

Use of rose hips and petals as food product (start 2015)

In 2015 Pheno Geno Roses had started a food project in cooperation with Frank Coenders, a rose grower in the Netherlands. The aim of this study is to identify rose cultivars of which the petals or hips are suitable for eating.

Eating roses is actually very healthy, because they contain a lot of antioxidants. This is especially true for the hips, which not only contain a large amount of antioxidants, but also have a high concentration of vitamin C. Additionally, composition of rose petals (vitamins, antioxidants, phenols, carotenoids, etc.) candidates them as a new potential source of food. Till now rose petals are used in wine and jam production, while their usage for fresh salads is not considered widely. At the moment, mainly wild rose cultivars are used for food. That is a trend we are hoping to change by highlighting the importance of domesticated cultivars. During this large scale study around 340 cultivars in total was tested and new varieties are still being included into research as our breeding program continues to expand.

The aim of this project is to detect which rose cultivars are the most valuable for the nutrition (from biochemical aspect), which are the most appropriate for human intake (taste characteristics), to detect which parents are good donors of characteristics related to nutrition, and to detect tools for MAB (QTLs).

To be a good rose for the food industry the flowers and hips should not only have a nice taste, but should also have a good nutritional value, look good and have a nice fragrance suitable for food.

During the study we continue to map all these different traits. A study is currently being conducted that will provide us the insight in how the flowers and hips look, taste, smell and grow. Next to these phenotypic values, attention must be given to the nutritional value of the flowers and hips. We are especially interested in the content of malic acid, citric acid, vitamin C, total antioxidants and sugars. In addition to these measurements, we are also looking at the DNA to find genes for these traits. These genes can be used in marker assisted breeding.

Using the results following this study, we can open new market possibilities. Based on the results, we can start breeding new cultivars which are perfectly suited for the use as a food ingredient. Since this kind of large scale study has never been previously performed and no other rose breeder is currently breeding for the food industry, this gives us some unique possibilities.

First Edible rose variety was introduced in summer 2018 and new varieties are expected to be introduced in the following years.