



# The Queen of





All photos by Brent Heath of Brent and Becky's Bulbs, except where noted.

## A Behind-the-Scenes Look at Dutch Tulip Production

By Eva Monheim

The heavy, moist air hung all around us as we entered Keukenhof, the annual open-air flower exhibition in Lisse, Holland. The sweet fragrance of tulips was suspended in the mist, and I was awestruck by the scent and visual vibrancy of the tulip pageantry. Stately beech trees and brilliant green lawns outlined the walkways and the beds of the spring-blooming flowers. I was here to see what millions of other visitors had seen before me, and, like them, I was consumed by Keukenhof's spring regalia.

Walking through Keukenhof will never leave my memory, nor will I ever view a tulip in the same manner. After seeing Keukenhof (pictured at left), one begins to have a better understanding of why the so-called "tulip mania" swept Holland in the 17<sup>th</sup> century. It was after the first sight of tulips in Turkey by Dutch ambassadors that the Dutch began their love affair with the flowers, eventually becoming the best tulip growers and breeders in the world. At Keukenhof, the oldest and newest of Dutch tulips are exhibited in the most imaginative ways for the public to swoon over. It is no wonder that the Dutch refer to the tulip as "The Queen of Spring."

I had come to Keukenhof to learn how the best tulips are selected and produced in the Netherlands for our gardens in the US. The story begins at the tulip farms. After our visit to Keukenhof, my Dutch friend, Carin, took me to two farms—first to the farm of Geert Jan Duisterwinkel. We drove for several hours to the northern part of the country, to the small town of Ulrum.

Upon our arrival at the Duisterwinkel

# Spring

# The Queen of Spring

**Opposite page clockwise from top right: 1)** Bulbs of various size with a bulb-measuring tool. **2)** The netting on which bulbs are planted for easy removal. **3)** A warehouse next to the tulip fields. **4)** Inside a tulip warehouse. **5)** Harvesting blossoms to keep the bulbs growing strong. **6)** Closeup of tulip bulb and bulblets.

**Below:** Close up of 'Prinses Irene' tulips.



farm, Geert Jan greeted us at the door of the farmstead with an armful of parrot tulips. I was taken back by the gesture, feeling as if I'd been given the world—hundreds of years of history in one armful. Metaphorically, I was given the farmer's world, his custom, his love of flowers and his livelihood, all in one big bouquet.

Geert Jan took us out in the field to explain the artful procedure of growing tulips. As we walked through the field, across a row of tulips planted four bulbs across, forming large bands of color, Geert Jan explained that it all starts here in the planting. Because of his farm's clay soil, the bulbs are planted mechanically in one long continuous netting material. As the netting is rolled out and ploughed under, the bulbs fall into their beds. The holes in the netting are large enough to allow the young tulip leaves to grow through them. Later, at harvest time, the netting helps loosen soil from around the bulbs as they are pulled up in the netting. This prevents injury and keeps the clay soil from remaining on the bulbs, which can cause disease and improper grading for bulb size.

How are tulip bulbs graded for export? Tulip bulbs are measured against the standard for the Japanese market—the highest quality of bulbs grown—known as “class 1 Japan.” The culling technique for tulips for the Japanese market is determined by the percentage of disease found within the bulb. The Japanese standard requires few diseases in very low percentages within a shipment of bulbs. The higher the percentage of disease within a shipment, the lower the class designation will be.

Tulip brokers and their clients may demand other standards as well. These can include tightness and color of the outside bulb sheath, whether the sheath is broken or fully intact, and the size of the bulb. The tulip bulb's size is the measurement, in cen-



J. Blaine Bonham, Jr.



Eva Monheim

**Top of page:** Acre upon acre of color.  
**Above:** My traveling companion Carin (left) with grower Geert Jan Duisterwinkel.

timeters, of the circumference. Bulbs for garden planting usually start at size 10/11 and go up accordingly to 11/12 and 12+ centimeters.

Geert Jan shared with me many professional growing techniques. For example, applying fertilizer and treating the tulips against disease are two important ways to increase bulb size. Another technique is removal of the plant's blossom after the flower has opened. Just as the fields become vibrant in color, workers remove the heads, being careful to remove as little of the flower stem as possible. Leaving the flower stalk and leaves provides additional food for the bulb. Geert Jan said that for every centimeter removed from the flower stem, 1% of the bulb size is lost. Loss of bulb size could mean an additional growing season to get the bulb up to a larger grading size.

If the blossom is left on the plant to bloom and go to seed, the bulb may or may not flower the following year. Larger bulbs can bloom up to three seasons, and with a yearly application of fertilizer, they will bloom for many seasons.

After the first growing season, tulips

develop bulblets. Bulblets are the asexual means of reproduction for the tulip, ensuring that the variety grows true to form — the DNA is identical. The development of large, healthy bulblets at the base of the original/mother bulb guarantees bulbs for new crop development. Pinching off the blossom encourages bulblet development.

As we continued walking through the colorful, fragrant field, stopping to admire 'Prinses Irene', an orange-melon tulip with a red-burgundy streak up the petal, Geert Jan observed, "It is not only the knowledge and vigilance of the individual farmer that produces the best bulbs. The climate and the daily weather conditions play a big role, and it's important to have a supportive network of other farmers." He explained that cooperation among farmers—sharing equipment, sharing knowledge of successes and failures, and working together during harvesting and planting—helps to create a world-class product and a world-class reputation.

At the second farm, I met Geert Kruize, a breeder and tulip broker. Here, the tulips were grouped in smaller plots to accommo-

## The Queen of Spring

date the vast number of varieties being grown. Geert showed me a technique to guarantee pure color lines within each new variety of tulip. He carried a small triggered sprayer and directly applied a straight stream of Roundup to any plant that was not true to the variety being grown—known as a “rogue.” A visual scanning of the fields, while the tulips are in bloom, helps the breeder maintain pure lines—or discover new lines or varieties. If a rogue tulip is not identifiable as an existing variety, the plant is sometimes tagged and numbered and the visual characteristics noted. Later, the rogue tulip is separated from the rest of the tulips in the field, eventually being planted out again in its own area. Geert will watch the new variety to make sure it has desirable qualities before naming and introducing the tulip.

What do breeders look for when making new selections? Tulip characteristics are

matched to the needs of the market. If a tulip is short and stocky with thick flower stems, the tulip might be sold to the landscape industry as a good wind-resistant variety, or it may be utilized for the potted flower market. Short, stocky plants provide easy shipping and handling and compact beauty for apartment dwellers. Large foliage and tall, large headed tulips might be used for botanical garden displays or in the cut flower industry.

Debbie van Bourgondien of van Bourgondien Bulbs, says that when she visually assesses her company's fields in the Netherlands, she looks for overall uniformity in height, color, petal shape, overall plant size, foliage shape and color, variety name and blooming time. Working closely with breeders in the Netherlands, Debbie can make selections based on her company's long track record in Dutch bulb sales and her knowledge of current American

market trends. She says Americans tend to purchase tulips with easy-to-pronounce names and more unusual characteristics.

Just before leaving, Geert Kruize wanted to show me one more group of fields before we ended our day. We drove down dark earthen roads, over small bridges, and past fields of tulips. Large puffy clouds filled the azure blue sky. In front of us was a large Dutch barn, an earthen dyke, and tall modern windmills, sheep grazing, fields of colorful tulips and the sea beyond. We stopped our car. “This is Holland at its best,” said Geert, as I gazed at the scene. I had learned in a short time what took centuries to create and master. I now understood the connection of the Dutch with their landscape and their love affair with tulips. 🌷



## Tulip Planting Recommendations

Plant tulips in late fall in humus-rich, sandy, well-drained soil. Grow them where they will get at least 5 to 6 hours of sun a day; full sun is preferable. Dig the soil to a depth of 8 to 12 inches, and work in Bulb Booster or other bulb food. Set the bulbs 4 to 8 inches apart, depending on size and variety. After the ground has frozen, mulch with straw or hay. After flowering, remove the head of the tulip but allow the stem and foliage to die back naturally. Tulips perform best their first year, and many gardeners treat them as annuals, discarding the plants after they finish blooming. Extensive testing in recent years has proven that if a slow-release fertilizer such as Bulb Booster is applied, you can expect more than one year of flowers out of most varieties of tulips. Many early-flowering species, as well as Darwin Hybrid tulips, come back year after year with no effort.

## The Queen of Spring

