

Executive summary

The Swedish food and agriculture sector has achieved steady growth in productivity and sustainability, but significant challenges remain

Since joining the European Union (EU) in 1995, Sweden has promoted EU and domestic agricultural policy reforms to move towards a more market-oriented and sustainable agricultural system. These policies are aimed at achieving high levels of environmental performance and animal welfare while also ensuring high productivity and financial viability for farmers, and lowering government expenditures. Over the years, these policies have led to a high level of confidence by Swedish consumers and citizens in the overall performance of their agricultural and food system.

Agricultural total factor productivity (TFP) has increased since 1995 – growing at a slightly higher rate than the EU28 average over 1995-2016 – due mainly to structural changes including the concentration of production on fewer but larger and more efficient farms. Efforts to accelerate this trend are being made through more targeted research and education to facilitate adoption of new, state-of-the-art technologies. This can help overcome the inherent disadvantages of location and climate in Sweden, in addition to the country's high labour costs, taxes and the costs associated with compliance to strict domestic rules with respect to environmental and animal welfare standards.

Sweden was one of the earliest OECD countries to raise awareness of environmental issues and develop environmental policies. Farmers are required to undertake and pay for environmental impact assessments for a wide range of agricultural activities, in particular for intensive poultry and animal husbandry. The result has been progress in decoupling environmental pressures from agricultural production as measured by reduced intensity of nutrient surpluses and of GHG emissions even while total agricultural production has remained relatively stable.

Framework conditions are enabling innovation and entrepreneurship

Sweden's economy is innovation-oriented and competitive resulting in excellent performance. Making growth more sustainable, inclusive and green is a key overall objective. The Swedish Innovation System (SIS) benefits from a strong and stable macro economy and institutions, along with a high quality of life and significant gender equality. The SIS also benefits from strong human resources and its science base, high investment in R&D and good positioning in international networks.

Sweden is one of the world's leading economies in exploiting opportunities of digitalisation through the Information and Communications Technology (ICT) infrastructure. Public institutions facilitate a sound business environment through protection of property rights, an independent judicial system, and low level of business and administrative corruption. Moreover, there are few barriers to trade or foreign direct investment.

Untapped potential to further improve productivity and competitiveness throughout the food and agriculture sector provides challenges and opportunities

Some sectors in the agriculture and food system need to improve productivity growth in order to become competitive: Sweden does not have a comparative advantage in food and agriculture production, although there is a high degree of heterogeneity and some sectors, such as vegetables and the downstream food supply chain, perform relatively well. The food supply chain functions well, but

there are concerns about the high market concentration in the Swedish retail food industry. Achieving sustainable TFP growth for the agricultural sector requires continued structural adjustments and well-targeted investments, so that farmers can adopt new or improved technology to help offset high production costs.

The Agricultural Innovation System (AIS) is mostly integrated in the SIS framework, but *research is not well connected with the needs of the agriculture and food sector*. The rate of innovation is estimated to be lower in agriculture and food processing than elsewhere in the economy. Government efforts, however, to strengthen education, research and innovation are on-going to encourage the adoption of new cost-reducing technologies, while at the same time maintaining high environmental sustainability, food safety and animal welfare standards.

Regulations are more stringent than EU requirements. National legislation sets norms and standards for food safety, environment and animal welfare that are well above EU requirements in many areas of agriculture and horticulture, particularly in relation to the types and permitted uses of pesticides, the use of antibiotics in animal production and welfare requirements (housing, space, and husbandry) associated with livestock production. These regulations are complex and costly to implement. They reflect consumer and citizen preferences, and Swedes are willing to pay a premium to partly offset the additional administrative and financial costs of producers. A high priority for the government is to simplify their implementation, and reduce the administrative burden and compliance costs that fall to farmers.

A coherent national rural policy is needed as existing programmes and investments are not effectively mobilised to improve well-being or promote growth in rural areas. There is no clear framework or mechanism to adapt national policies to the needs and circumstances of the diversity of rural areas. The national governance and funding arrangements of the 2014-20 Rural Development Programme (RDP) also differ from many regional growth policies, thereby impeding smooth co-ordination of investments between national and regional growth policies.

Key recommendations

Overall agri-food strategy

Accelerate implementation of the Swedish Food Strategy platform to better account for the knowledge and innovation needs in agriculture.

Agri-food policies and regulations

Sweden should continue to promote modern technologies in the food and agriculture sector and engage with stakeholders to raise productivity while maintaining high environmental, food safety, animal health and welfare standards that reflect societal preferences for a balanced and sustainable regional development within an open trading system.

Identify appropriate policy measures that target the development of agricultural activities that are potentially financially viable, as well as those that ensure the provision of sufficient collective or public goods (environmental, cultural, social values) provided by agricultural activities.

Advocate the implementation of performance-based, national agricultural policies that reflect the diversity and uniqueness of Sweden's agri-environment, within the broad guidelines agreed to at the EU level.

Reduce government support of agricultural incomes and increase farmer returns from the market by investing in more research and development, encouraging further integration of agriculture into SIS.

Reduce administrative and compliance costs by simplifying domestic environmental, animal and crop health, and animal welfare regulations that go beyond EU regulations.

Assess whether concentration in the food retail markets impedes competition through, for example, the Swedish Competition Authority.

Establish a scientific council on animal welfare as suggested in the 2017 Food Strategy.

Environmental sustainability

Ensure that environmental and climate change concerns continue to be taken into account when developing and assessing policies that can contribute to productivity and competitiveness.

Encourage performance-based evaluation of policies and implement measurable indicators of performance.

Apply the polluter-pays-principle more systematically to hold farmers accountable for all harmful environmental effects from crop and livestock pollution; for example, by adding taxes on fertilisers and issuing penalties where these contribute to water pollution.

Strengthen efforts to provide targeted and tailored advice to farmers on sustainable technologies and practices.

Capacities and services to boost innovation

Implement and facilitate pro-active skills policies, life-long learning, and labour mobility to alleviate shortages of high-skilled workers in the agro-food chain, and to better identify current and future skill requirements of the sector.

Prioritise inter-generational renewal in agriculture by developing tailor-made schemes that target young Swedish farmers. Assess the extent to which land regulations, taxation, inheritance law, territorial planning and agricultural policies impede generational renewal.

Establish a mechanism to engage with stakeholders with the aim of improving the coherence of rural development policy.

Strengthen the socio-economic foundation of the rural economy by stimulating the bio- and circular-economy in sustainable agricultural, forestry and agri-forestry business models.

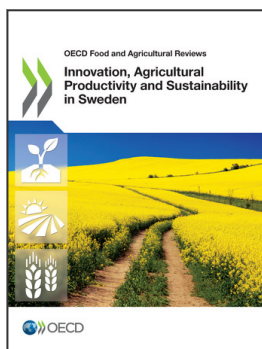
Fully connect farmers and rural population to the digital economy by ensuring reliable high-speed internet access across all rural areas and upgrading the people's skills and business practices so that they can fully benefit from these new technologies.

To counter the declining number of students enrolled in agri-food courses strengthen the co-ordination between agricultural educational institutions and the agri-food industry, and facilitate discussions between education and knowledge institutions and the industry so as to identify the skills needed for future development.

Agricultural Innovation System (AIS)

Strengthen linkages between basic research, applied research and the industry by undertaking the following actions.

- *Develop a long-term strategy for research and innovation in the food and agriculture chain by clarifying the institutional roles of SBA, SLU and RISE, establishing a platform to co-ordinate their tasks, or by merging them within RISE (the Research Institutes of Sweden Holding AB); creating a national council to monitor R&D policies of institutions; setting up a national agricultural research institute to carry out applied R&D; and assessing the effectiveness of current funding allocations to research councils and universities.*
 - *Encourage active participation by stakeholders, producers and the industry in RISE, EU EIP-Agri and international networks to transfer innovation in agricultural practices, which focus on agri-food research and innovation on knowledge-intensive high-tech areas.*
 - *Ensure that farm advisors are well-trained, and are in possession of the most up-to-date practical knowledge and skills.*
 - *Strengthen research evaluation by improving the internal system for quality assurance.*
 - *Develop indicators and tools to evaluate performance and monitor the rate and quality of innovation in the food and agriculture sectors. In addition to traditional indicators on efforts (e.g. R&D expenditures) and outcomes (e.g. number and quality of patents), such indicators should include impact (e.g. the rate of innovation adoption, total factor productivity (TFP) and environmentally adjusted TFP growth, and agri-environmental indicators).*
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