

The role of the Royal Swedish Academy of Agriculture and Forestry is, with the support of science and practical experience, to promote agriculture and forestry and related activities, for the benefit of society. The Academy was founded in 1811 at the initiative of Karl XIV Johan and started its work on 28 January 1813.

The Academy's 200th Commemorative Meeting

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Academy President Kerstin Niblaeus

The 200th Commemorative Meeting of the Royal Swedish Academy of Agriculture and Forestry on 28 January 2013

Your Majesties
Honourable Minister
Esteemed Fellows
Ladies and Gentlemen

Two hundred years have passed since the Royal Swedish Academy of Agriculture held its first meeting under the leadership of the newly elected successor to the throne, Karl Johan. The Crown Prince gave a magnificent speech, the message of which was very clear: a focus on agricultural development rather than war. His vision was an increase in arable land, an increase in the population – and national diligence. The new Academy was to be an important tool for the attainment of this.

The interest in agriculture came at the right time. Even among the most highly versed circles it was very much the fashion to praise the upright and healthy farmer, as Erik Gustav Geijer did in the poem *Odalbonden* (The Yeoman Farmer), (1811):

On the rocky ridge there is my house
High above the forest and lake...
The firm earth, she is my hope
She shows eternal faith...
We prepare for the country the nourishing cordial
We feed it – the bread is ours

Sweden was a country in crisis. The economy was in a dire state in the post-war years with galloping inflation and a weak currency. And soul of the nation was in trauma after (citing Tegnér's words) "Finland, recently, like a blood-stained shield, was torn from the heart of the nation".

Expectations for the new academy were high. How did things go?

At the beginning, the Academy was completely associated with its director, Abraham Niclas Edelcrantz, who was born in Turku, the son of a professor of theology. He was a brilliant all-rounder – a physicist and inventor, poet and theatre director, with a passion for agriculture.

He was a fellow of the Swedish Academy and every other conceivable academy and learned society, but it was the Academy of Agriculture that was his chief concern.

He had prepared well for his mission. During the early years of the 19th century he travelled around Holland, France, Great Britain and the German states. His actual mission was to study iron production and distillery methods – quite simply industrial espionage – and the reports home were to be written in invisible ink. However, he devoted most of his time to agriculture and brought home a collection of agricultural implements and four steam engines, as well as the young engineer Samuel Owen, who later became a leading design engineer in Sweden. One of the steam engines was used in Edelcrantz' own mill, Eldkvarnen, which was located on the very spot we are on today and which is best known for the great fire in 1878.

Edelcrantz also studied the various academic societies and their organisation and activities: the Sociéte d'agriculture in France, the Board of Agriculture in Great Britain and the Kürfurstlich-Sächsische Ökonomische Sozietät in Saxony.

This knowledge was then put to use in the Academy, which pursued development and educational activities, was responsible for economic statistics and acted as a unifying body for the agricultural societies. It was both an administrative body for agronomy in general and a learned society with a mandate to promote agricultural progress. The Academy organised competitions for new tools for the processing of flax or the planting of oaks, for example, and expressed an opinion on matters such as new cultivation projects and drainage companies. Edelcrantz initiated the Field for Experiments in Stockholm's Frescati area, which would become both an experimental field and a model farm.

The far-sighted Crown Prince arranged funding in an ingenious manner. Through the intricacies of foreign policy, Sweden ended up for a while at war with Napoleon, who declared all Swedish receivables in France to be due. To compensate the Swedish investors for their French losses, the state assumed the debts, but they only received two-thirds, the remaining one-third went to the Academy of Agriculture, which received a fund of just over 166,000 *riksdaler*. This corresponds to some 20 million kronor today.

The fellows were an impressive group of ministers and state secretaries, counts and barons, but there were also some working fellows with a scientific background or practical knowledge. The chairman of the scientific section was Jöns Jakob Berzelius, the most famous chemist of his day.

However, much rested on Edelcrantz himself. When he passed away eight years later, the Academy entered a period of decline, but was eventually saved by Gabriel Poppius who restored the Academy's role and its importance. He was an important person who had been president of the National Board of Trade and a government minister. He introduced an administrative committee, a sort of board that came to serve as an authority under the Ministry of Public Administration. And now, activities picked up again. The agricultural societies were activated, state-sponsored agricultural education was initiated and national agricultural meetings began to be held. The statutes were revised and the many ex-officio but passive fellows from the highest levels of the state disappeared. The Academy once again had a central and elevated position in Swedish agriculture.

This shake-up was facilitated by the positive developments in agronomy. Land parcelling and assarting increased yields and profitable oat exports replaced imports, crop rotation spread and mechanisation progressed. By the mid-19th century, the area under cultivation had risen from around 1 million hectares to some 2 million hectares, and the population from just over 2 million to 3.5 million. (But, most people were very poor and life expectancy was 40 years.)

In the decades that followed, efforts to cultivate new land and develop agriculture continued and the Academy was deeply involved. It was responsible for the state engineers who worked with drainage companies and cultivation projects around the country. The Academy was also in charge of the government advisors, who then became state consultants and who gave advice on everything ranging from flax cultivation to dairy processing and the production of alcohol. By the end of the century, the population totalled 5 million and the area under cultivation amounted to 3.5 million hectares.

This was also the time at which Sweden's social structure fundamentally changed. The old Riksdag of the Estates was replaced by two chambers, elementary school was introduced, local government acts were passed and the main railway line was built. The government and parliament gradually assumed more and more of the royal power. The central administration expanded and in 1890 the National Board of Agriculture was formed. This was to have farreaching consequences for the Academy of Agriculture, since the new authority took over all the administrative duties that had previously rested on the Academy. The change was probably a highly natural step in the transformation of society but there were those who speculated that the Academy's leadership had got on the wrong side of large and politically influential farmers' groups during the great tariff protection dispute. This was a furious dispute that was triggered off when grain prices fell sharply in the 1880s. The price of rye fell by almost a half in the course of a few years. This was because steamboats brought Russian and American grain into the country. When the dispute was at its height some 400,000 Swedes emigrated, mainly to America. The Academy was not among those who advocated tariffs, but tariffs were introduced anyway.

The expansion of the administration continued and soon Sweden had a Ministry of Agriculture. And, not only that, but around the country new associations, dairy cooperatives and buying associations were being formed, and a number of new journals created new channels for education and information.

For the Academy, it was now a natural step to focus on the second branch of the activities, i.e. the scientific. It was necessary to initiate and lead new research and to inform the country's many farmers of the latest advances.

The positive side of the change was that the Academy did not have burdensome financial and practical responsibilities and was also able to develop a more independent position.

When the Academy celebrated its centenary in 1913, it consisted of 173 fellows. Representatives of research and education tended to predominate. There was also a large group of landowners and industrial estate owners from southern and central Sweden, but most of them seldom took part in the meetings. Deliberations focused on genetics, on electric power in agriculture and on the production of so-called air-saltpetre, i.e. the new fertiliser products that were produced using electricity direct from the air.

The Academy continued on its path of research and science, and this role was confirmed later in the 20th century when the new Agriculture Research Council became accountable to the Academy.

For a long time forestry was hardly represented, but that would change. The forests played an important role in the revolutionary process of industrialisation that characterised Sweden during the first half of the 20th century. The sawmilling industry had flourished during the later decades of the 19th century. Exports benefited from increased demand from England, where industrialisation was in full swing. Waterways for timber floating were cleared and steam-powered boats accounted for the remainder of the traffic. Companies such as Mo & Domsjö, Ljusne-Voxna, Skutskär, Korsnäs and Iggesund grew rapidly. However the downside was that the timber assets in the Swedish forests were heavily exploited without replanting. Throughout the country, the forests were mismanaged.

The years around 1900 marked a turning point for Swedish forestry. A new forestry act was passed and the Forestry Board was set up. A few years later the College of Forestry and the Swedish Institute of Experimental Forestry were formed. Later on an extensive programme of land reclamation began, first in the south of the country and then later in the north. Eventually these efforts resulted in a sustainable forestry that lived on growth alone. Around this time, the pulp and paper industry also developed. Sweden gained a leading position on the world market at an early stage, and the contribution to the country's export income from forestry was 40% in the 30s and 40s.

It was, therefore, only natural that the Academy came to devote more and more time to forestry issues. Research was needed into the forest's biological processes, forest management and forest measurement. And, the stakeholders in the forest industry needed a venue for contact and discussions. This led to a reorganisation and a name change. In 1956 the Academy changed its name to the Royal Swedish Academy of Agriculture and Forestry, forestry received its own section and a certified Academy forester was employed.

We had now reached the middle of the 20th century. The Swedish welfare state was being built up, the economy was booming in a country that had been spared two world wars. The land and forests were producing more and more – and less effort was required. People were moving to the cities and there was rural depopulation. What happened to the Academy during this period?

Two things are important to mention.

The first is that the Academy finally got its own building. The building issue had been a major concern throughout the 20th century. The Academy was housed in a dilapidated building on Mäster Samuelsgatan, which was demolished when Norrmalm was rebuilt, and then the Academy moved around, for a while on Blasieholmen in the premises where the German embassy had been housed. The dream was to have our own building at Frescati. There was a magnificent drawing – but never enough money. In addition, the state had other plans for the Frescati area. In the new Sweden everyone would have the right to higher education and the university needed room to grow. Through a trade-off, the Academy was given a building on Drottninggatan 95 B, which formerly housed the Swedish School of Mining and which later housed the department of Slavic languages. At Frescati, the rural museum, which the Academy was in charge of, became a restaurant for the students – *Lantis* – and the rector's administration moved into the Blom House, which belonged to the Field

for Experiments. One particular advantage to the Academy's new home was that it became possible to develop the library with a focus on agrarian history, which today is an important part of our activities.

The second matter of importance was that our activities changed character and expanded into new areas. Instead of closed internal discussions, there were more and more open and outward-looking seminars and conferences on subjects of current interest in the Academy's field. Although these largely still concerned agriculture and forestry, they also covered related areas such as fishing – farmed fish, wild fish and global over-fishing problems. Food issues have also become a central area; the food industry is one of our most important industries. All kinds of food-related issues have come to take up more room on the agenda.

International cooperation also increased during this period, particularly with Eastern Europe where our Academy could help with scientific contacts during the time the Iron Curtain was still down.

This was also the time when environmental issues began to take up more time at the Academy. The period after World War II was a time when it was believed that development was all for the good. Research advances were now to be used in the service of peace and create resources for the development of the welfare society. In forestry, spraying from the air became a way to replace the laborious clearing. In agriculture, chemical agents were used to control weeds, insects and diseases, and fertiliser was used, which increased yields. But eventually there was a backlash. In 1963 American biologist Rachel Carson's book *Silent Spring* was published. The book described how birds had disappeared as a result of the chemical-intensive agriculture production. In Sweden virtually all sea eagles disappeared as a result of recalcitrant compounds that made the eggshells thin. Swedish researchers found mercury in freshwater fish, which turned out to be related to the use of mercury in agriculture.

Commitment to the environment spread rapidly in Swedish society and the Swedish Environmental Protection Agency and the Ministry of the Environment were formed. Aerial spraying was banned and wise farmers cut back on the use of both pesticides and fertilisers.

Eventually all these issues were also raised at the Royal Swedish Academy of Agriculture and Forestry. Alternatives to chemical control, more effective methods of fertilisation, and animal husbandry without antibiotics were discussed. Gradually, environmental concerns have helped to shape virtually all of the activities carried on by the Academy. The fact that our approach to farming and forestry must be based on the idea of sustainable development is now accepted as a matter of course.

The titles of seminars and reports have changed somewhat, in recent times there has been a lot about climate change. Both agriculture and forestry are affected by global warming – but they can also play an important role in combating it, by absorbing carbon dioxide and by replacing fossil energy carriers.

Above all, however, isolated environmental issues have been replaced by a broader view, an awareness of the complexity of our ecological systems and how everything is linked globally. Land and water must suffice in order to provide a growing population with both food and energy. The limits the planet sets are global.

We can look back on two hundred years of breathtaking development. Sweden's population has increased from one million to nine million. The average life expectancy is over 80 years. The acreage of farm land has declined slightly in recent years but productivity has increased all the more. Scientific and technological breakthroughs have played a significant role in this process.

What dare we say about the future?

There must be a global perspective. The sound and sustainable use of resources as a paradigm is something that must be shared by everyone in the world. We need continued new knowledge and scientific breakthroughs, but we also need to raise awareness and to convince across borders. It is a question of values and governance.

This is a huge challenge. Our Academy is one of many players – but we look forward to continuing to play an important role!

Kerstin Niblaeus



Academy Secretary Carl-Anders Helander

The 200th Commemorative Meeting of the Royal Swedish Academy of Agriculture and Forestry on 28 January 2013

Your Majesties
Your Excellencies
Honourable Minister
Madame Governor
Madame President
Other Fellows of the Academy and guests
Fabulous friends

I will arrange my speech in four sections: Mission, Resources, the Year that has Been, and the Year that is to Come.

The Academy's mission is clearly expressed in our mission statement:

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

On the basis of this mission statement, the Academy's mission can be summarised in the following five points:

- The Academy shall be a creative forum for the exchange of facts and differing opinions arising out of science and practical experience as to how the green industries can and should be developed.
- The Academy shall take the lead in generating new knowledge with the object of developing and strengthening the green sector and serving as a natural source of information and mediator of know-how to and among decision makers in the state and local government sector as well as in business enterprises.
- The Academy shall aim to promote sustainable, financial viability and competitive strength in the production and administrative processes that touch on the green sector.

- The Academy shall be an independent and critical, watchful organisation that generally throws light on the importance in all their aspects of the green sectors for the development of society as a whole.
- The Academy shall encourage historical studies so that knowledge and understanding of the past can be used as a background for discussions about the future.

The Academy's most important **resource** is its *Fellows*. It is through your in-depth and extensive know-how and skills, your networks and your dedication that the Academy can be constantly developing. Moreover, all those others of you who by belonging to committees, addressing our meetings or participating in other ways, are supporting the activities of the Academy. In any one year, as many as 1,000 people could be actively involved in work of the Academy.

To accomplish our mission and achieve our Fellows' goals, we naturally need *financial resources*. Thanks to numerous, generous donations over the past 200 years, combined with effective management of our capital, income from capital is by far the largest source of funding for the Academy. Our government grants-in-aid, although relatively modest, are also an important resource.

In order to be able to carry out and develop the programme of activities it is important to expand our capital base by attracting new donations. The Academy has therefore recently set up a Funding and Donations Council to stimulate new types of financing and new donations.

The Academy's building at Drottninggatan 95 B here in Stockholm is naturally also a key prerequisite for the Academy's activities. Here we have suitable premises for most the Academy's activities. Moreover, Enaforsholm and Barksätter, two properties donated to the Academy, provide valuable resources for some of our out-of-town activities.

Last but not least, the Academy has another important resource, *the personnel in the secretariat*: they are the people whose role is to convert our mission into practical action.

What our activities actually consist of is decided by the Academy through its various bodies and their active Fellows. It is in the first instance the Fellows of the Academy who propose topics to be addressed by the Academy. The activities are checked off against the Academy's business idea, its operative goals and its resources. One key point is to balance short-term issues of current interest against planned, longer-term programmes.

The activities of the Academy are mainly conducted though Sections and Committees. In addition, we have advisory boards to support the management functions, as well as planning and working groups that can be appointed for specific ad hoc purposes.

2012, the Academy's 199th year, was as usual a very active year. In total we carried out more than 70 activities, ranging from seminars, conferences, round-table discussions, and field trips, to book launches and so on. Not surprisingly I cannot describe all of them in detail. However, I have chosen to highlight four different activities and describe them in more detail.

The General Section arranged a seminar entitled "Sustainable Agriculture – does it need Modern Biotech?" The point of departure for the seminar was a book written by an American couple – she a scientist researching in gene technology and he an ecological farmer – who together described what could be achieved by combining modern technology with lean and sustainable farming.

The Agricultural Section set up a working group during the year, which then arranged four workshops to study Sludge, Phosphorus and the Ecocycle. This is an area in which an ecocylical approach is obvious, but where the recycling of sludge on farmland for use in the production of food is highly controversial and is a tricky problem. A concluding seminar is being arranged next month.

The Forestry Section held a seminar entitled "Technical Products from Biomass." This seminar discussed the fascinating opportunities that exist to replace fossil raw materials with renewable, biomass based ones.

As a sample of *ANH's – Unit for Forest & Agricultural History's –* extensive output I would like to mention the new Bergsten book entitled *At the foot of the Mountains*, a detailed biography of A. W. Bergsten, one of the Academy's most generous and important donors, which also provides voluminous information on Enaforsholm, the mountain farm he donated to the Academy in the 30s.

What the Academy actually does *is decided* (our independence is important) by the Academy *itself* through its various bodies and their members and planned on the basis of a recently adopted **Activities and Strategy plan**.

The Academy shall be responsive, flexible and able to become involved in issues of importance to the Academy whenever and how suddenly they may arise. This requires a readiness to adjust priorities, even during the same financial year if needed.

To sum up, the activities in 2013–2016 will focus on the following topics:

- The growing competition for land, water and biological resources.
- The need for greater and more effective production on farms and forests, while minimising their negative impact on their local environment.
- The contribution of farming and forestry to energy supply as part of the solution to the ongoing process of climate change.
- Research and innovation for the development of a bio-based economy and the know-how and competitiveness of the green industries of the future.
- Marketing, strategic leadership, management and political issues, all with a focus on the development of rural enterprise.
- The importance of meals and raw materials for the environment, health and enjoyment of food.

So, I can heartily recommend each and every one of you to take part in the Academy's activities, on the basis of whatever you find most interesting.

I would like to highlight just that little bit extra some of the events in connection with our bicentenary celebrations.

Already tomorrow, and on Wednesday, I hope that many of you will be taking part in Global Outlook, a major international symposium. This will be at Norra Latin Conference Centre; it is being financed by the Knut and Alice Wallenberg Foundation.

On 23rd May we will have an Open House at the Academy for everyone who would like to come and congratulate us; on 11th-12th June we hope there will be plenty of interest in the conference Future Harvests – on the 11th in Aula Magna at Stockholm University and on the 12th June in one of four different excursions.

Finally:

Fabulous Friends!

Foreseeing French Founder Found Future Funding: Food – Feed – Fuel – Fibre, from Fully Fair Fertilised Fields, Functioning for Future Families, Favours Full Fortunate Friendship. Fantastic!

Thank you!

Carl-Anders Helander