

Future- proofing the Apple

The apple industry has a long tradition in South Tyrol - one that is based on constant change. Just as they have done in the past, growers in the 21st century are tackling the challenge of how to rekindle the appeal of the apple. *A look ahead.*

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Photography by Patrick Schwienbacher



“Agriculture has survived to this day because it has constantly reinvented itself.”

Andreas Rottensteiner, farmer, Pieracherhof in Signato, Italy

For anyone setting out to explore the future of the South Tyrolean apple, the Pieracher farm in Signato is a good place to start. In a picture postcard landscape some 800 meters above sea level and with South Tyrol's capital city at their feet, apples are ripening across six hectares of terraced orchards. Some of these varieties haven't yet made it to the retail shelves due to the small quantities harvested, but already carry tempting brand names like SweeTango. “They are quite time-consuming to harvest because you have to cut the stalk off each apple to stop it piercing any others,” explains farmer Andreas Rottensteiner, pointing to the still-immature small red fruits. “But in terms of taste and consistency, they are premium apples. You just can't get better than these – so I'm hoping the price will reflect the extra work they involve.”

The farmer's family has run the farm on the Renon mountain above Bolzano for 260 years. Rottensteiner has always secured the farm's future with innovation: by gradually replacing hay meadows with apple orchards, by pioneering drip irrigation and hail nets, and indeed by growing club varieties. A member of the Association of South Tyrolean Fruit Cooperatives (VOG), the farm started trialing Kanzi in 2003. Today, 60 percent of its acreage is planted with proprietary varieties: Envy, Yello, SweeTango, and, this year for the first time, Cosmic Crisp. This apple – bred at Washington State University in Wenatchee, right at the heart of America's largest apple growing region – was hailed by the New York Times as “the most promising and important apple of the future” after making its debut in the US. “Agriculture has survived to this day because it has constantly reinvented itself,” Andreas Rottensteiner believes. “So the biggest mistake you can make is to do nothing and always stick with the same variety.”

1 Farmer *Andreas Rottensteiner* at his Pieracherhof farm in Signato 800 m above sea level.

2 The view from Signato stretches way down into the valley beyond the South Tyrolean capital Bolzano.

3 Rottensteiner grows six hectares of apples, some of which are not yet sold commercially.

4 The farm on the Renon mountain has been in the family for 260 years.

5 Time and again, the Rottensteiners have preserved their heritage with pioneering work and innovation. They replaced hay meadows with apple orchards and were early adopters of drip irrigation, hail nets, and club apples.





1 South Tyrol seeks to maintain its market position with variety innovation, natural production methods, technological leadership, and unrivaled service.

2 Around 90 percent of *VOG apples* are grown to Integrated Production standards, with 10 percent produced organically.

3 *Walter Pardatscher*, director of the largest apple marketing organization, *VOG*.

Even more so when competition from low-wage countries floods the market with traditional South Tyrolean varieties like Golden Delicious or Gala at bargain-basement prices. “In good years, when you get apples being sold by the truckload at 30 cents per kilo, traditional growing regions really feel the pressure,” says Alessandro Dalpiaz, director of Assomela, the umbrella organization of Italian apple producers. That’s particularly true in an area like South Tyrol, where small family farms with high production costs predominate. On top of this, there’s the growing problem of the traditional apple looking increasingly old-fashioned against the ever-expanding range of new and exotic products on display in supermarket fruit aisles.

So how does Europe’s largest contiguous apple-producing region plan to maintain its market position in the face of these developments? By continuing to produce top quality apples, say the large South Tyrolean producer associations, the

above-mentioned *VOG* and the Val Venosta Fruit and Vegetable Producers’ Association (*VIP*). But they can’t keep this promise by resting on the laurels of good climatic production conditions. Variety innovation, natural production methods, technological leadership, and unrivalled service are the key to securing the future of over 7,000 apple farmers across the province.

The *VOG* and the *VIP* may not always share the same focus. But when it comes to issues such as innovating the product range, they speak with one voice, and have done ever since a joint R&D department was set up 18 years ago: the Variety Innovation Consortium South Tyrol (*SK Südtirol*). Back then, the meteoric rise of Pink Lady made it abundantly clear that alongside the standard varieties, a new market was emerging – a market for managed varieties, whose variety and trademark rights are in the hands of private companies or consortia. In return for higher tree prices and royalties, growers

“It’s not just about sweet or sour, but how well an apple stays fresh.”

Walter Pardatscher, VOG Director



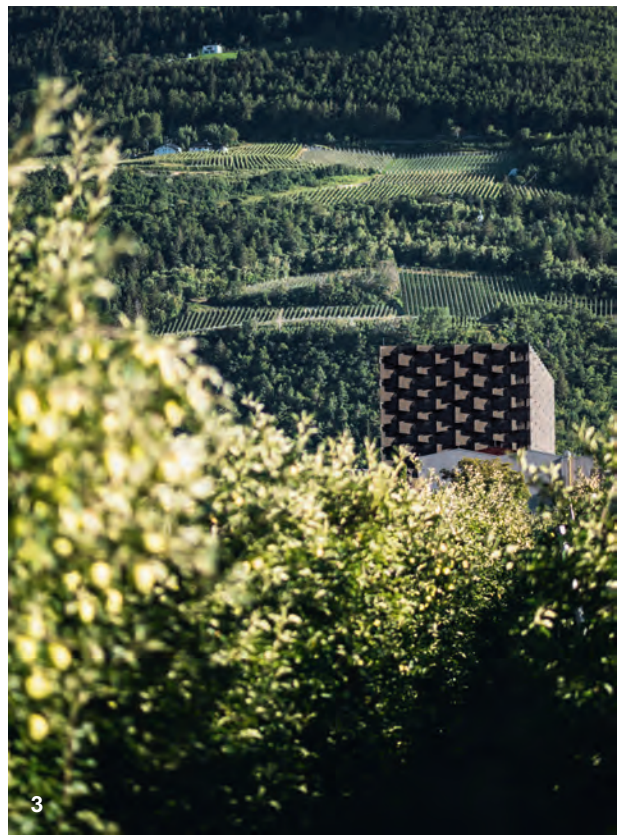
are granted cultivation rights and, along with them, the hope of achieving better farm gate prices in the future through controlled cultivation and exclusive marketing rights. At the same time, these new apple varieties are notable for their special organoleptic characteristics, ranging from ultra-crisp flesh and completely new flavor notes to excellent shelf-life qualities.

About a dozen of these club brands have been introduced in South Tyrol since the SK was founded in 2002. In 2011 cooperation within the region was ramped up a notch through membership in the International Pome Fruit Alliance, in which VOG and VIP work with producer organizations in South Africa, New Zealand, Australia, Chile, and the USA to hunt down the most promising varieties. Three spoils of this hunt will be presented to an international audience in January 2021, including Ipador: an apple with unusually long keeping qualities, making it suitable for marketing in the second half of the season, between March and July. The exclusive rights to Ipador are held by the six members of the International Pome Fruit Alliance, explains SK Executive Director Markus Bradlwarter: “Each member can decide how much to produce in their territory.”

That’s music to the ears of VOG. Europe’s largest apple marketing organization, founded in 1945 – and therefore fresh off celebrating its 75th anniversary – coordinates sales on behalf of twelve cooperatives with around 4,600 farmers producing up to 490,000 tonnes of apples. Of these, 63 percent are exported and have to compete against production and market trends in 60 countries worldwide – a challenge that is met with the slogan “Many apples to satisfy many tastes”. Their vision is to be able to offer an apple that is suitable for every European and non-European market 365 days a year using a sophisticated category management system. “It’s not only about consumers’ preferences for sweet or tart, size or color, but also about whether an apple will cope with long shipping times, or keep its freshness intact in a country with a tropical climate and limited logistical infrastructure,” says VOG director Walter Pardatscher.

One focus of the association’s activities is the issue of sustainability. Around 90 percent of its apples are grown according to the guidelines of integrated production, while ten percent are organically produced on 1,000 hectares. With approximately 30,000 tons, VOG is one of the largest producers of organic apples. The association is also working on the constant internationalization of its Marlene brand which was developed in 1995 for the Italian market and can now be found in 25 countries: In Spain, for example, Marlene is one of the best known brands in the fruit and vegetable sector.

New varieties with exciting flavors notes and special qualities are helping VOG to breathe new life into apple consumption. “Biting into an apple needs to be cool again,” Pardatscher says. This will also help South Tyrol’s apple



1 + 2 Across South Tyrol, growers are outcompeting each other with sustainable production practices: stone walls, bird nesting boxes, and voluntarily giving up herbicides.

3 Organic apples grown in the Venosta Valley are stored at the Juval Fruit Cooperative behind a facade with geometrically woven metal bands.

4 The new high-bay warehouse has room for 18,000 300-kilogram apple crates.

5 *Martin Pinzger*, director of the VIP, the Association of Val Venosta Fruit and Vegetable Producers.

6 The VIP brings together 1,700 family farm members in seven cooperatives that organize sorting, storage, and sales.



“Consumer behavior is changing, and demand for less plastic is growing.”

Martin Pinzger, *VIP Director*

growers to fine-tune their production to better satisfy world-wide demand. To achieve this, a five-year variety innovation program is under way in which 1,600 hectares – about 15 percent of VOG members’ apple orchards – have been planted with new varieties since 2017. “To maximize the quality of each variety, we give specific growing advice in order to make sure they are grown in the right microclimate zones, at altitudes ranging from 200 to 1,000 meters above sea level,” Pardatscher says.

An interesting microclimate can be found in the Venosta Valley in the west of South Tyrol, as well. At between 500 and 1,000 meters above sea level, this is the highest-altitude homogeneous growing area in Europe, with lots of sunny days, low rainfall, cool nights, warm days, and a constant breeze: the Venosta wind. In these conditions, even a standard variety such as Golden Delicious scales new heights with an attractive red blush. That’s why the popular high-altitude Golden still accounts for around 60 percent of the 320,000 tonnes of apples harvested by Venosta’s VIP cooperative. This organization, which celebrates its 30th anniversary in 2020, has 1,700 family farm members organised in six apple cooperatives.

All non-ideal Golden Delicious sites in the Venosta Valley and elsewhere in the region are currently being cleared to make space for new varieties. There is also a widespread move towards more natural production methods. Across South Tyrol, growers are outcompeting each other to incorporate sustainable integrated production practices, from installing stone walls, bird nesting boxes, and wildflower strips to voluntarily giving up the use of herbicides, a strategy in which



Venosta Valley growers lead the field. And it's the same picture in organic apples: with 15 percent of the total acreage now organic, South Tyrol's apple farmers top the European league tables for organic produce. This figure leaps to 20 percent in the west of the province – a rising trend that looks set to continue across all South Tyrolean apple orchards, boosted by a sustainability program which is currently being developed in conjunction with agricultural policymakers.

A landmark symbolizing what has been achieved so far can be found in the village of Castelbello in the Venosta Valley. The Juval Fruit Cooperative's cold store houses all the organic apples grown in the Venosta Valley area. Currently, up to 35,000 tonnes are produced, with plans to reach 50,000 tonnes over the next five years. Since 2019, the site also encompasses a high-bay storage system towering 30 meters in height: in the new building, with its striking façade made up of geometrically woven metal bands, apples are temporarily stored in large 300 kilogram bins.

More than 90 percent of apples from the Venosta Valley are now processed in these fully automatic high-bay systems. VIP director Martin Pinzger: "This gives us a competitive edge in terms of quality, turnaround time, and traceability which puts us up there among the top players in Europe in terms of service." Forklift trucks transport the apple bins up and down the five aisles in the warehouse at lightning speed. A tempo the VIP also applies to deliveries: they promise that their apples will be on the retailer's shelves within 24 hours of the order being placed. And they keep their promise, distance to the customer permitting.

The sales market for Venosta Valley apple producers is less expansive than that of VOG. Around half of VIP's apples are sold in Italy, with the rest going to Germany, the Iberian peninsula, Scandinavia, and 50 other markets. Within these regions, Venosta Valley producers have a reputation for reliability, whether as own-brand suppliers to large retail chains or innovative packaging specialists. "Consumer behavior changes all the time, family sizes are shrinking, demand for finished products is on the rise, and at the same time consumers want less plastic," Pinzger says. So the producer association aims for maximum flexibility in the packaging it offers: "As far as that's concerned, we're definitely up there at the highest level in the worldwide apple sector."

The highest level – that's the formula South Tyrol's apple farmers and their cooperatives apply to overcome the challenges of a difficult market. The future of the South Tyro-

lean apple depends on keeping one step ahead of everyone else. Identifying and exploring new avenues and leading the field, whether in terms of quality, variety innovation, service, or technology, are specialties of the South Tyrolean apple industry which enable it to keep reinventing the humble apple over and over. **SP**

1 + 2 VIP promises to have the apples on retailers' shelves within 24 hours of ordering.

3 The *future of the apple industry* lies in the hands of new varieties – like SweetTango, pictured here.

