

Doubled Haploid plant production

Our specialty



Fytagoras BV
knowledge in science



Doubled Haploid technology speeds up plant breeding programs by many years

Partner's
elite
cultivars



Technology



Trait selection
+ plant breeding



New elite
hybrids with
enhanced

- Yield potential
- Size
- Quality
- Metabolites
- Health
- Extreme weather Adaptation
- Disease and crop protection



DH technology is a non-GMO breeding tool that creates full inbred plants in one generation which are used to create elite hybrids

Why doubled haploids?

Advantages of using doubled haploid plants in your breeding program are:

- Production of 100% homozygous parent lines
- More uniform parents are derived for hybrid seed production
- Highly uniform offspring
- Speeding up breeding progress (varieties are released much faster on the market)
- Faster anticipation towards demands of customers
- Sorting out lethal genes in one step
- Identification of recessive mutants
- Creation of stable populations for genetic studies

Fytagoras' goal



Providing doubled haploid technology service to customers around the world

- Applicable for a wide range of genotypes
- Accurate risk and cost estimation
- Cost effective DH plant production



Screening of a wide range of crops



Tomatoes



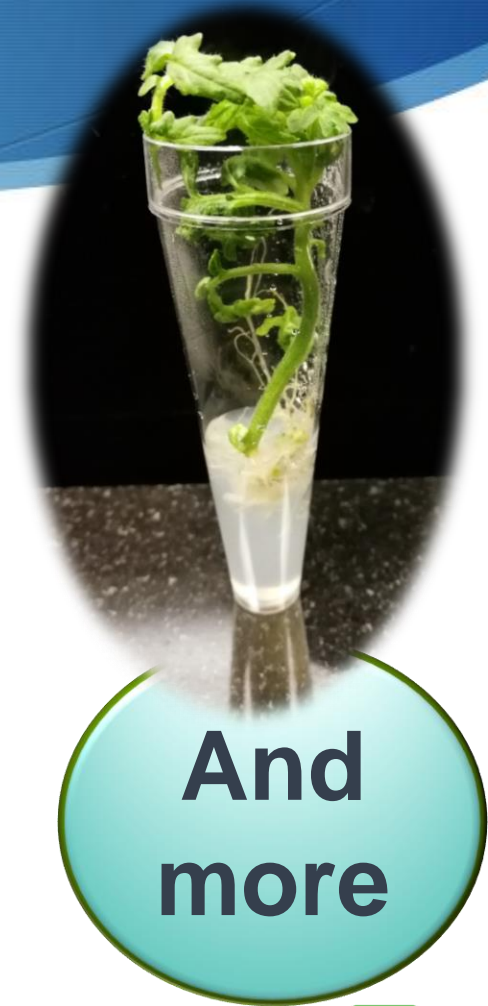
Potatoes



Sweet pepper



Barley



**And
more**

Growth of donor plants



Early response evaluation

- Early estimation of line responsiveness to DH protocol gives a DH production prognosis for the customer



Embryo and plant production



Embryogenic callus

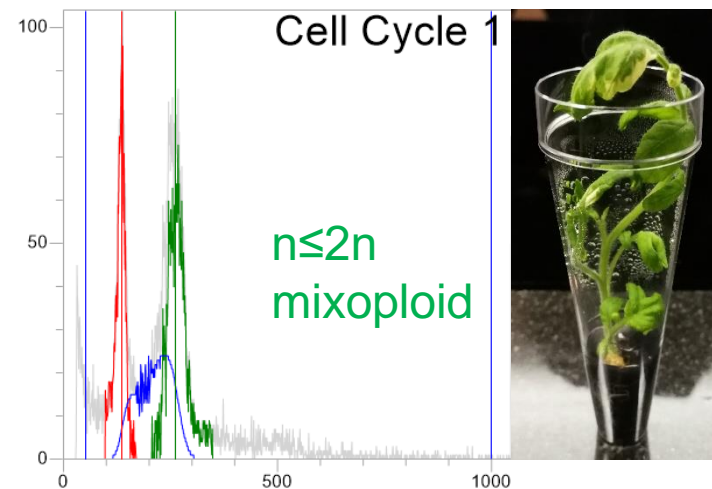
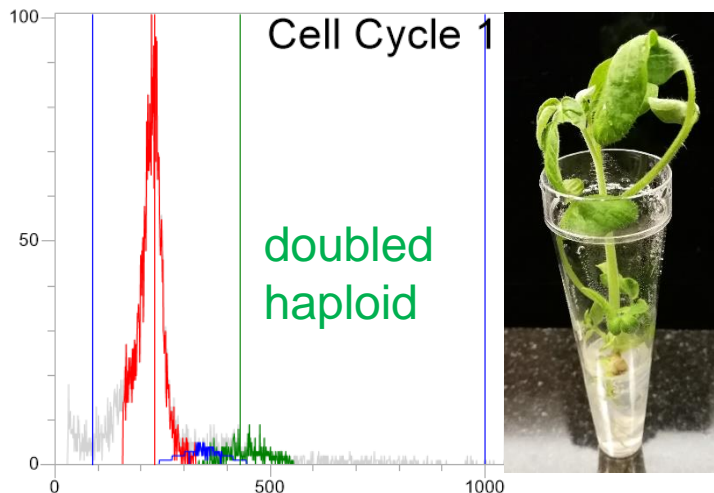
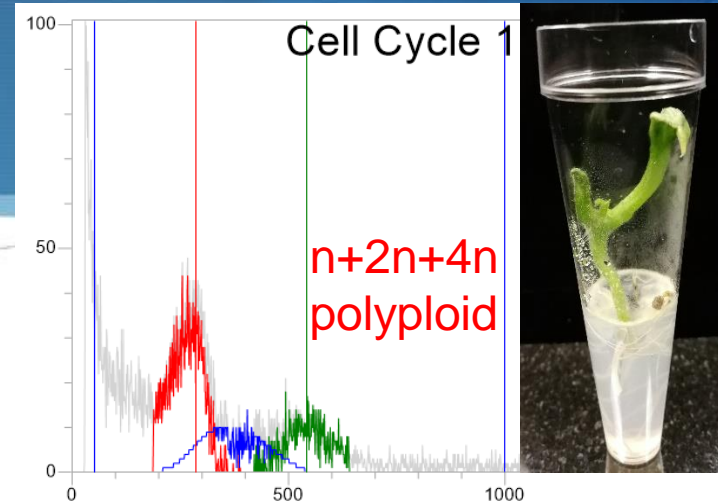
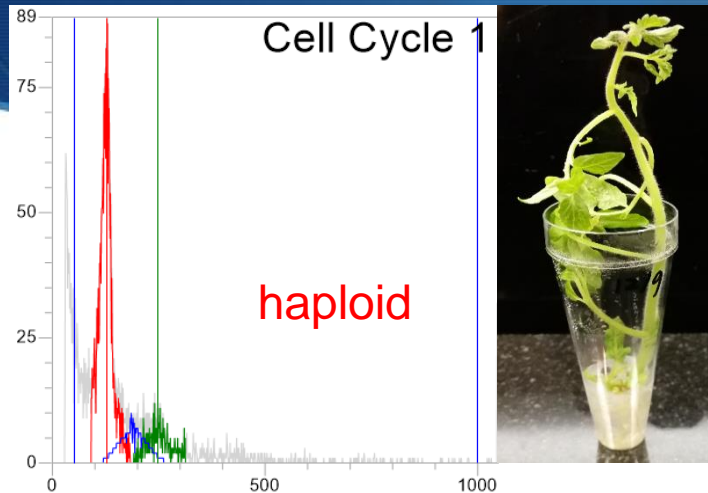


Selected DH shoots



Plantlet

Ploidy measurements with flow cytometry



Haploid, Doubled haploid and $n \leq 2n$ mixoploids are difficult to identify by morphology. Polyploids are often deformed.

DH plantlets in tissue culture



Delicate handling of tissue culture plants



DH plant growth and seed production



DH tomato plants with difference in plant structure

Seed production



DH plant



Harvested DH tomatoes

Seed production

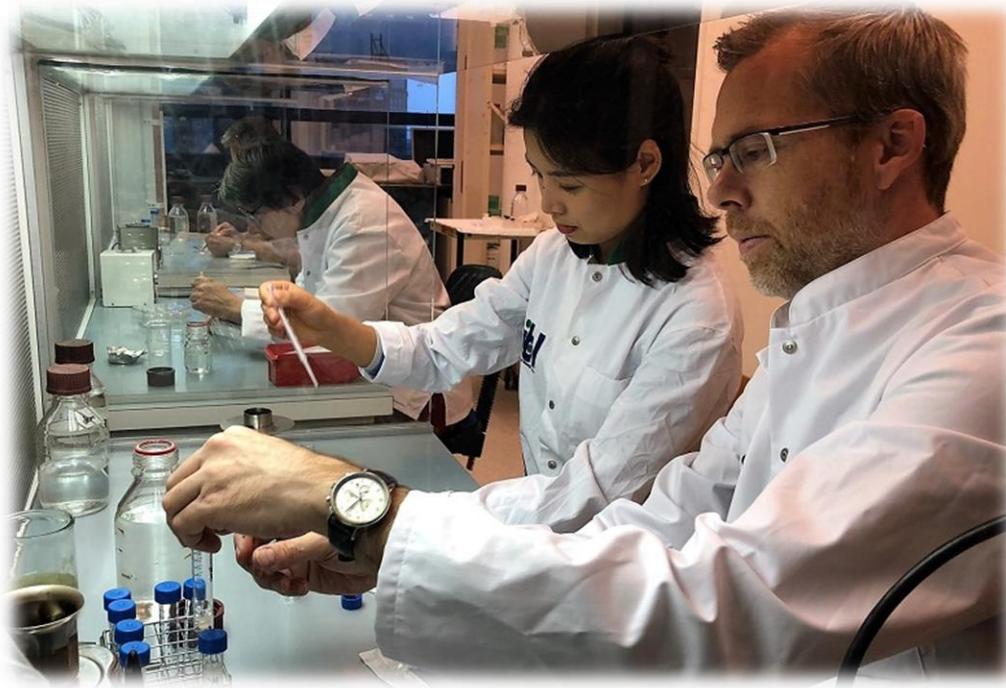


Tomatoes from DH plants



Seeds from DH tomatoes

Our laboratory



Fytagoras team working on DH related technologies



Marco Vennik
Project manager
& Researcher



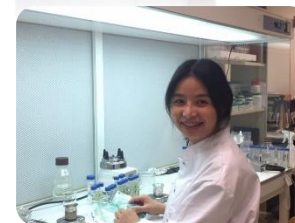
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