



Selected Daffodils for West-central Florida Gardens

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ADDITIONAL INDEX WORDS. *Narcissus*, chilling hours, Florida landscape

Daffodils and other flowering bulbs typically struggle in peninsular Florida because of the low number of chilling hours. However, for the last 5 years, the Florida Daffodil Society and 11 county extension offices in central Florida collaborated to determine if there were cultivars of daffodils that would repeat-bloom in this zone. In Winter 2004, 10 cultivars were planted in UF/IFAS Extension demonstration gardens, including Pasco County's office located in Dade City. Since then, Pasco County staff has monitored the performance of the 10 cultivars for green growth and flower production. Many of the cultivars have not re-bloomed over time, have declined, or died; however, several daffodil cultivars have performed satisfactorily and may be suited to the low chilling experienced in west-central Florida according to the trial. This paper discusses trialed cultivars that did not perform consistently and those that performed satisfactorily. These cultivars may be good candidates for wider usage in Florida home or commercial landscapes.

Daffodils (*Narcissus*) (Fig. 1) and other flowering bulbs are very popular winter bloomers with gardeners from more northern climates, yet typically struggle to perform satisfactorily in peninsular Florida. Problems demonstrated include inconsistent flowering and poor plant survival. Therefore, these early spring bloomers are often not recommended for central Florida landscapes.

It is believed that poor daffodil performance is primarily due to the low number of chilling hours received in Zone 9A landscapes. To determine if there are certain cultivars that might be

well suited for central Florida landscapes, trials were conducted. The Florida Daffodil Society and 11 county extension offices in central Florida collaborated to determine if there was consistent performance from certain daffodil cultivars that would allow repeat-bloom.

Counties participating in the trials included Baker, Brevard, Citrus, Flagler, Lake, Marion, Orange, Pasco, Seminole, Sumter, and Volusia. Typically these central Florida counties receive between 100 and 300 h of chilling each winter. The number of cumulative hours below 45° can vary dramatically in this area. For example, Winter 2009 produced over 325 chilling hours while other winters were as low as 200 h in Pasco County (see Table 1).

Daffodils also need to be able to photosynthesize for about 6 weeks prior to leaf dieback in order to be able to store sufficient energy to carry them into the next year. One problem in peninsular Florida is that as blooms fail in late winter, spring temperatures can increase to a point where daffodil foliage also declines prematurely. This reduces photosynthesis and therefore sacrifices satisfactory performance from year to year. In addition to general plant decline, reduced or uneven flowering, and a reduced number of blooms can result from very warm springtime temperatures.

Pasco County's Trials

In Winter 2004, 10 cultivars were planted in demonstration gardens, including Pasco County. Cultivars planted are listed in Table 2.

These bulbs were planted in a location that received a minimum of 6 h of sunlight, have very well drained soils, receive no



Fig. 1. A daffodil (*Narcissus*) cultivar, 'Nat Williams', used in the 11-county experimental trial.

The authors would like to thank the Florida Daffodil Society and President Linda Van Beck for their assistance and participation in this trial.

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Table 1. Chilling hours experienced in Pasco County winters from 2004 to 2009.

Winter	Hours at or below 45°
2004–05	265
2005–06	370
2006–07	200
2007–08	200
2008–09	325

Table 2. List of daffodil cultivars planted in the trial experiment in 11 Florida counties (Baker, Brevard, Citrus, Flagler, Lake, Marion, Orange, Pasco, Seminole, Sumter, and Volusia).

Trial garden daffodil (<i>Narcissus</i>) planted
Carlton
Erlicheer
February Gold
Ice Follies
Nat Williams
Nony
Soleil D'Or
St. Keverne
Sweetness
Ziva

supplemental irrigation and were grouped together for monitoring purposes. Planting depths were specified by the Florida Daffodil Society. Full sun plots were fertilized annually with a 6–10–20 fertilizer and monitored for 5 years.

Since Winter 2004, Pasco Cooperative Extension horticulture staff has monitored the performance of the 10 cultivars for green leaf growth and flower production. Each year, an evaluation of whether the cultivar would make a good addition to Pasco landscapes was conducted. For example, Winter 2009 produced over 325 chilling hours while other winters were as low as 200 h in Pasco County (Table 3).

Pasco County's Results

Of the 10 cultivars planted, some performed inconsistently, producing green foliage each year, but have not re-bloomed, have

Table 3. Number of chilling hours experienced in Pasco County during the winters from 2004 to 2009.

Winter	Hours at or below 45°
2004–05	265
2005–06	370
2006–07	200
2007–08	200
2008–09	325

declined, or died. Other cultivars performed more consistently, producing both green leaf growth as well as inflorescences annually.

Three daffodil cultivars have performed satisfactorily and may be suited to the low chilling experienced in west-central Florida according to the trial. These three cultivars performed well each year over the last 5-year trial. 'Nat Williams', 'Erlicheer', and 'Carlton' have consistently produced leaf growth as well as multiple flower stalks each year. These cultivars may be good candidates for wider usage in Florida home or commercial landscapes.

Conclusion

There is little doubt that there is a great deal of interest in flowering bulbs in west-central Florida. However, with low chilling hours inconsistently provided each winter, only a few daffodil cultivars can maintain vigorous growth to reliably produce flowers.

Choosing one of the three relatively consistent bloomers is one avenue to succeed. Other cultivars should also be explored to meet customer demand.