# Call text – Agriculture and machinery 2026

The overall goal of the Lantmännen Research Foundation is to support the development of profitable and sustainable crop and animal production. Ongoing climate change and a turbulent world situation emphasise the need for a well-functioning food chain from field to fork. Key issues are the development of efficient and sustainable feed raw materials, plant nutrition products, energy and other inputs. Climate adaptation, food security and effective transfer of knowledge from research to practice are high priorities.

Collaboration is a key factor in overcoming common challenges and is an effective way of achieving results of high quality and relevance. We encourage researchers contacting Lantmännen to discuss the possibilities to, for example, use Lantmännen's feed, seed and other inputs. There are also opportunities to run R&D projects in collaboration with Lantmännen's specialists and at Lantmännen's production facilities, research sites and Future Farms. Lantmännen has extensive research activities in feed and crop production as well as grain facilities specially equipped with sensors for data collection and monitoring.

**Sustainable intensification of Swedish crop production**

Successful crop production is typically characterised by high yields and stable performance over time. A key issue is secure access to effective inputs and technologies for precision farming. Robust cropping systems are important to manage climate change and the increasingly unpredictable weather changes. A warmer climate increases the potential for higher yields but also poses new challenges with weeds and pests, while the need for new, efficient plant protection methods remains high. Minimising the environmental impact of crop production is also a key priority.

Current research areas:

- Methods for early yield prediction and various measures to achieve the highest yield and desired quality.
- Lime, fertilizers and additives, such as nitrate inhibitors, which are effective and sustainable with a focus on Nordic conditions.
- Robust cropping systems that can handle both surpluses and deficits of water, as well as milder winters in northern Sweden. Knowledge of preceding crop effect and the effect of catch and intercrops. The carbon balance of arable land and nitrous oxide emissions with the focus on Nordic conditions as well as practical and economic possibilities. Measures to monitor and promote biodiversity.
- New technologies and products that can supplement or replace traditional plant protection products.
- Methods and strategies for managing emerging weed species and increased weed pressure, especially in cereal and forage seed production.
- Plant breeding of the future, with a focus on technologies for the management of characteristics that are of great importance in a changing climate.
- Fast and accurate, preferably farm-specific analysis methods for, for example, vitality, germination and purity in seed with a focus on winter cereals.
- In-depth knowledge of the climate performance of different pasture ley mixtures and forage production systems.
- Forage crops for different purposes, with a particular focus on equine production.
- Increased crop stability for peas and faba beans.

**Right quality of grains and other plant-based commodities**

A prerequisite for profitable production and processing of grains, peas, faba beans and other plant-based commodities is that they meet defined quality specifications. The right quality is crucial for achieving a high yield in subsequent processing stages. Different customers and different application areas impose different quality standards on these commodities. Sustainable and resource-efficient grain management means maintaining grain quality without unnecessary drying, cooling or cleaning. All unnecessary measures have a significant economic impact. Climate change can entail greater weather variations, which creates the need for new knowledge and development of new standards for drying and storing. At the same time, the risk of attacks of various storage pests and problems with reduced storage stability increase.

Current research areas:

- The influence of cultivation measures on quality parameters required in different grain processing facilities e.g. protein content, amino acid composition, starch content, falling number and kernel size.
- The influence of grain properties on yield in industrial processes and in feed. An example is the gluten yield in wheat, where grain batches with similar analysis values can give very different results.
- Cultivation and handling methods that minimise the content of unwanted substances such as heavy metals and fungal toxins. Strong focus on substances where limit values and guideline values have been lowered or will be lowered.
- Energy-efficient drying and control of the drying process to reach the optimal target water content. Safe buffer storage before drying and efficient cooling.
- Monitoring systems to detect negative processes at grain storage that negatively affect various quality parameters, for example germination in malting barley.
- Methods for measuring quality parameters as early as possible in the value chain.
- Sorting and separation of different grain qualities to increase added value. Methods and algorithms for online sorting with desired grain qualities in focus.

**Profitable and sustainable intensification of Swedish livestock production**

An expansive livestock production is important for a sustainable food supply. Knowledge about feed and the efficiency and function of feed and feed ingredients in different animal species is absolutely crucial. Detailed information on the animal's nutritional needs and on physiological processes in the body must go hand in hand with the genetic progress for production potential that occurs continuously. Digital, technical and biotechnological development is also needed to find new solutions and approaches for a sustainable and circular livestock production.

Current research areas:

- Models for feeding recommendations that include both effective nutritional supply and climate efficiency for high-producing animals under Swedish conditions. The topic also includes the causal relationships between nutrition, management and production losses.
- Increase the lifetime production of livestock with a focus on animal health, sustainability and climate performance.
- Feed evaluation for Swedish-grown crops, side streams from industrial processes and other raw materials that can be upcycled into food via livestock production. It concerns, for example, energy evaluation, fibre quality, protein quality, amino acid composition, mineral and trace element content, manageability and taste.
- The animals' specific need for fat. This applies to fatty acid composition, fat quality, any impact on the end product and the development of feed fat that is produced from raw materials with a strong sustainability profile.
- Process technology for increased digestibility and reduced energy consumption. Parameters such as milling structure and pellet quality are examples of important factors.