



Nordic Association of Agricultural Science

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DEAR NJF MEMBERS,

Welcome to the first edition of the NJF Newsletter.

We are very excited about it! The newsletter is a collection of news and information from the Nordic and Baltic countries. It includes both NJF and other information that is of interest to our members. The newsletters will include news about NJF's upcoming and past activities, relevant non-NJF events, introduce people, organisations and projects, and share topical news within Nordic and Baltic countries.

The aim of the newsletter is to keep you updated and engaged, to provide inspiration for new collaborations and networking with colleagues.

The newsletter will be published about five times a year. Please support our newsletter by suggesting us relevant updates on agriculture and agricultural sciences in your country! You may also support us in spreading the newsletter!

Visit NJF website: <https://nordicagriculture.eu/>

Secretariat email: njf.nordicagriculture@gmail.com

NEWS FROM THE PRESIDENT

It is my pleasure to introduce the first edition of NJF newsletter. This newsletter is one of new items that the board of NJF has decided to launch. NJF is also going to revise its website and provide better means for communication and co-operation between the members.

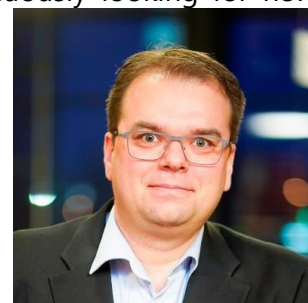
The board started recently to develop a new strategy for the association. We would like NJF to be an active platform that enables fruitful collaboration between agricultural specialists in Nordic and Baltic countries. As part of the strategy process, also you as a member of NJF will have an opportunity to share your ideas and expectations, as we are launching a member survey during the summer.

The organization of NJF is also seeing some new faces. Anna Mårtenson retired from the position of secretary general in the winter and Silvia Gaiani started as the new secretary general in the spring. In addition, the board of NJF has two new representatives: Johanna Leppälä (Finland) and Fredrik Fogelberg (Sweden).

The main activity of NJF has been the organizing of conferences. We are continuously looking for new topics for conferences. If you would like to suggest a topic, please do not hesitate to contact us.

Jarkko Niemi

President of NJF



NEW SECRETARY GENERAL: SILVIA GAIANI

Hallo NJF folks ☺

Let me welcome you once again to NJF newsletter!

My name is Silvia Gaiani and I'm the new Secretary General at NJF.

As you can probably guess from my name, I'm Italian, living between Seinäjoki (Finland) and Bologna (Italy). I'm an agricultural economist by background and since 2021, I'm working as senior researcher at Ruralia Institute, University of Helsinki, Finland.

The focuses of my research are sustainable food systems, food entrepreneurship and innovation and rural development. Before joining Ruralia Institute I have worked for different UN agencies, including FAO, WMO and UNEP and I have been travelling around the world doing research in Japan, India, Canada, Mozambique and many EU countries.

I'm passionate about numbers and the Nordic/Baltic countries, so I feel honored to cover my current position at NJF!

In my spare time, I love to play around with my kids and practice yoga!



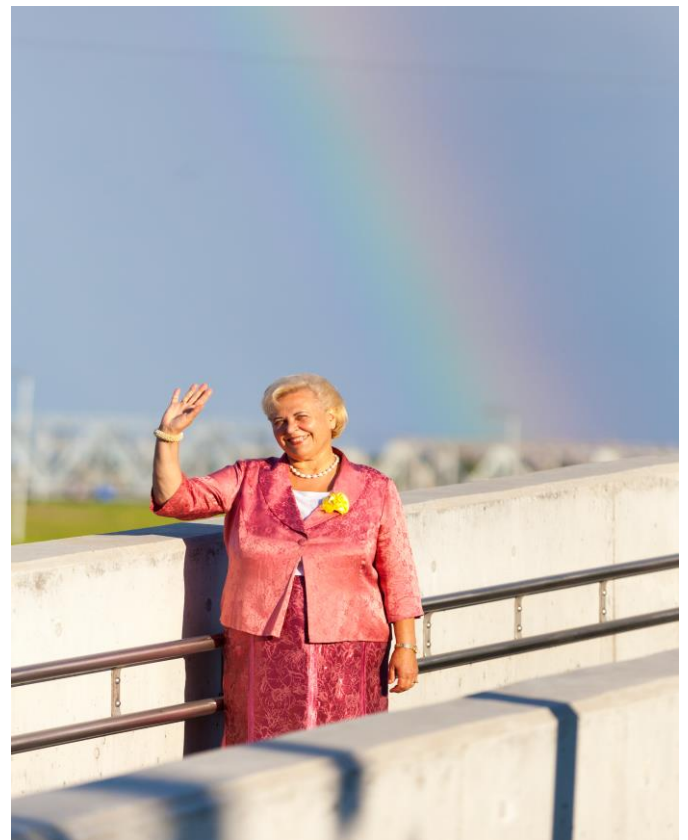
Silvia Gaiani is the new Secretary General of NJF.

MEMBERS IN FOCUS: PROFESSOR RIVZA BAIBA

I am the Chairperson of the national association of Nordic Association of Agricultural Science in Latvia. I'm a Professor of Economics at Latvia University of Life Sciences and technologies and I'm also ex-minister at the Ministry of Education and Science of Latvia, President of the Academy of Agricultural and Forestry Sciences of Latvia, Secretary General of the Academy of Sciences of Latvia, Foreign member of the Swedish Royal Academy of Agricultural and Forestry, of the Italian Academia dei Georgofili and of the Lithuanian Academy of Sciences.

On top of that, I'm also expert from the European Academy of Sciences Academic Advisory Board (EASAC) in the field of economics and co-author of the research „Circular economy: a commentary from the perspectives of the natural and social sciences” (www.easac.eu).

The main fields of my scientific activity are bioeconomy, cultural and gastronomic heritage, knowledge-based economy, regional development, tourism, and market research.



Professor Rivza Baiba, the chairperson of the national association of Nordic Association of Agricultural Science in Latvia.

How long have you been a member of NJF?

For 25 years now!

What is the added value of being part of NJF?

I think there is not just one added value but many. By being a member of NJF you get to know new people and you can expand your network, thus creating many opportunities for cooperation and knowledge sharing. Plus, you have the feeling of being part of one big family, NJF!

How do you see the future of agricultural science and NJF?

I am positive about the future of agriculture and NJF. Everything is in our own hands – we can develop new forms of cooperation, conduct research, which is important for our global society, and contribute to develop agriculture as an industry.

What makes you happy?

Many things can make me happy, but work-wise I'm happy when I see new NJF members joining, when I participate or organize a well-structured seminar, when I see the interest of my PhD students in NJF and in general when I see people's willingness to participate to our monthly conference.

PAST CONFERENCES

11th International Scientific Conference "Rural Development 2023: Bioeconomy for the Green Deal", Vytautas Magnus University Agriculture Academy, Kaunas, Lithuania, 26th -28th of September 2023

The existing and rising challenges of the Green Deal and the role of bioeconomy in these processes were discussed in different conference sections:

- Agro-innovations and Food technologies,
- Biosystems engineering and environment integrity,
- Multifunctional approach for sustainable use of bio-resources,
- Social research for sustainable bioeconomy and climate change

ISESSAH conference "Understanding stakeholder behaviour and socio-economic implications of practices and policies of animal health". 13th – 15th of June 2023, Helsinki, Finland

Altogether 93 persons attended ISESSAH 20203 conference, which was organized in collaboration between NJF, The International Society for Economics and Social Sciences of Animal Health ([ISESSAH](#)), Natural Resources Institute Finland ([Luke](#)) and [University of Helsinki](#). The programme included 5 invited talks, about 50 oral presentations and about 25 posters. The conference was started by Associate Professor Jens Rommel, Department of Economics, Swedish University of Agricultural Sciences, who gave an invited talk "Exploring the Potential of Experimental Economics to Improve Animal Health Outcomes: Recent Advances and Future Directions".

The second day of the conference was started by Dr. Arnaud Rault from the National Research Institute for Agriculture, Food and Environment (INRAE), France, who focused on "Modelling the interplays between economic agents to better figure biosecurity actions". The second day included also two stakeholder talks, namely "Political decision making in the context of animal diseases" given by Taina Aaltonen, Deputy Director General at Ministry of Agriculture and Forestry, Finland, Chief Veterinary officer of Finland and "Voluntary animal disease control programs, their success and motivating factors in Finland" given by Ina Toppari, Executive manager at Animal Health ETT r.a., Finland.

The invited talk of the third day, "Using behaviour change frameworks in endemic disease management", was given by Dr. Beth Clark from Newcastle University, United Kingdom.

Visit conference website and read the programme [here](#).



Latvia Scientific and Practical Seminar dedicated to the Scientific Heritage of Professor Ervids Grinovskis on Digitalization in the Bioeconomy

24th-26th of May, 2023, Jelgava, Latvia

The Faculty of Economics and Social Development (ESAF), Latvia University of Life Sciences and Technologies (LBTU), held an annual scientific and practical seminar dedicated to the scientific heritage of professor Ervids Grinovskis, and this year the theme of the seminar was Digitalization in the Bioeconomy.

Students and teaching personnel, including NJF members, were invited to participate in the seminar. In the seminar, experts from various fields shared best practices and analysed the essential role of digitalization in the bioeconomy sector.

The seminar was opened by NJF member, researcher and associate professor of the Institute of Economics and Regional Development Dr Sandija Zēverte-Rivža with a report on "*Digitalization in Bioeconomy Companies in Latvia*", followed by NJF member, leading researcher of the Institute of Energetics of the Faculty of Engineering Dr. Vitalijs Osadcuks with a report on "*Trends and Problems in and Prospects for Agricultural Robotization*" and associate professor of the Faculty of Information Technologies, leading researcher Dr. Aleksejs Zacepins with a report *Digital Solutions in Beekeeping*.

In continuation, a report "*Introduction of Digital Solutions into the Food Sector in Vidzeme on the Way to a Knowledge-based Bioeconomy*" was presented to the audience by project manager Maija Rieksta from Vidzeme planning region and, at the end, assistant professor of the Institute of Economics and Regional Development, researcher Dr. oec. Līga Proshkina talked about "*Professional Development for the Use of Food By-products*".

The Latvian NJF members also actively participated in the continuous International scientific conference *Challengers of Economics, Education and Society Development in the Nordic – Baltic Countries and beyond* organised by the Nordic Association of Agricultural Science (NJF).



On-line International Continued Scientific Conference "Environmental sustainability in a climate change context: challenges and adaptation", 16th of March 2023

Lithuanian association of NJF organized an international scientific conference "Environmental sustainability in a climate change context: challenges and adaptation" on the 16th of March 2023.

The first section of this conference "The challenge of sustainable agricultural soil management practices under climate change" was dedicated to discussing how multiple agricultural practices could help store vast amounts of atmospheric carbon in soil, at the same time regenerate soil fertility, plant health and whole ecosystem. The importance of sustaining healthy soil, adoption of sustainable land management practices (tillage, crop diversification) and their effect on the sustainability of soil organic carbon, CO₂ efflux were discussed during the conference. More than 40 persons participated in the conference.

The second on-line section "Carbon and nutrient cycling management: impacts of agricultural activities" took place on June 29, 2023, from 10 to 12 a.m. EET.

AGROMEK: NJF, EurAgEng and Agromek joint seminar "Advances and innovations in agricultural engineering", 29th-30th of November 2022, Herning, Denmark.

An agricultural engineering seminar was held as part of the AGROMEK exhibition, in Herning, Denmark on 29-30 November 2022. Nils Bjugstad at the Norwegian University of Life Sciences at Ås, Norway took the initiative and made the seminar possible. For this, he deserves a big thank. About 30 persons participated in the event, 23 presentations were given, 19 abstracts and 1 poster were presented.

Keynote presentations were made by Hans Griepentrog, University Hohenheim, Germany, and Per Frankelius, Linköping University, Sweden with Jonas Engström, Research Institutes of Sweden, Sweden. Besides the keynote presentations, 21 presentations covering research in the areas of smart farming, imaging, solar energy, sensor technology, sustainability, energy, energy efficiency, and soil compaction were given. Participants were also allowed access to the exhibition through the seminar.

The presentations were very interesting and had a strong forward-thinking spirit. In the exhibition area there was, for example, a department with several automatic electrified robots, drones with advanced sensors for collecting field data, advanced positioning systems, advanced control of the dosing of plant protection products, commercial fertilisers and manure.

The figure on the next page presents a self-driving robot that in the project Square meter Farming (SqM-Farm), uses artificial intelligence based on data from sensors on drones, robots, and satellites to help the farmer optimize the yield of the fields.

Information about the seminar, book of abstracts, presentations etc. is available online [here](#).



UPCOMING CONFERENCES AND CALLS IN NORDIC-BALTIC COUNTRIES AND BEYOND

Participate as a speaker in NJF Economy section's online conference

The economy section of NJF is organizing a monthly international multidisciplinary continuous on-line scientific conference "Challengers of Economics, Education and Society Development in the Nordic – Baltic Countries and beyond". Separate webinars of this conference take place at Microsoft Teams **every first Wednesday of each month** (except for July and August) from 13:00 until 14:30 EET (from 12:00 until 13:30 CET). The schedule of each seminar includes two 15-20 minutes presentations with possibility for 20 minutes discussion after each of them.

Researchers and PhD and master's students from Nordic and Baltic countries and all over the world are invited to participate as speakers. Those who would like to participate as speakers are invited to prepare an abstract of their presentation and to register for participation at their most suitable date by fulfilling the registration form that is available [here](#). Title of presentation, name of speaker and co-author(s), annotation and keywords of presentation can be sent via email to Linas Stabingis (linas.stabingis@vdu.lt), who is the coordinator of this activity.

The programme of the upcoming seminars and other information about the conference is accessible at the [NJF website](#).

European Federation of Animal Science monthly webinar (various topics). [Further information](#)

18th International European Forum (Iglis-forum) (186th EAAP seminar) on System Dynamics and Innovation in Food Networks, 12th-16th of February 2024, Garmisch-Partenkirchen, Germany. A joint initiative by agri-food groups of leading European and international universities and business schools providing a discussion platform for the European and international scientific community. The forum will feature presentations and discussions in a mountain venue that should foster exchange, creativity, and the development of new ideas for innovative and interdisciplinary research. [Conference website.](#)

30th European Grassland Federation General Meeting: Why grasslands? Leeuwarden, The Netherlands, 9th-13th of June 2024. [Conference website.](#)

International consortium on applied bioeconomy research (ICABR), 28th annual conference, 11th-14th of June 2024, Ravello, Italy.

Conference themes include:

- The Role of Productivity Increases
- Technology Availability for Increased Productivity and Climate Change Mitigation
- Policies for Improving Sustainable Food System Growth

[Conference website.](#)

32nd International Conference of Agricultural Economists (ICAE), 2nd-7th August 2024 in New Delhi, India: "Transformation Towards Sustainable Agri-Food Systems". ICAE 2024 will address urgent questions on how to make agri-food food systems more sustainable with a particular focus on the important role of agricultural economists in facing these interdisciplinary challenges. The conference will feature invited and contributed papers and sessions on topics such as healthy and sustainable diets, technological and institutional innovations, agroecology, gender roles and social equity in agri-food systems, environmental and social externalities of value chains, the true cost of food, and bioeconomy, among others.

[Further information.](#)

75th Annual Meeting of European Federation of Animal Science (EAAP), Florence, Italy, 1st – 4th of September 2024. Further information will be available [here.](#)

11th European Conference on Precision Livestock Farming (ECPLF), University of Bologna, Italy, the 9th -12th of September 2024. The focus of the 11th ECPLF is the PLF-Welfare-Sustainability nexus. [Conference website.](#)

Courses organized by the Nordic Forestry, Veterinary and Agricultural University Network (NOVA)

Sustainability transitions: theories, methodologies and applications in urban and rural environments, 3 ECTS, October 31- December 5, 2023, University of Helsinki, Helsinki, Finland. [Further information.](#)

NEW PROJECTS AND PROJECT NEWS

CyberGrass I: "Introduction to remote sensing and artificial intelligence assisted silage production"

The project is a collaboration between Swedish University of Agricultural Sciences, Natural Resources Institute Finland (Luke), Finnish Geospatial Research Institute (FGI), Hushållningssällskapet Norrbotten Västerbotten and ProAgria Etelä-Pohjanmaa. It is funded by Interreg Botnia Atlantica Programme with Region Västerbotten and Österbotten Förbund.

Research on remote sensing methods (satellite and drone imaging) has developed rapidly, and new applications are being proposed in agriculture. In this project we tested how remote sensing can be used to estimate grass sward yield in practical farming conditions; this project was conducted in collaboration with pilot farmers and collaborating agribusinesses in plant breeding and dairy industry's primary production advisory activity.

Drone-based monitoring of grass sward yield showed good results. The developed method also includes algorithms to estimate characteristics, yield, and quality of grass stands. Yield quality estimation requires more studies on optimal spectral bands and

more training data. Currently, these sensors are costly and the data processing workflow complex and time-consuming. This is a limitation for the transferability of this method toward an operational system. It will be further developed within on-going projects.

Satellite remote sensing was tested for field monitoring in silage production and for providing background information for the "Silage swards D-value prediction" method. The upgraded method improves the geographical accuracy of the predictions as it utilizes 1 km by 1 km grid-based weather data for predicting current grass D-value (which is the most important quality characteristics for harvest time decision in silage making) as well for the oncoming days weather forecast. A map-based version will be applied on the Luke's website. The model utilizing grass growth models and weather data will be further developed for grass yield quantity estimation also for the second and third cuts, and the project studied possibilities to utilize satellite data for estimating the previous harvest cutting dates as baseline for the next harvest predictions.

The project joined nicely the expertise of satellite remote sensing and crop growth modelling in Umeå, Sweden with the drone imaging of grass swards in Finland at Luke and FGI. Unfortunately the pandemic limited the practical cross-border collaboration, but fortunately remote meeting procedures developed during the project. The project team is preparing a continuation for this recently completed project.



Reference measurement of grass sward underway in Umeå just after satellite and drone remote sensing. David Parsons, Julien Morel, Sanna Bergqvist and Benjamin Bollhöner were the key players in Sweden. (Photo: Benjamin Bollhöner)

NEWS OF INSTITUTES

Newly established Centre of Estonian Rural Research and Knowledge (METK)

The Centre of Estonian Rural Research and Knowledge (METK) has been established as a result of the merger of the Estonian Crop Research Institute and the Agricultural Research Centre. METK started in the 1st of January 2023. The main goal of creating a center was to combine competences of two institutions, which would offer needed rural life and agriculture services compactly and comprehensively and to achieve higher performance of the research and development institution.

The mission of METK is to be the main research and development institution in its field in Estonia. With the creation of the knowledge center, a significant number of agricultural scientists are gathered under a common roof. In this way, they have easier access than before to the data collected in the framework of laboratory analyzes and surveillance, on the basis of which better opportunities are created for targeted advice to both practitioners and policy makers.

As a result of the merger, the agricultural sector now has one contact institution, where the best research, laboratory and experimental activities are concentrated. METK is gathering both agricultural knowledge and practical solutions. METK will coordinate nationwide agricultural and rural knowledge transfer and innovation activities and lead the system.

NEWS FROM ACTA AGRICULTURAE SCANDINAVICA

A special issue based on the 27th NJF congress

A special issue of Acta Agriculturae Scandinavica was initiated by the board of NJF after the congress. If you would like to submit your manuscript to the special issue, please contact jarkko.niemi@luke.fi.

Recently published articles of Acta

Click the title to access an article. Support Nordic-Baltic agricultural scientific community by publishing your research in Acta!

[Effect of melatonin on oxidative stress, inflammation cytokines, biochemical parameters and growth](#)

[performance in broiler chicken under induced stress by dexamethasone.](#)

[Feeding silage to fattening pigs – effects on nitrogen utilization and ammonia losses from fresh manure.](#)

[Effects of calving season on the growth performance and carcass characteristics of Hanwoo steers.](#)

[Livestock insurance scheme under the National Livestock Mission, India – certain constraints as perceived by the beneficiaries.](#)

[Constructing a simulated udder for neonatal piglets as an alternative to nurse sows.](#)

[Growth performance and meat quality of broiler chickens on diets containing Keratinase-treated and untreated feather meal-based diets.](#)

[Evaluation of the chromium-EDTA complex and creatinine as markers for urinary volume in cattle.](#)

[Potential of Opuntia Ficus-Indica Cladodes In M'sila \(North ALGERIA\) as feed for ruminants: chemical composition and in vitro assessment.](#)

[Effects of fermented carrot by-product diets on growth performances, carcass characteristics and meat quality in fattening pigs.](#)

[Heritability of the elk hunting traits in the Finnish Jämthund population.](#)

[Evaluation of growth performance and feed efficiency in reciprocal crosses of Fayoumi with three exotic chicken breeds.](#)

[Nitrogen retention capacity of paddy soil improved under long-term garlic-rice rotation.](#)

[Isolation of three genera of microorganisms in lahar-laden soils of Sta. Rita, Pampanga, Philippines through the 16s rRNA gene sequence analysis.](#)

[Alpha-, gamma- and beta-proteobacteria detected in legume nodules in Latvia, using full-length 16S rRNA gene sequencing.](#)

[Canopy height impact on legume mass and *Megathyrus maximus* tiller dynamics in mixed pastures.](#)

[Sandy silt loam soil may hamper the inoculation effect on lucerne \(*Medicago sativa* L.\) growth.](#)

[P-fertiliser and rhizobial inoculation increased the concentration of mineral nutrients in the rhizosphere of two chickpea genotypes.](#)

[Host status and host sensitivity of Kickapoo white tepary bean to *Meloidogyne enterolobii*.](#)

[Ipomoea carnea associated phytochemicals and their in silico investigation towards *Meloidogyne incognita*.](#)

[Dry-season autotrophic and heterotrophic soil respiration in contrasting agroecological settings.](#)

[Seed priming with selenite enhances germination and seedling growth of Sorghum \[*Sorghum bicolor* \(L.\) Moench\] under salt stress.](#)

[The lower labile carbon of surface soils in Chinese semiarid areas.](#)

[Effects of organic amendments and cover crops on soil characteristics and potato yields.](#)

[What must be considered in winter strawberry production under LEDs in Iceland?](#)

[Chemical composition and herbicidal activity of *Origanum onites* essential oil on weeds and wheat.](#)

[Prioritising key variables for assessing food system resilience in Finland.](#)

[Double cropping as an adaptation mechanism to climate change patterns in the Carpathian Basin.](#)

[Optimisation of rice straw and acacia biochar doses in two soils for phosphorus availability.](#)

[How low can you go? Broiler breast muscle possesses a mitochondrial content of just 2%.](#)

[The impact of curcumin nanoparticles \(CurNPs\) on growth performance, antioxidant indices, blood biochemistry, gut morphology and cecal microbial profile of broiler chickens.](#)

[Effects of daytime or night-time grazing on animal performance, diurnal behaviour and enteric methane emissions from dairy cows at high latitudes.](#)

[The nutritive value of *Panicum maximum* and *Brachiaria brizantha* grass species.](#)

Rapid Communications

[Triggering elements for adoption of Hybrid Napier in crop-livestock system of semi-arid tropical regions of India: evidence from Tamil Nadu](#)

OPEN JOB POSITIONS

If you would like to announce a position in future newsletters, please inform NJF secretariat about the job advertisement or website where your open jobs are announced.

Research Professor in Sustainable Natural Resource Governance. Natural Resources Institute Finland (Luke). [Further information.](#)

Senior Scientist, GHG research, agriculture. Natural Resources Institute Finland (Luke). [Further information.](#)

Postdoctoral position on Small-RNAs role in Potato-Phytophthora infestans interactions. Swedish University of Agricultural Sciences. [Further information.](#)

Researcher - adaptation of crops to future climate conditions. Swedish University of Agricultural Sciences. [Further information.](#)

Research Coordinator. Swedish University of Agricultural Sciences. [Further information.](#)

Professor in Plant Breeding and Crop Diversity. Swedish University of Agricultural Sciences. [Further information.](#)

Senior Lecturer/Associate professor in economics with a focus on environmental and natural resource economics. Swedish University of Agricultural Sciences. [Further information.](#)

Assistant Professor in Data Driven Evolution and Biodiversity. Swedish University of Agricultural Sciences. [Further information.](#)

PhD position on Machine Learning for Molecular Modelling and Simulation within Data Science. Norwegian University of Life Sciences. [Further information.](#)

Two PhD scholarships within reproductive biotechnology. Norwegian University of Life Sciences. [Further information.](#)

A temporary Breeding Supporter for covering a maternity leave. Viking Genetics, Skara, Sweden. [Further information.](#)
