

Activities and focus

2017–2020



THE ROYAL SWEDISH ACADEMY OF AGRICULTURE AND FORESTRY

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The Royal Swedish Academy
of Agriculture and Forestry

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Ceres

The goddess of vegetation and agriculture

The seal of the Royal Swedish Academy of Agriculture and Forestry depicts Ceres, the Roman goddess of vegetation and agriculture, known to the ancient Greeks as Demeter.

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Foreword

We live in a globalised world. The terms set for our Swedish staple industries are largely determined by the EU and world-wide trade. The turmoil in the financial markets is greater than in many years, creating uncertainty and disruption. In many of the so-called developing countries, the living standards of a growing middle class have improved, while the most deprived still live in extreme poverty. Civil wars with their roots in poverty, the struggle for natural resources and religious conflicts characterise parts of the world – with multitudes of people fleeing to safety and a better life to follow. Added to this are the problems arising from a changing climate and extreme weather conditions that alter food production in the affected areas. Our modern day's greatest challenge is to mitigate climate change while at the same time provide a growing world population with food, water and energy – sustainably.

The Academy's role has changed since the work began in 1813 but the main focus holds true and is more important than ever. One of our Academy's most important tasks today is to be the forum in which representatives of the green industries can meet and where opinions can be aired. There are both experienced and knowledgeable practitioners in the circle of fellows – from agriculture, forestry and industrial activities – and the more theoretically orientated sciences, as well as many who engage in public administration.

Our fields of activity include the cultivation and utilisation of our natural resources as well as the management of these. The agricultural industries change over time and new trends in society give rise to many questions about what is a sustainable lifestyle. The Academy welcomes discussion and provides opportunities to exchange ideas, where the principle should always be scientific knowledge and proven experience.

The purpose of this document is to provide the ground plan for the Academy's next four years, from 2017 to 2020. The activity-specific content is drawn up on an annual basis and is based on the initiatives taken in our sections and their committees. The Royal Swedish Academy of Agriculture and Forestry (hereinafter referred to as KSLA) has recently celebrated 200 years of success and continues its work with the aim of focusing on the most important issues in the agricultural sciences and related fields.

Stockholm, December 2016

Lisa Sennerby Forsse
President of the Academy

Björn Sundell
Vice President of the Academy

This strategic plan was approved by the Academy Collegium
December 1, 2016.

Global view

The world has a population of around some seven billion people and, according to the United Nations, is projected to reach between nine and 10 billion by 2050. The majority, about four billion, live in Asia, and the remaining three billion are divided between America, Europe and Africa. In Asia there is strong economic growth in many areas and population growth has slowed as a result of improved living conditions. But while growth in American and Europe has lost momentum there are still areas of the world where population growth remains high and poverty and hunger are realities. To meet mankind's basic needs is a formidable task. A country such as Sweden, with excellent opportunities to increase food production in a sustainable manner, has every reason to contribute, both nationally and globally.

With the development in media and IT, awareness of differences in living standards between rich and poor is increasing and we can expect that many more people will both wish and be able to depart for richer countries where the conditions for a better life are more favourable. The flow of refugees reaching Sweden in recent years represents both opportunities and challenges. Important steps in the reception of new citizens include getting integration to work, and nurturing the qualities and skills refugees and other immigrants possess so that they can establish themselves in different parts of society. Many public services have a responsibility in this, and our Academy can and should play an important role in this process.

The world is facing a number of major challenges at macro level. Environment and climate change, sustainable community development and health challenges are a few examples. In order to meet these challenges research-based knowledge is necessary. The poorest and most vulnerable people on our planet suffer greatly, partly because of the threat to food production. Additionally, key species, habitats and entire ecosystems are at risk. A warmer climate and changes in precipitation patterns

affect the conditions for crop cultivation and animal production in many parts of the world, which means that the competitive environment has changed. In order to meet growing demand and at the same time reduce agriculture's own environmental impact more research and more resources are needed, as well as long-term investment in the development of sustainable farming and modern plant breeding. The changes facing the green industries require greater scientific knowledge. Our Academy has a responsibility and an important role in this in order to contribute to sustainable development.

The international food trade is expanding, which means tougher competition but also greater opportunities for Swedish food production. Demand for foodstuffs produced with little negative environmental impact is huge. This should benefit Swedish agriculture, which accounts for a high degree of climate-smart production. But it requires further knowledge building, active marketing and export efforts, along with political decisions, in order to increase the competitiveness of the Swedish food production. Several important proposals to this effect have been presented, including the competitiveness inquiry (SOU 2015:15) and in the autumn (2016) the government is expected to launch a long-awaited Swedish food strategy. This strategy should include a clear aim and clear objectives if it is to serve as a long-term platform for the development of the food sector.

Thanks to natural resources such as timber and water, Sweden has good prospects of achieving the proposed goal (SOU 2016: 47) to have zero net emissions of greenhouse gases into the atmosphere by 2045. The aim is to reduce emissions but also to capture the greenhouse gases that nevertheless escape. Forests absorb large amounts of carbon dioxide which is converted into raw materials that can replace fossil fuels and fossil-based products. Swedish forestry's climate benefits are significant. But if forests are to contribute to the realisation of this vision, optimal management is necessary.

Research shows that various measures to increase forest production contribute to increased absorption of carbon dioxide, at the same time as they can strengthen and secure the economy. But, the same measures can contribute to reducing biological diversity and the experience value of the forest. When conflicts

arise between different forest actors and interests, it is important to produce a scientifically based foundation for necessary and sensible compromises. Besides the climate benefits, i.e. the combination of carbon sinks and the replacement of fossil energy and other raw materials in a bio-based economy, it is also about the long-term management of the environmental requirements as well as the economic and social values the forest represents. To meet these challenges, the Government is engaging in a dialogue with representatives of civil society to develop a national forestry programme. This will form the basis for the way in which forests will contribute with jobs and sustainable growth as well as the development of a growing bioeconomy.

Competition for forest raw materials is expected to increase in a developed bioeconomy and Swedish forestry faces growing competition from countries with significantly lower costs. Our forestry practices are likely to be directed partly towards continued energy raw material, partly towards high-quality raw material and high value-added timber products. Timber construction is currently growing strongly, including in the form of high-rise apartment buildings. As bio-refineries, today's pulp mills are likely to develop into suppliers of a mix of paper, processed fibres, "green chemicals" and energy.

Sweden's nature harbours a high biodiversity that is partly the result of past generations' cultivation and utilisation of the forests and farmlands and many other types of landscape. Modern management practices mean that the mixture of species in our habitat changes. Some species benefit and others are disadvantaged. Trees are an important renewable natural resource and the forest contains a wide variety of habitats for animals, plants and fungi. Other examples of species-rich ecosystems of great importance for biodiversity are the semi-natural grasslands, which have been created by centuries of mowing or grazing. The importance of grazing ruminants to create diversity in the landscape cannot be overstated – without them pastures would become overgrown and biodiversity would decline.

Today, more than half of the world's population lives in urban areas, a proportion that is expected to increase to around 60 per cent by 2030. Among the EU member states Sweden has experienced the strongest urbanisation trend since 2005 and urbanisation is still taking place throughout the country.

At present, 85 per cent of the population live in built-up areas with more than 10,000 residents. The migration to the cities and towns also leads to many people living far-removed from farming. In turn, this increases the risk that the understanding of the production of raw materials from agriculture and forestry is becoming less among ever-larger groups.

The landscapes around our cities and towns offer opportunities for the practice of outdoor activities, which is an important requisite for people's health and wellbeing. At the same time it is there that the construction and maintenance of roads, railways and other infrastructure takes place, which has a huge impact on the landscape. It can create barriers for animals, important habitats can be wiped out and valuable cultural heritage can be lost. Parallel to this, it also provides the means to create new opportunities for animals and plants to become established. As a countertrend, the continuing urbanisation has created growing interest in urban gardens and "urban food production". With the latter comes the introduction of new production techniques, such as vertical farming, which reduces dependence on agricultural land and increases the utilisation of built-up areas' residual resources. Further development here may become an important part of future food security in urban environments. The concept of "urban forestry" is also gaining ground in the world and with the ongoing process of densification and rising populations will be more in demand in Swedish town planning.

Economies of scale and efficiency improvements in agriculture and forestry are expected to continue. When it comes to animal husbandry this, together with climate change, may pose risks for the increased spread of infection both among animals and from animals to humans. It will also make new demands on breeding to create defensible systems in animal ethics. However, there are in Sweden today well-functioning larger production units where both ecologically sound and animal ethical considerations are met. In Sweden, where distances are long from north to south, a mix of large and small units should be a possible solution for an economically viable food production, while at the same time having less of an impact on climate and the environment.

Efficiency in crop production can be improved through the use of high-yielding varieties of perennial or autumn-sown cereals and oilseeds. These have a much greater resistance to weeds and provide better protection against erosion and nutrient

leaching. Grassland farming is made up of perennial and often nitrogen-fixing species. By better exploiting its potential and using new technologies with reduced tillage, precision farming and new rotations, agriculture can reduce its fossil energy requirements, reduce nutrient leakage to surrounding ecosystems and switch from being a carbon dioxide source into a carbon dioxide trap.

The rapid growth in plant breeding could create crops that are more resistant to pests, more drought and salt tolerant than current varieties, and that are less dependent on fertilisers. The UN's intellectual property rules on biological diversity have come to play an increasingly important role for research and plant breeding, not least as a result of advances in genetics. Patent and plant variety rights may also impede the free exchange of biological material of importance, not just for food production but also as a base for the manufacture of pharmaceuticals and industrial products. Moreover, the EU has developed a framework that severely restricts plant breeding with modern methods, which severely restrains the development of our biotechnological research in comparison to other parts of the world.

Aquaculture is the sector of food production which is growing fastest globally, according to the FAO. Maximum capture for fisheries production is estimated to have been reached and the world's fish resources must be managed in a more sustainable way. If fish consumption continues to increase, the aquaculture industry will need to continue to grow in the future as many fish stocks are fully exploited or overexploited. In Sweden it is mainly rainbow trout and char that are farmed but so are mussels and crayfish and some oysters as well. The value of the total production was around SEK 370 million in 2014. The potential to expand domestic fish and shellfish farming is good and it is important that the development of this industry takes place in a form and with technologies that are sustainable from both an ecological and economic as well as ethical and aesthetic perspective.

In view of the growing population and increasing demand, world leaders gathered at the UN headquarters in New York on 25 September 2015 to adopt a development agenda that was more ambitious and far-reaching than ever before. It maps out a

path towards a sustainable future by 2030. The 2030 Agenda for Sustainable Development includes 17 concrete goals whereby all states are bound to eradicate poverty and hunger, reduce inequality, ensure quality education, better health, decent work and sustainable growth. All the goals are basically dependent on ecosystem services from forests, farmland and water resources, which means that KSLA's activities are particularly relevant and of current interest for us here in Sweden, but also for the rest of the world.

Since the dawn of mankind, we have had an impact on our environment, improved the conditions for our survival – and we must of necessity continue to do so. Today, with policy decisions based on the best available knowledge our Academy has an important role to play here as a forum for the exchange of knowledge concerning the agricultural industries.

KSLA's vision

How we want our world to be, the world in which we operate.

We strengthen the green sector for a sustainable future.

Mission

What we should do, for whom and why.

The Purpose of the Academy:

The task of The Royal Swedish Academy of Agriculture and Forestry is to promote agriculture and forestry and associated activities with the support of science and practical experience and in the interest of society.

Starting from the Purpose, the Academy has clarified and supplemented the focus of its activities by formulating a mission statement:

For the positive development of society, the Academy will promote the sustainable use and management of land, water and air, as well as plants and animals for our sustainable livelihood and habitat. We do this by being an active meeting place for science and practical experience, and where, through the exchange of ideas and advocacy, influence and knowledge dissemination, we identify and strengthen the green industries to meet the challenges.

Target groups and interested parties

To whom we choose to focus and direct our activities.

The Academy and its fellows should be seen as actors/ambassadors for the activities and as an internal target group. External target groups for the Academy's activities vary with the issue but some important ones include (in no particular order):

- Politicians, other decision-makers and actors at municipal, regional, national, European and global level.
- Decision-makers and actors in industry, research, development and education.
- Practitioners and other representatives of primary production and processing with particular focus on young people.
- Opinion-makers, such as the media, teachers and interest groups.
- Students at university level.

Characteristics

Values, how we treat ourselves and others.

In a changing society with many actors and many opinions, it is important to clarify the Academy's characteristics, which must be stated in all activities. To spread knowledge of and nurture and develop these characteristics is an ongoing process in which the Academy's fellows and staff play a central role. The Academy should be perceived as:

- **Independent and analytical.** KSLA works to ensure that different views and opinions can be presented and discussed so that complex and controversial issues can be discussed freely and with a holistic approach.
- **Competent and credible.** KSLA's competence rests on its fellows and is supplemented by external expertise where required.
- **Based on science and proven experience.** KSLA's activities are based on science at the same time as it is central to the Academy to affirm and develop the interdependence between theory and practice.
- **Historically rooted, current and future-oriented.** KSLA is a modern academy that captures new trends at an early stage, relates them to the lessons of historical development, clarifies their relevance for the present day and follows up the future consequences and opportunities.

Goals for KSLA 2020

Where we want to be/what we want to have achieved and by when.

Goals for activities

- **KSLA is the obvious choice** for knowledge and decision-making gathering for people engaged in the green sectors and to support their contribution to positive social development in the short- and long-term.
- **The degree of external funding** has increased by 50 % through active stakeholder participation.
- **The composition of the association of fellows** has widened, representing a broader range of ideas and perspectives and the fellows feel a greater commitment.
- **A multidisciplinary holistic approach** permeates the Academy's soul and activities.

Goal for characteristics

- Our target groups, stakeholders, fellows and staff perceive us in accordance with our chosen characteristics.

Activities and organisation

What we intend to do in order to reach the goals, who is responsible and how we want to interact.

The activities are determined by the Academy through its various bodies and its active fellows. It is primarily the Academy fellows who propose issues the Academy is to work with. The activities will lead to the achievement of KSLA's goals, be within the framework of the Academy's mission and help us to take steps towards the vision. Compromises between current and long-term planned activities are important. The scope of activities is limited by the available human and financial resources. The Academy will continue to be characterised by the timeliness and ability to engage in the rapid emergence of, and for the Academy, important issues. This requires an open mind to reprioritise even during the ongoing activities.

Overall organisation

The work in the Academy is conducted mainly in the sections, committees and panels. KSLA's vertical and horizontal activities are coordinated by the Collegium, which includes the sections' working committees in order to attain a higher degree of integrated approach and avoid overlaps. The works of the panels and committees is an important part of the Academy's continuous monitoring of the world around, analysis and initiating work.

In addition, there are standing committees to strengthen the management function. Furthermore, preparation or working groups are appointed for specific, shorter-term assignments.

Sections, panels and committees

The three sections constitute a standing division of the Academy's activities at the same time as active cooperation between fellows in the various sections characterises, and must characterise, the Academy's work. Through the initiative of the sections the Academy's topical activities are regularly reviewed and developed. It is important that this work continues at the same time as it is combined with more long-term planned activities within the Academy's core areas.

Panels are appointed by the Academy Collegium after validation in the sections to manage Academy-wide issues. The Collegium elects the fellows in the panel groups who support and lead the work, the panel groups which are supplemented with fellows inside and outside the Academy.

The panels operate for extended periods without therefore having permanent status. They are appointed for a term of three years with a possibility of extension.

Committees are appointed by the Academy Collegium following proposals from the sections. The sections' working committees support and lead the work with additional guidance when required. Through the committees the Academy follows developments in specific areas and takes initiatives in topical issues.

The committees are usually appointed for a maximum term of three years, after which the continued or altered activity is considered by the sections and the Collegium. The committees which were approved in December 2016 are stated under the respective sections below. Committee membership is not restricted to a section and even individuals who are not fellows of the Academy can become members of a committee. Breadth and depth of expertise for the committee is decisive.

Standing committees

Pursuant to its Charter, the Academy has three standing committees for permanent tasks:

- **The standing finance committee** – analyses the financial markets, discusses and proposes guidelines for financial management and assists the Academy in securities trading.
- **The standing prize and award committee** – assesses the proposals received for prizes and awards and submits proposals thereon to the Collegium.
- **The standing committee for the Academy's unit for library, archive and historical projects (BAHP)** – advises on the Academy's historical activities and the work with the library, the archive as well as historical projects including publication.

In addition, the Academy has two committees to prepare/evaluate applications for funds from the foundations administered by KSLA:

- **The research grant committee** – assesses external grant applications and submits proposals thereon to the Collegium.
- **The review committee** – reviews the internal grant applications and submits proposals thereon to the Collegium.

The Sections and BAHP

The General Section

deals with overall issues like natural resources, nature conservation, environment protection, the landscape, research policy, communication of knowledge, and town and country planning. The section also deals with issues relating to industries and sciences not specifically associated with agriculture or forestry, e.g. fisheries, aquaculture and the use of other natural resources.

Panel

- A panel with a focus on youth issues, developed from UNIK, Young in KSLA. The General Section assists with a secretariat resource.

Activities 2017–2020 will focus on the following areas:

The UN's global development goals of Agenda 2030 will be the overall theme of the section during the period. The three committees below fall under this umbrella, which works with rural-urban relations, landscape issues and technology development. In addition, the section is planning to work with aquaculture and the green sector skills during this period.

Committees

- The Committee for rural-urban relations (2016–2018)
- The Committee for landscape issues (2016–2018)
- The Committee for technology in the green sector (2017–2019)

The Agricultural Section

deals with issues concerning production, processing and marketing in theory and practice, including specific educational and advisory questions within agriculture, horticulture and veterinary medicine, and environmental issues related to the industries.

Panel

- A panel with a focus on international issues, developed from earlier committees and working groups with an international focus within KSLA. The Agricultural Section assists with a secretariat resource.

Activities 2017–2020 will focus on the following areas:

- Issues relating to agricultural production.
- The competitiveness of Swedish agriculture in a local, regional and global perspective.
- Entrepreneurship in agriculture and other rural entrepreneurship linked to agriculture and forestry.
- Agriculture's adaptation to climate change.
- Food supply chain.
- Consumer perspective.

Committees

- The Committee for agriculture's climate adaptation (2016–2018)
- The Committee for food production's value chains (2016–2018)
- The Committee for Swedish agriculture 2030 (2017–2019)

The Forestry Section

deals with issues concerning silviculture and the utilisation of the forest as a natural resource, including industry and marketing in theory and practice, specific educational and advisory issues, hunting and environmental issues related to the industries.

Panel

- A panel with focus on research issues, developed from former committees and working groups within KSLA with a focus on research. The Forestry Section assists with a secretariat resource.

Activities 2017–2020 will focus on the following areas:

- Highlight opportunities and obstacles so that ecosystem services from the forest can be used in a sustainable manner.
- Draw attention to the sustainability potential that agriculture and forestry in Sweden have for countering global climate change and highlight the impact of the industries from a system perspective, which includes land use, land ownership, agriculture, product markets, energy systems and other relevant social issues.
- Increase knowledge about the potential of forestry and agriculture to help reduce dependence on fossil fuels and their function as a carbon sink.
- The future of knowledge and skills in the forest industries.

Committees

- The Committee for energy issues (2014–2017)
- The Committee for forest ecosystem services (2016–2018)
- The Committee for climate and land use towards 2030 (2017–2019)

The unit Library, Archive and Historical Projects (BAHP) advises the Academy's historical activities. The unit also has an expert council with specialised competence within the areas of historical activity.

The activities 2017–2020 focus on how the green sector can be transformed as a whole through specialisation, innovation, changed attitudes and through national and international lobbying. Important areas are:

- Alternative agriculture in the past and today.
- Traditional knowledge, biological diversity and early trial industries.
- Making agriculture political.
- Anthrax and other livestock afflictions.
- Art, people and the landscape in change.
- The green industries development reflected in medals and reward systems.
- The Library and Archive as an information resource within the green industries.

Working methods

The Academy shall nurture and develop the following working methods:

- **Through regular Academy assemblies**, and by organising conferences, seminars and symposiums, the Academy offers a forum for highlighting complex issues for which there is no common view and for which various solutions must be weighed up against one another. The activities are based on different future scenarios, the frontline of research, technology development's opportunities, new patterns of values and more.
- **Versatility and a holistic approach** are guaranteed through the representation of different experiences, skills and approaches in both conferences, seminars, committees and projects, as well as among the fellows.
- **The free scientific and practical conversation** and exchange of ideas, as well as trans-disciplinary discussions, are important. KSLA should, partly in collaboration with other academies, ensure there are many opportunities for this.
- The Academy should continually carry out **global and future analyses** within its area of responsibility. Foreign fellows ought to be actively brought into this work.

- To an increasing degree the Academy's **activities ought to be made accessible** to interested parties via more webcasts.
- An important part of the Academy's work is **commenting on official inquiries and legislation proposals** relevant to the green industries. Normally a smaller working group of fellows with expertise is formed to develop our consultation response. The President and Academy Secretary are responsible for ensuring the answer is balanced and gives a comprehensive response, in line with the Academy's characteristics, of the problems dealt with and the legislation proposed.
- In order to ensure activities remain strong qualitatively and quantitatively strong and are appropriate **more financial support should be sought** from appropriate sources.

Communication

Good communication is important for the Academy's interaction with the external world. We aim for a climate of open communication typified by a willingness to take the initiative and to have foresight.

Our external communication shall be based on confidence in the Academy's activities and the Academy itself. Our internal communication with fellows and staff should provide knowledge about the Academy's vision, mission, etc., prepare and anchor decisions as well as create a holistic view, participation and commitment in the work of the Academy.

The fellows are the Academy's most important resource. With their expertise and networks within the various areas of activity of the Academy they provide knowledge and are ambassadors for the Academy. They have an extremely important role practically: Communication should be a natural part of all our activities and responsibility for a specific area also means responsibility for planning and initiating the necessary communication. Each committee, working group and similar takes responsibility for external communication if its activities are in focus.

Content and form within the Academy's communication should be adapted to the target groups the specific activity is aimed at.



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