



Making the most of synergies between healthy nutrition and sustainable food production

Our diet could be healthier while also being more sustainable. This is the conclusion reached by a group of researchers who evaluated various dietary scenarios for the Swiss population. If less meat and sugar were consumed, both public health and the sustainability of food production would improve. Such shifts in eating habits are expected to create synergies, but there will also be trade-offs. Based on their results, the researchers have issued specific recommendations for different target groups that should help minimise the trade-offs while promoting a sustainable and healthy diet.

Our eating habits have far-reaching consequences: on the one hand, they affect our health and play a part in the development of various diseases. On the other hand, the production of food as well as its processing and consumption have an impact on the environment, the economy and society. In the context of NRP 69, an interdisciplinary research group looked for solutions to promote a diet that is both healthy and sustainable. The researchers developed various dietary sce-

narios for the Swiss population until 2050. Based on this work, they analysed potential synergies and trade-offs between a healthy diet and sustainable food production.

In total, the researchers developed ten dietary scenarios for the future. They then analysed three key scenarios in more detail: in the reference scenario, they assumed that today's eating habits will remain unchanged until 2050. The scenario

From the perspective of sustainability, consumers should ideally only eat meat from animals that were not fed with fodder grown on arable land.



"Swiss food pyramid" is based on the assumption that the recommendations of the Swiss Society for Nutrition (SGE) will be implemented in full by 2050. The third scenario, called "Feed no food", presumes that by 2050 farmed animals will be given no food that is fit for human consumption or that was grown on land that could be used to grow food for humans. The animals would only eat grass, by-products of food production or food wastes. This scenario would lead to a much more efficient use of land because no animal feed would be grown on arable land.

Healthy often equals sustainable

The analysis shows that the two alternative scenarios would require similar adaptations to our eating habits. We would have to eat significantly less meat and increase our intake of pulses.

This would result in synergies between sustainability and public health: eating less meat is healthier and leads to greater ecological and social sustainability in food production. In addition, the Swiss food industry would achieve a higher level of self-sufficiency thanks to reduced imports and the consumers would spend less money on food because they would buy fewer expensive animal products. However, on a macroeconomic level, such a change would reduce the value-added potential of the Swiss food sector.

Adaptation leads to trade-offs

The analysis of the different scenarios also shows that changes to eating habits entail trade-offs. One such contradiction concerns the type of meat that should best be eaten as part of the reduced-meat diet. From the point of view of sus-

Recommendations for policy makers

Adjusting incentives and regulations

The research group makes a number of recommendations to assist political decision-makers in promoting a food system that is both healthier and more sustainable.

- Campaigns promoting healthy eating need to target specific social groups because eating habits vary considerably depending on the age group, socio-economic situation and region.
- Swiss agricultural policies need to be brought into line with the aims of healthy eating. Incentives to produce meat and sugar, should be scaled down. A reduction in the consumption of dairy products should also be recommended.
- Major distributors should be given incentives to promote healthy and sustainable products and limit advertising for unhealthy and unsustainable products.
- Politicians should consider introducing a tax on unhealthy foods.
- Taxes on certain substances and methods in agricultural practice, such as using chemical fertilisers and imported concentrated feed would encourage more sustainable food production.
- Taxation on certain agricultural products should involve a balanced mix of measures which takes into account both the ecological as well as the social and health-related dimension of production. The intensive production of pork should not be more attractive than non-intensive beef production in suitable locations. Existing trade-offs need to be identified and discussed (e.g. climate protection and the use of local grasslands).
- The consumption of healthy foods could be promoted with financial incentives, such as a lower VAT rate.
- Regulations that are in contradiction to sustainability goals should be revised. This includes restrictive rules concerning expiry dates and restrictions on using food waste as animal feed.
- A limitation or a ban on advertising products that are unhealthy and not very sustainable should be examined.

tainability, consumers should only eat meat from animals whose feed is not grown on arable land. Beef from cows that are kept on grasslands throughout their lives meets this criterion. To avoid wasting resources, we would have to eat as much of this kind of meat as possible, including entrails and cuts that are currently exported. But this leads to some trade-offs in terms of health: meat should be eaten as a source of minerals, pro-

tein and vitamins, but epidemiological studies suggest that small increases in the risk of several cancers may be associated with high consumption of red meat or processed meat. Another contradiction concerns the foods replacing meat: if plant-based products such as pulses need to be imported, we have to consider the social impact in exporting countries.



From a public health perspective, consumers should eat less sugar. The picture shows sugar beet before processing in a Swiss sugar refinery.

Recommendations for consumers

Less meat and sugar, more fruits and vegetables

The researchers recommend that consumers adapt their eating habits in a way that benefits their health and the environment.

- Sugar consumption should be reduced.
- To improve their health, consumers should eat more fruits and vegetables that are seasonal and locally produced.
- Animal products should be replaced in part with pulses and other sources of plant protein. This would reduce the high environmental impact of animal products.
- In general, less food should be purchased. Overall this would lead to less food waste and would automatically reduce the ecological footprint of the food system.
- Acquiring practical knowledge about healthy and sustainable eating should be part of our general education. This would include acquiring the skills needed on a daily basis to purchase sustainable and healthy food, as well as its preparation and storage.

Developing viable visions

The researchers conclude that political measures in the areas of food, health and sustainability in Switzerland are insufficiently coordinated at present. For example, farming subsidies for the production of meat and sugar are in conflict with targets in the areas of public health and sustainability: the subsidies lead to lower prices and increased consumption of meat and sugar, while health campaigns recommend eating less of those products.

Further information:
www.nrp69.ch

To maximise the synergies in the food system and minimise trade-offs, we need coherent and coordinated policies across the different sectors. Economic incentives, regulations and information campaigns need to be combined in a balanced mix. Producers and consumers will not necessarily see any financial benefits as a result of healthier and more sustainable diets. For this reason, the various stakeholders of the Swiss food sector need to jointly develop a viable vision of future diets.

Recommendations for the food industry

Investing in new technologies

By being innovative, the food industry can contribute to healthy eating and sustainable food production.

- Food-processing industries should invest in technologies that make food by-products available for human consumption.
- The animal feed industry should develop products that are almost exclusively based on food waste products and by-products.
- Existing value chains should become more flexible so that the food industry can cope with heterogeneous products from an agriculture adapted to local conditions. This would prevent requirements defined by the processing industry from limiting the sustainable potential of food production. For example, pork meat is currently considered of inferior quality if the animals were fed organically. Another example is the excessive fertilising that is required to meet the baking quality requirements of cereals.

Agricultural recommendations

Reaching environmental goals and breeding suitable livestock

- Production methods need to be adapted in view of reaching the environmental goals "Umweltziele Landwirtschaft" in good time. It is crucial to aim for a fertiliser balance that is effectively – and not just mathematically – balanced and to reduce the use of pesticides.
- Agriculture needs to breed types of animals that can live on suboptimal food. More diverse animal breeds could contribute to a more efficient use of the available resources, such as food waste products and by-products. This would make it possible to reduce the proportion of fodder that is specifically grown for animals.