March 2026

# agroscope

## WORK PROGRAMME 2026—2029

Agroscope good food, healthy environment

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Confederation

Federal Department of Economic Affairs,
Education and Research EAER
**Agroscope**

Agroscope introduced seven new resistant grape varieties in early 2026. These will greatly reduce the environmental impact of viticulture in the future, which is also in line with consumer wishes (cf. article on topic, pp. 22–23). Photo shows waxed shoots for the propagation of resistant grape varieties.

# Dear readers,

Welcome to the first issue of our 2026 Agroscope magazine! It seems fitting that this issue appears just as I take up my new post as head of Agroscope. I am very much looking forward to steering this unique research institute into the future together with the Executive Board and all employees.

At this point I would like to warmly thank my predecessor Eva Reinhard for her outstanding dedication over the last eight years. We wish her all the very best in her well-deserved retirement!

Agroscope began the new year with the launch of the new 2026–2029 Work Programme. This sets out our research framework for the next four years. Since agricultural research is often long-term by design, some projects from the old work programme will carry through into the new one. At the same time, we will be focusing more closely on other topics: climate change adaptation, crop protection, profitability, plant protection and plant breeding. Read more about this on page 17.

The new Work Programme is designed to have maximum benefit for and impact on agricultural practice. Put simply, we will be placing more emphasis than ever before on our motto ‘We research with and for farmers’. For example, we have set up a new Agricultural Soils Experimental Station in Grange-Verney (VD) in conjunction with the Canton of Vaud and Prométerre (page 4).

Unfortunately, Agroscope has not escaped the effects of the straitened state of the federal finances. While we are already putting in place various economy measures, further spending cuts lie ahead when the Federal Council’s 2027 budget relief programme comes into force. This means that we will have to reduce research in some areas. However, we will do our utmost to tackle the challenges currently facing the Swiss agriculture and food sector with the resources available to us.

Happy reading!
Corinne Jud Khan

New Head of Agroscope

**Other topics**



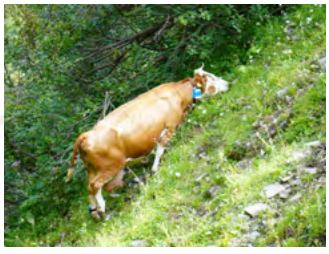
**New Experimental Station for Improving the Quality of Agricultural Soils**



**Swiss Consumer Wine Preferences: Traditional vs. Fungus-Resistant Grape Varieties**



**Agroscope Looking for Suitable Cattle Breeds to Maintain Alpine Pastures**





**Agroscope is the Swiss Centre of Excellence for Agricultural Research,** and is affiliated with the Federal Office for Agriculture (FOAG). Agroscope makes an important contribution to a sustainable agriculture and food sector as well as to an intact environment, thereby contributing to an improved quality of life.

# Events

24 April – 3 May 2026
BEA Bern, 'Grünes Zentrum'

**Agroscope takes part in the special exhibition 'Wir sind Schweizer Milch' ('We Are Swiss Milk')**

5 May 2026
Agroscope Reckenholz

**15th 'Agricultural and Food Sector' Life-Cycle Assessment Platform**

7 – 8 May 2026
BFH-HAFL, Zollikofen

**54th Annual Conference of the Swiss Society for Agricultural Economics and Agricultural Sociology (SGA)**

31 May 2026
Agroscope Stone Fruit Centre Breitenhof

**Agroscope Breitenhof Conference 2026**
The meeting place for the stone-fruit sector

24 June 2026
Agroscope Reckenholz

**Soup & Science**
Event for the public

15 August 2026
Agroscope, Güttingen Teaching and Experimental Farm

**Güttinger Conference 2026**

All Agroscope events that are open to the public are advertised on our website.

# New Experimental Station for Improving the Quality of Agricultural Soils

Agroscope, the Canton of Vaud and the Swiss farmers' association Prométerre have been pooling their competencies to improve the quality of agricultural soils. As a result of this strategic partnership, the new 'Agricultural Soils' Experimental Station was launched in Grange-Verney (Moudon, VD) on 12 February 2026. First projects will start in the 2026 season. The aim will be to create a reference platform at the interface of agricultural practice, research and knowledge transfer.

The Canton of Vaud is one of the most important farming regions in Switzerland, producing 20% of the country's grain and almost 30% of its oilseeds. In some parts of this region a substantial decrease in soil organic matter can be observed, which has a negative impact on soil fertility.

The phenomenon is often exacerbated by a decline in cattle husbandry and by intensive land use. Restoration of soil organic matter is essential in order to safeguard the productivity of agricultural land over the long term, guarantee its resilience in the face of climate change, and ensure the economic stability of the farms.

## Jointly developed solutions for practitioners

The 'Agricultural Soils' Experimental Station aims to develop concrete solutions under practical conditions. To this end, it works closely with research, education and practice. The Experimental Station is operationally run by Robin Krischer ('Soil' Project Manager, General Directorate of Agriculture, Viticulture and Veterinary Affairs [DGAV]) and managed by a steering committee consisting of Agroscope, the Canton of Vaud and Prométerre. Designed to run for four years, the framework agreement enables the gradual involvement of additional partners.

"Soil health is of key importance for the sustainability of farms and is developed by those who cultivate the soil" states Martin Pidoux, Director of Prométerre. "The Experimental Station shows the great importance of cooperation, which is anchored in practice."

## Part of a long-term vision

The work is being carried out in Moudon, on an area of over 100 hectares within a network of partner farms. For the Canton of Vaud, the Experimental Station is part of the long-term vision of a productive, sustainable and resilient agricultural sector. In the words of Valérie Dittli, State Councillor responsible for Agriculture: "With this Experimental Station, the Canton of Vaud strengthens the connection between research and agricultural practice, in order to lend concrete support to farmers pursuing increasingly soil-friendly management practices. The partnership shows the will to act in a coordinated and pragmatic manner for the future."

Partners of the 'Agricultural Soils' Experimental Station (from L to R):
Eva Reinhard (Former Head of Agroscope), State Councillor Valérie Dittli, Robin Krischer (Head of the Experimental Station), Martin Pidoux (Head of Prométerre).

## First projects

Joint workshops are being held with the farmers to develop the projects. The focus here is on the specific challenges facing agricultural practitioners. Solutions will be pursued jointly, drawing on the knowledge and professional skills of all partners.

From 2026, a first experiment with soil covers (green manures) is planned, with the intention of determining the desired plant species and suitable management methods for optimising the direct effects on agricultural-soil conservation and improvement as well as on nutrient dynamics and recycling.

In parallel with this, a systemic long-term trial is planned to improve cultivation techniques (crop rotation, soil tillage and fertilisation).

## Partners

- Operational management by the Canton of Vaud: General Directorate of Agriculture, Viticulture and Veterinary Affairs (DGAV)
- Steering committee consisting of Agroscope, the Canton of Vaud and Prométerre

Further information on the 'Agricultural Soils' Experimental Station

Further Agroscope Experimental Stations – Research with Practitioners

# Shared Responsibility: Public Opinion of Agricultural and Food Policy

Swiss citizens think that government, farmers, retailers and consumers are jointly responsible for transitioning towards more sustainable food systems. These are the findings of two surveys conducted by Agroscope and ETH Zurich.

**Judith Irek, Robert Finger, Jeanine Ammann, Andreia Arbenz, Gabriele Mack, Nadja El Benni**

The transition to more sustainable food systems is a core theme of agricultural and food policy. A study conducted by Agroscope and ETH Zurich now reveals how people in Switzerland perceive the responsibilities of different groups in this respect – government, farmers, retailers and consumers.

The researchers analysed the results of two representative surveys conducted in German-speaking Switzerland. The first focused on production-oriented agricultural policy goals such as animal welfare, biodiversity or fair incomes for farmers. The second survey looked at demand-side measures for sustainable food consumption, such as information campaigns or taxes on certain products. Participants were asked whether government, farmers, retailers and/or consumers are responsible. Socio-demographic characteristics, political orientation and attitudes to environment and health were also considered.

## All stakeholders are held responsible

The results show that many Swiss citizens have a food systems mindset and consider government, farmers, retailers and consumers to be jointly responsible. Respondents perceive *all stakeholders* as responsible to highly responsible, with little in the way of nuance regarding either production or consumption (Fig. 1).

Conducted jointly by Agroscope and ETH Zurich, the study examines how the Swiss population assesses the responsibility of different stakeholder groups – farmers, retailers and consumers – in the implementation of sustainable food systems.

In the survey of production-oriented goals – traditional agricultural policy – the government was named as the stakeholder with the greatest responsibility. By contrast, for consumer-based measures, the highest level of responsibility was ascribed to consumers. This may reflect a societal expectation that individuals should contribute to sustainability through their purchasing decisions.

Regression analysis showed that the perceived responsibility of the stakeholders is a significant predictor of willingness to accept policy measures. In particular, the perceived responsibility of the government correlated strongly with the acceptance of sustainable food consumption measures. Citizens who hold the government responsible for consumer-related issues tend to be more willing to accept different measures. This also applies to restrictive measures such as additional taxes on certain products or special provisions for canteen menus which could limit personal consumption habits.

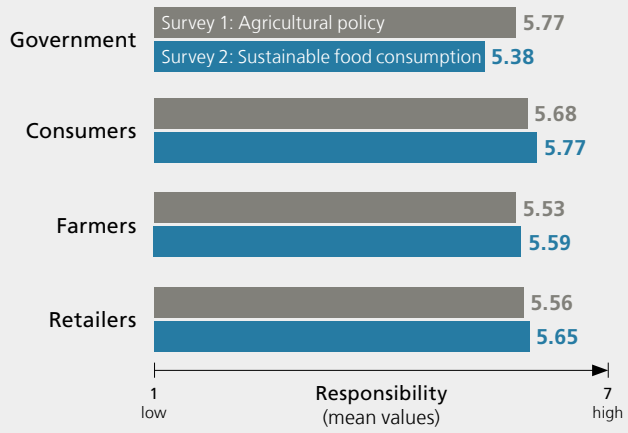



Fig. 1: To what extent do you hold the following stakeholders responsible for achieving agricultural policy goals/ensuring sustainable food consumption (Likert scale)?

## Awareness of holistic food system

Overall, the study shows that most Swiss citizens already have a holistic view of agricultural and food policy. The respondents understand the close ties between food production and consumption and believe that public and private stakeholders have a shared responsibility in both areas. Accordingly, citizens believe that all stakeholders are responsible for achieving policy goals to create more sustainable food systems.

## New government responsibility for food policy

The study also showed that consumer-based policy measures tend to be better accepted when they are perceived to be the government's responsibility. Since agricultural policy has traditionally focused on the production side and consumer-based measures are relatively new in terms of food policy, it follows that this area of government responsibility is also new. Policymakers seeking to implement such measures should avoid communicating this new responsibility in a manner that may be regarded as 'nanny state' meddling in with personal food choices.

### Summary

- Citizens of German-speaking Switzerland were asked about responsibilities for sustainable agricultural and food systems.
- Many people have a holistic understanding and view agricultural and food issues as part of an integrated food policy in which the government takes new responsibility for consumer measures.
- Most respondents assign a high level of shared responsibility to government, farmers, retailers and consumers for production- and consumption-related issues.
- The study also showed that the more the government was perceived to be responsible, the higher the acceptance of different food policy measures.

Scientific Publication:
Q Open, Volume 5, No. 2, 2025

### Groundbreaking Ceremony for Grangeneuve's New Building for Cheese-Culture Production

Liebefeld Kulturen AG's new building is an important milestone for the future of Swiss cheese cultures. Due to be commissioned in May 2028, the building will be equipped with cutting-edge technological infrastructure.

### Herbicide-Free Control of Yellow Nutsedge

Agroscope and partners together tested herbicide-free control of nutsedge in multiyear field trials. Their findings are summarised in a new factsheet and video.

→ Video

### Supporting Ground-Nesting Wild Bees for the Benefit of Crop Pollination

A new Agroscope factsheet offers tips on how to support ground-nesting wild bees on one's farm with relatively little effort. This will help boost the populations of the primary insect pollinators of agricultural crops.

### Franches-Montagnes Breeding Programme: Optimising the Breeding Goal, Preserving Diversity

Measures need to be taken to preserve the genetic diversity of the Franches-Montagnes, Switzerland's last remaining native horse breed. New recommendations from Agroscope show how to curb the rising inbreeding rate and propose measures for further clarifying the breeding goal and the assessment of morphological traits.

### Understanding the Population Dynamics of Potato Blight

Potatoes require very high fungicide inputs. New strains of late blight are hampering control measures. A monitoring programme aims to comprehensively record the population dynamics of the pathogen in Switzerland and provide recommendations for farmers.

### Looking Back on Several Decades of Commitment to Cheese Research

On 27 November 2025, Hans-Peter Bachmann was awarded the Werder Prize for Food Safety and Quality. In an interview with Foodaktuell, he looks back on 35 years of research, primarily in the cheese sector.

→ Interview

### Cultivar Mixtures Yield Wheat Baking Quality of Greater Stability

An Agroscope study shows that breeding cultivar mixtures is an effective strategy for mitigating the effects of changing abiotic conditions and maintaining stable wheat quality.

### Agroscope Unveils Seven New Resistant Grape Varieties

Agroscope announces the approval of seven new grape varieties possessing long-term resistance to the main fungal diseases as well as outstanding oenological characteristics. Presented on 29 January 2026 in Martigny (Canton of Valais) at the Agrovina trade fair, they are the result of over fifteen years of breeding work.

→ Video

### Agroscope Benefits from European Collaboration on Nitrogen in Plant Production

Being part of an extensive network creates opportunities to make significant advances in research. The aim is to develop solutions to better quantify and manage nitrogen fluxes in agricultural soils.

### Risk Associated with Handling Dressed Seed Often Underestimated

A recent study shows that the risk of exposure during activities involving seeds treated with plant protection products is not always properly understood. Information provided to agricultural professionals should be improved.

### Agroscope Tests the Potential of Sweet Sorghum for Distillation

Although relatively unknown in Europe, sorghum is one of the world's five most important cereal crops. Agroscope is exploring the potential of varieties with a high sugar content to produce regional spirits.

→ Further news topics

# Trifluoroacetic Acid and Other PFAS in Groundwater: the Role of Plant Protection Products

The occurrence of per- and polyfluoroalkyl substances (PFAS) is widely documented in soils, water bodies, drinking water and foods. An analysis by Agroscope ranks the contribution made by plant-protection products and other sources to groundwater contamination with PFAS.

**Marianne E. Balmer, Daniel Baumgartner, Ulrich Schaller, Peter Bormann, Thomas Poiger**

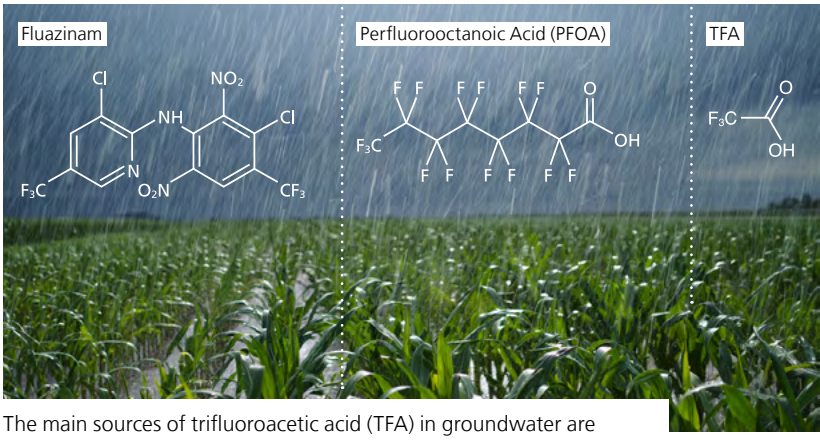
Scarcely a day goes by without a report in the media on the occurrence of PFAS in soils and water bodies, foods and the human body. Today, the use of a number of 'classic' PFAS – i. e. longer-chain, highly fluorinated PFAS – is strictly regulated. Main reasons for this are the persistence of these substances in the environment and their toxicological properties.

## Effects not yet fully explained

While we do not know enough about the effects of numerous other types of PFAS on human health or the environment, work is being done at the European level to bridge these knowledge gaps and improve regulation. Part of this involves determining maximum levels for PFAS in drinking water and groundwater.

## The definition has evolved

The term 'PFAS' was long taken to mean only long-chain, highly fluorinated 'per- and polyfluorinated alkyl substances', encompassing around 1000 chemicals. Since 2021, however, a new and much broader OECD definition has been applied according to which over 10,000 polyfluorinated compounds now qualify as PFAS.




The main sources of trifluoroacetic acid (TFA) in groundwater are fluorinated coolants from air conditioning and cooling systems and fluorinated plant protection products (e. g. fluazinam). Plant protection products do not contribute significantly to pollution from conventional long-chain, highly fluorinated PFAS (e. g. PFOA).

## Plant protection product (PPP) active substances not part of 'classic' PFAS

There are no longer-chain, highly fluorinated PFAS that are approved as PPP active substances. There are, however, various fluorinated active substances that, according to the current broad definition, are now considered PFAS. The fluorine in the molecular structure of these active substances improves their stability and effectiveness. Conversely, fluorinated compounds often degrade more slowly in the environment.

## TFA – a special PFAS compound

A breakdown product of most of these fluorinated active substances, trifluoroacetic acid (TFA) is also considered a PFAS according to the new definition and is found in groundwater throughout Switzerland. As with other PFAS, the effects of TFA on humans and the environment are not yet sufficiently understood.

## Refrigerants and PPPs contribute to TFA in groundwater

Fluorinated refrigerants from air-conditioning units and cooling appliances that degrade in the atmosphere into TFA and enter the water cycle through rainfall are considered the main source of TFA in the environment, followed by fluorinated PPP active substances which break down into TFA in the soil. The share of groundwater contamination with TFA for which each of these two sources is actually responsible is influenced by various factors, and can therefore not be estimated at present. Whilst TFA is evenly deposited over all of a surface area with the rain, PPPs are only applied over part of an area. TFA concentration in rain has significantly increased since the 1990s, unlike the amount of TFA potentially produced from PPPs, which has remained around the same over the last 15 years.

## PFAS-containing co-formulants in PPPs are very rare

In addition to active substances, PPPs also contain so-called co-formulants, which are occasionally named as a potential source of PFAS in the environment. Our analysis has shown that PFAS-containing co-formulants only occur in a very small number of PPPs. One product contains small amounts of a long-chain, highly fluorinated antifoaming agent; three products contain fluorinated propellants. Compared to other sources, the amounts sold with PPPs are small. Co-formulants do not contribute appreciably to the occurrence of PFAS in the environment, whether they be 'classic' PFAS or TFA.

Scientific Publication:
Swiss Agricultural Research 16, 132–144, 2025

## Conclusions

- The term 'PFAS' is usually taken to mean longer-chain, fully- or highly fluorinated alkyl substances. As a whole, PPPs are not a significant source of these 'classic' PFAS.
- PFAS-containing co-formulants are very rarely present in PPPs. In Switzerland, between 1–6 kg of PFAS-containing antifoaming agents and around 100–1000 kg of fluorinated propellants were sold annually with PPPs from 2014 to 2023. Compared to other sources, these quantities are negligible.
- According to the latest, very broad OECD definition, 20 PPP active substances currently approved in Switzerland are also categorised as PFAS. Among these are 18 potential TFA precursors. From 2008 to 2023, a total of around 30 to 45 tonnes of these active substances were sold per year.
- Fluorinated refrigerants from air-conditioning and cooling systems that are released into the atmosphere where they degrade into TFA are considered to be the group of chemicals with the highest quantitative TFA-formation potential, followed by fluorinated PPP active substances which degrade in the soil to produce TFA.
- Atmospheric deposition of TFA is estimated at 24.5 tonnes per year for the whole of Switzerland, mainly from the degradation of fluorinated refrigerants. The maximum TFA-formation potential from the PPP active substances sold in Switzerland averaged 11.5 tonnes of TFA per year.
- Whilst the amount of PFAS sold with PPPs is known and the maximum amount of TFA produced in the environment can be estimated relatively accurately, there is very little comparable information for other areas of application.
- TFA is documented in groundwater and drinking water throughout Switzerland. The share accounted for by refrigerants and PPPs respectively varies between sites, and depends on various factors.
- It is not yet sufficiently understood how contamination with TFA affects the environment and human health.

Impressions of current (research) activities of Agroscope.


1 Planting potatoes on experimental plots.
2 New bus connection to the Agroscope-Reckenholz site.
3 Close-up of a Chasselas grape.
4 Constructing a horticultural tunnel.
5 Clover sown by children as a work-experience activity on 'Future Day' at Agroscope.
6 Pollen beetle.
7 Red-clover forage-plant breeding.

4


5

6

7

Archive photo: Soil tillage.

1 Farriery activities in Avenches.
2 Special double-layer films trap heat in the polytunnel.
3 Propagating potato plants.



# “The Motto ‘We research with and for farmers’ Continues to Be Upheld”

*Agroscope’s new Work Programme is geared to impact and practical benefits, explain Corinne Jud Khan, the new Head of Agroscope, and Eva Reinhard, her predecessor.*

## What are the main objectives and elements of Agroscope’s new Work Programme?

Within the scope of around 360 research projects, the Work Programme 2026–2029 searches for solutions to the main challenges of the Swiss agriculture and food sector. We aim to help safeguard agricultural production, offer better potential courses of action to farming families, and reduce the negative environmental impacts of food production. We research along the entire agriculture and food system, from field and barn to plate and back, so to speak. We develop solutions that make agriculture and food systems more ecologically, economically and socially sustainable.
The Work Programme 2026–2029 is results- and impact-oriented: it is meant to provide maximum and rapid benefit for agricultural practitioners, the food sector and the environment.

## What are the changes in terms of the research topics?

We are intensifying research in key areas facing major challenges, such as climate-change adaptation, crop protection (especially in vegetable crops and field crops), sustainable livestock production and nutrient-loss reduction. Moreover, the additional funds allocated by the Swiss Parliament for crop protection and plant breeding have enabled us to support these particularly challenging topics with additional research projects.

## How does Agroscope gear its research to practice?

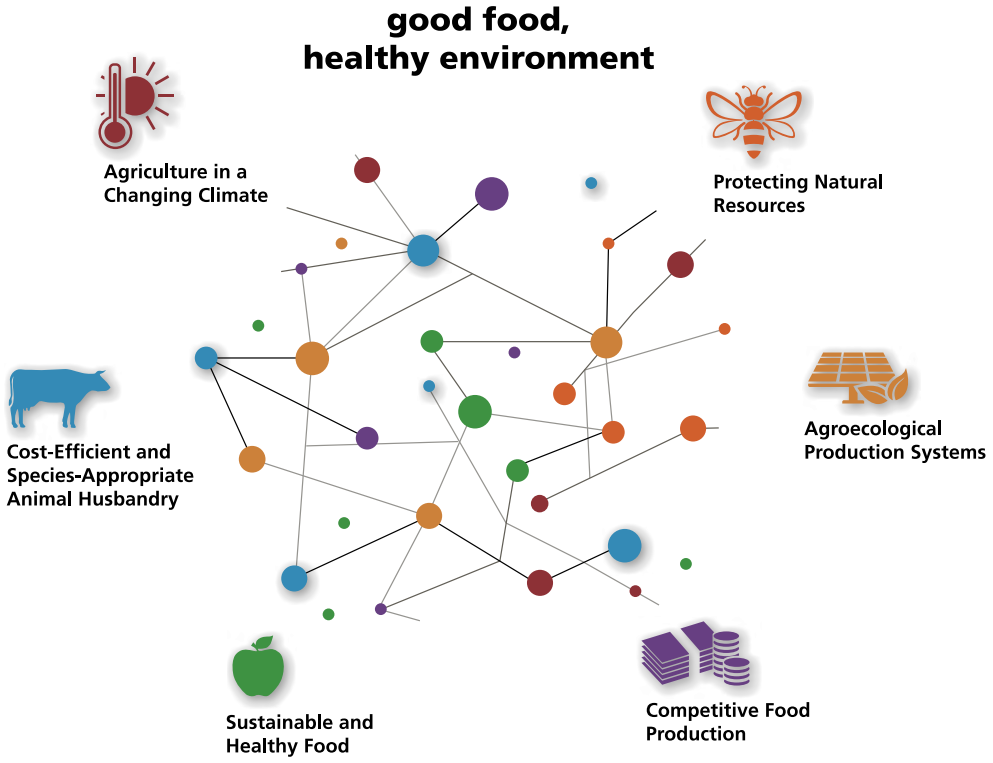
The Work Programme was developed via a structured process with the participation of many branches, organisations and stakeholder groups within the agriculture and food sector. In total, over 650 proposals were submitted by around 70 organisations. It is important for research findings to be implemented in practice; if they remain only in our heads and on paper, they achieve no impact. The practical relevance of the projects and knowledge transfer are ensured by a strong involvement of stakeholders from practice, the Federal Administration, agricultural extension, and the Cantons. —

Corinne Jud Khan (right), the new Head of Agroscope, and Eva Reinhard, her predecessor (left).

→ Video

# Agroscope Addresses New Challenges

Agroscope has launched its new Work Programme. Research is even more systematically geared to impact and maximum practical utility, and addresses the main challenges of the Swiss agriculture and food sector.




To safeguard domestic food production, enable farming families to earn a fair income and reduce negative environmental impacts: these are major challenges facing the Swiss agriculture and food sector. Agroscope's new 2026–2029 Work Programme aims to contribute to meeting these and many other challenges.

Further information is available on the Agroscope website.

The new Work Programme continues to focus on the six core themes depicted in the figure, and boosts research in areas posing major challenges, such as crop protection, plant breeding, climate-change adaptation and profitability. Research into cost-efficiency and value creation will also be expanded. All in all, the Work Programme is even more strongly geared to impact and practical utility than ever before.

On the following page, we present three examples of projects from the new Work Programme.

### AviPig-Feedwise

Pork is a popular meat, but its production is associated with emissions and nutrient losses. This project aims to refine needs-based feeding so that optimal use can be made of valuable feedstuffs and pig and sow health can be improved with minimum environmental impact. To this end, researchers are developing models for feeding and feeding behaviour that are tailored to Swiss conditions, as well as updated databases and tools for farmers. These will enable farmers to reduce the nitrogen and phosphorus excretions of their livestock, improve animal welfare and make optimum use of innovative feed from microalgae or by-products.

→ Video

→ Video

### Sustainable sugar-beet cultivation

This project aims to develop sustainable plant-protection strategies for sugar beet. Crop protection is increasingly under pressure, as plant-protection products lose their approval and the toll taken by weeds, diseases and pests increases. Alternatives to chemical control as well as prophylactic measures are being tested: researchers are studying how companion planting affects weeds, diseases and pests, and what interactions there are, for example, in crop rotations or with adjacent crops. Knowing the role of weeds as reservoirs of Virus Yellows and SBR ('Syndrome Basses Richesses' or low beet sugar content syndrome) is key for controlling these major new plant diseases and reducing yield losses in sugar-beet crops.

### WaterAdapt

Climate change is exacerbating water scarcity whilst increasing the water requirement of agricultural crops and making it increasingly difficult to achieve reliable crop yields. The 'WaterAdapt' project develops innovative systems to safeguard the production of field crops, fruit, vegetables and wine grapes, in spite of of climate change and increasing water scarcity. Using cutting-edge technologies, researchers explore techniques allowing early detection of crop water stress in light of regional water availability and irrigation. At the same time, investigations are conducted into how different cropping techniques affect water-use efficiency, how drought alters the agronomic behaviour of crops, and what cultivars or species are particularly resistant.

→ Video

# Agroscope Looking for Suitable Cattle Breeds to Maintain Alpine Pastures

Alpine pastures are biodiverse and culturally important, but also challenging for modern cow breeds. A mismatch between animals and pasture leads to habitat loss. Agroscope is therefore looking for cattle breeds that are suited to maintaining alpine pastures.

**Caren Pauler**

Which type of cow is best suited to which site conditions (forage, slope, grazing management) and offers the greatest benefits in terms of animal welfare, the ecosystem and profitability? Agroscope researchers address this question in the 'PeaMaps' project recently conducted on the experimental alpine farm in Graubünden. Three cattle breeds serve as models for the full range of productivity: Holstein, the most intensive dairy breed; Original Brown, a moderately intensive dual-purpose breed; and Hinterwälder, a small extensive breed. The Agroscope team took a closer look at 45 dairy cows from these three breeds grazing on the experimental alpine pasture.

## Modern breeds are super-producers – with high demands

Changes in breeding and feeding have resulted in the near trebling of cow milk yields over the past century. Modern breeds require nutrient-dense, readily available feed to cover their energy requirements for milk production. However, one-third of Switzerland's agricultural area consists of low-nutrient alpine pastures, some with challenging terrain. This mismatch between the high demands of the grazing animals and the relatively scarce pastureland resources has consequences: modern dairy cows cannot extract sufficient nutrients from alpine forage to produce the high yields for which they have been bred. If not fed concentrates in addition to their pasture forage, these cows produce milk by mobilising body reserves, which causes considerable weight loss. Apart from examining weight and milk yields, the Agroscope team is currently analysing data on the milk quality and cost-efficiency of the three breeds.

## Wanted: moo-ntaineers

Modern breeds also have trouble coping with typical alpine terrain. GPS tracking of the cows shows that Holsteins consistently avoid steep, nutrient-poor areas. The Hinterwälder cows are made of sterner stuff: they were not put off by either bushes or steep slopes, and explored the furthest reaches of the alpine pasture. The smaller animals stumbled far less on the (sometimes-steep) path to the milking parlour, and were less likely to slip when it rained. The researchers also observed the grazing behaviour of the animals to determine which breed consumes how much of which plant. The analysis of the dairy-cow study is still ongoing, but previous Agroscope research

A sure-footed ten-year-old Hinterwälder cow on the steep slopes of the experimental alpine pasture. Modern breeds would have great difficulty in grazing here.

projects on suckler cows clearly showed that extensive breeds are less choosy grazers, and thus actively suppress problematic plants.

## Site-adapted cattle breeds: the key to sustainable alpine farming

The major differences between modern and more traditional cattle breeds have tangible consequences: in practice, productive animals are usually concentrated on a small number of pastures in the alpine region that offer good forage quality and more moderate terrain. The resultant overuse of the land causes erosion, eutrophication and weed infestation. By contrast, less favourable alpine pastures are hardly used any more, and are subject to shrub encroachment. Site-adapted breeds, however, can help prevent both over- and underuse, thereby contributing to the maintenance of alpine pastures with their unique biodiversity and high cultural value. —

Further information

### Conclusions

- Modern cattle breeds are big and heavy. When intensively fed, they produce more milk than dual-purpose or extensive breeds.
- These breeds need nutrient-dense, readily available feed to cover their energy requirement for milk production; however, one-third of Switzerland's agricultural area consists of low-nutrient, and in some cases steep, alpine pastures.
- Productive animals are concentrated on the few pastures in the alpine region that offer good forage quality. Overuse of these pastures causes erosion, eutrophication and weed infestation, with the attendant adverse effects.
- The less-favourable alpine pastures are underused and thus subject to shrub encroachment. This leads to a loss of both grazing land and biodiversity.
- Farmers who focus on a site-adapted breed are able to make use of available resources without overtaxing their animals, whilst contributing to alpine pasture maintenance.

# Swiss Consumer Wine Preferences: Traditional vs. Fungus-Resistant Grape Varieties

Wines made from fungus-resistant grape varieties are meeting with a comparable success to those from traditional grape varieties. A Swiss study reveals several consumer profiles, highlighting the importance of custom-tailored marketing strategies.

**Marie Blackford, Barbara Guggenbühl-Gasser, Jonas Inderbitzin, Martin Wiederkehr, Pascal Fuchsmann, Stefan Bieri, Kathleen Mackie-Haas**

On average, wines from robust grape varieties are just as popular with consumers as those from traditional grape varieties.

## Fungus-resistant grape varieties: a promising alternative

Fungicides are essential in viticulture for controlling downy mildew, powdery mildew and botrytis. Given the growing demand for greater sustainability in viticulture, fungus-resistant grape (FRG) varieties represent a promising alternative, allowing winegrowers to reduce the use of plant-protection products. In Switzerland, various public and private breeding programmes have produced certified FRG varieties such as 'Divona', 'Sauvignac', 'Divico' and 'Cabernet Jura', increasing their availability to winegrowers. Varieties stemming from European research programmes round out this list.

## Gaining consumer trust

Despite the acknowledged quality of wines from FRG varieties, there is the belief that consumer acceptance remains a major stumbling block for large-scale adoption. However, studies conducted in several countries, *inter alia* France, Germany and Brazil, show that consumers are generally open to these wines, especially when their environmental benefits are emphasised. In Switzerland, the last study on the subject was conducted over a decade ago, despite the development of new grape varieties and growing interest in sustainability.

## Consumer study on wines from resistant grape varieties in Switzerland

This study addresses three issues:

1. Do Swiss consumers perceive wines from FRG varieties differently from those made from traditional grape varieties?
2. Can consumer groups be identified according to their rating of FRG wines?
3. Does the information on FRGs influence their ratings?

To answer these questions, we conducted a multi-stage study combining a chemical analysis of the wines, an expert sensory profile and consumer tests with FRG wines compared to those from more-traditional grape varieties in three Swiss towns: Nyon (Vaud), Liebefeld (Bern) and Wädenswil (Zurich). Half the participants were informed that they were tasting wines from FRG varieties; the other half were not.

### Conclusions and recommendations

- This Swiss consumer study showed that wines made from the resistant grape varieties tested are on average as highly rated as those from the traditional varieties.
- Three consumer groups were identified based on their preferences, highlighting three key consumer acceptance factors for wines made from resistant grape varieties: sensory quality, consumer wine knowledge level and consumer familiarity with resistant grape varieties.
- Although information on the environmental benefits does not affect overall ratings, certain consumers are sensitive to it.
- Marketing strategies should thus be tailored to these different consumer segments, stressing the wines' sensory qualities whilst strategically communicating their ecological benefits.

Scientific Publication:
Oeno One, Vol. 59 No. 3, 2025

| | | 2024 | 2025 | Variance | Variance in % |
|---|---|---|---|---|---|
| **Functional Earnings** | CHF | 22,512,764 | 26,865,153 | 4,352,389 | 19.3 % |
| **Functional Expenditure** | CHF | 200,420,613 | 202,661,514 | 2,240,901 | 1.1 % |
| **Statement of Investments** | | | | | |
| Investment Income | CHF | – 190,661 | – 30,725 | 159,936 | |
| Investment Expenditure | CHF | 5,110,331 | 3,387,918 | – 1,722,413 | |
| **Cost Coverage Ratio** | % | 10.9 % | 13.0 % | | |
| **Project Management with Third-Party Funding** | CHF | 16,124,593 | 21,860,038 | 5,735,445 | 35.6 % * |

* The marked increase is due to the fact that, from 2025, Switzerland is again associated with the EU research programmes and the projects are directly funded by the EU.

**1319**
publications, including **708** practice-oriented publications;
**611** scientific publications

**1484**
lectures and posters

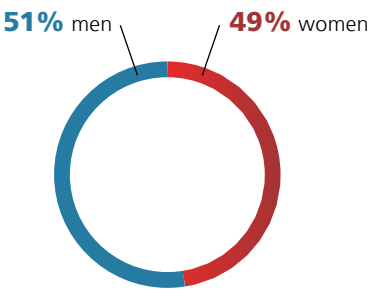
**92**
supervised dissertations

**98**
supervised semester, Bachelor and Master theses

**1750**
lectures (universities, technical colleges, vocational schools and courses)

**951** full-time positions (FTE) with
**1115** employees

**42** internships
**81** trainees
**70** doctorates
**65** postdocs



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Corinne Jud Khan
Head of Agroscope

▸ Interview, page 17