

EIP-project: Introduction of new crops in Sweden, sweet potato as a pilot

There is great interest in new crops in Sweden. The EIP-project aims to create a secure system for introducing Swedish sweet potatoes and other new crops in Sweden.

Demand for new products in the vegetable dish is increasing. For example, the consumption of sweet potatoes increased by 1,600 percent from 2010 to 2018. Introducing new profitable crops is a challenge, especially given that volumes are needed for grocery and industry to become interested. New crops are also needed so that the proportion of Swedish-coded on the market will not give way to imported goods. Especially vegetatively propagated crops are a challenge and therefore sweet potatoes were chosen as model crops.

Based on achieved results from field trials, a cultivated area of 300 ha is enough to cover the entire need in Sweden. There are a number of suitable varieties for Swedish conditions and it takes a minimum of 100 days from planting to harvest. During the first month after planting it is important to avoid all kinds of plant stress as the final number of storage roots and their quality will be determined. The month before harvest the storage roots increase rapidly in weight if enough water is available.

Access to starting material of good quality, plants or cuttings, is a bottle neck. At present, import and long-distance transports from southern Europe are not a viable option. In addition, the price increases for each intermediary and so does the uncertainty about quality that you get at delivery.

There are lots of sweet potato varieties to be found in the rest of the world but in Europe there are only a few protected varieties available. If a variety is protected, royalties must be paid to the plant breeder before any propagation is allowed. The problem here is the middlemen who have been granted European rights and will not allow growers to propagate themselves, even if they pay royalties.

We have compared plants with cuttings and have found out that regardless of which the result is undoubtedly best when the propagation takes place near the production site. In addition to the fact that plants are more expensive to produce, plants present an increased risk of malformed storage roots.

There is a need for a propagation system of free sweet potato varieties that have healthy, variety-resistant elite plants as a base. It is a major vulnerability to become fully dependent on imports, which we see applies to all fruit trees, strawberry and asparagus plants imported to professional growers.

We want to invest in two alternatives: specialized companies produce cuttings on demand and/or growers with the right conditions force their own storage roots to produce their own

cuttings. In both cases, a propagation protocol is needed with data such as development rate, space and total numbers of cuttings.

Swedish sweet potato has a great news value and the media attention means that it can become a drawl for locally produced and a sought after premium product. Restaurants that are constantly looking for new, exclusive ingredients, have tested Swedish grown sweet potato varieties and the judgement is that some of them have a developed taste, good texture and exciting colors.

Already today is it possible to produce attractive waste products and in the long term as volumes increase, the food industry can develop new products, everything from baby food to healthy convenience products, based on Swedish raw material, both leaves and roots.

The hope is that the Swedish Sweet Potato brand will stand for specially selected Swedish-registered varieties, grown from certified starting material produced near the market, without chemicals and where continuous improvements are made to achieve the lowest conceivable waste and best possible handling after harvest.

The purpose is to increase the degree of self-sufficiency in Sweden by finding more, profitable crops, preferably those with standing volumes. The purpose is also to contribute to raising competence, especially when it comes to domestic vegetative propagation.

The challenges have mainly been regarding variety rights and access to starting material at the right time, of good quality at reasonable prices.

It is also a major challenge to build up competence at various stages from propagation, field production to post-harvest management.

It turns out that Swedish production of edible crops is vulnerable and after decades of import of seeds, cuttings and plants from abroad, there is currently no functioning variety testing, domestic production starting material and advisory support to producers who want to get started with new crops.

It is the "from news to article number" step that requires collaboration and willingness to invest and a fast pace to solve problems in parallel. The EIP project is now completed, but we would like to continue the work to develop a common strategy for how volumes should gradually increase in the market while maintaining profitability at all levels

It requires cooperation between producers and different trade partners together with a long-term strategy. This is made more difficult by the fact that trade is global and Sweden is an importing country with a relatively short growing season.