

New Grapes for the Future



FastGrapes

2024

Torben Bo Toldam-Andersen

<https://www.vrangbaekgaard.dk/udvikling-af-nye-druesorter-til-cold-climate/>

CVR: 42054739

Introduction to the Future Grapes

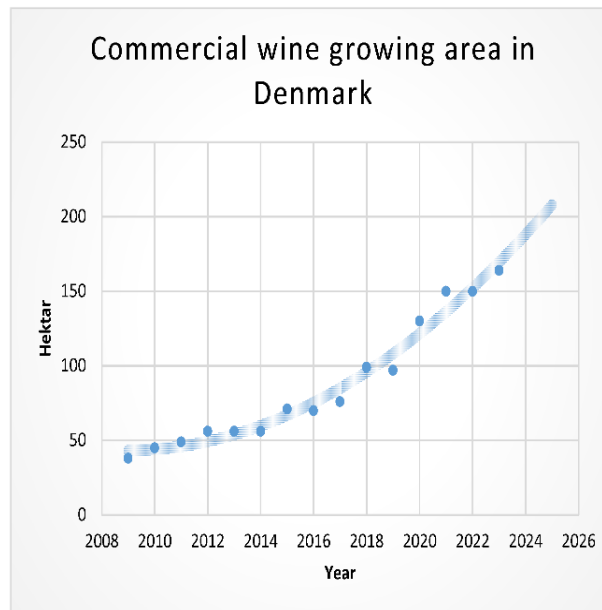
The Company

FastGrapes is a private breeding Company establishment in 2021 by Torben Bo Toldam-Andersen who has worked with fruit growing research for 30 years at Copenhagen University.

The breeding work is based on a cooperation with the German breeders at the Julius Kühn Institute (JKI) in Siebeldingen.

The work is supported by the private fond 'Foreningen PlanDanmark'

A new winegrowing region is emerging in the north based on the cultivar Solaris.



Vision/goal

Our overall vision is to develop cultivars which can create a solid cultivar base for the development of a cold climate viticultural zone in north of the classic zones for cool climate and warm climate viticulture in central and southern Europe. An emerging industry has been established within the last 2 decades in southern Scandinavia (Denmark and Scania in south Sweden). This development has primarily been successful due to the release of the cultivar Solaris in 2004. Solaris is a high quality grape with very good agricultural and oenological potential, however, to ensure a more sustainable and strong wine industry in Northern Europe we see a need to broaden the genetic base.



Our primary goal is to release 2-3 new blue grape cultivars with a similar ripening potential as Solaris in order to make it possible to produce high quality red wines in North Europa/ Scandinavia. **Secondly to develop further green/yellow cultivars as supplements to Solaris.**

“FastGrapes aims at cultivars with a fast fruit development capable of reaching from flowering to maturity in about 95 days. Equal to a heat sum of 700-800 calculated with 10 °C as basis.”

The FastGrapes cultivar selection process is performed in a sustainable organic test environment with strong focus on cultivars with high levels of resilience towards pest and diseases as well as environmental stresses. The new FastGrapes cultivars must at a minimum be as robust as Solaris against the major diseases in order to support the development of organic viticulture and a more sustainable wine industry for the future.





Selection criteria

Plants in the seedling fields at JKI are screened and selected at the time of maturity for Solaris. A range of parameters are evaluated on the mother plants:

Plant health: the mother plant must show a strong healthy canopy with no or very small disease symptoms when grown in unsprayed conditions under high disease pressure. Genetic markers are used to verify the existence of known resistance gene loci.

Yield and fruit quality potential: Total yield and yield components e.g. number of clusters, cluster size and structure (density). Berry size and berry quality characteristics such as must density, chemical composition and taste characteristics.

Agronomic traits like vigor of growth and growth habit. Finally, selected plants are harvested and micro-vinificated and quality of wine is evaluated by a sensory expert panel. Based on this a decision is made for propagation and testing.





FastGrapes follow a 'Fast Track'

The selection and testing process is traditionally carried out over many years. We try to shorten this by a 'Fast Track' strategy based on a fast propagation directly from the selected mother plants. In average about 40 plants are obtained of each. These are then spread out on as many test fields as possible. This allows FastGrapes in a few years to obtain a broader basis of data for the decision on cultivar registration. The decision should be based on both viticultural and oenological potential of the selections and this requires a larger amount of fruits and data from diverse growing conditions.

Participatory test strategy

The participatory approach in the testing with a high number of test locations is for us an important part of our strategy to bring out new genetic material to the industry.

The main planting is established at our own vineyard at Vrangbækgaard on the island Fünen on the coastline south east in a classic fruit growing area which also today remains the most important fruit growing area in Denmark. The other test sites are spread out in the country from east to west and north to south. Additional test sites are also being established in Sweden, Germany, Norway, Latvia and Belgium.



*Two year old
FastGrapes at
Vrangbækgaard*



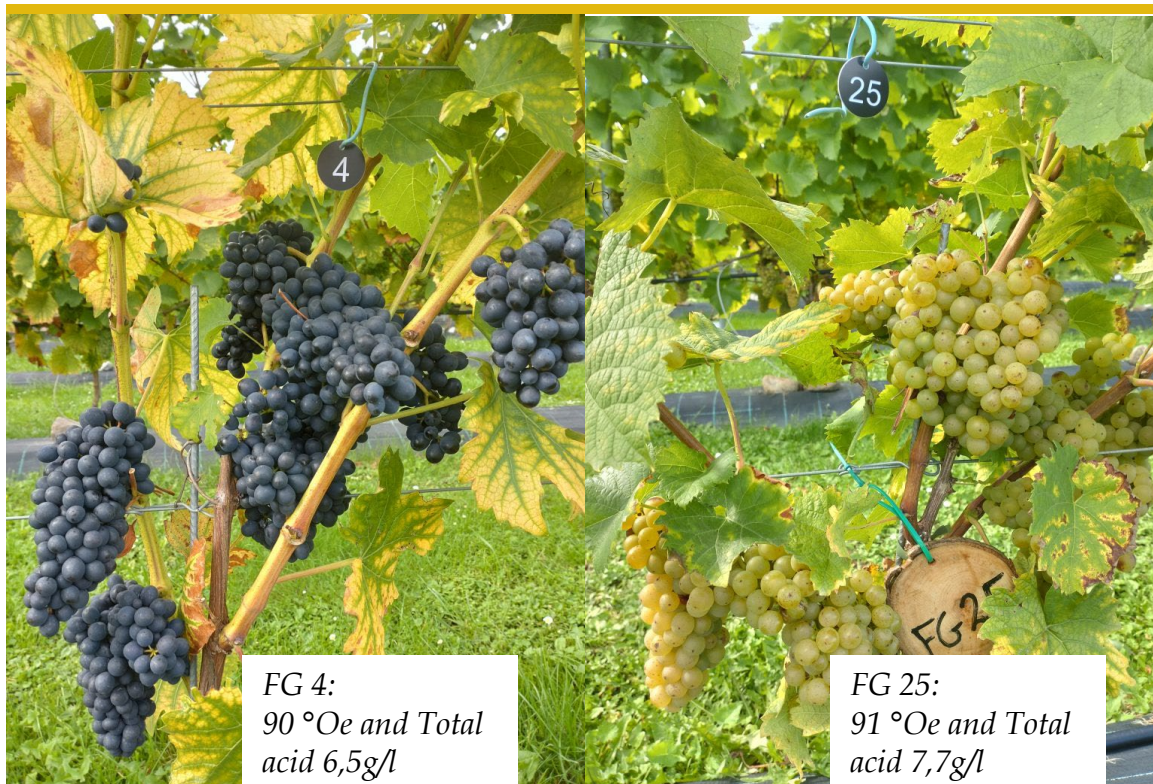
Status on the work so far...

In 2020 approximately 5000 plants were evaluated and 40 early genotypes identified. Of these 25 were selected and propagated in 2021. The following year test plots were established in 10 locations in Denmark, Sweden and Germany. An additional 6 selections were identified in 2021 and planted in 2023 and further 10 were selected in 2022 and will be distributed and planted in spring of 2024.

The selection tour in 2023 involved screening in a new large field of seedlings (4000 plants) and showed extraordinary successful, as we were able to identify 128 early plants. Of these 40 were preselected and harvested for micro vinification. In February 2024 data was wrapped up and 8 blue and 9 green/yellow types were selected for propagation.

This brings the total number of FG selections up to 58. With a 50:50 distribution of blue and green grapes.

In 2023 an important milestone was reached as the first grapes were harvest at Vrangbækgaard showing good levels of maturity by 1. October:



*FG 4:
90 °Oe and Total
acid 6,5g/l*

*FG 25:
91 °Oe and Total
acid 7,7g/l*

Potential markets for FastGrapes

A part from in Scandinavia Solaris is also planted in Northern Germany, Poland, Nederland, Belgium and United Kingdom, as well as in the high altitudes in the Alp region (South Tyrol, Schweiz and Austria). The viticulture in these areas are seen as the potential marked for the cultivars developed by FastGrapes.

Background and perspectives:

When crossings are made in a crop like grapevine large variation can be found in the progeny in all parameters including the time of maturity. Due to climate change the focus has changed by the JKI breeders to later and later ripening material. This means the genepool, which ripens early is not utilized in the normal breeding program. It opens a window of opportunity for the FastGrapes company to make a targeted selection with focus on the early material.

The number of available Piwi cultivars has in the last 20 years been increasing and with increasing fruit quality. One of the first examples of this new generation of Piwis is the cultivar Solaris, which also is remarkable due to its very early ripening. The cultivar is generally considered too early in the classic areas but thrives well in the north. In Denmark and southern Sweden Solaris has shown ability to deliver a reliable ripening around 1. October and is now the signature grape for a growing Scandinavian viticulture. The only wine region in the world based on high quality Piwi cultivars.

The classic cool and warm climate wine industry has so far been very slow to plant the new Piwi cultivars, but in the last few years a very positive change in attitude is seen and Piwi cultivars are now accepted for high quality wine production in different wine regions in Europe.



Also marketing efforts are increasing and get more organized as done under the label 'Zukunfts Wine' (Future Wines) in Germany.

”FastGrapes wants to contribute to a sustainable and delicious future!