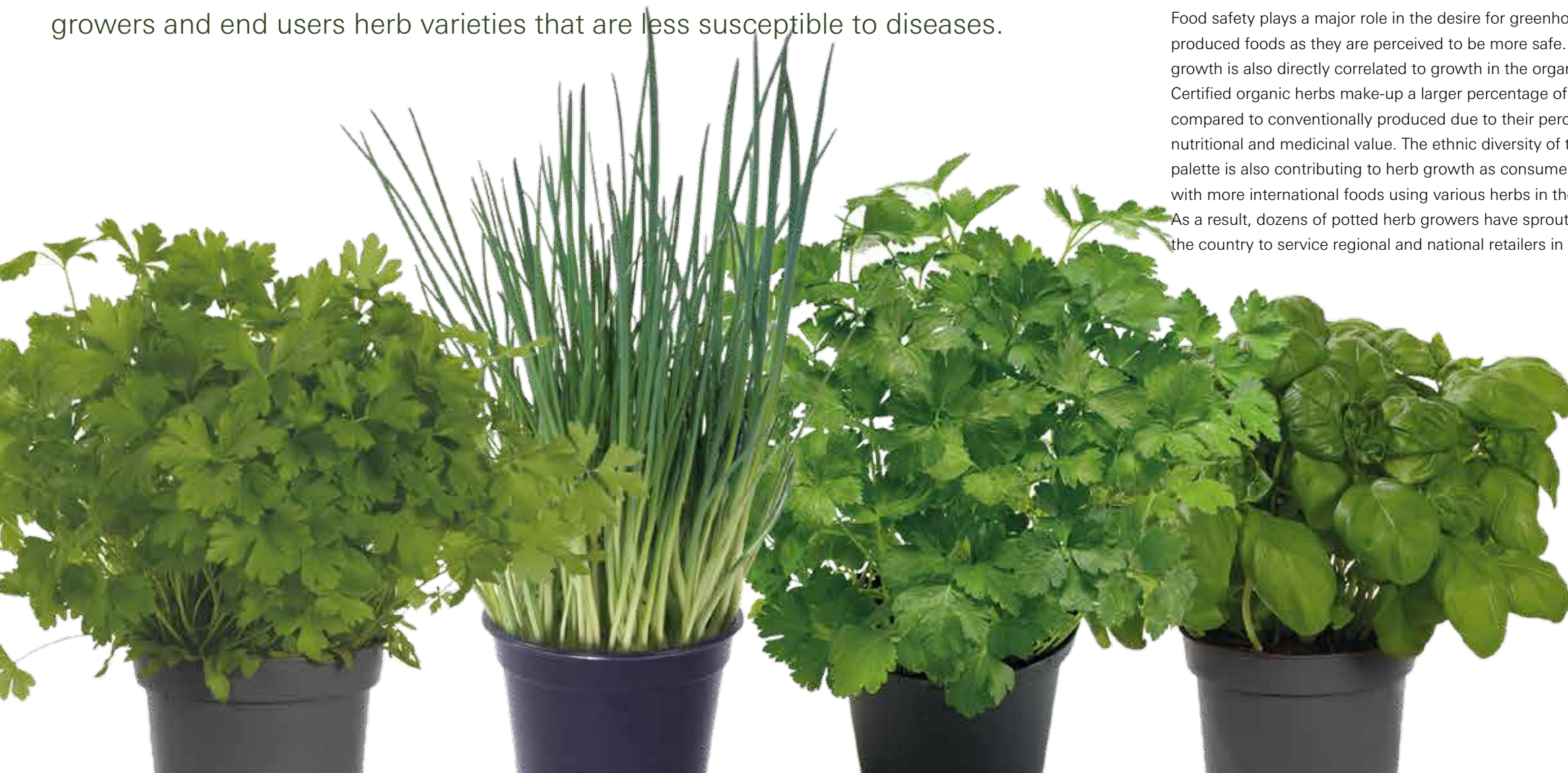


# Resistance breeding supports market growth of fresh potted herbs

Cooking is hot, and fresh herbs are part and parcel of that trend. In the western world the demand for herbs in pots has been steadily increasing for many years now. No surprise there, because what could be easier and more satisfying than snipping a fresh bouquet garni on your own window ledge, balcony or patio? Enza Zaden supports this development by offering both growers and end users herb varieties that are less susceptible to diseases.



In the western world more care and attention is being paid to food and cooking. Some people enjoy spending a lot of time on culinary exploits, but that is of course not necessary. An easy, quick meal can also be raised to a higher, tastier and healthier level in less than no time with a few fresh herbs. And if you don't have a traditional herb garden it's very convenient to have the herbs you often need close at hand at all times in the form of potted plants. With their vibrant foliage they will also bring a home to life while needing very little care – more aspects that make them appealing to an increasing population. Herbs in pots are hot!

## Booming culinary and organic markets

Erica Renaud, Regional Business Manager for Vitalis and Herb Product Manager in North America, sees the growing culinary movement also in the US. Renaud: "People want fresh herbs. There is a desire for consumers to eat more nutritious, ethnically diverse and safe food products. Fresh herbs contribute to fulfilling these consumer desires, while major US retailers want year-round greenhouse grown consistent food products."

Food safety plays a major role in the desire for greenhouse produced foods as they are perceived to be more safe. Herb market growth is also directly correlated to growth in the organic sector. Certified organic herbs make-up a larger percentage of the market compared to conventionally produced due to their perceived nutritional and medicinal value. The ethnic diversity of the US food palette is also contributing to herb growth as consumers experiment with more international foods using various herbs in their recipes. As a result, dozens of potted herb growers have sprouted up across the country to service regional and national retailers in recent years.

Renaud: "The largest factor in herb pot growth is the demand by the retailer for growers to supply a diverse product range year-round. With protected culture, they can supply consistent quality year-round for the booming culinary and organic markets, and market the product as US grown. For retailers that do not require US grown, the product is predominantly grown in open field production in the southwest US and Mexico. Besides the growing market, the demands of the fresh produce chain have also changed. What was traditionally expected from an herb cultivar – high yield – is no longer enough; the varieties have to be uniform, responsive to liquid fertilization, fit in a sleeve properly, good shelf-life and resistant to present and developing diseases."

## Strong growth

It's not surprising that the cultivation and sale of herbs as pot plants have enjoyed a great boom in many parts of the world. What once started on a small-scale in Scandinavia is now rapidly spreading across Europe, North America and Australia. Enza Zaden's herb Portfolio Manager Klemens Holz estimates that sales of potted herbs in Germany have doubled in the past five years, from around 60 to 120 million pots. And there's still plenty of room for further growth, he adds. "Potted herbs are now widely available in northern and western Europe, and are slowly becoming more common further east, in Poland and Russia, too."

## Cultural differences

Several nurseries on both sides of the Atlantic Ocean specialise in the cultivation and sale of fresh herbs and related leafy plants. Under their own brands or under private labels they supply extensive ranges of potted herbs and herbs packed in consumer units to supermarket chains and garden centres. Big names in this sector are for example Gartenbauzentrale Papenburg in Germany, Jacobs Farm / Del Cabo and Shenandoah Growers along the west and east coasts of America, and Especia (Gipmans) in the Netherlands.

Different herbs are popular in different markets with different eating cultures, but basil ranks top in most countries, followed at some distance by flat- and curly-leaf parsley and dill. Coriander is the second most popular herb in the UK. Mediterranean herbs such as thyme, lemon thyme, rosemary and oregano may be more difficult to obtain outside the summer months, but they are also becoming more common as potted herbs.

"Sales of potted mint are currently growing rapidly, but those plants are propagated via cuttings rather than from seed," adds Holz. "So that's not our territory. The herb is available in several variants and is very versatile in its use."

“Year-round production and supply are an absolute must for the large nurseries”



Enza Zaden employees John Cartwright, Sales Representative, and Monika Bietsch, Assistant Breeder Herbs, on the Herb & Rucola Day 2015 in Dannstadt.

### Diseases affecting herbs

Many types of herbs that are grown in pots have a short cultivation cycle. Even so, their cultivation also involves risks. Under certain conditions they may be extra-susceptible to infections of leaf, root and stem diseases. Basil, parsley and dill crops, for instance, are frequently affected by Downy Mildew, Fusarium and Septoria. These fungi can cause substantial losses, especially in crops that are grown without chemical control products. And in America the focus is precisely on organic where herbs are concerned. This is less the case in Europe, where organic cultivation is more restricted, resulting in higher cost prices.

Herbs in pots must moreover remain vital throughout the sales channel, and for long enough afterwards to allow consumers to enjoy them for some time. Plants that show symptoms of diseases shortly after they have been purchased, making them less attractive or even causing them to die, will lead to disappointment among consumers.

### Tightened objectives

Herbs propagated from seed became an important product group for Enza Zaden in 2001, following the takeover of Julius Wagner, a German breeding company specialising in herbs and other leaf crops. At first the emphasis was on breeding characteristics such as uniformity and an attractive dark green leaf colour. “We made a lot of progress in that field, and put Enza Zaden on the map as breeders of herbs, too,” says Holz. “Around ten years ago we tightened the breeding objectives of several herb varieties to gear them more to the needs of our customers and end users. They want plants with good resistance and year-round homogeneous, reliable production. So we now actively focus on resistance breeding by selecting and crossing specific genetic characteristics that make the

plants resistant or less susceptible to common diseases. Important to us are resistance to or tolerance of the most common fungus diseases and tolerance of low temperatures, because in many countries herbs are grown outdoors or in unheated plastic greenhouses. And year-round production and supply are an absolute must for the large, specialist commercial nurseries.”

### Second generation

This focus on genetic resistance has had the desired effect. Holz: “We already have basil and parsley varieties that are resistant to mildew. Last year we officially launched our first Downy Mildew intermediate resistant basil variety on the market with overwhelming success. Eleonora (E09B.11540), as this variety has been named, perfectly indicates the gap in the market for improved herb varieties. Eleonora is a great addition to our basil variety Elidia, that is resistant to Fusarium, which can cause root rot. And we have recently introduced parsley varieties with intermediate resistance to Downy Mildew: Peione and Fidelio.”

The Portfolio Manager refers to them as the herb varieties of the ‘second generation’: varieties that still have the attractive colour and a good flavour, and at the same time ensure a more reliable cultivation, and a better shelf life and keeping quality at consumers’ homes. They are ‘so to speak’ a bit more forgiving in conditions that are not ideal, which is the case mostly in the sales channel and consumers’ homes. “The coming years Enza Zaden will continue to steadily expand its range of resistant and tolerant herb varieties for sale in pots,” says Holz. “Those varieties lead to higher yields, fewer product losses at retail outlets and greater satisfaction among end users – all in all major advantages that will support the further growth of this category of products.” ■



The breeding efforts of Enza Zaden have resulted in a new generation of herb varieties within the parsley, basil and rucola assortment. These varieties stand out from other varieties when it comes to resistance, shelf life and harvesting.

Portfolio Manager Klemens Holz: “With the special icon we've developed, we can indicate these varieties to our customers. In that way they know immediately which varieties have these special qualities.”