

Three new quinoa cultivars for varying climates

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Consumers can't get enough of the superfood quinoa, healthy grains which originate from and thrive in South America. Wageningen UR has developed three varieties that also do well elsewhere in the world.

"Startling, but understandable," is how the breeder Robert van Loo of Wageningen UR describes the hip status of quinoa. "It is rich in protein

and other healthy ingredients and contains less starch than pasta, rice or potatoes. It is also gluten free, which is good for people who are intolerant. Last but not least, quinoa is delicious."

Near the equator

Most quinoa comes from the Bolivian and Peruvian Andes. Wageningen UR has been researching possibilities to grow the crop in Northwest Europe since the 1990s. "The quinoa [varieties](#) from the Andes are cultivated near the equator," Van Loo points out. "The plants are used to short days when ripening so cannot really be grown in countries like the Netherlands."

Three new quinoa cultivars for Europe

Van Loo and his colleagues worked on developing new cultivars between 2003 and 2007. They used classical crossing methods to find variants that would not be sensitive to the length of days and also free of the bitter substance saponin. This resulted in three new varieties. The French company AbbottAgra saw merit in the idea of European quinoa and obtained a license to start growing it in 2007. From this moment on, things started moving quickly.



"A thousand hectares were planted this year in France alone," Van Loo says. "But there are developments in the Netherlands, too. In the Netherlands, the Dutch Quinoa Group has acquired the right on our varieties to set up a Dutch production chain, in collaboration with pioneering farmers, now planted an area of 30 hectares with our varieties. In cooperation with European partners, Wageningen UR is currently also creating new varieties with qualities such as better mildew resistance and higher yields – as well as with new colours, such as dark red to reflect the fact that consumers are already familiar with variants from South America."

Quinoa for saline soils

Another useful factor is the fact that the varieties do well in [saline soils](#). Tests have shown that quinoa doggedly continues to grow in places

where other crops quickly perish. Wageningen UR will be considered for an award of the Securing Water for Food programme, for its project proposal on growing Wageningen quinoa on saline soils in Chile, China and Vietnam.

Falling prices

Although the supply of quinoa is barely sufficient to meet global demand, Van Loo predicts that this will change. "The scale of production cannot easily be increased in South America. So, I wouldn't be surprised if there were 20,000 hectares cultivated in Europe five years from now. The market price, which is now very high, will go down as a result."

Not a loss for South America

Van Loo isn't worried that South America will ultimately lose out due to an increase in the global output of quinoa. "For most Bolivians and Peruvians, quinoa is not an important part of the daily meal. Before the global hype began, production had even decreased greatly, as yield per hectare was not interesting enough for farmers. I'm more concerned about the export of minerals – if minerals are insufficiently supplemented by fertilisers, soils will become poorer. I think that the international chains, of which Wageningen UR is part, need to exercise considerable caution in this respect."

Provided by Wageningen University

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