

# The city FEEDS the city and FERTILIZES the countryside: sustainable food production

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## The circular and sustainable food production system of the future is already here. FaaS – Farming as a Service has been launched in Sweden through ICA Maxi in Sundsvall

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Modern technology makes it possible to grow vegetables and fish in closed systems. This means that production can get closer to consumers. We now have the ability to share energy and take advantage of residual flows that were previously classified as waste and were a problem. Food production in closed circular and sustainable food production systems in urban environments has the opportunity to utilize heat and power resources from adjacent businesses. The surplus of, for example, heat that previously cost money to ventilate away, is today an important resource in a circular production model. Urban water and sewerage systems, which are often strained and have problems separating nutrients, which can lead to eutrophication of our seas and watercourses, are now becoming a source of extraction and production of recycled fertilizers. We can in the long run get rid of the use of the unsustainable production of mineral fertilizers. Through controlled and predictable production with the help of AI technology, much of the overproduction that is the source of food waste can be avoided. The city can not only FEED itself with vegetables and fish but can FERTILIZE grain and outdoor food production in the countryside.

### Make the transition to sustainable food production possible

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GreenFood, together with Agtira, is making a major joint investment in urban farming with vertical farms in Sweden. The basis for this sustainable development is innovative FoodTech companies as JUMO, SentianAI, Solserv and Ekobalans. Technologies for producing fish and vegetables safely and sustainably in closed systems, as well as taking advantage of and refining valuable residual flows in our cities.



### GreenFood

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We absolutely love healthy food. To make it tastier. Easier. Better. More affordable. It is the passion that drives us at Greenfood. The passion for healthy food has made Greenfood one of the Nordic region's leading food groups in fresh healthy food, with a history that spans over 50 years. Green convenience today, for a greener tomorrow is our guiding principle. For us, it is not more difficult than that. Everything we stand for and everything

we do depends on a healthy planet, and a healthy planet is completely dependen[1]dent on us. Our decisions should lead to a more sustainable society – not because we are forced to because of rules and expectations, but because we think it is important to contribute to a better world. Greenfood’s range is at the forefront of sustainable food with the base in fruit and vegetables.



## **Agtira**

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We redefine the concept of locally grown – by developing food production systems for vertical and indoor food production in urban environments – we create opportunities for food production in, or in direct connection to grocery stores. With our smart systems and Ai, we redefine the concept of locally grown. Our ambition is to be a world leader in food production systems for vegetables and fish in urban environments and constantly develop both food production methods and software support. The circular and sustainable food production system of the future is already here.



## **Solserv**

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### Packaging and composting solutions

Solserv has many years of experience in machines and service for creative and sustainable packaging technology. We deliver complete solutions for machinery, training, maintenance, and service for large and small customers in the international market

### Thoughtful waste management

For space-saving and efficient production, a well-thought-out management of waste is required. Our environmentally friendly composting solutions cover all needs – from 5 to 1400 kg per day. We also have facilities with a capacity of 5-100 tonnes per day with subsequent processing into recycled fertilizers. A fully automated system with heat and microorganisms breaks down food residues and other compostable organic waste into usable compost soil. Thanks to the active process of controlled heat and microorganisms, the process takes no more than 24 hours.

## **EkoBalans**

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The future is circular and EkoBalans has the technology

Circular economy is the opposite of the toil and waste society. In a circular economy, we use the resources that already exist in society instead of new raw materials. For EkoBalans, circular economy means benefiting from residual flows from agriculture, treatment plants and industry. If we had to decide, all residual flows, which contain phosphorus, nitrogen and substances that contribute to an improvement in the properties of the soil, would be called resource flows.

We at EkoBalans want society's organic residual flows to be used sustainably with completed cycles for plant nutrients such as nitrogen and phosphorus. That is why we deliver solutions for recycling plant nutrients and sustainable management of residual flows from treatment plants, biogas plants, the food industry and agriculture. We then refine the residual flows into high-quality fertilizers and soil improvement products.



## **Jumo**

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Your partner for sensor and automation solutions

JUMO is a leading global component and system supplier for individual sensor and automation solutions. In addition to components in temperature, fluid analysis, pressure, level, flow rate and humidity, the focus is also on automation challenges such as registration and monitoring, regulation and automation.

Measurement provides knowledge

Temperature, humidity, pH / conductivity, CO<sub>2</sub> and light intensity all affect the growth climate in the greenhouse. Accurate measurement and control of these measured values is therefore very important. JUMO offers a wide range of sensors for measuring temperature, humidity, pH / conductivity and CO<sub>2</sub> where you can choose between wired, wireless, analog and digital versions.



# SentianAI

## Sentian

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We at Sentian believe in the power of artificial intelligence and machine learning to drive innovation and transform processes. We help industrial companies to improve their operations by using cutting-edge AI and ML technology, to take them to the next level.

Our Machine Learning powered control solution helps minimize energy costs and reduce emissions. Our innovative AI learns your process from your historical operational data, finds the best parameter settings through real-time simulation and keeps on adapting even as process, equipment and goals change. As a result, it can more accurately and responsibly control your energy usage than APCs and expert operators.



SCIENCE AND  
EDUCATION **FOR**  
**SUSTAINABLE**  
**LIFE**

## Swedish University of Agricultural Sciences

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We are improving the world. SLU is a top-class international university with research, education and environmental analysis in the sciences for sustainable living. We bring together people with different perspectives but with the common goal of creating the best conditions for a sustainable, vibrant and better world.

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