

# There is more to strawberries than meets the eye

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26 One of the effects of the lockdown caused by COVID-19 is that the Dutch Spring Trials 2020 had to be cancelled. Not a major drawback compared to the havoc the virus instigated, but still a disappointment for those eager to learn more about the latest novelties in flowers and bedding plants. To compensate, ABZ Seeds invited guests to a virtual tour on their premises.

• **Many Dutch ornamental breeding** companies organize spring trials. Among them is ABZ Seeds, as the strawberry varieties are as well praised for their quality as bedding plants as for the fruit production. In the demo greenhouse at the Holland Strawberry House, ABZ Seeds displayed all their latest varieties and experimentals. The Holland Strawberry House is a replica of South African buildings in the Cape Dutch style. It underlines the bond between the Netherlands and South Africa as the grand, ornately rounded gables are reminiscent of features of townhouses in the Dutch capital, Amsterdam. It would have been a fitting concept if the World Seed Congress did not have to be postponed due to COVID-19. It remains, however, a very beautiful head office.

## Diversity

It is amazing to see how diverse strawberries can be, with many different forms and colours. At ABZ Seeds, the flowers vary from white to pink, to deep rose and even red. Some have single flowers, others double, the shape of the plants vary from compact to plants with many runners and the fruits from conical shaped to almost round. Via a live video chat connection,

## The happiest fruits

Scientists found that just thinking about strawberries makes people happier, a unique characteristic compared to other fruits. Its appeal is so strong that 86% of people feel more relaxed just by imagining putting a strawberry in their mouth, a study by the University of London's Centre for the Study of the Senses revealed. Fruits, such as apples, bring back less pleasant memories, while bananas and plums were the least likely to improve mood, concluded



Professor Barry Smith, who investigated the link between emotions, taste and smell. Strawberries proved to be the happiest fruits. The smell of strawberries is difficult to create artificially. Flavouring companies have failed at it, by and large, and yet it is so powerful as a reminder of happy summer days.

ABZ Seeds' director/breeder, Gé Bentvelsen, was able to provide his guests with information about the many varieties the company produces and those that are still in an earlier stage of trials. And, of course, the bright red fruits were on display as well.

A virtual tour makes it possible for all distributors worldwide to visit the trials. The advantage (besides complying to the safety measures made compulsory by the corona virus): people are able to visit without time-consuming travelling. But it had a noticeable disadvantage: with video chatting, only two senses are used: ears and eyes and, especially with strawberries, smell and taste are of the utmost importance. "It is the distinctive aroma of strawberries that evokes happy memories," explains Gé Bentvelsen. The fragrance centre is close to the emotion centre in the brain, so the neural lines are short. That is why smell plays an important role in the triggering of memory tracks. And at ABZ Seeds, it is crucial comparing the different scents, as the company is highly focused on smell and taste. Think, for instance, of the series of delicious gourmet strawberries ABZ Seeds created. More than 35 years ago, Gé Bentvelsen became involved in breeding strawberries at s&g (nowadays known as Syngenta). His goal at the time: to redirect and intensify a small breeding programme for bedding plants towards commercial fruit production. But, as strawberries are octoploids, it was far from easy to reach that goal. "When I studied at Wageningen University, Professor J. Sneep always reminded us that 'Patience and perseverance is what a breeder needs to possess. And when you have an initial success, you should never rest on your laurels', he always added," says Gé Bentvelsen.

A few years later, when the company was forced to set priorities, it was decided to sell the breeding programme altogether. Gé Bentvelsen continued the strawberry breeding programme with his newly formed company ABZ Seeds. The abbreviation stands for strawberry from seeds. The first F1 hybrid strawberry was introduced on the market in 1996.

## Sustainability

For a long time, ABZ Seeds was the only company involved in hybrid strawberry breeding. "Today, Japan has one hybrid variety and, in Canada, a governmental institution has started a hybrid breed-



Gé Bentvelsen belongs to the twenty most innovative plant breeders in the European seed sector

ing programme, as did two other Dutch breeding companies. In the Netherlands, common practice is still strawberry breeding for cutting varieties. At least six companies are present in the market.” Meanwhile, ABZ has over twenty F1 hybrid varieties, mostly designated for the bedding plant market. “For commercial fruit production, we have chosen to aim at a special segment: covered cultivation in north-west Europe. For these companies, the reliability of the plants is of the utmost importance. Our varieties have a germination percentage of over 90%, which makes them very reliable for plantlet producers.”

Bentvelsen hopes he will, in due course, convince the strawberry fruit producers to choose his varieties. “It is a more sustainable alternative,” he claims. The Dutch minister of Agriculture, Carola Schouten, has instigated a research programme as strawberry is a problem crop. Environmentalists accuse growers that their strawberries are six times more ‘toxic’ than other fruits in the supermarket. That might be a bit exaggerated, as the European standards for these harmful substances are very strict. But growers do have to use high levels of chemicals, as cuttings are more contaminated with diseases and pests.

### Huge experience

The minister has formed a commission that is looking into alternatives. “So far, there are several scenarios that will be worked out. Production in greenhouses, for instance, where the water is re-circulated and strict hygiene measures can be maintained. The use of rock wool, instead of peat or coconut coir, would also reduce environmental pres-

sure. And last, but not least, the use of seeds instead of cuttings,” explains Gé Bentvelsen.

“We have 25 years of experience with strawberry plants from seed worldwide,” says Gé Bentvelsen. The varieties for fruit growers are suitable for year-round production. At the Proeftuin Zwaagdijk, strawberry varieties are tested in a greenhouse with assimilation (LED) lighting for cultivation from November through to April. “We use everbearing strawberry varieties, such as Delizzimo. In South Africa, a project with this variety has been very successful.” For today’s strawberry growers, it would, however, mean a huge change in cultivation techniques. It would be comparable to tomato growing. Even vertical farming will be possible, according to Gé Bentvelsen, as some varieties have compact plants that are suitable to this relatively new cultivation system. It would open up a whole new market.

### Praise

The ABZ Seeds varieties have received many rewards. This year, Gé Bentvelsen received the IPM ‘Neuheiten Des Jahres’ (the innovation of the year) Prize with the Fragaria x ananassa Duch Fr ‘Summer Breeze Snow’ in the Tub Plants category. The jury called it “a jack of all trades”. “As an attractive flowering plant and as a tasty treat for patio and balcony, it is ideally suited for city gardening. Its unusually large, semi-double flowers form a proper inflorescence and, therefore, stand attractively above the foliage. This is what makes the ornamental value of this strawberry so interesting.” It is one of many ABZ-varieties that definitely has the wow-factor, especially if you use all your senses.