness of digital technologies used in the horticultural sector.

Need more information?

Feel free to contact us:

www.sodr.pl

ogrodnictwo@sodr.pl

Agrotronics and computerisation in agricultural mechanisation

Title of operation:	Agrotronics and computerisation in agricultural mechanisation - challenges in diagnostics, service and repair of modern agricultural equipment - a chance for success in the profession of the future
Implemented by:	Warmian-Masurian Agricultural Advisory Center in Olsztyn
Completion date:	October 2021
Form of implementation:	Workshop training combined with lecture part
NRN Activity:	Activity 2: Networking activities for advisers and services supporting the implementation of innovation in rural areas
RDP Priority:	Priority 1: Fostering knowledge transfer and innovation in agriculture, forestry, and rural areas
Target group:	Employees of agricultural units and companies, agricultural students, teachers and students of agricultural schools
Objective of the operation:	Practical mastering by teachers and students of knowledge and skills in the operation of mechatronic components and systems used in agriculture

Today's increasingly modern agricultural machines operate on the basis of innovative mechatronic solutions, which are also used with similar success in the automotive industry, aerospace and even in medical apparatus. The increasing sophistication of agricultural equipment necessitates a new approach to its operation. This in turn implies the need for intensive training not only in the construction and use of machinery, but also in sensorics, actuators or electronics. This is because competence in this area will become increasingly desirable on the market every year. The programme entitled 'Agrotronics and computerisation in agricultural mechanisation - challenges in diagnostics, service and repair of modern agricultural equipment - a chance for success in the profession of the future', carried out by the Warmian-Masurian Agricultural Advisory Center, was an important step towards their improvement.

The project included a two-day workshop training combined with a lecture part. The event took place on 5-6 October 2021 in Stare Jabłonki in the Warmian-Masurian voivodship. The key objective of the training was to familiarise participants with the latest methods of diagnosing, servicing and repairing modern machinery and equipment used on an increasingly large scale in modern agriculture.

During the training course, experienced specialists showed participants the latest solutions used in agrotronics, also discussing the principles of mechatronic systems in agricultural vehicles and machinery (i.e. agrotronics, sensorics, actuators, electronics, automation and programmable controllers). The event was also aimed at supporting networking of potential employees with employers, manufacturers and distributors of agricultural equipment.



Agrotronika i informatyzacja w mechanizacji rolnictwa
- wyzwania w diagnostyce, serwisie i naprawie nowoczesnych
urządzeń rolniczych - szansa na sukces w zawodzie przyszłości
5-6 października 2021 r., HOTEL ANDERS - ul. Spacerowa 2, 14-133 Stare Jabłonki

Trainees during the lecture part

Who took part in the project?

The training workshop carried out was attended by 50 agricultural students and five teachers. The participants were divided into small groups of up to eight persons, so that each participant had the chance to play an active part in the planned practical tasks.

The key for effective learning: theory combined with practice

The discussion of each training unit consisted of three stages: a theoretical part, a practical part I carried out on a simulation station, and a practical part II using an actual component present in agricultural machinery. The theoretical part for each topic started with a 45-minute lecture. The trainees had the opportunity to participate in three lectures:

- Lecture 1. 'Agrotronic systems: sequential control of hydraulic systems in agriculture', under the direction of dr hab. inż. Adam Ekielski from the Warsaw University of Life Sciences. A specialist simulator of hydraulic systems, which are the basis for the operation of many modern agricultural machines, was available to participants.
- Lecture 2. 'Computer diagnostics for vehicles and machinery', delivered by dr inż. Mirosław Czechłowski from the Poznań University of Life Sciences. The trainees had the opportunity to look at the design of three modern John Deere tractors supplied by the distributor. Their task was, i.a. to familiarise themselves with the equipment's computer software and diagnostic methods, and the knowledge acquired allowed them to recognise the causes of presented faults on their own.
- Lecture 3: 'Applications, decision support systems and artificial intelligence in crop and weed identification', conducted by dr hab. inż. Łukasz Sobiech from the Poznań University of Life Sciences. The trainees' task was to install and master a specialised mobile application with which they identified the species of plants presented.

Programme results

Participants performed practical diagnostic exercises at professional training stations (whiteboard or distributed). Thanks to the format of the event based on both the didactic part and the practical tasks, the training was a great opportunity not only to acquire up-to-date knowledge, but, above all, to gain specific skills.



Trainees during the practical part

DO YOU KNOW THAT...

Agrotonics (also known as agromechatronics) is the use of automatic control systems to operate machinery and equipment in agriculture. One of the first persons to use the term agromechatronics was Prof. Rudolf Michalek in a 2014 article entitled 'Agroengineering or agromechatronics'.

Trainees during the practical part



The initiative proved to be an effective and innovative form of knowledge transfer on modern solutions and principles of mechatronic systems in agricultural vehicles and machinery. Participants gained knowledge about the introduction of new information technologies in agricultural mechanisation. The direct effect of the course was to increase the participants' knowledge and skills in the area of diagnostics, service and repair of modern agricultural equipment, as confirmed by a certificate.

Need more information?

Feel free to contact us:

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sekretariat@w-modr.pl

RDP 2014-2020 - through the lens

Title of operation:	RDP 2014-2020 - through the lens
Implemented by:	Marshal's Office of the Dolnośląskie (Lower Silesia) Voivodship
Completion date:	June - November 2021
Form of implementation:	competition
NRN Activity:	Activity 3: Collection of examples of operations implementing specific Programme priorities
RDP Priority:	Priority 6: Promoting social inclusion, poverty reduction and economic development in rural areas
Target group:	Residents of the Lower Silesian Voivodship in two age categories: 13-18 years old and adults over 18 years old
Objective of the operation:	Identification, collection and dissemination of examples implemented under the priorities of the RDP 2014-2020, in particular so-called good practices

The Rural Development Programme 2014-2020 (RDP 2014-2020) has been drawn up in detail on the basis of European Union regulations and is entirely subordinated to several main objectives. These include, first and foremost, improving the competitiveness of agriculture, activities aimed at sustainable management of natural resources and climate improvement, as well as rural development. The operation carried out by the Marshal's Office of the Dolnośląskie Voivodship was aimed at presenting and disseminating interesting examples of investments undertaken within the scope of individual priorities of the RDP 2014-2020.

As part of the operation, a photo competition was organised with the overriding aim of promoting the so-called good practices of the RDP 2014-2020. The prerequisite for entering the competition was to take a photograph presenting a selected operation implemented in the Dolnośląskie Voivodship and co-financed from RDP 2014-2020 funds. Competition works had to include max. 5 photos with a short description justifying why the presented operation can be considered a good practice.

Who took part in the project?

The photographic competition entitled 'RDP 2014-2020 - through the lens' was addressed to residents of the Dolnośląskie Voivodship. The competition was divided into two age groups: those aged 13-18 and those aged 18 and over. Finally, 15 adults took part in the competition.

Success captured in a photograph

Fifteen competition works were submitted by the statutory deadline - all of which were entered and then assessed in the 18+ category. The participants had to demonstrate considerable creativity and the ability to capture in a photograph specific investments implemented under the RDP 2014-2020 priorities, having only a camera and their own imagination at the disposal.

The submitted works were then assessed by a specially appointed competition committee. Its members

included i.a. the Director of the Rural Areas and Natural Resources Department, the Director of the Rural Areas Department, as well as selected employees of the Rural Areas Department and the Voivodship Promotion Department. The committee selected the winners of the competition and awarded four financial prizes. The awardees included:

- 1st place -
Marcin Wrześniacki for his work showing the reconstruction of the municipal road no. 120304D in the village of Sosnówka (cash prize of PLN 4,000).



- 2nd place -
Klaudia Mirek for a photograph showing the construction of a recreation complex at Kościńska Street in Piława Górna (cash prize of PLN 3,000).



DO YOU KNOW THAT...

Sosnówka is a Karkonosze village located between Karpacz and Cieplice. This village, traditionally divided into Sosnówka Dolna (near road No. 366) and Sosnówka Górna (towards Borowice), lies at an altitude of 370-720 metres a.s.l. The settlement was established near one of the oldest roads to the Czech Republic close to Dobre Źródło (Good Spring) near Grabowiec. In the 18th century it was a settlement of weavers, who made voile and damask there.

Piława Górna is one of the largest centres for the stone industry in Poland. The town owes the development of this industry to the Moravian brothers (Moravian Church, Unitas Fratrum) who settled there in the 18th century.

- 3rd place - Agnieszka Seweryn for a photograph presenting the construction of a playground, outdoor gym and health path at Wolności Street in Złoty Stok (cash prize of PLN 2,000).



- Distinction - Marianna Kosmalka for a photograph showing the start-up of a business of renting electric bicycles and tourist equipment, together with the solar charging station and repair station (cash prize of PLN 1,000).



Project results and future prospects

The main motivation for carrying out this operation was the desire to show and disseminate to a wide audience examples of good practices and actions taken under the RDP 2014-2020 priorities. In this way, the project organisers were able to reach rural inhabitants, activating them to create partnerships for the implementation of further projects aimed at the development of their local areas. Thanks to the operation, the Lower Silesian community was able to learn about the solutions implemented under the RDP 2014-2020, which can be applied more widely. The programme also served the purpose of civic education - the participants learned about the opportunities for the development of their local communities through the acquisition and effective use of RDP 2014-2020 funds.

Need more information?
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Innovative village

Title of operation:	Innovative village
Implemented by:	Association of Local Action Groups 'Brama Mazurskiej Krainy'
Completion date:	June - September 2021
Form of implementation:	study visit
NRN Activity:	Activity 4: Training and networking activities for Local Action Groups (LAGs), including provision of technical assistance for inter-territorial and international cooperation
RDP Priority:	Priority 6: Promoting social inclusion, poverty reduction and economic development in rural areas
Target group:	Representatives of Local Action Groups, social economy actors, especially thematic villages, and entrepreneurs from the tourism and food sector
Objective of the operation:	Creation and promotion of networked integrated thematic villages, development of branded rural tourism products and strengthening of LAG's partnership activities in networking of social economy entities

Thematic villages are a way for local promotion and rural economic development based on a chosen village specialisation. The decision on a theme usually stems directly from the history and traditions of the particular place. The thematic village project itself aims to revitalise the rural economy and create effective ways to generate alternative income for local residents. The effective use of cultural, historical and natural resources, as well as the promotion of local tourism products and the practical activities of social enterprises in the tourism industry are the main slogans of a study trip to Austria carried out as part of the 'Innovative Village' project.

During the operation, a study trip to six thematic villages in Austria (i.a. poppy village, blacksmith village, textile village, herb village) was organised. The formula of the trip focused on mutual exchange of knowledge and experience between persons representing Polish social economy entities and enterprises from the tourism and catering sector and representatives of Austrian thematic villages.

The meeting with representatives of six groups operating in Austria and the establishment of contacts with foreign entities specialising in the same sector proved to be a contribution to the promotion and implementation of successfully tested entrepreneurial attitudes on home ground. This experience created an important basis for the development of entrepreneurship in rural areas in Poland and the creation of new jobs.

Photo. LAG „Brama Mazurskiej Krainy”





Participants of a study trip to Austria

Who took part in the project?

The study trip to Austrian themed villages was attended by 14 participants. Among them were representatives of Local Action Groups, social economy entities, as well as entrepreneurs operating in the tourism and catering sectors.

Many experiences, one direction

As part of the 'Innovative Village' project, participants attended a study trip to Austria. On site, they visited six picturesque themed villages, including:

- Poppy Village in Armschalg,
- Energy Village in Grossschonau,
- Winemakers' Village in Grinzing,
- Blacksmith Village in Ybbsitz,
- Textile Village,
- Herbal Village.

By visiting Austrian villages, the trip's participants were able to see in practice that themed villages can not only earn money for themselves, but also effectively integrate the local community. In addition, this activity builds a positive external image of the village, encouraging tourists to visit.

DO YOU KNOW THAT...

Local Action Groups are a type of territorial partnership that brings together representatives of local organisations from the public, private and non-governmental sectors, as well as local residents working for the benefit of the local community.

Armschlag in Austria is inhabited by fewer than 100 residents. The village also has the tourist nickname 'Mohndorf', which translates as 'Poppy Village'. Regular events such as the 'Poppy Harvest Festival', 'Poppy Day', 'Poppy Fair' and 'Poppy Flower Festival' take place in Armschlag. The village is currently visited by 30-40 K visitors every year.



Study trip participants during a visit to the Armschlag village

Project results and future prospects

The direct effect of the project is undoubtedly the establishment and strengthening of cooperation between representatives of social economy entities and businesses from the tourism and catering sectors with their Austrian partners. The exchange of knowledge and experience promotes the development of entrepreneurship in Polish rural areas. The international transfer of knowledge in implementing innovative solutions in the tourism, education and food sectors will contribute to better integration of local communities and the creation of a network of foreign contacts.

An important issue of the project undertaken was to create opportunities for cooperation in the promotion of networked thematic villages and to strengthen LAG partnership activities. A study trip to Austria resulted in new ideas aimed at gradually expanding the scope of cooperation. In the future, this is likely to contribute to the promotion of the LDS area and to emphasise the LAG's role in creating a network of cooperation between social economy entities.

Need more information?

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Extending the shelf life of serviceberry fruits

Title of operation:	Ozonation as a method of extending the storage life of serviceberry (amelanchier) fruit and improving its quality
Implemented by:	University of Rzeszów
Completion date:	February - October 2021
Form of implementation:	analysis/expertise/study
NRN Activity:	Activity 6: Facilitate the exchange of knowledge between actors in rural development, exchange and dissemination of the results of rural development activities
RDP Priority:	Priority 1: Fostering knowledge transfer and innovation in agriculture, forestry, and rural areas
Target group:	Farmers from the Podkarpackie Voivodship looking for alternative sources of income, e.g. from serviceberry production, and research scientists
Objective of the operation:	Determining the effect of ozonation on the quality and shelf life of serviceberry, using an appropriately selected concentration of ozone and duration of exposure of this type of gas on the said type of fruit

Modern agriculture must move with the times and take advantage of every opportunity to introduce innovative methods to improve the quality and shelf life of crops. This was the guiding principle of the project carried out by the University of Rzeszów entitled 'Ozonation as a method of extending the storage life of serviceberry fruit and improving its quality'. At the beginning of February 2021, those involved in

the operation began research into the effects of ozonation on serviceberry fruit. The aim of the project being carried out was to extend the shelf life of the fruit of this species, so that consumers can keep the products they buy for a longer period of time.

University of Rzeszow employee during project research



How was the research carried out?

The material for the study consisted of fruit from two serviceberry varieties, SMOKY and MARTIN. The fruits were ozonated after harvesting using gaseous ozone at a concentration of 10 ppm, for 15 and 30 minutes. After ozonation, the fruits were stored in a climate chamber for seven days at 4°C and 90% humidity. Each test repetition was kept in separate containers. Fruit samples for testing were taken on the 1st, 3rd, 5th and 7th days of storage. Tests were conducted to determine the effect of ozonation on the mechanical, chemical and microbiological properties of serviceberry.

Who took part in the project?

The project 'Ozonation as a method of extending the storage life of serviceberry fruit and improving its quality' involved a group of engineers from the University of Rzeszow. In addition, partners of the operation were the Rzeszow Horticultural and Apiculture Cooperative and the AGRICO Grzegorz Tomaka Garden Centre. The first of these organisations provided the serviceberries necessary for the research. The second company supplied the special packaging in which the fruits were stored during the experiments to determine storage stability, following the ozonisation process.



University of Rzeszow employee during project research

DO YOU KNOW THAT...

Serviceberry is a species that can be considered 'semi-domesticated', as it is perfect for growing in the garden. This genus tolerates a large spectrum of soil conditions, doesn't freeze, doesn't get sick and doesn't even need heavy fertilisation. In addition, serviceberry is attractive as a cultivated plant because it regularly bears fruit and decorates the garden in spring and autumn.

Ozone is a triatomic oxygen molecule and at room temperature exists as a bluish gas with strong oxidising potential. It is widely used in many segments of the economy, i.a. for food preservation, deodorisation (odour removal) of air, wastewater treatment and disinfection of both objects and food.

Project results and future prospects

The most important conclusion of the operation is the confirmation of the thesis that the ozonation process has a positive effect on the quality of serviceberry fruit. In addition, it was proven that the application of gaseous ozone improved the quality parameters of the tested food, i.a.: antioxidant potential, total polyphenol content and vitamin C concentration. Gaseous ozone also reduced the level of contamination in the fruits, which further increased storage life.

The results obtained were presented during a thematic conference organised by the NRN partner - PAAC in Boguchwała. Therefore, the objective of spreading the knowledge obtained as a result of the project was fulfilled. Farmers, residents of rural areas whose work is closely linked to the environment, after learning about the results of the scientific research, drew attention to the positive effects of the ozonisation process and showed interest in implementing the new method in fruit production.

The attention of the conference participants was particularly drawn to the fact that ozonation does not pollute the environment and thus fits into its sustainability. The results of the research also offer new opportunities for farmers to increase economic efficiency of the farm.

Need more information?

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Agroforestry - a benefit for the environment and the farmer's wallet

Title of operation:	Agroforestry - innovative solutions in agriculture
Implemented by:	Agricultural Advisory Centre in Brwinów, Poznań branch
Completion date:	July 2021
Form of implementation:	Agroforestry publication promotional video Agroforestry in Poland training study visit
NRN Activity:	Activity 2: Networking activities for advisers and services supporting the implementation of innovation in rural areas
RDP Priority:	Priority 1: Fostering knowledge transfer and innovation in agriculture, forestry, and rural areas
Target group:	Representatives from advisory services and science, as well as farmers, government representatives, local authorities and rural residents
Objective of the operation:	Providing knowledge and information on innovative solutions in agriculture and on rural areas, in the field of agroforestry

The future of agriculture must be directly linked to the implementation of innovative solutions in this sector, which will simultaneously increase the quality of yields and make farming conditions environmentally friendly. To achieve this, it is essential to educate farmers and raise their awareness of ecology. Therefore, a project entitled 'Agroforestry - innovative solutions in agriculture' was carried out. The most important objective of the operation was to transfer knowledge about innovative solutions in agriculture and on rural areas in the field of agroforestry.

What does agroforestry mean?

Agroforestry uses soil in a way that mimics the vegetation tiers in a forest. In this way, agricultural land allows at least two different species to be grown on the same area, without sacrificing the yield and economic benefits per hectare. Agroforestry responds to the needs of farmers facing the aftermath of drought, as its basic premise is to maintain water in the soil.

Who took part in the project?

The project involved farmers, academics and representatives of government and local administration. As the materials created as part of the project are available on the AAC and SIR websites, they can be accessed by anyone interested in rural development.



Participants during a study trip carried out as part of the project 'Agroforestry - innovative solutions in agriculture'

Education as the first step towards modern agriculture

As part of the 'Agroforestry - innovative solutions in agriculture' project, a number of educational activities were carried out. The first of these was a publication on agroforestry, which is an excellent source of knowledge about this way of using agricultural land. This document can be used by farmers and other persons interested in the agricultural sector in Poland, as it has been placed on the AAC and SIR website. The publication contains information on:

- the use of agroforestry systems in animal husbandry,
- cooperation as a tool to support innovation in agriculture,
- the possibility of using raw materials from agroforestry crops in the manufacture of products with increased health value,
- the implications of climate change for agriculture,
- economic aspects and conditions of agroforestry development,
- the impact of cultivation conditions on plant growth and the quality of the heath speedwell (*veronica officinalis*) and the bugleherb (*ajuga reptans*) herbage,
- cultivation of selected species in the agroforestry system - Father Hugo's Rose (*rosa hugonis*) with cloudberry (*rubus chamaemorus*) and black elder (*sambucus nigra*) with lungwort (*pulmonaria*),
- possibilities of using agroforestry in stands of anthropogenic origin,
- health-promoting values of selected raw materials from agroforestry crops,
- cultivation of nettle (*urtica dioica*) in an agroforestry system with alder (*alnus mill.*),
- water management in agroforestry crops - methods for collecting and retaining water in the soil,
- presenting agroforestry as the future of European agriculture using historical farming methods.
-

Another activity carried out under the operation was the production of two promotional movies about agroforestry in Poland. All materials present good practices in agroforestry cultivation in Poland as well as opinions of farmers, local government representatives and scientists on this method of cultivating agricultural land. Created videos can be found on the AAC and SIR websites.



Participants during a study trip carried out as part of the project 'Agroforestry - innovative solutions in agriculture'
Photo: Agricultural Advisory Centre in Brwinów

To spread awareness of agroforestry, two training sessions were also conducted in the form of webinars. The topics covered in the lectures ranged from basic terms related to agroforestry to issues explaining practical ways of introducing this way of farming on farms.

The last activity carried out under the project 'Agroforestry - innovative solutions in agriculture' was a training course in the form of a study trip for representatives of the world of science, farmers, representatives of government and local administration, teachers from agricultural schools, residents of rural areas and other persons interested

in agroforestry. The aim of the training was to pass on theoretical and practical knowledge in the form of workshops held on the farm of Ms Barbara Baj-Wójtowicz. Participants learned about innovative solutions in agriculture and on rural areas. The information presented contributed to raising awareness of the need to implement joint activities in agricultural and forested areas.

DO YOU KNOW THAT...

Agroforestry is identified with the future of agriculture and, therefore, the University of Rzeszów has introduced a course of study devoted entirely to this way of using agricultural land. It was created in response to EU market demand and trains young people in innovative solutions used in agriculture and forestry. Initiatives of this kind are essential in these times of observed climate change.

Improving the competence of farmers as a result of the project

The most important objective achieved through the activities carried out under the project was to increase the knowledge of persons involved in the agricultural sector in Poland about agroforestry and its benefits. The gradual introduction of environmentally friendly crop changes will allow for the systematic development of rural areas. An important argument in favour of agroforestry is also the possibility for farmers to save considerable amounts of money. Indeed, agroforestry cultivation is characterised by lower water consumption and acreage use than traditional methods.

Need more information?
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Coping with the effects of drought and maize (corn) cultivation

Title of operation:	Tackling the effects of drought using innovative methods for grain maize cultivation as an example
Implemented by:	Łódź Agricultural Advisory Centre in Bratoszewice
Completion date:	October - December 2021
Form of implementation:	conference short movie, television broadcast
NRN Activity:	Activity 2: Facilitate the exchange of knowledge between actors in rural development, exchange and dissemination of the results of rural development activities
RDP Priority:	Priority 1: Fostering knowledge transfer and innovation in agriculture, forestry, and rural areas
Target group:	Farmers, residents of rural areas, academics, agricultural advisors and employees of agricultural advisory units
Objective of the operation:	Educating participants in activities on modern methods of maize (corn) production in grain crops

From year to year, it is possible to observe a successively decreasing amount of precipitation during the maize growing season. However, thanks to the intensive development of the agricultural sector in Poland, experts have developed methods to protect this crop. Increasingly, Polish farmers are facing the problem of drought, and maize, like any plant, needs an adequate amount of water. This problem keeps farmers awake at night, and if they want to continue planting maize, they have to look for varieties that perform better in these difficult conditions and use technologies that limit the loss of water from the soil.

In view of this problem, the Łódź Agricultural Advisory Centre in Bratoszewice held a conference to educate project participants on modern maize production methods. Activities related to this project took place in the fourth quarter of 2021.

Who took part in the project?

The conference 'Tackling the effects of drought using innovative methods for grain maize cultivation as an example' was attended by 30 participants interested in this topic. They were mainly farmers and rural residents who wanted to improve their knowledge about the maize varieties best able to cope with the harsh conditions as well as cultivation technologies that limit the loss of water from the soil.

Conference 'Tackling the effects of drought using innovative methods for grain maize cultivation as an example'





Participants of the conference 'Tackling the effects of drought using innovative methods for grain maize cultivation as an example'

What happened during the conference?

On 20 October 2021, a conference was held at ŁAAC in Bratoszewice during the Corn for Grain Days, conducted as part of the project 'Drought Prevention and Corn Growing'. The event was opened by the Director of ŁAAC, Tomasz Kopera, who warmly welcomed the participants and speakers. The following lectures were given during the conference:

- 'Innovations in soil preparation and maize sowing, in the absence of spring rainfall',
- 'Impact of adverse conditions including drought on maize growth',
- 'Modern maize nutrition taking into account water shortages during the growing season'.

The above-mentioned lectures were given by experienced specialists - dr Roman Warzecha and mgr inż. Monika Żurek from the Plant Breeding and Acclimatization Institute in Radzików. After the lectures, the conference participants visited the demonstration plots of ŁAAC. They were able to admire and see in detail there as many as 75 varieties of maize, as well as to talk to representatives of companies producing the latest tractors and agricultural machinery.

A short video was produced during the conference, which summarised the key points from the event programme. The movie was emitted on 10 December 2021 at 18:00 on the TVP 3 Łódź television channel.

DO YOU KNOW THAT...

October and November are the most common harvest dates for maize for grain. It is a versatile crop. It was cultivated by the ancient Maya and Aztecs in South America more than 6,000 years ago. For the ancient tribes, it was a food and material base as well as an object of religious worship. Maize was brought to Europe at the turn of the 16th and 17th centuries, and to Poland 100 years later.

Need more information?

Farmers got the upper hand over drought

The greatest success of the project 'Tackling the effects of drought using innovative grain maize cultivation methods as an example' was to educate participants about the innovations involved in growing this particular cereal, taking into account the impact of adverse conditions such as drought on its development. This provided farmers with practical information about which maize varieties will perform best in their fields during ongoing climate change. This knowledge will translate directly into better yields in the coming years. The positive conclusions of the conference participants could also be seen in their answers for the evaluation survey that was conducted at the end of the lectures.

Participants at the ŁAAC demonstration plots



Participants at the ŁAAC demonstration plots



In addition, the conference was an ideal opportunity for farmers and other participants to establish contacts with representatives of agricultural equipment companies and people involved in consultancy and science. Meeting new specialists in innovative maize-growing methods may result in further cooperation, which will contribute to the development of agriculture and rural areas in the Łódź Voivodship.

Need more information?

Feel free to contact us:

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Digital village

Title of operation:	Digital village - in search of new competences
Implemented by:	PD Solutions Daniel Prokopiuk
Completion date:	April - October 2021
Form of implementation:	training
NRN Activity:	Activity 11: Activate villagers to undertake initiatives for social inclusion, especially the elderly, young people, the disabled, national minorities and other socially excluded people
RDP Priority:	Priority 6: Promoting social inclusion, poverty reduction and economic development in rural areas
Target group:	Residents of rural areas in Podlaskie Voivodship, Dobrzyniewo Duże municipality, Nowogród municipality
Objective of the operation:	Improving the knowledge of rural residents and rural entrepreneurs on promotion, sales and marketing through online tools

Sustainable rural development is an important item on the list of priorities for European Union policy-making - both in terms of job creation opportunities and from the perspective of the quality of life of residents. The 'Digital Village - in search of new competences' programme, implemented under the NRN OP 2020-2021, was a response to these challenges. The series of eight training courses conducted during the project focused on issues aimed at successively improving the knowledge and competences of rural inhabitants, in terms of using online tools.

A key objective of the programme was to increase the competencies of rural inhabitants and rural entrepreneurs in the area of effective promotion, sales and marketing via the Internet. The workshops were devoted to promoting the quality of life in rural areas and its sustainable development. An important idea of the project was to show the potential of rural territories as places creating favourable conditions for professional development. Participants had the opportunity to learn how to make effective use of the region's environmental resources and the wide range of opportunities offered by the use of new technologies. All this had as its primary objective not only the realisation of the objectives of sustainable rural development, but also, in the long term, the reduction of disproportions in the socio-economic dimension between rural and urban areas.

DO YOU KNOW THAT...

A report prepared by the European Commission shows that currently as many as 85% of all jobs in the EU require at least a basic level of so-called digital competence. Eurostat's projections in this regard assume that by 2030, 80% of EU citizens in working age will need to have digital skills to get a job.

Who took part in the project?

The 'Digital Village - in search of new competences' programme was aimed at rural residents of the Podlaskie Voivodship, from the Dobrzyniewo Duże and Nowogród municipalities. Participants included both entrepreneurs running various types of businesses and people who are just planning to start activities in rural areas. Attendance at the workshop was an opportunity to exchange experience and integrate residents.



Training for programme participants - 7 September 2021, Dobrzyniewo Duże, Photo: Ewa Jaźwińska

Eight training courses in eight days

A series of training sessions organised as part of the programme took place on 7, 10, 14 and 21 September 2021 in Pogorzałki (Dobrzyniewo Duże municipality) and on 17, 18, 24 and 25 September 2021 in Grądy (Nowogród municipality).

The framework schedule of training courses under the project 'Digital Village - in search of new competences' was divided into several key thematic blocks:

1. ABC of marketing via the Internet - branding.
2. Blogs - types, functions, practical application.
3. Selling via the Internet - can you make money from it?
4. Social media - types, functions, practical applications.

Participation in the workshop gave participants the tools they needed to promote their business via the Internet on their own, e.g. through professional use of social media or maintaining a company blog. Participants learned about the importance of these online channels in modern business, finding that their use is extremely popular today.

An outcome that opens up a range of possibilities

During the training, participants acquired knowledge on how to create online sales offers for the production of natural food products and tourism services based on natural resources. Through the implementation of the programme 'Digital Village - in search of new competences', participants gained skills needed to effectively run and promote their own business. Using this knowledge will help them to optimise the costs of promotion by working independently in this area.

Prospects for the future

As a result of the programme, the conditions will be created to establish partnerships and promote both the natural environment and regional products made in rural areas. Specific knowledge on promotion, sales and marketing using internet tools will contribute to an increase in interest in products manufactured in rural areas and an increase in their sales. As a result, this will translate into a significant improvement in the economic conditions of the inhabitants of these regions, provoking the effective creation of new products and services.

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Agroaction: cooperation!

Title of operation:	Agroaction: cooperation!
Implemented by:	Mazovia Agricultural Advisory Centre
Completion date:	April - December 2021
Form of implementation:	TV programme
NRN Activity:	Activity 2: Networking activities for advisers and services supporting the implementation of innovation in rural areas
RDP Priority:	Priority 1: Fostering knowledge transfer and innovation in agriculture, forestry, and rural areas
Target group:	Farmers, agricultural advisory representatives, residents of rural areas
Objective of the operation:	Enhancing cooperation and knowledge exchange between partners of the Agricultural Knowledge and Innovation Systems (AKIS) and agricultural practice in the Mazowieckie Voivodship

Agricultural activity is subject to constant development processes and successive modernisation. Technological development in this area is progressing on an extremely wide scale. To see this, it is enough to compare, for example, traditional farming tools with today's modern agricultural machinery, which in many cases is controlled by advanced satellite technology. Both cultivation and animal husbandry technologies have undergone quite a technological revolution. However, activities aimed at increasing the degree of innovation in Polish agriculture, especially at the micro level, are not left unsupported.

The key objective of the operation was to increase cooperation and enable knowledge exchange between the partners of the Agricultural Knowledge and Innovation System (in particular consultancy) and agricultural practice in the Mazowieckie Voivodship. This was achieved by activating rural inhabitants to create partnerships and supporting active networking between those interested in implementing innovative solutions in agriculture, food production, forestry and rural areas.

Mazovian countryside connects us

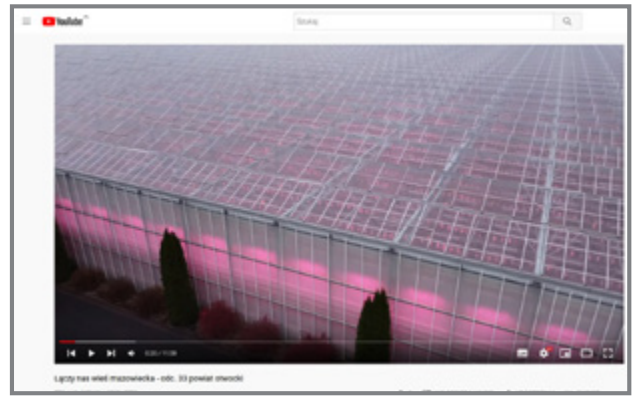
A series of original television programmes entitled 'Łączy nas wieś mazowiecka' (Mazovian countryside connects us) was produced as part of the 'Agroaction: cooperation!' project. The premiere episode was transmitted on Saturday 3 April 2021 at 18:11 on TVP3 Warsaw. Subsequent episodes of the series were aired at a fixed time every Thursday at 18:50 (repeats took place on Fridays at 17:48). The programme is also available on the official website of the Mazovian Agricultural Advisory Centre and on YouTube. In the course of the project, a total of 35 episodes devoted to the subject of farms operating in the Mazovian Voivodship were produced.

DO YOU KNOW THAT...

The broadcast features an innovative method of maize cultivation - sowing corn under a biodegradable film made from maize starch. The film retains moisture and protects against low temperatures, allowing seeds to be sown earlier. Under the influence of UV radiation, the film disappears during the growing season.



View of the page of TVP3 Warsaw with the programme 'Łączy nas wieś mazowiecka' (Mazovian countryside connects us)



View of MAAC Warsaw YouTube page with 'Łączy nas wieś mazowiecka' (Mazovian countryside connects us) broadcasts

35 episodes about each county

In line with the idea of the programme 'Mazovian countryside connects us', the material for individual episodes was produced in each powiat (county) of the Mazovian Voivodship. The programme focused on presenting the use of technology and innovation on local farms. The aim of the series was also to show what cooperation between research institutes and farmers looks like. In this way, viewers of the programme could see that agriculture in the Mazovian Voivodship is characterised by a high level of innovation. This was evidenced, for example, by farms equipped with weather stations, as part of the Internet-based platform for advice and decision support in integrated pest management (IPM) - eDWIN project. In addition, there were farms specialised in the cultivation of vegetables and the use of specialised substrates, as well as LED lighting, pumped tunnels, soilless cultivation systems or biological pest control.

As a result, 35 episodes were produced, showing specialised and multidirectional Mazovian farms, specialist breeders as well as ecological and agrotourism farms. During the broadcast of the episodes, viewers were able to get knowledge about the best fruit and vegetable producers from the Mazowieckie Voivodship and familiarise themselves with the activities of agricultural schools and scientific institutes. Viewers saw, using concrete examples, how agriculture in the region is changing dynamically and how effective cooperation between agricultural advisory units and farming practice is. The programme highlighted the important role of advisory services in the implementation of innovation and the process of modernising farms, presenting the immense cultural wealth of rural areas in the Mazovia region.

Project results and future prospects

The implementation of the operation contributed to the dissemination of knowledge on innovative solutions in Polish agriculture. The recorded material included real examples of applied innovations, modern technologies and creative ideas of farmers and inhabitants of rural areas. The released episodes are an important inspiration for other farmers looking for new solutions on their farms.

As a direct result of the project, there was an increased interest in innovation in agriculture, as evidenced by the higher number of contacts with advisers from the Mazovian Agricultural Advisory Centre on the issues raised. Total number of viewers who watched episodes of the programme 'Łączy nas wieś mazowiecka' (Mazovian countryside connects us) on TVP3 Warsaw reached 2,032,600.

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Local Water Partnerships

Title of operation:	Local Water Partnership (LWP) in Little Poland
Implemented by:	Małopolska Agricultural Advisory Centre in Karniowice
Completion date:	December 2021
Form of implementation:	teleconferences television broadcasts electronic broadcasts
NRN Activity:	Activity 2: Networking activities for advisers and services supporting the implementation of innovation in rural areas
RDP Priority:	Priority 1: Fostering knowledge transfer and innovation in agriculture, forestry, and rural areas
Target group:	Farmers, fishpond owners, representatives of public administration, national forests, national and landscape parks, water companies, scientific institutes, SWH PW, agricultural universities, NGOs, representatives of advisory entities, entrepreneurs affecting the state of waters in a given area and other entities and persons interested in the subject, inhabitants of the Małopolskie Voivodship (Little Poland)
Objective of the operation:	Supporting networking between the local community and institutions in the field of rural water management, identification of problems in the area of water management and dissemination of good practices for water efficiency in agriculture and rural areas

The irrational management of environmental resources is resulting in irreversible climate change and a decline in natural retention capacities on land, contributing to a progressive reduction in access to water. The underestimation of water resources is a problem on an incredible scale. It cannot be solved even by the fact that all social and economic activities depend heavily on water supply and quality. For this reason, the promotion of water protection and sustainable management are activities that should be implemented at local, regional, national and international levels. An important starting point for rational water management and the beginning of a discussion on this serious problem was the operation entitled 'Local Water Partnership (LWP) in Little Poland'.

Steps towards rational water management are being taken by creating a network of cooperation between local communities and institutions and organisations working to manage water resources in agriculture and rural areas. The networking initiative, the so-called Local Water Partnerships (LWP), was undertaken by the Małopolska Agricultural Advisory Centre in Karniowice. Seven teleconferences and eight TV and electronic broadcasts were held as part of this operation.

The key idea of the operation was for LWP members to learn about each other's scopes of action and requirements related to water management, and to identify problems in this area in terms of the needs of agriculture and rural residents, as well as potential ways to solve them. The project was intended to disseminate good water management and water efficiency practices in agricultural and rural activities.



Małopolska AAC, Photo: Wiktoria Janiszewska

Who took part in the project?

The target group for this operation was really large. The target audience included farmers, fishpond owners, representatives of public administration, national forests, national and landscape parks, water companies, scientific institutes, SWH PW, agricultural universities, NGOs, representatives of advisory entities, entrepreneurs affecting the state of waters in a given area and other entities and persons interested in the subject, inhabitants of the Małopolskie Voivodship.

A bit of knowledge for those interested

During the first phase of the project, seven online conferences were organised, attended by a total of 170 people. They were held on 8, 10, 15, 17, 22, 24 and 29 June 2021. Participants in the individual conferences were recruited from counties with similar hydrological and agricultural characteristics. During the meetings, the findings of the pilot programme implemented in 2020 and plans for the future were presented. In addition, participants examined the water management problems noticeable in the areas discussed.



During the next stage of the operation, eight programmes on water management were recorded and transmitted on TVP3 Kraków. Experts and representatives of the local community and authorities were involved in producing the video clips. The following issues were addressed in the episodes:

- efficient use of water on the farm,
- good agricultural practices for water retention on permanent grassland,
- water resources for agricultural producers and livestock pond owners,
- ecoschemes of the Common Agricultural Policy and the quantitative and qualitative status of local water resources,
- impact of mining on agricultural production conditions,
- impact of agriculture on water intake,
- household and agricultural water retention,
- regenerative agriculture.

As part of a summary of the operation, eight multi-annual plans for water management in agriculture were published in electronic form for individual poviats (counties) of the Małopolska Voivodship.

DO YOU KNOW THAT...

From 21 June to 20 August 2022, the average value of the Climatic Water Balance (a drought risk indicator), reported by the Institute of Soil Science and Plant Cultivation (IUNG) in Puławy, was negative at -123 mm. Water deficits for crops occurred throughout the country.

A Local Water Partnership is a voluntary association of individuals or entities with an impact on water management on the given area.

Project results and future prospects

The direct effect of the operation was to familiarise 170 conference participants with current water management issues, taking into account local specificities. The project had a networking character, as people representing various professions and institutions were present among the audience. On the other hand, the provision of eight reports and a series of publications contributed to the dissemination of expertise in water management. This is extremely important as preparing agriculture for climate change requires the involvement of direct water users in addition to administrations at all levels.

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Green Deal close to us

Title of operation:	Green Deal close to us
Implemented by:	Kuyavian-Pomeranian Agricultural Advisory Centre in Minikowo
Completion date:	June - November 2021
Form of implementation:	Footage
NRN Activity:	Activity 2: Networking activities for advisers and services supporting the implementation of innovation in rural areas
RDP Priority:	Priority 1: Knowledge transfer and innovation
Target group:	Farmers, rural residents, agricultural advisors, general public
Objective of the operation:	Educating the target group about the practical principles of the European Green Deal

In December 2019, the European Commission presented the European Green Deal. This is a set of policy initiatives that aims to achieve climate neutrality in Europe by 2050. Among the set mentioned is the point 'Zero pollution for a non-toxic environment', which draws attention to increasing citizens' efforts to reduce existing pollution. In view of the enormous scale of the Polish agricultural sector, those involved in it should start as soon as possible to contribute to the creation of a non-toxic environment in the coming years.

To protect citizens and ecosystems, the Kuyavian-Pomeranian Agricultural Advisory Centre in Minikowo has produced factual videos explaining the principles behind the European Green Deal. Each of the 13 episodes deals with a different issue, covering topics such as pesticides, antimicrobials, broadband internet, organic farming and landscape and nutrient elements.

13 episodes full of practical knowledge

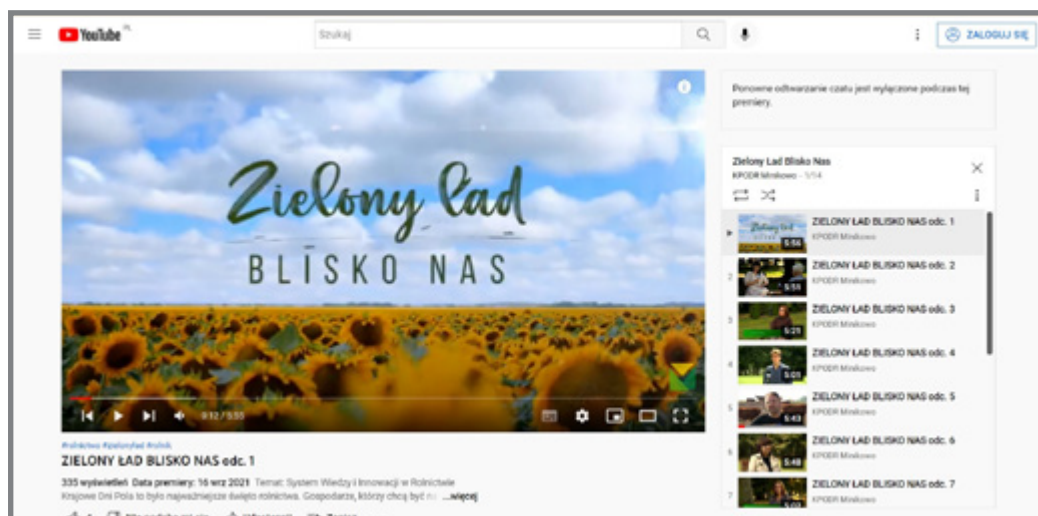
The first episode in a series of videos introduced one of the most important events in the agricultural world - National Agricultural Fielddays. It is during this festival that farmers can learn more about trends in crop production and view more than 500 crop varieties. In addition, during the National Agricultural Fielddays there is the opportunity to learn about offers from distribution, chemical and fertiliser companies. Regularly increasing your knowledge of agricultural innovations allows you to cultivate crops in a sustainable and ecological way.

The next episode of the programme dealt with compliance requirements of the European Green Deal, as a comprehensive approach to protecting the environment and combating climate change. From this material, viewers learned how important the role of agriculture is in protecting the environment. The second episode from the series also presented the Code of Good Agricultural Practice, a guide for farmers with practical advice to ensure sustainability in agricultural production.

Episode three was entirely devoted to issues related to field irrigation. Climate change is forcing many industries (including agriculture) to look for new ways of water management. From the material prepared by the Kuyavian-Pomeranian Agricultural Advisory Centre, viewers learned more about how to deal with the effects of drought.

In the fourth episode from the series produced as part of the 'Green Deal near us' project, viewers can

View of KPAAC Minikowo's YouTube page with episodes from the 'Green Deal close to us' series



learn about the 'Renaldo' pilot programme. This is an initiative of the Kuyavian-Pomeranian Agricultural Advisory Centre in Minikowo, which aims to encourage the establishment of energy cooperatives. This undertaking is in line with the need to look for alternative energy sources. Experts suggest what the benefits of such activities are.

The next episode addresses an extremely important issue - sustainable plant cultivation and animal husbandry. By carrying out such activities, consumers can obtain a fresh, good-quality and low-processed product. That from organic farming or breeding must be certified. In this episode, experts explain what conditions must be met to obtain such a certificate.

Watching the sixth episode from the series, we can learn about the importance of herb cultivation for the preservation of biodiversity, both on a conventional and an organic farm. On such a farm, there are strict rules related to the plant protection products that should not be used, but there is also a need for greater care for the condition of the soil and the natural preparation of sites for subsequent crops. The programme discusses how the cultivation of herbs can play a major role in restoring nature.

The theme of the seventh episode is agricultural education and its role in the development of organic farms. The modern farmer is an entrepreneur who moves with the times and is familiar with innovative technologies. It is education that helps him/her to master all the innovations. Both farmers and agricultural consultants rely on it.

Episode nine addresses the issue of adequate soil health and quality, which is the basis for all agricultural crops. There are points in the European Green Deal aimed at transforming food systems into healthy and environmentally friendly ones. To meet these requirements, Polish farmers need to know how to rationally

DO YOU KNOW THAT...

In the thirteenth episode, the 'Wiejska e-skrzynka' (Rural e-box) project was presented. It is a project bringing together local farmers and food producers from the Kuyavian-Pomeranian Voivodship. Intermediaries are often overlooked in the production and sale of products. The aim of 'Wiejska e-skrzynka' is to select the most advantageous way of distributing agricultural products using short supply chains, supplied by farmers from the Kujawsko-Pomorskie Voivodship. Innovative principles for the sale of food produced by farmers, small businesses, farm shops, a sales platform, purchasing groups.



KPAAC page view of the first episode from the series 'Green Deal close to us'

fertilise the soil on their farms. It is this knowledge that they will receive by watching the ninth episode from the series 'Green Deal close to us'.

The European Green Deal strategy for farms has two objectives: to marketize the agricultural economy and, to move towards climate-neutral agricultural production. Therefore, the tenth episode of the programme presents the tools available to farmers to help them run a business-developed farm.

The eleventh episode from the series 'Green Deal close to us' focuses on water problems. One of the solutions of the Kuyavian-Pomeranian Agricultural Advisory Centre in Minikowo is the creation of Local Water Partnerships. These partnerships bring together farmers, scientists, local government officials, representatives of water companies and advisors. Their task is to develop water management measures in a given area. Joint ventures are intended to help to minimise the effects of drought and flooding.

In the twelfth episode, the focus is on presenting the effects produced by teams formed by farmers, scientists, entrepreneurs and advisors. These teams are 'operational groups'. They are set up to look for modern solutions to facilitate the development of farms and production. Such projects also make it easier to obtain EU subsidies.

The final, thirteenth episode from the series is dedicated entirely to a modern platform, the 'Wiejska e-skrzynka' (Rural e-box), which allows customers to order food online. This project brings together more than a dozen processors. Among them are producers of cheese, meat, cured meats, vegetables and herbs. Their products can be picked up at designated locations in the Kujawsko-Pomorskie Voivodship (Kuyavian-Pomeranian Voivodship).

Practical knowledge accessible to everyone

A total of 13 columns were recorded, each of which was transmitted several times on the regional TVP Bydgoszcz programme 'Green Deal close to Us', according to the current schedule. A total of 54 broadcasts took place. 24,154 viewers watched the features. The campaign reached its main audience, namely residents of rural areas and small towns. The added value of the project is the possibility to use the results of the operation, after its completion. All videos are available on the internet, at <https://www.kpodr.pl/> and on KPAAC's YouTube channel.

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Modern and safe potato cultivation

Title of operation:	Modern and safe potato cultivation in Lubuskie Voivodship
Implemented by:	Lubuskie Agricultural Advisory Centre in Kalsko
Completion date:	August - November 2021
Form of implementation:	training field demonstration movie
NRN Activity:	Activity 2: Networking activities for advisers and services supporting the implementation of innovation in rural areas
RDP Priority:	Priority 1: Fostering knowledge transfer and innovation in agriculture, forestry, and rural areas
Target group:	Potato producers, processors and distributors, or persons intending to undertake such production, agricultural advisers, producers who may become precursors in potato cultivation in Lubuskie Voivodship, as well as other entities and individuals interested in the subject matter
Objective of the operation:	Supporting innovation in agriculture, food production, forestry and rural areas

Poland is now one of the largest potato producers in Europe. Despite this, a significant proportion of the potatoes on our market are still imported. This is due to the low quality of Polish potatoes, a lack of awareness among producers of the needs of the present-day consumer and serious phytosanitary problems. This fact, combined with the lack of storage infrastructure and knowledge of irrigation, means that Polish producers are still in the vicious circle of low profitability of production. In view of the above, the implementation of the operation entitled 'Modern and safe potato cultivation in the Lubuskie Voivodship' carried out by the Lubuskie Agricultural Advisory Centre in Kalsko was fully justified.

The project included two training courses combined with field demonstrations. The event was of an innovative and educational nature, although there was also a practical part devoted to potato cultivation.

The aim of the initiative was to transfer good practice in implementing innovations in agriculture and rural areas, and to promote modern potato-growing technologies based on the example of farms in Lubuskie Voivodship. A video prepared at the end also served these purposes.

Moreover, an important aim of the operation was to present the assumptions of the 'Programme for the Polish Potato' (MARD). It aims to thoroughly restructure the industry by eliminating market and phytosanitary irregularities, as well as to support producers by promoting Polish food products through the Poland Tastes Good and Polish Product promotional campaigns.





Training in Złotnik, Photo: Sylwia Wawrzyniak-Bodnar

Who took part in the project?

The initiative was primarily addressed to direct potato producers, processors and distributors, as well as those considering setting up production operations. Participants also included agricultural consultants, producers likely to become precursors in potato cultivation in the Lubuskie Voivodship and other entities and individuals interested in the subject.

A dose of knowledge about growing potatoes, the king of Polish tables

As part of the completed operation, two trainings took place on 25-26 August 2021 in Złotnik and Ośno Lubuskie. Mentioned events were attended by a total of 100 participants. During the trainings, field demonstrations were also carried out on farms in Złotnik and Połęczko.

During the substantive part of the training, presentations were given by representatives of the Voivodship Inspectorate for Plant Protection and Seed Production (VIPP&SP) in Gorzów Wielkopolski. Marcin Cyganiak and Halina Wysługocka gave a lecture on 'Bioassurance as a basic element of market access and safe food production, taking into account the fight against bacterial ring rot during potato cultivation'. As part of the substantive part, general issues related to the principles of crop rotation, fertilisation, irrigation and labelling of potatoes other than seed potatoes were discussed. The main goals for the Polish potato were set, i.a.:

- elimination of the bacterium *Clavibacter sepedonicus* (Cs),
- free international trade on EU and third country markets,
- improvement of profitability of domestic potato production.

DO YOU KNOW THAT...

The statistical Pole consumes 92 kg of potatoes annually, 20.8 kg of which in the form of processed foods. The potato is the fourth most cultivated vegetable in the world - after rice, wheat and maize. The Spaniards discovered the potato in 1536 during the conquest of Peru and brought it to Europe. Among the most popular varieties of potatoes grown in Poland are Vineta, Denar, Lord, Tajfun or Bellarosa.



Field demonstration - potato cultivation, Photo: Sylwia Wawrzyniak-Bodnar

The next speaker, dr Wojciech Nowacki from the Department of Potato Agronomy, having 40 years' experience in potato cultivation, gave a presentation on 'Sustainable potato production as an important element of environmental protection in times of climate change (irrigation systems, production economics, storage)'.

The practical part of the training included field demonstrations. The farms of Kazimierz Ostrowski in Złotnik and Dariusz Kozakiewicz in Połęcko were presented. Participants had the opportunity to see a range of innovations, including the technology for growing many varieties

of potatoes in beds (as many as 10 potato varieties are grown on 200 ha in Połęcko), a modern storage facility with a sorting and packaging line and ventilation system, a drying room with a cleaning facility, or a grain store with specialised floor ventilation.

The final stage of the operation was the preparation of a video on farm innovations in the Lubuskie Voivodship, which provides a comprehensive compendium of knowledge about potato cultivation.

Project results and future prospects

The video produced as part of the operation was viewed by almost 5,500 people. The project also resulted in a publication entitled 'Professional Potato Production', prepared by dr Nowacki, in which the material obtained in the course of the operation was used. The variety of project forms (training, field demonstrations, movie) made it possible to present the entire spectrum of factual information about potato cultivation in Poland. The knowledge provided is the basis for the implementation of agricultural innovations in rural areas. The event also provided an opportunity to establish cooperation between farmers and representatives of scientific and advisory units.

Dr Wojciech Nowacki, PBAI-NRI
Photo: Sylwia Wawrzyniak-Bodnar



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Podlasie Cheese Academy - 2nd edition

Title of operation:	Podlasie Cheese Academy - 2nd edition
Implemented by:	Podlaskie Agricultural Advisory Centre in Szepietów
Completion date:	July - October 2021
Form of implementation:	cheese-making workshop, study trip, cheese gala
NRN Activity:	Activity 2: Networking activities for advisers and services supporting the implementation of innovation in rural areas
RDP Priority:	Priority 1: Fostering knowledge transfer and innovation in agriculture, forestry, and rural areas
Target group:	Podlaskie Voivodship rural residents, farmers and farm advisors, in particular those involved in cattle, sheep and goat farming, cheese production, milk processing and farm-level marketing, and farmers interested in milk processing
Objective of the operation:	Increasing knowledge on the promotion of short food supply chains, new/improved cheese production methods and innovative ways of marketing cheese products

Short food supply chains contribute to reducing the number of intermediaries between the farmer or food producer and the consumer. The dissemination of this idea, as well as the desire to activate producers operating in the area to promote local food markets, are the key objectives of the second edition of the operation entitled 'Podlasie Cheese Academy' carried out within the framework of the Innovation Network in Agriculture and Rural Areas (SIR)

Who took part in the project?

The project was attended by farmers from the Podlaskie Voivodship involved in dairy cattle breeding and interested in processing milk into cheese and the possibilities of setting up ART and MLL agricultural businesses.

Three events, one goal

The operation was carried out in three stages. The initiating event of the project was a two-week workshop for the residents of the Podlaskie Voivodship, which started in July 2021. During the next step, the participants of the operation went on a study trip to selected cheese-making facilities located in the Dolnośląskie Voivodship (Lower Silesia), which took place on 8-10 September 2021. The culmination of the project was a ceremonial Cheese Gala held as part of a cheese-making competition on 21 September 2021 at Dworek Pana Tadeusza in Kuczyna. All events served to promote short food supply chains, new and improved cheese production methods, as well as innovative ways of marketing the cheese products produced at the farm level.





Cheesemaking workshop leader demonstrates successive stages of cheese manufacturing

80 residents of the Podlaskie Voivodship attended the July workshop. The scope of the training included both theoretical and practical knowledge of rennet cheese making and milk processing issues. Each participant received a complete cheese-making kit, which was necessary to prepare their own cheese at home. In this way, participants were able to apply the knowledge they had acquired in practice by making their own cheese for a cheese-making competition.

During the next stage of the project, 30 participants went on a study trip which included visits to cheese-making facilities in Lower Silesia. The programme included a cheese-making workshop led by Sylwester Wańczyk at the 'Sery Zagrodowe' organic farm in Krzeszów. In addition, participants visited the 'Kozłonoga' farm, which makes cheese from raw material obtained from a local goat farm, and 'Szczypiorki' in Tuszyn, an example of Agricultural Retail Trade.

The third stage of the operation and at the same time its finale was the Cheese Gala organised as part of the cheese-making competition. During the event, participants were able to demonstrate the skills they had acquired, and the cheeses they had made were judged by a professional jury as per taste, texture and appearance.

Participants at the Cheese Gala on 21 September 2021.



The winners of the competition included:

1. in the category 'the best cheese without additives':
 - 1st place - Małgorzata Kaczyńska
 - 2nd place - Mateusz Stiepanow
 - 3rd place - Agata Poleszak
2. in the category 'the best cheese with additives':
 - 1st place - Jarosław Osmólski
 - 2nd place - Wioletta Korszlak
 - 3rd place - Krystyna Maślowska

Those on the podium received a cash prize in the form of vouchers, while the other participants received a consolation prize and a named diploma.



Cheese Gala, 21 September 2021, winners of the best cheese competition

DO YOU KNOW THAT...

To replenish the total calcium requirement in the human body, you only need to eat two slices of yellow cheese a day.

Rennet cheeses are a type of cheese in which the cheese mass is obtained by denaturing the milk with rennet and then undergoing maturation. The longer the cheese matures, the more intense its flavour is.

Project results and future prospects

As a result of the operation, participants gained practical knowledge of rennet cheese making, and thus were able to prepare their own products. During the workshop, trainees learnt all the necessary ins and outs of cheese-making, including how to select raw materials and additives needed for cheese production, under what conditions cheese ripens, or how to process the grains. The effectiveness of the workshops is confirmed by the results of the evaluation questionnaires, in which the participants rated the quality of the training highly and expressed their wish to participate in similar events in the future.

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Green AgroPicnic for Young Farmers

Title of operation:	Green AgroPicnic for Young Farmers
Implemented by:	Lublin Agricultural Advisory Centre in Końskowola
Completion date:	June 2021
Form of implementation:	discussion panel live report video report
NRN Activity:	Activity 2: Networking activities for advisers and services supporting the implementation of innovation in rural areas
RDP Priority:	Priority 1: Fostering knowledge transfer and innovation in agriculture, forestry, and rural areas
Target group:	Farmers, persons planning to commence agricultural activity, representatives of agricultural advisory services, entrepreneurs, representatives of agricultural, peri-agricultural and scientific institutions, representatives of organisations and associations, persons interested in these topics
Objective of the operation:	Presenting the principles of the Green Deal, showing practical examples of selected elements of production technology aimed at protecting soils, biodiversity, reducing nitrogen emissions, combating climate change and the effects of drought

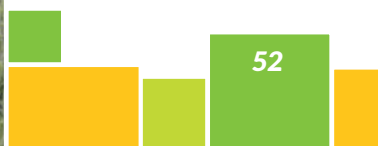
The SWOT analysis (strengths, weaknesses, opportunities, and threats) of the Draft Strategic Plan for the Common Agricultural Policy 2023-2027 identified limited access to knowledge and innovation - especially among young farmers - as one of the weaknesses of Objective 7 'Attract young farmers and facilitate business development'. The analysis noted that farms rarely introduce business innovations, which translates into

*Visiting the experimental fields by participants of the Green AgroPicnic
Photo: Anna Jakimiak, LAAC in Końskowola*



low innovation rates. The EC report also shows that young farmers have little interest in initiatives such as demonstration training or field demonstrations. In view of this, it appears necessary to increase the activity of young people connected with agriculture through education and organising initiatives for the benefit of the local environment and building networks of partners. An event organised by the Lublin Agricultural Advisory Centre in Końskowola - the 'Green AgroPicnic for Young Farmers' - was aimed at these goals.

The event took place on 26 June 2021 and had an outdoor format. The main idea of it was to present the key principles of the European Green Deal to a wider audience. During the Green AgroPicnic, participants attended lectures and discussion panels, and admired prepared variety plots, machinery and cooking demonstrations. Visitors had the opportunity to learn about innovative solutions in agricultural machinery and equipment, as well as selected elements of production technology aimed at protecting soils, biodiversity, reducing nitrogen emissions, counteracting climate change and the negative effects of drought.



The entire event was transmitted online on YouTube and via the official LAAC in Końskowola Facebook profile. The Green AgroPicnic was also reported on by TVP3 Lublin in the programme 'Summer with TVP3 Lublin'. The event received the honorary patronage of the Minister of Agriculture and Rural Development, the Voivode of Lublin and the Marshall of the Lubelskie Voivodship.



Participants of the panel discussion during the Green AgroPicnic
Photo: Anna Jakimiak, LAAC in Końskowola

Who took part in the project?

500 people attended the outdoor event. Among the visitors were young farmers from the Lubelskie Voivodship, as well as those planning to commence agricultural activity, representatives of agricultural advisory services as well as agricultural, peri-agricultural and scientific institutions, entrepreneurs, representatives of organisations and associations and other persons interested in the subject.

Event history

As part of the "Green AgroPicnic for Young Farmers" operation, field demonstrations, demonstration plots, panel discussions and agricultural equipment demonstrations were held at the LAAC experimental and implementation field in Końskowola. The lectures addressed the following topics:

- 'Biological progress in agricultural crops as an element of biodiversity, counteracting the effects of climate change and ensuring an appropriate level of agricultural income',
- 'Role of crops and companion plants in improving soil conditions',
- 'Appropriate crop rotation and liming as a foundation for achieving stable yields',
- 'New challenges in soil cultivation and crop sowing'.

Presentations of innovations, including precision farming solutions, were an important part of the event. A competition using modern IT solutions was prepared for participants. The event included a culinary

demonstration by Jacek Jakubczak, President of the Association of Lublin Cooks, who prepared healthy dishes and drinks for the participants in order to promote organic food. Visitors were also interested in information and consultation stands of agricultural institutions and companies operating in the agricultural environment and cooperating with the Lublin Agricultural Advisory Centre.

Company stands and presentation of agricultural equipment,
Photo: Anna Jakimiak, LAAC in Końskowola





Agricultural machinery exhibition, Photo: Anna Jakimiak, LAAC in Końskowola

Project results and future prospects

Participation in the event helped to raise awareness among young farmers about innovation and modern technologies in agriculture. Visitors had the chance to learn about the new solutions presented in the experimental and implementation plots at Pożóg II, which are examples of so-called ecoschemes that farmers will then be able to apply on their own farms.

DO YOU KNOW THAT...

The Green Deal is the EU's climate policy reform project. A key objective is for Europe to become a climate-neutral continent by 2050. This means that the EU economy should only emit as much greenhouse gases as it can sequester (e.g. through forests or CO2 capture technology).

The LAAC's experimental and implementation site at Końskowola is a unique place in the Lubelskie Voivodship, where research into the cultivation of agricultural crops has been carried out for decades. The site is located in the north-western part of the Lublin Upland, on pseudo-biotic soil formed from loess, belonging to the good wheat complex of class III a.

In view of the exodus of young people from rural areas, it is extremely important to encourage them to remain in the countryside. To this end, advice on farm management, new agricultural production technologies, current legislation or how to obtain funding for development is particularly essential. The AgroPicnic was an important activity undertaken in this direction. The added value of the project is that the participants of the event will be able to use the acquired knowledge to successively introduce new technologies on their farms.

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What is allowed to whom in the sołectwo?

Title of operation:	Village leader, village council, village meeting..., in other words what is allowed in the sołectwo - 3-day workshop for village leaders and members of village councils from the Małopolska Voivodship (explanation: sołectwo is an administrative unit in Poland, a subdivision of a municipality, although only rural locations are assigned to sołectwos)
Implemented by:	Instytut Rozwoju Obszarów Wiejskich (Rural Development Institute)
Completion date:	July 2021
Form of implementation:	workshops
NRN Activity:	Activity 12: Identification, collection and dissemination of good practices having an impact on rural development
RDP Priority:	Priority 1: Fostering knowledge transfer and innovation in agriculture, forestry, and rural areas
Target group:	Village leaders (sołtysi) from the Małopolska Voivodship and members of village councils
Objective of the operation:	Strengthening the competences and raising the level of skills of village heads from the Małopolska Voivodship as leaders of local initiatives and persons supporting the building of relations and social ties

Village leaders in Poland for more than 800 years have been performing their functions. Over this period, their roles have changed significantly, and their responsibilities have been adapted to the current needs of rural areas. Today, a village leader (sołtys) is primarily a leader of the local community, representing it externally while soliciting its needs and integrating its residents. In 2020, new village representatives were elected to develop the areas under their authority over the next five years. In many cases, these are people with no experience about the sołectwo. To help them perform their duties in the best possible way, it was decided to carry out a project entitled 'Village leader, village council, village meeting..., in other words what is allowed in the sołectwo'. The operation was also aimed at village leaders who had been elected for another term of office, so that they may broaden their knowledge and competences.

*Workshop conducted as part of the project 'Village leader, village council, village meeting..., in other words what is allowed in the sołectwo'.
Photo.: Rural Development Institute*





Project participants during the workshop Photo.: Rural Development Institute

Who took part in the project?

The project involved 100 village leaders and members of village councils from the Małopolskie Voivodship. In addition, the following organisations were involved in the project: Małopolska Agricultural Advisory Centre in Karniowice, trout breeding ponds Pstrąg Ojcowski, P.P.U.H. Tłocznia Maurer and Winnica Goja - vineyard and wine producer.

The first mentioned partner assisted the Rural Development Institute with the ongoing recruitment of project participants according to specific criteria and co-managed the full guest service during the workshop. The company Pstrąg Ojcowski provided refreshments for the village leaders in the form of a regional delicacy such as smoked trout. Tłocznia Maurer prepared gift sets for the project participants consisting of products bearing the Małopolska Culinary Heritage Network logo. The last partner of the operation, the Winnica Goja, took charge of the tasting of its wine during the gala dinner on the second day of the workshop.

Workshops to improve the skills of village leaders

During the three-day workshop, participants received the latest information on legislation (i.a. the legal basis for the functioning of the sołectwo, issues related to the sołectwo statute), knowledge of which is essential when performing the function of a village leader. In addition, those involved learnt how they can make their public speeches more attractive and learnt about effective conflict resolution methods.

DO YOU KNOW THAT...

The 'Village Mayor of the Year' (Sołtys Roku) competition has been running for over 20 years. The aim of this initiative is to promote the most active village leaders who contribute to the local community. This undertaking provides an additional motivation for every rural representative to continuously develop and acquire new skills. Participation in projects such as 'Sołtys, rada sołectka, zebranie wiejskie..., czyli co komu wolno w sołectwie' (Village leader, village council, village meeting..., in other words what is allowed in the sołectwo) opens up new opportunities for village leaders, thus increasing their chances of being recognised in the 'Village Mayor of the Year' competition.



Project participants during the workshop Photo.: Rural Development Institute

Improving the organisational skills of the workshop participants (thanks to the knowledge gained from the lecture on convening and preparing a Village Meeting, as well as conducting and taking minutes), increasing awareness of being a leader (lecture on public speaking and how to speak in order to be listened to) and acquiring conflict resolution skills (lecture addressing the issue related to pacifying and mediating in conflicts) will stimulate the workshop participants to act effectively.

Practical skills that facilitate the performance of duties

The most important result of the project was the acquisition by participants of skills related to the substantive and effective conduct of a Village Meeting, which is the decision-making body of a village. Thanks to the workshops, village leaders learned how to plan, announce, conduct and keep minutes of such meetings. The culmination of this thematic block was the staging of the Village Meeting, improvised by the participants, with roles assigned by drawing lots. In this way, those taking part in the workshop were able to test their newly acquired knowledge in practice.

Participant in a workshop carried out as part of the project 'Village leader, village council, village meeting..., in other words what is allowed in the sołectwo' Photo.: Rural Development Institute

In addition to his/her 'social skills', today's village leader should also have the knowledge about how to better perform the tasks associated with his/her function. This is why it is so important to create the conditions for village leaders to continuously improve their skills. An opportunity to do so was provided by workshops organised as part of the project entitled 'Village leader, village council, village meeting..., in other words what is allowed in the sołectwo'.



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Autumn Innovation Fair

Title of operation:	Autumn Innovation Fair
Implemented by:	Podkarpackie Agricultural Advisory Centre in Boguchwała
Completion date:	September - October 2021
Form of implementation:	fair
NRN Activity:	Activity 2: Networking activities for advisers and services supporting the implementation of innovation in rural areas
RDP Priority:	Priority 1: Knowledge transfer and innovation
Target group:	Entrepreneurs from the agricultural sector whose companies use innovative solutions, including in particular sellers of agricultural machinery and equipment, livestock, as well as farmers and representatives of research and advisory institutions
Objective of the operation:	Creating an opportunity for entrepreneurs from the agricultural sector to exchange knowledge, experience and expand their network of business contacts

Development of rural areas would not be possible without constant innovation, not only in terms of machinery and other equipment, but also in terms of solutions used in the agricultural sector. An excellent opportunity to acquire a new dose of this knowledge was the 'Autumn Innovation Fair' organised by the Podkarpackie Agricultural Advisory Centre in Boguchwała. The two days, during which participants had the opportunity to visit 200 stands, were a time not only to acquire practical information, but also to meet new people and entrepreneurs from the agricultural sector. The fair took place near the magnificent palace complex, consisting of the palace, granary, entrance gate and park. This location was an additional attraction of the event.

Autumn Innovation Fair, Photo: Małgorzata Wilk



Who took part in the project?

The most important target group addressed by the 'Autumn Innovation Fair' was agricultural entrepreneurs. Equally important audiences were representatives of scientific, agricultural and peri-agricultural institutions. Due to the reputation of the event, it was also attended by enthusiasts of Podkarpackie products and people wishing to gain new knowledge in the field of organic and sustainable agriculture.

Event history

'Autumn Innovation Fair' is a local event that has been organised for 16 years and is becoming increasingly popular among the people of Podkarpacie every year. Last year's fair attracted the attention of lovers of gardens and home orchards, as well as gourmets of regional wines and preserves. The theme of the 2021 fair was vegetables. Participants were able to acquire knowledge about the organic cultivation of individual species and obtain valuable information about their nutritional benefits. Pumpkins and their different varieties were a hit, and those interested in this vegetable could admire them in a carving edition. Potatoes were also a surprise, as they were shown in as many as 80 varieties from all over the world.



Autumn Innovation Fair, Photo: Małgorzata Wilk

The attention of the event's participants was also undoubtedly drawn to the fascinating rabbit exhibition. As part of this agenda item, experts shared innovative solutions about breeding of these animals. Experts made the audience aware of an interesting alternative in the form of rabbit breeding, due to the rarer occurrence of certain diseases among these animals, compared to other species (e.g. ASF).

Fair programme

During the two-day event, the following attractions were on the agenda:

- an exhibition of fruit and vegetables, fruit and vegetable preserves, honey and bee products,
- an exhibition of rabbits and small livestock,
- a national alpaca show,
- an exhibition of the latest varieties of table potatoes,
- a presentation of wine-making associations operating in the Podkarpackie region,
- a trade fair of nursery stock, grapewine bushes, seeds and flowers,
- demonstrations and presentations by companies promoting fruit processing,
- presentation of modern solutions in rabbit husbandry,
- competitions:
 - 'Carving inspirations with pumpkin',
 - 'The Best Product of the Podkarpacie Region - Fruit and Vegetable Dishes',
 - 'Painted by Autumn',
 - 'Flavours of Podkarpackie honey',
 - 'The tastiest cheese from Podkarpackie farms',
 - 'Good examples of implemented operations on agricultural farms as an element influencing the development of rural areas' conference,
- folk handicraft workshops for children,
- a master woodcutting demonstration by woodcutters,
- a presentation by Farmer's Wives' Associations,
- a folk crafts fair,
- demonstration of juice-pressing,
- demonstration of carving.

An inspiring event

'Autumn Innovation Fair' was an event that supported the networking of partnerships between those involved in agriculture. With several thousand participants (including experts on the implementation of innovation in agriculture) over the two days of the fair,

the discussions that took place during the event can certainly be counted as interesting and substantive. Thanks to the knowledge gained, entrepreneurs and those involved in agriculture will be able to reduce the number of technological mistakes made when creating a plantation, as well as during its subsequent management.



SIR promotion at the exhibition stand, Photo: Małgorzata Wilk

DO YOU KNOW THAT...

Carving is the art of sculpting vegetables and fruit. In Poland, this craft has been gaining more and more enthusiasts for several years. Currently, carving is one of the disciplines at the World and European Culinary Championships.

What are the possibilities for the future?

The topics discussed at the fair held in Boguchwała enable innovations in agriculture and rural areas to be implemented more effectively. Farmers learned more about the growing demands of the market, not only in Poland, but also in Europe. Obtaining such knowledge allows farms in rural areas to adapt their operations to support an environmentally-friendly attitude.

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Fruit and vegetable exhibition, Photo: Małgorzata Wilk



Rural Tourism Forum - History happens today

Title of operation:	VIII Kujawsko-Pomorskie (Kuyavian-Pomeranian) Rural Tourism Forum - History happens today
Implemented by:	Kuyavian-Pomeranian Agricultural Advisory Centre in Minikowo
Completion date:	November 2021
Form of implementation:	study visit conference, competition
NRN Activity:	Activity 6: Facilitate the exchange of knowledge between actors in rural development, exchange and dissemination of the results of rural development activities
RDP Priority:	Priority 1: Fostering knowledge transfer and innovation in agriculture, forestry, and rural areas
Target group:	Persons wishing to carry out tourism activities in rural areas and groups wishing to gain knowledge about ethnographic tourism, as well as owners of rural tourism facilities
Objective of the operation:	Educating participants about good practice in ethnographic tourism and selecting winners in a competition who will exemplify good practice in this area

Tourism activities constitute an important sector in the economy of rural areas. However, in order for sites and historic spaces to be attractive places to visit, they need to be properly adapted to the expectations and needs of tourists. To promote the education of entrepreneurs in rural areas of the Kujawsko-Pomorskie Voivodship, the Kujawsko-Pomorskie Rural Tourism Forum implemented a project to support the exchange of knowledge on tourism activities. It included a conference, a competition and study trips for five groups.

In 2021, the seventh 'History happens today' conference took place. Every year, this event attracts many enthusiasts of ethnography and related tourism, which involves learning about the folk culture of a particular place. It is a great opportunity to exchange knowledge and build cooperation between people who are strongly and actively involved in activities favouring the development of tourism in rural areas. Among experts on ethnography, participation in the 'History happens today' conference is considered a great honour. The theme of last year's event was the search for an answer to the question 'Is the commercialisation of rural cultural heritage the right thing to do?'

Forum participants, Photo: KPAAC in Minikowo





The owner of Gozdawa Manor (Pałac Gózdawa) receives an award for winning first place in the AGRO-vacation competition in the attractive regional cuisine category, Photo: KPAAC in Minikowo

Who took part in the project?

A total of 241 residents of the Kujawsko-Pomorskie Voivodship took part in all stages of the project. The vast majority of them were enthusiasts of ethnographic tourism, who through their activities contribute to the promotion and development of rural areas. The second group was composed by owners of rural tourism facilities, who submitted their participation in the AGRO-vacation competition. The involvement of the 15 entrepreneurs will help to promote the tourist offers of their facilities, which are distinguished by their extremely high level and quality.

Three days of practical knowledge and fruitful discussions

During the first day of the conference, held as part of the Kujawsko-Pomorskie Rural Tourism Forum project, some extremely interesting lectures took place. The first was entitled 'What is the value of ethnography?' and was led by Łukasz Ciemiński, ethnologist from the Father Władysław Łęga Ph.D. Museum in Grudziądz. His lecture, which began the conference, showed participants the cultural wealth of the Kujawsko-Pomorskie Voivodship, while at the same time presenting the possibilities for its skilful commercialisation. The expert encouraged the use of recognised professional sources during this process, as well as seeking inspiration in the resources of local 'small fatherlands'.

During a lecture on culinary tourism, dr Izabela Chudzyńska from WSG: the University of Economy in Bydgoszcz (WSG), said that 'just a pinch of truth is enough for us to feel the taste of authenticity'. There are culinary trails with a very strong tradition of manufacturing a product in a given area, yet lacking in imagination. There are also those where modern modifications prevail over historical truth. Finding the golden mean between fantasy and fact is therefore a recipe for success.

Laura Maciejewska shared her recipe for success with the conference participants. The speaker presented a number of suggestions for expanding an agrotourism farm to include elements related to regional folklore. In turn, Agnieszka Kowalkowska, director of the Kujawsko-Pomorskie Tourist Organisation office, proved that 'commercialisation' is not a word to be avoided in the context of developing ethnographic tourism and protecting the region's cultural heritage.

The last lecture, by Aleksandra Hapka from KPAAC in Minikowo, concerned the promotion of vanishing professions in the context of building an Educational Homestead offer. Although they seem archaic compared to modern production methods, they still represent an excellent way of using natural resources. It should always be borne in mind that for children and young people, understanding is the basis of learning. Therefore, it is worth bearing this in mind when discussing given issues related to, for example, food production or processing.

DO YOU KNOW THAT...

Ethnographic tourism involves learning about and exploring places inhabited by different ethnic groups and familiarising visitors with their living culture - customs, rituals and crafts.

The ethnologist's work also involves preparing museum exhibitions of regional and non-European character. The greatest challenge is to create an accessible and comprehensible story on the chosen topic using the objects collected in the archive. An important part of the ethnologists' work involves so-called field trips, where they document existing evidence of the past as well as customs that are still alive today. Often during such trips, ethnologists interview local people and acquire valuable objects for museum collections.

On the second day of the conference, a study trip for five groups was organised, so that participants could learn in practice about the activities of facilities creating a tourist offer based on the rich cultural heritage resources of the Kuyavian-Pomeranian region.

On the third day of the conference, a debate was held. It was attended by experts from various backgrounds - museology, education, local development, EU funds, tourism industry. Each presented his/her point of view on the commercialisation of the cultural heritage of the Polish countryside. Once again, it was confirmed that the strength lies in cooperation and in listening to all interested parties. The debate uncovered many opportunities for tourism businesses and opened the door for further discussions and deliberations on building local tourism products.



Traditional Kashubian pattern from the Tuchola Forest Area (so called 'borowiacka school') decorates and distinguishes the scout scarf; Photo: KPAAC in Minikowo

AGRO-vacation competition

As part of the AGRO-vacation competition, 15 facilities were selected (five in each of the three categories: agro-tourism farm, rural tourism services, attractive regional cuisine), which present an outstandingly high standard with their activities. Applications for the competition were accepted until the end of June 2021, and the final decision on which sites were qualified for the 2nd stage of the competition took place in late July/early August. The winners were announced and awarded during the first day of the conference.

Three partners were involved in the implementation of the operation: the Kujawsko-Pomorskie Tourist Organisation, the Local Action Group "Municipalities of Świecko Powiat" and the Local Action Group 'Tuchola Forest'. All partners undertook to promote the operation on their websites, and the Kujawsko-Pomorskie Tourist Organisation additionally provided conference materials in the form of folders with the logo, notepads and pens.

Project results as a role model

The three-day 'History happens today' conference covered many important topics related to promoting the countryside as a place to do business. Participants at this event received a lot of valuable information about ethnographic tourism and the sustainable use of local resources to promote a region. This knowledge provided those attending the conference with a base to enable them to implement rural development initiatives.

The AGRO-vacation competition, conducted as part of the project, selected 15 winners whose tourist facilities can serve as an example and inspiration for other owners of such buildings. The honoured buildings help to set the standards that every entrepreneur in the field of ethnographic tourism should strive to achieve.

Plans for the future

As during the previous editions of the conference, this time, too, proposals for future activities for the development of rural tourism emerged through discussions with participants. Examples of participants' ideas include improvement of the Internet agrotourism database, new training topics for persons active in the agrotourism sector, and the intention to create a culinary tourist trail in the Kujawsko-Pomorskie Voivodship. Several participants expressed their desire to create an Educational Homestead and to join the National Network of Educational Homesteads.

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Summer bird cherry shows

Title of operation:	Summer cherry shows (Prunus avium L.)
Implemented by:	Świętokrzyska Chamber of Agriculture, Sandomierz Apple Trail Association
Completion date:	August 2021
Form of implementation:	workshop
NRN Activity:	Activity 6: Facilitate the exchange of knowledge between actors in rural development, exchange and dissemination of the results of rural development activities
RDP Priority:	Priority 2: Enhancing farm viability and competitiveness of all types of agriculture in all regions and promoting innovative farm technologies and the sustainable management of forests
Target group:	Rural residents, particularly fruit growers from the Świętokrzyskie Voivodship
Objective of the operation:	Educating participants on sustainable horticulture and practical ways to improve the profitability and competitiveness of their farms

Modern and sustainable farms must be run in such a way that they are both distinguished by their ecological approach and high profitability. To achieve such goals, continuous education and the acquisition of new skills by farmers is essential. One of the best ways to develop competences is to participate in various workshops and lectures. Therefore, in cooperation with the Świętokrzyska Chamber of Agriculture and the Sandomierz Apple Trail Association, a workshop entitled 'Summer Bird Cherry Shows' was held in Sambórz in August 2021.

The aim of the project was to train and raise the level of knowledge of farmers from the Świętokrzyskie Voivodship in sustainable horticulture. With the information gained from the workshop, participants will be able to improve the profitability and competitiveness of their farms, in particular by introducing or developing responsible bird cherry cultivation.

Another aim of the operation was to familiarise farmers with the latest European trends in sustainable fruit production, taking into account optimal use of the environment and preservation of biodiversity. In addition, the workshop promoted the establishment of bird cherry plantations as a way to develop entrepreneurship and increase farm profitability.

Who took part in the project?

The workshop, held as part of the 'Summer Bird Cherry Shows', was attended by 200 fruit growers living in the Świętokrzyskie voivodship who were interested in sustainable bird cherry production.

DO YOU KNOW THAT...

Bird cherries are naturally sweet and are an excellent source of vitamin C and polyphenols, which are essential elements for maintaining skin health. The aforementioned ingredients are powerful antioxidants and therefore show anti-inflammatory properties. They also help to reduce oxidative stress, while reducing damage to the skin caused by free radicals.

Workshops full of theoretical and practical knowledge

During the first, practical part of the workshop, participants visited an orchard under shelter where they were able to admire the Kordia and Regina bird cherry varieties. This was also the time when they got knowledge about issues such as:

- management and pruning of the bird cherry orchard,
- orchard protection and monitoring for diseases and pests,
- practical aspects of fertilising bird cherries.

During the second, theoretical part, participants learned about the following topics:

- a summary of the bird cherry season,
- supplying the right ingredients before, during and after the harvest,
- new varieties of bird cherry,
- causes of trunk cracking on bird cherries and ways to prevent it.

The lecture also addressed issues related to increasing the profitability and competitiveness of the participants' farms. During the workshop and lecture part of the project, in addition to practical knowledge of bird cherry growing, aspects of preserving the optimum use of environmental resources by rural inhabitants, maintaining biodiversity and implementing the principles of green economy were also addressed.

Participants in the operation were introduced to the latest European trends in sustainable fruit production, taking into account green economy principles. The latest information was shared during lectures given by experts from Belgium and the UK. The provided knowledge covered European trends and technologies, including the appropriate use of cultivation treatments, reduced use of chemicals and more efficient use of natural resources.

Fruitful results of the project

As a direct result of the operation, more than 200 farmers were educated about sustainable horticulture. More and more consumers are paying attention to where the fruit and vegetables they buy come from. This is why farms providing organic growing conditions for crops are more often chosen by owners of larger and smaller shops. Increased interest in growing bird cherries may contribute to an expansion of the acreage under this species, having a high economic potential.



Participants of the 'Summer Bird Cherry Shows', Photo: Monika Witek



Participants of the 'Summer Bird Cherry Shows' during the discussion at the lecture
Photo: Monika Witek

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What's out of the homestead, it's on the table following the slogan 'Niech Cię Zakole'

Title of operation:	What from the homestead, it's on the table following the slogan 'Niech Cię Zakole' (Take a turn in our pantry) - kołudzka goose, merino lamb and złotnicka pork in the local tourist and culinary brand
Implemented by:	Institute of Zootechnics - National Research Institute
Completion date:	May - October 2021
Form of implementation:	educational and implementation workshops
NRN Activity:	Activity 6: Facilitate the exchange of knowledge between actors in rural development, exchange and dissemination of the results of rural development activities
RDP Priority:	Priority 3: Promoting food chain organisation, including processing and marketing of agricultural products, animal welfare and risk management in agriculture.
Target group:	Entities forming a short supply chain, including local breeders of native sheep breeds, small processors, caterers and agro-tourism operators from the Niech Cię Zakole trail and candidates for accession, as well as a group of consumers from the above-mentioned entities, including Lancers Honored and customers of regional product fairs in Bydgoszcz and Toruń
Objective of the operation:	Supporting the regional tourism and culinary brand 'Niech Cię Zakole' in the creation of short supply chains and the marketing of products based on the local breeding potential of native breeds

Lamb leg and ribs



The effective use of indigenous raw material sourced directly from local breeders significantly enhances the quality of the services offered by catering operators, constituting a strong local tourist and culinary brand. In the spirit of these assumptions, the Institute of Zootechnics - National Research Institute together with its partners: The Kuyavian-Pomeranian Tourist Organization and the Copernicana Anna Gajewska Tourist Office carried out a project entitled 'What from the homestead, it's on the table' following the slogan 'Niech Cię Zakole' - kołudzka goose, merino lamb and złotnicka pork in the local tourist and culinary brand.



Goose from Koluda

Following the culinary trail

The programme of the operation was extremely extensive. The project involved educational and implementation workshops, including:

- a series of three workshops implemented in catering facilities - 36 trainees and 60 people representing the consumer link,
- two educational workshops in the Experimental Plant of the Institute of Zootechnics - 40 participants,
- exhibition stands organised three times at the Toruń Free Fair and three times at the Bydgoszcz Frymark (Freimarkt),
- an outdoor event under the slogan 'What's out of the homestead, it's on the table at the Niech Cię Zakole picnic'.

The project was designed to support the regional tourism and culinary brand 'Niech Cię Zakole' in the marketing of products manufactured on the basis of local breeding potential of native breeds: white goose, Polish merino of the old type and złotnicka swine.

Who took part in the project?

The operation was attended by local breeders of native sheep breeds, as well as caterers, poultry processors and agri-tourism operators from the Niech Cię Zakole trail, and candidates for accession. Another group of recipients were consumers of the above-mentioned entities, including Lancers Honored enjoying tourist, catering and processing services, and customers of regional product fairs in Bydgoszcz and Toruń.

Workshops full of taste

As part of the operation, two educational and implementation workshops entitled 'Native Breeds - Top Class' were held at the catering entities that make up the Niech Cię Zakole Trail. The topics focused on lamb, goose and pork of native breeds.

Participants learnt how to effectively use each element of the carcass in catering and processing. During the two-day workshop, they used culinary workbooks with recipes drawn from the regional culinary heritage. At the end of each training day, a tasting panel was organised. This resulted in menu offerings based on meat, from local breeders.

Two educational workshops on the cutting into elements of pork, lamb and goose carcasses were also held at the Experimental Plants of the Institute of Zootechnics in Kołuda Wielka and Pawłowice. Cooking teams from six restaurants and agri-tourism establishments from the Dobrzyń Land and the Lower Vistula Valley were trained. These workshops enabled the consolidation of the production and processing line.

As part of the operation, exhibition stands promoting products of indigenous breeds were also organised. A total of six events were held at the Free Fair in Toruń and the Bydgoszcz Frymark. All events included culinary demonstrations and tastings in the programme and were targeted at niche consumers of regional products.

The culmination of the project was an outdoor event entitled 'What's out of the homestead, it's on the table at the Niech Cię Zakole picnic', realised at the Życie Gruzji (Georgian Life) restaurant in Osielsko. During the event, three culinary demonstrations and tastings were held, at which the culinary tourism offer of the Niech Cię Zakole trail in the Lower Vistula Valley was presented. The stands were visited by around 300 buyers.



A lecture on the goose

DO YOU KNOW THAT...

Bigos from lamb, a speciality of the culinary brand 'Niech Cię Zakole', is made according to the original recipe, according to which bigos from noble meats does not contain cabbage.

In the Kuyavian-Pomeranian region in Dobrzyń Land, the Vistula is the widest in its course - 2000 m. Flowing through the Lower Vistula Valley, it turns sharply and creates a charming meander (in Polish language zakole). 'Niech Cię Zakole', how beautiful it is here!

Project results and future prospects

The implementation of the operation contributed to the creation of three supply chains involving the Experimental Plants of the Institute of Zootechnics in Kołuda Wielka and Pawłowice, which resulted in closer cooperation between restaurants and agrotourism. Products from native breeds have been introduced to the offers of the trail operators under the common brand 'Niech Cię Zakole'. This provided consumers with access to high-quality local products. On the other hand, goose breeders from Lower Vistula Valley

and Dobrzyń Land gained a systematic sale to caterers from the 'Niech Cię Zakole' trail. An unintended effect of the operation was the creation of three ART activities in Dobrzyń Land with breeding and specialisation in the processing of lamb, goose and pork.

'Niech Cię Zakole' products



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Healthily and traditionally

Title of operation:	Linseed oil, nowotomska sausage - healthily and traditionally on the Wielkopolska table
Implemented by:	Wielkopolska Agricultural Advisory Centre in Poznań
Completion date:	May - October 2021
Form of implementation:	training workshop
NRN Activity:	Activity 6: Facilitate the exchange of knowledge between actors in rural development, exchange and dissemination of the results of rural development activities
RDP Priority:	Priority 3: Promoting food chain organisation, including processing and marketing of agricultural products, animal welfare and risk management in agriculture.
Target group:	Farmers from the Wielkopolskie Voivodship intending to start food processing based on local product and selling under short supply chains, agricultural advisors, representatives of Local Action Groups
Objective of the operation:	Transfer of knowledge and skills to farmers and other entities about food processing based on local product and traditional production methods

Regional and traditional products are undoubtedly important elements supporting the economic development of the region. This is evidenced by the fact that in today's competitive market, a gradual increase of consumer interest in products made using traditional methods is noticeable. Greater concentration of processing activities in rural areas is therefore an important direction for the development of these regions. An important step towards the realisation of this objective was the operation entitled 'Olej lniany, kiełbasa nowotomska - czyli zdrowo i tradycyjnie wokół wielkopolskiego stołu' (Linseed oil, nowotomska sausage - healthy and traditional on the Wielkopolska table), carried out by the Wielkopolska Agricultural Advisory Centre in Poznań.

As part of the project, four training meetings were organised, entirely devoted to issues of rational nutrition as well as the processing and marketing of local products. During the second part of the operation, eight specialised

Lecture part of the workshop





Tasting of traditional nowotomyska sausage

workshops were held. The project was primarily aimed at providing the assembled farmers and others with knowledge on food processing based on local product and traditional manufacturing methods. This had a significant impact on the sustainable development of rural areas and on improving the profitability of farms by developing processing activities and creating new jobs.

Who took part in the project?

Key addressees of the operation were farmers from the Wielkopolskie Voivodship who intend to start food processing based on local products and selling as part of short supply chains. The project participants also included agricultural advisers and representatives of Local Action Groups.

DO YOU KNOW THAT...

Cold-pressing of oil is a low-temperature processing of grains and seeds of plants, thanks to which it is possible to protect all their valuable components: vitamins, organic chemical compounds and unsaturated fatty acids, including polyunsaturated fatty acids omega-6 and omega-3. The body cannot produce unsaturated fatty acids on its own, which is why it is so important to supply them with food. Their presence in the diet has a real impact on our wellbeing - resistance, nervous system function, skin and hair condition.

Nowotomyska sausage is a maturing sausage, raw, smoked with natural smoke, coarsely chopped. It contains no phosphates, artificial additives or fillers. The raw material used comes from the producer's own farm and from local farmers in the Nowy Tomyśl county.

Knowledge as a starting point for effective action

As part of the operation, four training and workshop meetings were held at the County Agricultural Advisory Centre in Sielinek (Nowy Tomyśl County).

Academics from state universities acted as lecturers. The individual training blocks were devoted to the following topics:

- 'Food and human health - the aware producer and consumer',
- 'With tradition into the future - local, regional and traditional products',
- 'Short supply chains based on regional products of plant origin',
- 'Short supply chains based on regional products of animal origin'.

The second stage of the operation was the organisation of eight workshops. Half of these were on cold-pressing of oil, the other four meetings were related to traditional smoking of products.

Project results and future prospects

The immediate effect of the implementation of the operation was an improvement in the knowledge and skills of farmers and other entities from the Wielkopolskie Voivodship in the field of food processing. The adopted formula of the operation (training courses, workshops) enabled the achievement of the set objective in relation to farmers who want to produce high quality food and also entities which have an impact on supporting the organisation of the food supply chain. It was also an important step towards building a partnership network in the Wielkopolska region.

Thanks to the implementation of the operation, the participation of those interested in introducing rural development initiatives has increased. Participants in the lectures have shown interest in on-farm processing, and farmers who have so far been undecided want to take up this type of activity. This in turn will translate into an enriched product offer and increased attractiveness among potential consumers looking for regional and local food of unique taste and quality. The operation has also served to promote the countryside as a place for living and professional development.



Workshop on product smoking organised by WAAC

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Countryside is THE BEST

Title of operation:	Countryside is THE BEST - I am staying here
Implemented by:	Local Tourist Organization 'LOT nad Bugiem'
Completion date:	April - October 2021
Form of implementation:	workshops video
NRN Activity:	Activity 11: Activate villagers to undertake initiatives for social inclusion, especially the elderly, young people, the disabled, national minorities and other socially excluded people
RDP Priority:	Priority 6: Promoting social inclusion, poverty reduction and economic development in rural areas
Target group:	Children and young people from the 'LOT nad Bugiem' area, that is from the Siemiatycze, Łosice and Siedlce poviats (counties) - Korczew municipality
Objective of the operation:	Increasing the knowledge and skills of children and young people of the Podlasie Nadbużańskie region regarding career opportunities offered by environmental resources, small-scale processing, tourism and local crafts

Participants during the workshop 'Suzette pancakes from the Podlasie Nadbużańskie, a combination of traditional and French cuisine'



Podlasie Nadbużańskie is located on the border between the three voivodships: Podlaskie, Mazowieckie and Lubelskie. The area is characterised by great diversity, both religiously and culturally, as well as linguistically. Young people, having completed their education, leave this region in large numbers for big cities, failing to see the career prospects offered by their current place of residence. This is leading to a gradual depopulation of these rural areas. To counteract this, an initiative entitled 'Countryside is THE BEST - I am staying here' was organised by the Local Tourist Organisation 'LOT nad Bugiem'.

The project organised in September 2021 a series of six workshops addressed to children and young people. A video was produced from the event, which is permanently available online for a wide audience. The goal of the operation was to increase the knowledge and skills of young residents of the Podlasie Nadbużańskie region to seek career opportunities. Due to its rich natural resources (the Bug River, unique vegetation, mines), the Podlasie Nadbużańskie region is now becoming more and more touristic. New entities providing recreational services, accommodation,



Participants of the rafting trip on the Bug River

catering, as well as small processing plants producing local products are constantly being established in these areas. The operation was intended to demonstrate the potential of rural areas and prove that the countryside can be a promising place for living and professional development.

Who took part in the project?

The workshop was addressed to children and young people living in the counties of Siemiatycze, Łosice and Siedlce - Korczew municipality.

September dedicated to workshops

The project has organised six workshops led by experienced lecturers and local entrepreneurs according to the following schedule:

- 9 Sep 2021 - 'Suzette pancakes from the Podlasie Nadbużańskie, a combination of traditional and French cuisine',
- 14 Sep 2021 - 'A walk through a fruit orchard',
- 16 Sep 2021 - 'Local minerals and their applications',
- 17 Sep 2021 - 'Children's cooking, the story of Janusz Korczak',
- 20 Sep 2021 - rafting on the River Bug as part of the lesson 'Observation of birds and animals along the Bug River',
- 22 Sep 2021 - 'Organic farming' workshop.



'Organic farming' workshop participants

DO YOU KNOW THAT...

Do you know that organic farming is a pro-environmental method of agricultural production and a system of farm management that combines environmentally preferable practices, a high degree of biodiversity, the conservation of natural resources as well as the application of high standards of animal welfare and a production method geared towards the use of natural processes and substances.

Groups of 15 children and young people attended each workshop. Participants were able to attend as many workshops as they wished. The workshops dealt with a variety of topics, but each emphasised the important values of the region: environmental resources, small-scale processing, tourism, local crafts. During the workshops, participants discovered what organic farming was, learned how to segregate waste and created permaculture boxes (permaboxes). As part of the mineral training, they visited a chalk mine and created jewellery with flint.

Young participants were able to see, through the example of local entrepreneurs, how they use the potential and resources of their region. This is certainly an inspiration for children and young people, which may encourage them to stay in the countryside and take their own entrepreneurial initiatives in the future.

Summary information about the workshops was documented in the form of a video available online. This material not only promotes the qualities of the Podlasie Nadbużańskie region, but also serves as a guide for subsequent persons (e.g. educators, teachers) interested in organising similar workshops.

Project results and future prospects

Participants in the operation learned how to make effective use of local resources for personal and professional development. In the future, this will certainly result in a higher percentage of people willing to stay in rural areas and set up businesses there. This goes hand in hand with the creation of new jobs and the activation of the young generation to work together for the local community.

The publication of the video from this event can be of great help to teachers and local educators, who will be able to use it to promote the resources of the Podlasie Nadbużańskie region to further audiences. Implementation of the operation has the potential to significantly improve the economic situation of the region by promoting social inclusion.

Need more information?
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Demonstration farms from Greater Poland

Title of operation:	Demonstration farms as tools for supporting knowledge transfer
Implemented by:	Wielkopolska Agricultural Advisory Centre in Poznań
Completion date:	November 2021
Form of implementation:	study trip, video, conference
NRN Activity:	Activity 2: Networking activities for advisers and services supporting the implementation of innovation in rural areas
RDP Priority:	Priority 1: Fostering knowledge transfer and innovation in agriculture, forestry, and rural areas
Target group:	Agricultural producers, residents of rural areas, employees of agricultural advisory units, other persons interested in the topic
Objective of the operation:	Facilitating knowledge transfer in the field of modern agricultural production and promotion of good practices in the area of innovative solutions based on the example of the activity of Demonstration Farms

Taking into account the need to disseminate good agricultural and production practices, on the initiative of WAAC in Poznań a network of demonstration farms was set up in Wielkopolskie (Greater Poland) Voivodship. This network is composed of entities related to agriculture, such as farms attached to scientific institutions, producer groups and individual farmers with different production profiles. Demonstration farms are a tool for supporting knowledge transfer and facilitating the dissemination of good agricultural and production practices, including innovative solutions that can be applied on the farm. The operation 'Demonstration farms as a tool for supporting knowledge transfer' implemented under the Innovation Network in Agriculture and Rural Areas (SIR)) was geared to these objectives.

The subject of the operation were two study trips to selected demonstration farms, as well as the production of 10 videos on subjects closely related to the activities of these farms, and one conference, being a summary of the project. The overall objective of the initiatives carried out was to facilitate the exchange of knowledge and experience in the field of modern agricultural production. In addition, the project contributed to the dissemination and promotion of good practices in the area of modern solutions, using the activities of demonstration farms as an example.

Biogas plant in Przybroda, Poznań University of Life Sciences
Photo: Agnieszka Staniszevska



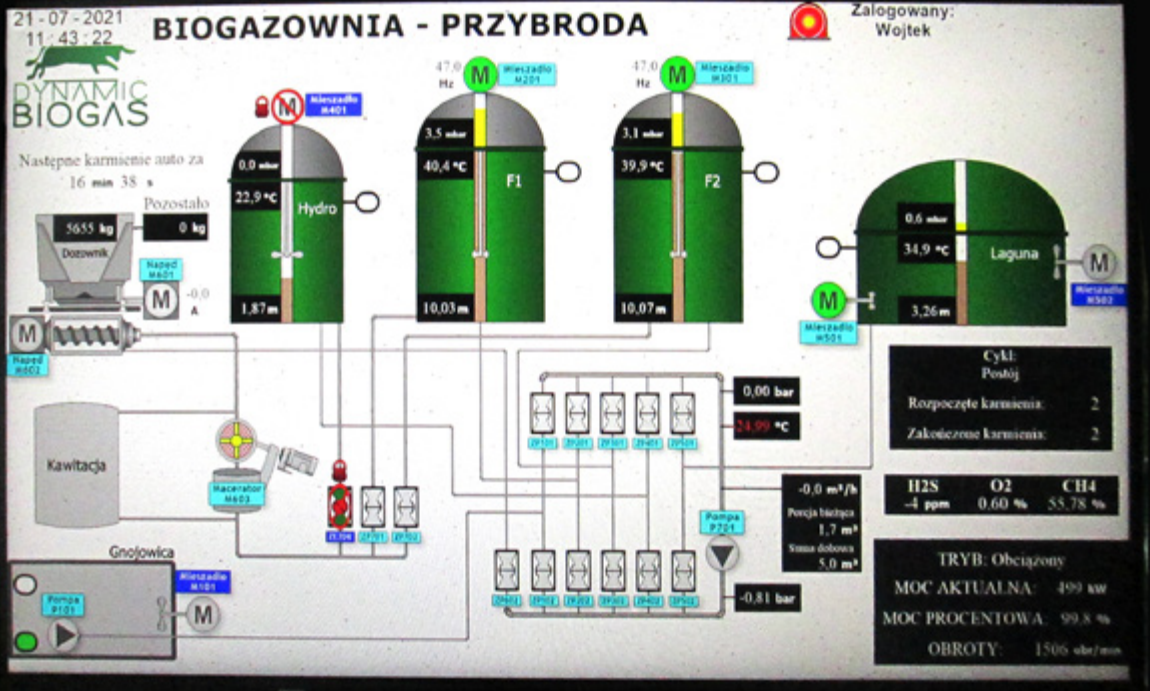


Diagram of the biogas plant, Photo: Agnieszka Staniszevska

Who took part in the project?

The project was attended by a group of farmers, agricultural producers and employees from agricultural advisory bodies. The event also brought together residents of rural areas, as well as other persons interested in the topics covered.

Working towards a common goal

The first study trip organised under the operation took place on 21 July 2021. A group of farmers visited the Agriculture and Pomology Research Farm (APRF) in Przybroda, belonging to the Poznań University of Life Sciences. This farm is commonly known for its innovative biogas plant. For this reason, the trip included a lecture entitled 'Technical aspects of small and large agricultural biogas plants. How to operate a biogas plant?', delivered by Prof. Jacek Dach from the Department of Biosystems Engineering of the Poznań University of Life Sciences. Participants gained valuable knowledge on how to build a biogas plant which is in line with global environmental trends and the European Green Deal strategy.

Following the lecture, participants went on a practical visit under the guidance of the biogas plant's CEO, Miroslaw Michalak, during which they learned what a biogas plant looks like, as well as the stages of biogas production.

Semco oils, Photo: Agnieszka Staniszevska



The second study trip took place on 29 July 2021. Participants of the project this time went to Śmiłowo, where the family company Semco, which specialises in cold-pressing oils, is located. During the visit, farmers listened to lectures about the technological usefulness of oils and how to store them. Thanks to this, the participants learned about the pro-health properties of oils, how they can be used in everyday life, and how the process of pressing oil from gold-of-pleasure seeds looks like.

The operation produced 10 videos showing demonstration farms. The material provides an excellent workshop for implementing

DO YOU KNOW THAT...

The biogas plant on the farm belonging to Poznań University of Life Sciences is unique in Europe. It is based entirely on Polish technology, which is much more efficient than those used to date. The plant processes waste from the 100 dairy cows on site and local food waste that is delivered daily.

Gold-of-pleasure is one of the oldest oilseed plants cultivated in Europe. Archaeological finds confirm that it was already known in the Bronze Age. It has been used in Poland for an exceptionally long time, as evidenced by folk names such as ryżyk, rydz, Inicznik or lennica. Today, its commonly used name is gold-of-pleasure - not to be confused with linen (flax).

innovations directly into farming practice. All the films are available on the website of WAAC in Poznań, under the SIR tab. This allows them to reach a wide audience.

The project concluded with a conference during which farmers, breeders and villagers listened to lectures on innovations used in crop production and modern tools used in agricultural activities. There was also a lecture on applying for funding under the Co-operation measure.

Project results and future prospects

Through the implementation of the operation, farmers gained knowledge about the construction of a biogas plant and the costs of its exploitation. They also learnt about the potential profit after one year of operation of a biogas plant and were made aware of the most important regulations concerning the construction and use of biogas plants. Meanwhile, the time spent at Semco made participants aware of the importance of using high-quality oils in their daily diet. In turn, a direct result of the conference is the apparent strengthening of cooperation between the main agricultural producers from Greater Poland.



Pressing device used for pressing oil from the gold-of-pleasure seeds, Photo: Agnieszka Staniszweska



Need more information?
Feel free to contact us:
www.wodr.poznan.pl

Conference at Racot Stud Farm
Photo: Agnieszka Staniszweska

Clean and beautiful homestead

Title of operation:	Clean and beautiful homestead - aesthetic village
Implemented by:	Union of Warmian-Masurian Municipalities
Completion date:	April - October 2021
Form of implementation:	competition
NRN Activity:	Activity 13: Promotion of sustainable rural development
RDP Priority:	Priority 6: Promoting social inclusion, poverty reduction and economic development in rural areas
Target group:	Inhabitants of villages from municipalities belonging to the Union of Warmian-Masurian Municipalities
Objective of the operation:	Improving the ecological and aesthetic condition of the villages registered for the competition and raising the awareness of the target group about the importance of caring for their environment

Biesowo village, which won 1st place in the competition 'Clean and beautiful homestead - aesthetic village'



Attention to aspects of cleanliness and the overall aesthetics of rural regions is extremely important for the sustainable development of these areas. Making use of the natural resources of a particular region makes it possible to create unique and beautiful areas which will further encourage tourists to visit the village. Breaking the stereotypes associated with the traditional appearance of the Polish countryside creates new opportunities for local residents to develop their space. An excellent opportunity to improve or create an aesthetic countryside was provided by the 'Clean and beautiful homestead - aesthetic village' competition. The project aroused in the participants a sense of responsibility for the appearance of the village in which they live. In addition, the competition increased residents' knowledge of how to skilfully shape the image of a village, while at the same time preserving its traditional appearance.



Award ceremony for competition winners

Who took part in the project?

A total of 35 villages and towns from municipalities belonging to the Union of Warmian-Masurian Municipalities took part in the competition, and a total of 700 residents were involved in their metamorphosis. Taking care of the common space helped to consolidate positive social attitudes and to build them from an early age. In many localities, children also took part in the clean-up work. In addition, young people have become involved in improving the image of the village. An example is the situation in Nowa Wieś Kętrzyńska, where young people removed unsightly graffiti from a public building.

Working together to improve the image and quality of life in the countryside

For seven months (April to October 2021), the competition participants worked intensively to improve the attractiveness of the respective villages. It was also an opportunity to improve the ecological condition of the area in question (by getting rid of any loose waste, placing enough bins, etc.). During the course of the competition, the Voivodship Competition Committee made two visits to the villages that had applied for participation in the project. The first visit was to assess the initial condition of the area, while the second tour verified the progress of the residents' work in terms of aesthetics and ecology.

As a result of the evaluations, four financial prizes were awarded to the winning villages. For the other villages that placed next, additional NRN partners funded in-kind and financial prizes.

The closing gala of the competition took place on 12 October 2021. During it, prizes were awarded to the winners and an exhibition illustrating the awarded villages was organised. Through the photographs, participants were able to see and admire how the potential of a village had been used, taking into account its local development.

Ogródki village, which won 4th place in the competition 'Clean and beautiful homestead - aesthetic village'





Winda village, which won 2nd place in the competition 'Clean and beautiful homestead - aesthetic village'



The village of Nowa Wieś Kętrzyńska, which won 3rd place in the competition 'Clean and beautiful homestead - aesthetic village'

Pleasing project results

As a result of the competition, the aesthetic and environmental image of 35 villages has changed. The involvement of almost 700 project participants changed their attitude from passive to active, in terms of the metamorphosis of the image of the place in which they live. The communities of specific villages began to integrate and together influence the ecological and aesthetic state of the areas surrounding them every day. The stimulation of residents' activity to improve their quality of life, the activation of social potential and the activity of the inhabitants translated directly into the development of villages and the creation of better living conditions (many places for joint recreation were created, bus stops were improved, beaches cleaned, etc.). The attractive environment of many villages has become an example to follow for other villages from the same municipality and neighbouring municipalities. Good example and the domino effect are able to change the rural environment - some villages already declared their participation in the next competition.

DO YOU KNOW THAT...

Biesowo village in the Biskupiec municipality hosts the annual Warmia Pierogi Feast, an event which combines tradition, culture and fun. The highlight of the event is the selection of the tastiest dumpling (in Polish pieróg) among dozens of stands representing localities from the Warmia and Masuria Voivodship. Each edition of the Warmian Pierogi Feast attracts residents from the surrounding villages and is extremely popular. At the 2021 festival, participants were able to taste both traditional dumpling varieties, such as dumplings with meat or berries, as well as more unusual ones, such as those with kebab or fish.

Need more information?
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Honey BEE'siness (Miodowy BEE'znes)

Title of operation:	Beekeeping Forum - the honeybee business (BEE'siness)
Implemented by:	Pszczółki municipality
Completion date:	May - September 2021
Form of implementation:	conference workshop competition
NRN Activity:	Activity 2: Facilitate the exchange of knowledge between actors in rural development, exchange and dissemination of the results of rural development activities
RDP Priority:	Priority 1: Fostering knowledge transfer and innovation in agriculture, forestry, and rural areas
Target group:	Residents of the Pomeranian Voivodship, in particular people living in the municipality of Pszczółki, beekeepers, children and adolescents as well as adults interested in using bee products
Objective of the operation:	Promoting knowledge of agricultural production based on beekeeping and acquiring new skills for modern forms of marketing honey and other bee products, as well as raising awareness among the residents of the Pomeranian Voivodship about the important role that bees play in the natural environment

Human use of nature's gifts should be carried out in a conscious manner, taking into account the environmental impact of these activities. Only then can we speak of sustainable agriculture and forestry in rural areas. With a view to spreading education in this area, the 'Honey BEE'siness' project was carried out. The operation was implemented through three activities - a conference, a competition and a workshop. All of the above-mentioned stages took place between May and September 2021.

Who took part in the project?

As many as 60 beekeepers from the entire Pomeranian Voivodship took part in the 'Pszczółki Beekeeping Forum - Honey BEE'siness' conference. In turn, through the implementation of five workshops on the creation of cosmetics based on bee products, 100 people (including 40 adults and 60 children) acquired new skills and opportunities to develop their own innovative business. The final activity of the 'Honey BEE'siness' project, which involved a competition, provided an excellent opportunity for school children to improve their knowledge about nature.

Workshop participants learned how to prepare natural cosmetics from bee products on their own, Photo: Archives of Pszczółki Municipal Office





Pszczołki Beekeeping Forum - Honey BEE'siness - during the conference experts encouraged beekeepers to expand their business by using bee products in a modern way

Photo: Archives of Pszczołki Municipal Office

Bee conference

The forum took place on 27 August 2021 at the Municipal Public Library in Pszczołki. It was attended by beekeepers and people interested in topics related to this particular profession (especially the promotion of bee products). The main objective of the conference was to encourage local beekeepers to develop their entrepreneurship and to become active in business fields they had not been familiar with before (e.g. by developing a new, expanded offer related to beekeeping or the use of innovative promotional tools). The conference programme included topics addressing issues related to increasing the efficiency of beekeepers' activities. Examples of presentation topics:

- 'Building own brand',
- 'Innovative and profitable apiary',
- 'Bee products and their forms of distribution'.

In view of the considerable interest on the part of beekeepers living in the Pomeranian Voivodship, it can be concluded that the topics discussed at the conference were well chosen. During the event, it was possible not only to learn interesting things about beekeeping, but also to meet people involved in this particular activity. The conference 'Pszczołki Beekeeping Forum - Honey BEE'siness' was an excellent opportunity for entrepreneurs to expand their network of contacts.

DO YOU KNOW THAT...

Pszczołki village is to this day well-known for its honey production, and its distinguishing mark includes three bees placed against the background of the village emblem. The first honey-based products were produced in Pszczołki as early as in the 14th century.

Pszczołkowski honey has been included on the list of traditional products maintained by the Ministry of Agriculture and Rural Development. It is produced in three types: May honey, June honey and July honey. Pszczołkowski honey is an unbelievably valuable product also because of its medicinal qualities. Until recently, it was mainly considered a medicine. It is used for the treatment of heart, respiratory and digestive diseases. May honey is characterised by an intense, decidedly sweet flavour and aroma. June honey, on the other hand, has a milder sweet, floral taste and aroma. In contrast, July honey is characterised by a flavour that is the most pronounced of the other offerings, with some describing it as pungent.

Workshop on making natural cosmetics from bee products

Meetings full of practical knowledge were attended not only by adults interested in natural cosmetics, but also by children. Under the guidance of professional trainers, workshop participants created various types of cosmetic products on their own. Their work resulted, i.a. in an enzymatic tonic based on nectar giving flowers, a nourishing cream containing beeswax, a honey shower gel, a honey body peeling and effervescent bath balls. The participants not only gained knowledge about the possibilities of using the natural resources of their region, but also became convinced that local production based on natural ingredients can become a form of development for rural businesses.

Competition to create a herbarium with melliferous plants

The last activity carried out as part of the 'Honey BEE'siness' project was a competition addressed to school-age children and young people from the Pszczółki Municipality. The participants' task was to create a herbarium presenting a minimum nine species of melliferous plants. Pupils could be inspired by information found in instructional videos published by the competition organiser, Pszczółki Municipality, on the YouTube platform. Thanks to this project, children and young people were able to learn more about the different plant species, as well as raising their environmental awareness about the role of bees in the ecosystem.

Hopeful results of the project

All the above-mentioned activities contributed to the promotion of the beekeeping profession, the production of honey and bee products, and the protection of nature and biodiversity. In addition, the conference and workshops held provided an excellent opportunity for the exchange of knowledge and experience between beekeeping professionals. As a result, entrepreneurs learned about innovative methods of using bee products. This resulted in decisions regarding the addition of hitherto unheard-of additives to honey, such as ginger or turmeric.

In turn, the involvement of children and young people in project activities (workshops and a competition) increased their interest in topics such as environmental protection, biodiversity of species and the need to create and protect bee benefits. This knowledge drew the children's attention to the importance of beekeeping, agriculture and building a human-friendly natural environment.

What are the possibilities for the future?

The activities carried out as part of the 'Honey BEE'siness' project showed beekeepers and those interested in natural products that continuously improving their competences and expanding their knowledge is the key for development. As the conference was mainly attended by novice beekeepers, they received a wealth of new, practical information. In response to their needs and requests, it was decided to organise a dedicated course to provide them with even more specialised knowledge. This will enable novice beekeepers to develop their businesses better.

Herbariums of melliferous plants prepared by competition participants, Photo: Archives of Pszczółki Municipal Office



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Bee closer to us

Title of operation:	Bee closer to us
Implemented by:	Podlasie Chamber of Agriculture
Completion date:	June - October 2021
Form of implementation:	competition
NRN Activity:	Activity 11: Activate villagers to undertake initiatives for social inclusion, especially the elderly, young people, the disabled, national minorities and other socially excluded people
RDP Priority:	Priority 4: Restoring, preserving and enhancing ecosystems related to agriculture and forestry
Target group:	Pupils from classes 7-8 of primary schools and youth from classes 1-3 of secondary schools located in rural areas of Podlaskie Voivodship
Objective of the operation:	Increase young people's knowledge about the importance of the honeybee for the environment, encourage them to learn more about bee life themselves

The condition of the environment in the years to come depends on changes in the lifestyle of everyone on Earth. This also applies to the youngest generations. Climate change and the loss of ecosystems can be stopped, but in order for this to happen, it is necessary to educate children and young people about the importance of every, even the smallest element of nature around us. With this in mind, the annual 'Bee closer to us' competition has been organised. Its organisers wanted to raise awareness among young people about the role of the honeybee in the ecosystem.

Who took part in the project?

Forty-seven children from schools in rural areas of Podlaskie Voivodship applied to take part in the competition, but finally 42 of them submitted their entries. The competition was held in two age categories. In the category of classes 7-8 of primary schools, 23 pupils submitted works, while in the category of classes 1-3 of secondary schools, 19 young people took part in the competition.

The success of the project was also due to the perfect cooperation between the project partners,

DO YOU KNOW THAT...

Do you know that honey as a food product is produced by bees from the nectar of plants, honeydew or from the nectar of plants and honeydew. Accordingly, we distinguish between three types of honey:

- nectar,
- honeydew,
- nectar and honeydew.

Honey undergoes a process of crystallisation, which is a completely natural phenomenon. This can happen three to four months after harvesting the honey. The exceptions are acacia and honeydew honeys, which retain their liquid form for up to 12 months.

Honey is a liquid food product that is the only one that never spoils. If stored in the right conditions, it will always be fit for consumption, even after many years have passed.

who complemented each other excellently at every stage of the operation, so that the cooperation between them can be considered exemplary and a model. An important element in the project's success was the well-defined theme of the operation and the appropriately selected activities aimed at the selected target group.



Surprising prizes

The competition consisted of creating a stylistic work entitled 'Bee closer to us. The students' works were carefully analysed by a competition committee, consisting of members of the organisations participating in the project (Podlaskie Museum of Folk Culture, Farmer's Wives' Association in Hołny Wolmera village, Central Research Centre for Cultivar Testing and Experimental Station for Variety Assessment in Krzyżewo). The winners of the competition received the following prizes in kind:

- a smartphone for taking 1st place in the best stylistic work category,
- a tablet for 2nd place in the best stylistic work category,
- a photo camera for 3rd place in the best stylistic work category.

Young explorers

By taking part in the competition, pupils were able to complete their knowledge of bee life and habits on their own or with the help of teachers and other adults. An interesting aspect raised by the project was the question of how these insects function in industrial reality. In addition, through participation in the competition, young people acquired knowledge about the importance of bees and the use of melliferous plants on farms, which improve the quality and structure of the soil and thus increase crop yields. Thanks to the implementation of the operation, the awareness of the participants about the necessity of environmentally friendly behaviour, which can be implemented in everyday life, has also raised.

To prepare the work, the pupils first explored the role played by the honeybee in the natural environment. This was the first impulse to independently discover further secrets of the everyday life of these fascinating insects. In addition, the pupils gained essential knowledge about honey plants and beekeeping and became aware of the importance of bee products for human health.

Participants were able to obtain information not only from available sources in books or on the Internet, but also from active beekeepers in the village where they live, such as neighbours, grandparents and uncles. In this way, rural residents were indirectly, but actively, involved in the operation.

The added value of the project is the willingness of its participants to join further competitions of this type.



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Lubuska Mega Dynia (Big pumpkin from Lubusz)

Title of operation:	Organisation of competitions (Lubuska Mega Dynia)
Implemented by:	Lubuskie Voivodship Self-Government
Completion date:	April - October 2021
Form of implementation:	competition
NRN Activity:	Activity 11: Activate villagers to undertake initiatives for social inclusion, especially the elderly, young people, the disabled, national minorities and other socially excluded people
RDP Priority:	Priority 6: Promoting social inclusion, poverty reduction and economic development in rural areas
Target group:	Residents of Lubuskie Voivodship, including school-age children and adolescents, representatives of Farmer's Wives' Associations, villages, agro-tourism farms and allotment holders, natural persons as well as companies, organisations and institutions situated in Lubuskie Voivodship
Objective of the operation:	Popularising pumpkin cultivation and its nutritional qualities, exchanging experience in pumpkin cultivation among the participants of the competition, as well as activating the residents of the Lubuskie Voivodship and educating them about the cultivation and care of vegetables

*Pumpkins submitted for the competition
Photo: Marshal's Office of the Lubuskie Voivodship*



The conscious and organic cultivation of plants, vegetables and fruits is not only an excellent support for the development of rural areas, but also an ideal way to develop the passions of their inhabitants. Therefore, to popularise pumpkin cultivation and its nutritional qualities, the Local Government of the Lubuskie Voivodship has organised a competition as part of the 'Lubuska Mega Dynia' project. Information about this project was announced as early as at the beginning of April 2021, so that each of the volunteers had time to cultivate his/her own vegetable. The competition was addressed to individuals as well as schools, businesses and institutions.

The idea behind the project was to encourage each volunteer to grow pumpkins organically. The size of the residents' garden was irrelevant - both small backyard areas and larger farm fields were perfectly suitable. Why was the pumpkin chosen? Primarily because it is a valuable, healthy and relatively easy to grow vegetable.



Weighing the pumpkins during the competition, Photo: Marshal's Office of the Lubuskie Voivodship

Who took part in the project?

The 'Lubuska Mega Dynia' project involved both individuals and representatives of companies and institutions that take into account social interests, environmental aspects and relations with employees and the public.

First stage of the competition

Once a particular applicant volunteered, one packet of giant pumpkin seeds was sent to him/her, which then had to be sown in the ground. The next task of the contestants was to create a photographic history of each stage of the vegetable's growth. The competition attracted a lot of interest. More than 150 people entered the first stage of it.

Competition final

The Lubuska Mega Dynia competition was held on 10 October 2021, during an outdoor event at the Ethnographic Museum in Zielona Góra - Ochla. During the event, visitors could not only learn about the culinary and health benefits of pumpkin and taste dishes using this vegetable and its preserves, but also enjoy pumpkin painting, cutting and pickling workshops.

More than 50 pumpkins were submitted for the final stage. Only organically grown pumpkins were allowed to take part in the competition. Each piece was verified using

Conclusion of the competition at the Ethnographic Museum in Zielona Góra - Ochla, Photo: Marshal's Office of the Lubuskie Voivodship





Competition pumpkins
Photo: Marshal's Office of the Lubuskie Voivodship

DO YOU KNOW THAT...

Do you know that there are more than 45 varieties of pumpkin. Small, medium, large and real giants. Contrary to popular belief, not all pumpkins are orange, many are green, white and brown. One of the more interesting varieties is the Hokkaido pumpkin, which, unlike other subspecies, does not even need to be peeled.

Pumpkins have anti-inflammatory and anti-cancer effects, strengthen the immune system and have a particularly good effect on the skin. This vegetable species not only fights viruses and parasites, but also helps to lose weight.

The record-breaking heaviest pumpkin in Poland weighed as much as 870 kg. The largest pumpkin in the world is a giant weighing as much as 1,226 kilograms. It was grown by an Italian farmer from Poggerino in the Chiant region.

the GREENTEST measuring device to confirm that no unauthorised chemical growth stimulants were used during cultivation. The largest specimen submitted weighed approximately 45 kg.

In the 'Organisations and institutions' category, the winner was the City of Nowa Sól, which grew a pumpkin weighing 38.72 kg. Second place went to the Farmer's Wives' Association in Brody - 36.94 kg, and third place to the Ethnographic Museum in Zielona Góra - Ochla - 36.14 kg.

In the 'Individuals' category, the largest pumpkin weighed 45 kg, while in the 'Schools' category, the winner was the Special School and Educational Centre in Wschowa, whose pumpkin reached a weight of 22.72 kg.

Attractive cash prizes and diplomas were prepared for the winners. In the 'Individual' and 'School' categories these were respectively: PLN 700, 500 and 300 depending on the place on the podium. In the 'Organisations and Institutions' category, the amounts were: PLN 1000, 700 and 500.

What are the possibilities for the future?

The competition proved to be great fun and a lesson in ecology and healthy food not only for schoolchildren, but also for representatives of private and public institutions. Thanks to the competition, children and young people got involved in gardening and tending the seedlings. An added value for them was the knowledge of organic pumpkin growing. The representatives of the institutions, on the other hand, were able to get involved in environmental and ecological work, at least for a while.

These findings inspire hope for the development of a passion for horticulture and the acquisition of new knowledge about organic cultivation among both younger and older participants in the competition.

Need more information?

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Traditional plants in attractive forms

Title of operation:	Traditional plants in attractive forms - gardens in glass as a key to nature
Implemented by:	Silesian Agricultural Advisory Centre in Częstochowa
Completion date:	June 2021
Form of implementation:	workshops
NRN Activity:	Activity 13: Promotion of sustainable rural development
RDP Priority:	Priority 6: Promoting social inclusion, poverty reduction and economic development in rural areas
Target group:	Members of the Farmer's Wives' Association, people wishing to produce handicrafts, people connected with cultural institutions (e.g. village halls, libraries), agro-tourism farms and educational homesteads, representatives of institutions supporting rural development (e.g. LAG representatives), agricultural advisors connected with the RH and people living in the areas around the Beskids.
Objective of the operation:	Practical training, in the form of workshops, for residents of the Podbeskidzie region in the creation of compositions using traditional plants, thereby promoting on the designated area the technique of creating traditional mini-gardens in glass containers.

Enhancing the competences of rural inhabitants has a direct impact on the development of local areas. Sometimes people living in specific regions of Poland are not aware of the potential that lies in the gifts of nature at their fingertips. Workshops were therefore held for people living in the areas around the Beskids. The aim of the operation was to make participants aware of the possibilities of using traditional plants and other regional elements not only to create eye-catching decorations, but also to gain a new source of income.

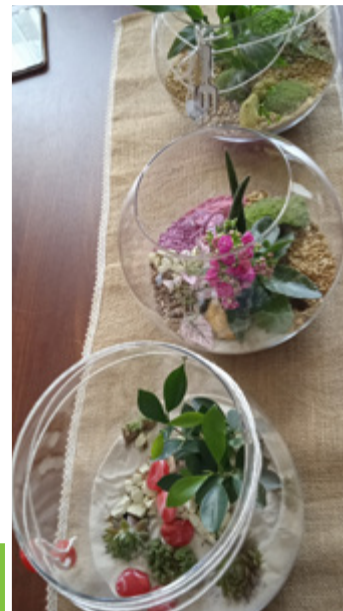
Creative workshops

In a practical floristry workshop, demonstrating techniques for refurbishing and selection of different glass containers, whose original purpose was quite different, the adaptation of them for reuse while creating a new floristic product was presented.

Through the classes, the participants gained skills in creating an innovative product, nevertheless derived from tradition and nature. Creating floral compositions in combination with natural elements of organic origin, such as stone, cones, etc., together with details characteristic for the Podbeskidzie Region, brought the course participants closer to the natural environment and made them more sensitive to local nature.

At the end of the workshop, an exhibition was organised to demonstrate the results of the floral skills acquired, in the form of a presentation of the works created.

Presentation of compositions in glass, Photo: Anna Zawadzak





Flower compositions in glass, Photo: Anna Zawadzak



Garden in glass, Photo: Anna Zawadzak

Who took part in the project?

The 'Traditional Plants in Attractive Forms' project was addressed both to people wishing to create handicrafts and to residents of the Podbeskidzie Region associated with cultural institutions (e.g. village halls, libraries), agri-tourism farms and educational homesteads. The workshop was attended by i.a. members of Farmer's Wives' Associations and farm advisors from Rural Households.

As part of the completed project, two workshops were held, which were finally attended by a total of 20 persons. The meetings took place at the end of June 2021.

Works by workshop participants, photo: Anna Zawadzak



Impressive results of the project

The immediate and direct result of the operation was training of 20 persons in floral techniques and flower compositions during the workshop.

In addition, as a result of the project, the participants' desire to improve their newly acquired skills in floristry and to share this knowledge with others has been triggered. Promoting floral compositions in local area creates an opportunity for additional income and the elimination of poverty.

An extremely positive outcome of the workshop was also the establishment of cooperation between the participants. Participants jointly advised each other on how to make individual works more attractive and improved. In addition, already during the workshop, participants noticed the possibility of using their new skills on the occasion of various regional events, such as harvest festivals.



Workshop as part of the 'Traditional plants in attractive forms' project, Photo: Anna Zawadzak

What are the possibilities for the future?

Those taking part in the workshop gained new insights and skills, and were taught how to create beautiful floral arrangements from readily available and inexpensive natural elements, and how to make money from this. The participants were further motivated in this area, which will be a driving force for the flourishing of the villages in which they live. Thus it can be concluded that the project has contributed to the development of rural areas in the Podbeskidzie Region on the basis of cultural traditions and local resources.

DO YOU KNOW THAT...

The workshops of the project 'Traditional plants in attractive forms' were held in Wilamowice, a small town in the Podbeskidzie Region. The municipality of Wilamowice lies on the border of the southern part of the Oświęcim Basin, at the foot of the Beskids. It has excellent landscape and tourist values and is an integral part of the Bielsko-Biała County. The local area is recognized and known as the place where the 'Polish Flemish' live. The descendants of the former settlers are forming a unique cultural enclave today, with their language, beautiful regional costumes and customs.

Need more information?
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Wicker weaved

Title of operation:	Wicker weaved - tradition combined with modernity
Implemented by:	Farmer's Wives' Association "High Heels" in Modliborzyce
Completion date:	June - October 2021
Form of implementation:	training workshops printed material - a calendar to promote the project
NRN Activity:	Activity 13: Promotion of sustainable rural development
RDP Priority:	Priority 6: Promoting social inclusion, poverty reduction and economic development in rural areas
Target group:	Members of NGOs (in particular Farmer's Wives' Associations) and young people working for rural development, persons under 35 years of age
Objective of the operation:	Acquisition of new skills in basic wickerwork techniques by the participants of the training courses and workshops, as well as the creation of entrepreneurial attitudes among them.

Briefing on paper wicker weaving



The use of natural resources found in specific parts of Poland not only fosters local patriotism, but also supports and drives the regional economy. An example of such activities can be the 'Wicker Weaved' project, carried out in June and October of 2021. The aim of this project was to teach participants basic wickerwork techniques and to create entrepreneurial attitudes towards selling handicraft products. To realise these ideas, a workshop and training were held for members of Farmer's Wives' Associations and young people up to the age of 35.

Who took part in the project?

Members of the Farmer's Wives' Association and people under the age of 35 took part in the 'Wicker Weaved' project. Finally, 15 participants took advantage of the workshop and the training series.

As part of the 'Wicker weaved' project, people who stood out for their practical knowledge of weaving various natural wicker products were invited to lead courses.



Presentation of baskets made by workshop participants

Acquiring new skills under the guidance of wicker enthusiasts

The project started with a one-day training session, where participants could learn more about the basics of wicker. This part was followed by a five-day creative workshop on weaving handicrafts from this original material.

The people in charge of running the workshop and training courses are true handicraft enthusiasts. By participating in the project, they hoped to pass on to the younger generation at least a small portion of their love for beautiful handmade wicker products. Handicrafts made of wicker are now highly valued because of their timeless dimension, and products made of this material are extremely popular and often purchased.

In addition, as part of the 'Wicker weaved' project, training sessions were held on the following topics 'Women active in the local environment - motivating and inspiring to develop' and 'Handicrafts as an alternative source of income'. Such topics have had a positive impact on increasing the activity of the local community and its initiatives to develop entrepreneurship. Thanks to the project, the traditions and cultural values of the Modliborzyce municipality have been strengthened.

The surprising face of wicker

The workshop and the wickerwork training had a positive impact on rural development. The events provided an opportunity to acquire the necessary knowledge of wickerwork, as well as to undertake another form of activity. The skills and knowledge gained contributed to the possibility of acquiring an additional source of income for rural residents through the sale of handmade products. The Farmer's Wives' Association has also established cooperation with other Farmer's Wives' Associations and organisations, which has resulted in participation in local folk art reviews and fairs.



Workshop participants weaving wicker baskets

What are the possibilities for the future?

The “Wicker weaved” project promotes economic, natural and social sustainability in rural areas. The acquisition of new skills by the residents of these areas improves the quality of life in the countryside and shows that the rural areas are a particularly good place for living and professional development.

A few words from the project participants

Participants described the workshop and the training as interesting, creative and mobilising. As can be seen from the questionnaires collected during the workshop, the participants rated very highly the usefulness of the information acquired in terms of improving their skills and knowledge, as well as the workshop programme itself and the trainers. It can therefore be said with certainty that the training courses held met the expectations of the participants.

Instructor demonstrates how to prepare paper tubes for paper wicker weaving



DO YOU KNOW THAT...

Growing wicker is not the easiest thing to do. Plantations are set up in autumn, before the first frosts, or in spring when the frosts have eased. The first year involves intensive care, weeding and compulsory felling if you don't want the rods to splurge. Harvesting is physical work. The wicker is cut using special knives, then sorted according to size, boiled, debarked, dried and tied into sheaves. This type of material is used to weave baskets of different size, furniture, mats, fences, various decorations for gardens or structures for public spaces, i.a. sculptures in parks or children's play equipment. Wicker continues to hold its rightful place on our market. Fashion and the form of the products are changing, but the loyal buyers remain. Some of the old designs have fallen out of fashion, but others are still in use today. Wicker will never get bored.

Need more information?

Feel free to contact us:

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List of used abbreviations

- AAC** - Agricultural Advisory Centre
a.s.l. - above sea level
approx. - approximately
ART - Agricultural Retail Trade
c. - century
dr – doctor
EC - European Commission
eDWIN - Internet-based platform for advice and decision support in integrated pest management (IPM)
e.g. - for example
Eng. - engineer
EU - European Union
Fr - priest (father)
ha - hectare
i.a. - inter alia
K - thousands
kg - kilogram
KPAAC - Kuyavian-Pomeranian Agricultural Advisory Centre
KPTO - Kuyavian-Pomeranian Tourist Organisation
LAAC - Lublin Agricultural Advisory Centre
LAGs - Local Action Groups
LDS - Local Development Strategy
LTO - Local Tourist Organisation
LWP - Local Water Partnerships
ŁAAC - Łódź Agricultural Advisory Centre
m - metre
M - million
MAAC - Mazovian Agricultural Advisory Centre
MARD - Ministry of Agriculture and Rural Development
MLL - marginal, local and limited production
mm - millimetre
MO - Municipal Office
NCU - Nicolaus Copernicus University
NIHR - The National Institute of Horticultural Research (historical name: Research Institute of Horticulture)
nm - named
NRI - National Research Institute
NRN – National Rural Network/Polish Rural Network
NRN OP – National Rural Network/Polish Rural Network Operational Plan
on - about, on
PAAC - Pomeranian Agricultural Advisory Centre
PAMCB&P - Polish Association of Meat Cattle Breeders and Producers
PBAI - Plant Breeding and Acclimatization Institute
PhD - Doctor of Philosophy
ppm - *parts per million*
Prof. - professor
RDP - Rural Development Programme
RH - Rural Household
SAAC - Silesian Agricultural Advisory Centre
sc. - so called
SIR - Innovation Network in Agriculture and Rural Areas (SIR)
SWH Polish Waters or **SWH PW** - State Water Holding Polish Waters
TVP - Polish Television
un. - under the name
ut. - under the title
VIPP&SP - Voivodship Inspectorate for Plant Protection and Seed Production
WAAC - Wielkopolska Agricultural Advisory Centre
WULS - Warsaw University of Life Sciences
y - year



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