DAFFODILS
for the
Farmer Florist

MISSISSIPPI STATE UNIVERSITY™ EXTENSION

Originating from the temperate climates of northern Europe, daffodils (*Narcissus pseudonarcissus*) were introduced to the United States with the first settlers. Thanks to their warm colors, these spring-flowering bulbs serve as a welcome sign that spring is right around the corner in the temperate climates of the world. Daffodils are some of the first flowers to bloom, providing farmers with salable crops in the early spring. While there are nearly 150 cultivars produced on a large scale, their worldwide production is focused on pure white, pale yellow, yellow, and bright orange daffodils. Their blooms can be small, less than 1 inch to 3 inches across.

PRODUCTION

Flower Types

Daffodil flowers are classified according to their form. Their divisions (13) are made based on variables such as trumpet form, size, doubling, and number of flowers per stem. The American Daffodil Society has more information about these divisions.

BULB SELECTION

When selecting bulbs, be sure to purchase them from a reputable supplier to avoid any production issues (i.e., poor flowering and short stem length) that can occur with low-quality bulbs. As with most flower bulbs, daffodils are graded by size and measured in centimeters around the "waist" of the bulb. Bulbs that are graded larger will produce more stems and flowers than bulbs that receive a smaller grade.

The availability of daffodil bulbs in optimal sizes can vary from year to year due to weather conditions before and during bulb harvest. Additionally, bulb size varies by cultivar, with some daffodil varieties producing larger bulbs than others.

CULTURAL PRACTICES

Thanks to their native range, daffodil bulbs can be grown in a wide range of soil types, whether in the field or under production in high tunnels, bulb crates, or containers. However, like other bulbs, daffodils perform best in a well-drained planting media. While the media type is not critical, pH and electrical conductivity (EC) are important. For adequate nutrition uptake, a low EC and a pH ranging from 6.0 to 7.0 is optimal. Narcissus species can be grown hydroponically, which can provide cleaner flowers at harvest.

Daffodils are winter hardy in USDA zones 3 through 8 and will return to bloom again year after year. Most varieties require a seasonal succession of warm, then cool, followed by warm temperatures. In other words, seasonal temperature changes cause flowers to grow roots and leaves, then blossom. Plant daffodil bulbs from mid-fall through early winter before the ground freezes. For optimal results, plant the bulbs within a month after you receive them. Bulbs should be planted loosely about 6 inches apart and about 6 inches deep. This spacing allows the bulbs plenty of room to multiply over time without overcrowding. When planting daffodils,

it is possible to plant them into informal groups rather than in straight rows to give them a more natural look, which may be a plus on farms with event space or those hosting photography sessions. Bulbs planted in crates or pots should be stored at a temperature around 48°F (9°C) for about 120 days before being moved to warm temperatures for blossoming.

INSECTS AND DISEASES

While a variety of insects and nematodes can feed on daffodil bulbs, their most serious insect pests are aphids. Due to the damage that aphids can cause on marketable flowers, their early detection is critical. One method for early detection of aphids is using yellow sticky traps. Placing these traps randomly among plants in the production area and checking them weekly will aid in early aphid detection.

Plant diseases are a major concern in daffodil production. The family of root rots (i.e., *Fusarium* sp., including *F. oxysporum, Rhizoctonia solani, Phytopthera cactorum*, and *Phytopthera parasitica*) can be prevented by procuring from a reputable bulb source, using only pasteurized media, and sanitizing the growing area. Additionally, the use of pre-planting bulb dips and routine fungicide media drenches can help prevent root rot. In addition to root rot, gray mold (*Botrytis cinerea*) can occur on flowers and leaves if the air circulation and humidity control are inadequate. *Botrytis* can also be a problem with open daffodil flowers, where it finds a suitable environment in the sugar-laden nectar at the end of the stigma.

HARVEST AND POSTHARVEST HANDLING

When growing daffodils as fresh cut flowers, harvest the stems when they are just showing color and/or at the "gooseneck" stage (just beginning to bend). When cut, daffodils can be stored dry-wrapped in a non-waxed paper, such as newspaper, and kept for up to 2 weeks in cold storage at 32 to 35°F. When not being stored dry, cut daffodil stems can be held for up to 2 weeks at 32 to 35°F at 90 percent humidity in a commercial floral preservative. Note that daffodils should not be placed into the same water as other cut material because they exude sap, which inhibits water uptake by other plant species.

DESIGN APPLICATIONS

Daffodils are stunning flowers no matter their size or blossom classification. They are recognized as some of the first flowers to bloom in the spring and are welcomed in consumer bouquets, arrangements, and stylized designs for special occasions.

In floral design, small-flowered varieties are classified as filler because they are easily massed together to fill in a pattern. Larger flowers with their rounded outlines can be used as mass flowers, providing visual weight to an arrangement. We want to point out that their three-dimensional trumpets allow them to fit into the distinctive category, meaning that their form is unusual, just like lilies, anthurium, and bird of paradise plants. Increasing the space between the blooms within a design allows viewers to appreciate their distinct form.

Figure 1. Table centerpiece using Attraction daffodils.

TABLE ARRANGEMENT

For this arrangement, we created a container that would elevate the floral design beyond a simple vase, having an informal, contemporary look (Figure 1).

This little container is like a Victorian epergne, not made from crystal and silver, but from rustic water tubes, raffia, and wood products. It is a value-added product. It is designed to display short-stemmed flowers, so it is a container to keep in mind when using petite crops.

Each of the water tubes is rubber-banded to a bamboo skewer to provide a flower head extension. We drilled holes matching the skewers' diameter into a round, wooden trivet. The next step is to wrap the tube/skewer unit with raffia to provide a uniform, earthy color and texture. It is possible to use other materials to cover the tube/skewer unit such as yarn, cloth strips, or leaves in fresh or dried form.

The container can be rented and returned to the farm for numerous uses. After a few rentals, it can be filled with flowers and sold.

Figure 2. Hogarth-curve bridal bouquet.

Figure 3. Daffodil flower heads on damp paper toweling await wire mounts.

Figure 4. Bend the wire at approximately one-third its length, then pierce it into the flower's cup.

Our next project uses a large-cupped daffodil, an unnamed variety. We felt it could be displayed as a formal, wired and taped bouquet—the method now making a welcomed comeback among some floral designers. These mechanics allow for slim curves like the Hogarth used in Figure 2.

First, cut the stem just below the flower's unripe ovary. We used about 8–12 conditioned flowers for the bouquet design and combined them with variegated, needlepoint ivy. Lay the flower heads on a wet paper towel to slow down their transpiration and wilt (Figure 3). Mist the flowers with antitranspirant spray to slow down moisture loss.

Use the hairpin wiring technique with a #26 wire or similar gauge (Figure 4). You can add lower gauges (thicker wires) to the stem for stability after the flower is mounted on the light gauge. Wrap the artificial stem with floral tape and mist each flower again with antitranspirant spray.

FLOWERS TO WEAR

Headpiece

Figure 5. A garland headpiece of Attraction daffodils.

The floral headdress in Figure 5 is simple to construct for those with wiring and taping practice. We used the same wiring and taping methods shown in the Flowers to Carry section. The design is held in place with two bobby pins. Bold styles such as this can be created for advertisements and promotions of your flower farm's products and attract the attention of potential brides.

We mounted our small Bell Song daffodils using #28-gauge wire in the hook method (Figure 6). Note that each wire stem is visible, adding to the gathered and bound appearance.

Boutonniere

Figure 6. A lapel cluster of Bell Song daffodils.

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