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# The potato crop is suffering from the heat and threatening to trigger water shortages

Switzerland's roughly 4,000 potato farmers have seen three years of mediocre harvests. The potato plant needs water in summer. It is suffering from the scorching summer months as water scarcity becomes an issue.

#### STÉPHANE HERZOG

Potatoes are a staple of the Swiss diet. Take the rösti, for example. And a picnic is not a picnic without a good packet of crisps. Swiss farmers are also fond of potatoes: in good conditions, they offer unparalleled returns to farmers on the Swiss Plateau. But it takes 10,000 Swiss francs to cultivate a hectare. "The potato is the best crop for transforming sunlight into calories, and it can also be consumed directly, which is a bonus," comments Patrice de Werra, potato expert at Agroscope, the centre of excellence for agricultural research in Switzerland. The potato also needs water, much more than wheat or sweetcorn,



# "The worst thing for the potato plant is extreme weather conditions."

Niklaus Ramseyer, general secretary USPPT

for example. The water must also come at the right time – in summer, when the potato variety grown for chips and crisps sinks its tubers into the earth. However, ever since 2021, there has been one heatwave after another. And potatoes don't grow at temperatures over 30 degrees. In fact, the rain has also sometimes come at the worst possible moment, as in the summer of 2021, when it impeded the planting season. "The worst thing for the potato plant is extreme weather conditions," comments Niklaus Ramseyer, general secretary of the Swiss Union of Potato Producers (USPPT). Potato growers have seen their income fall markedly, by 40 percent in some cases. Switzerland now has to import the foodstuff from neighbouring countries. More than 50,000 tonnes were imported in 2021, year of the worst harvest since the turn of the century, at only 380,000 tonnes, against more than 500,000 tonnes in the good years. The accumulation of these bad harvests is starting to weigh on farmers' morale so much that some of them are thinking of giving up on the potato.

# Droughts in a country rich in water

It all comes down to water, even in Switzerland, with its wealth of rivers and lakes. "It is a major problem," acIt was a difficult year for Swiss potato farmers, with rain at the wrong time as well as very high temperatures that stunted growth and parched the soil. Photo: Keystone

knowledges Ramseyer of the USPPT. "We're getting more rain in winter and less in summer. If a river's water level goes down, the farmers using surface waters may have this source denied to them by the authorities," he remarks. The USPPT is lobbying for the installation of sprinkler systems wherever possible. About 45 percent of holdings do not have such a system. "Only a fraction of them will be able to install sprinklers," explains de Werra, due to the gradient of the land and the proximity of water sources. Niklaus Ramseyer is pushing for new solutions. "For example, we could use dams to store the water in the winter, so that we can irrigate more effectively in the summer," he suggests. Farmers can also try planting more robust or early blooming crops. In any case, the potato growers are

fighting tooth and nail to defend the potato. "There is strong demand and we want to meet it. And we are against importing. The main thing is to preserve the arable land that is devoted to growing potatoes," emphasises Ramseyer, adding that Switzerland has fertile land and enough rain for the potato crop.

# Switzerland does not measure its water

"We'll always have enough water in Switzerland, albeit not necessarily in the right place and at the right time," remarks Bettina Schaefli, professor of hydrology at the University of Bern. These dry summers are a novelty in a country where having to water the potato crop was unusual a few decades ago. Schaefli predicts a trade-off among the regions, with agriculture being a priority, as it feeds the people. Water will need to be measured and distributed fairly between agriculture, industry and private use.



# "The potato may no longer be here in 100 years' time."

Patrice de Werra, Agroscope

However, Switzerland does not measure its water. "Farmers have to provide statistics on everything they do, except for water consumption," bemoans Schaefli, adding that farmers do not waste this resource, which they pay for.

Will dams save the potato? The hydrology professor sees two distinct issues to consider, given how disparate these two activities are. "The main thing is rain and snow," she says.



Swiss potato fields like this one in Burgdorf (canton of Berne) depend increasingly on irrigation. But that means increasing competition for what water there is. Photo: Keystone

In any event, the Swiss potato faces an uncertain future. The length and intensity of heatwaves, the lower rainfall in summer and the level of evaporation will reduce available water volumes at key times. "The challenge affects vegetable cultivation as a whole, as this needs even more water than potato farming. As for the potato, if climate disruption accelerates, the potato may become a delicacy in 70 years. In 100 years, it may no longer be here," says Patrice de Werra. Swiss farmers will favour less water-intensive agriculture, such as sweet corn or lentils. "They can adapt; meanwhile, countries like Russia will acquire more arable land," he concludes.

## A question of timing

Usually, the early potato varieties are planted in February, whereas the potatoes used to make chips and crisps are planted between March and May. The first harvest is in June and the second in September. The potatoes are then stored until the following spring. Some growers had to plant late in 2023 - around early June - because of the waterlogged ground. This interfered with root development. June was dry and hot. The potatoes, however, were not able to withstand these extremes in weather. Then, August was hot again. The Swiss Union of Potato Producers predicts a bad harvest and believes the country will have to import again. Every winter, small potatoes of the size used for raclette are imported from the south, especially from Egypt. (SH)

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