

Agroscope Reckenholz-Tänikon Research Station ART



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**Agroscope Reckenholz-Tänikon
Research Station ART**

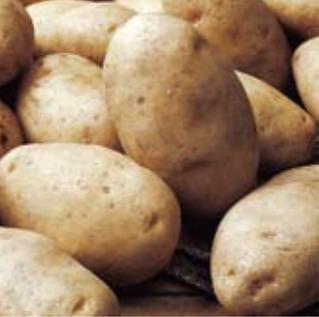


Research for agriculture and nature

Producing healthy, nutritious food is part of the remit of agriculture in the 21st century, as is protecting our natural resources of soil, water, air, climate, biodiversity and cultural landscape. All this comes at a cost, and should be done as efficiently and sustainably as possible.

The Agroscope Reckenholz-Tänikon Research Station ART has therefore set itself the following targets:

- We conduct research for environmentally compatible and economically competitive farming. Our primary concern is for a diverse rural area.
- We develop and assess sustainable plant-production and animal-husbandry systems.
- We combine ecology, economics and agricultural engineering in a holistic research approach.
- We create scientific knowledge and decision-making tools for agriculture, government authorities and society.



We promote the ecological production of high-quality food.

Food safety starts in the field.

Healthy crops from environmentally sound agricultural production

Agroscope Reckenholz-Tänikon Research Station ART develops crop production methods that promote the self-regulation of diseases, pests and weeds. By developing production methods that take account of soil conservation, we help maintain and promote soil fertility. In particular, we support organic agriculture.

Some fungi that attack crops produce toxins. Our researchers study the fate of these substances to ensure that the food produced can be consumed without health concerns. ART also pays close attention to noxious substances entering the food and feed chain from non-agricultural sources.

Robust nature in meadows and pastures

We promote the development of stable, locally adapted plant communities for both the intensive and extensive utilisation of mountain and plain areas. For the establishment of temporary leys, we select appropriate varieties of fodder plants and develop a wide range of seed mixtures adapted to the intended usage.

In collaboration with our partners, we strive to achieve an efficient and environmentally sound use of grasslands, and conduct research into improvements to the milk and meat production systems that rely on grasslands. In this way, we also support the development of sustainable grassland and alpine cultivation systems.

We breed appropriate grass and clover varieties for a wide range of needs.



Grasslands predominate in the Swiss landscape.



Protection and careful use of natural resources

ART seeks to recognise important agro-ecological developments in society, agriculture, and the environment at an early stage. We evaluate the risks to natural resources, posed by farming, climate change as well as from the use of genetically modified plants and introduced organisms, and develop appropriate response strategies.

We test the impacts of agro-ecological measures.



We monitor the impact of environmental and agricultural measures and recommend ways to reach agro-ecological goals more quickly and efficiently. We introduce our knowledge and know-how in public discussions.

Agriculture, environment, and society interact constantly with each other.





ART provides planning and calculation bases for farm management and process engineering.

Analyses and forecasts for cost-effectiveness

The agricultural sector is currently under great economic pressure. To allow future-oriented decisions to be made by farmers, government authorities and policymakers on the basis of hard facts, we supply solid data on the income situation in agriculture and on competitiveness. We examine the direct payment system, and use quantitative models to formulate decision-making principles for the future shaping of agricultural policy.

We supply planning and calculation bases for buildings, labour and machines to farmers and agricultural extensionists.



Large windrows and sufficient transport capacities are essential for high work performance.



Potato late blight can cause significant yield losses, particularly in organic potato production. The spray application technique developed by us for organic farming can help to control this disease.



The Modular Construction Standards for Farm Building Costs is a tool for planning low-cost buildings.

Future production techniques and structures

Cutting-edge technology can facilitate agricultural production and keep it competitive. To this end, ART assesses and develops new techniques for sowing, cultivating, fertilising, plant protection and harvest in arable farming.

The number of farms in Switzerland is steadily declining. What sort of repercussions does this have for the rural population, the development of part-time activities in agriculture, and the rural area? What types of growth and co-operation are rewarding for farms? We provide professionally sound answers to these questions.

Sustainable and animal-friendly housing systems

Animal husbandry in Switzerland is subject to stringent legal requirements and aims to be species-appropriate and animal-friendly. In order to meet these aims, we investigate and develop systems for sustainable milk production, as well as for the housing and feeding of cattle, pigs and goats. Process-engineering, farm-management and work-economics aspects are important in this context, as are social and ethological considerations. In addition, we test the use of new information technology in the housing systems.

We also formulate principles for animal-protection provisions and for the authorisation of pen fittings.

Species-specific housing of farm animals requires an appropriate feeding technique.

Behavioural observations are used to judge the animal-friendliness of a housing system.





Exchanges between researchers from different countries broaden horizons, encourage innovation and are the *sine qua non* for participation in international projects.

Internationally linked

Research and development operates within a global network. This makes it easier to address local issues more comprehensively. International exchange among researchers enables participation in projects extending beyond national boundaries, and promotes top-quality achievements. ART is active in this field, and involved in numerous international research projects.



Scientific congresses are the platform for personal contacts.

Knowledge transfer

ART keeps in close contact with its customers and partners. We encourage open dialogue and are keen to pass on our knowledge at conferences, field inspections, in courses and lectures, or to the media.

Our researchers regularly publish their results in major national and international scientific journals, as well as in publications for farmers.

We regularly attend exhibits.

Publishing – a very important task for researchers.



Agriculture that respects humans and the environment

Agroscope is part of the Swiss Federal Office for Agriculture and consists of three research units:

Agroscope Changins-Wädenswil
Research Station ACW

Agroscope Liebefeld-Posieux
Research Station ALP

Agroscope Reckenholz-Tänikon
Research Station ART

Swiss agronomic research helps to support an efficient agrarian sector that assumes its ecological and social responsibilities. The research stations are furthermore involved in the regulation of the agricultural means of production and in the protection of plant variety rights.

Agroscope Reckenholz-Tänikon Research Station ART

Reckenholzstrasse 191
CH-8046 Zurich
Phone +41 44 377 71 11
Fax +41 44 377 72 01

Tänikon
CH-8356 Ettenhausen
Phone +41 52 368 31 31
Fax +41 52 365 11 90

info@art.admin.ch
www.art.admin.ch

