

GLADIOLUS CULTIVAR EVALUATION

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ABSTRACT: Thirteen gladiolus cultivars were planted in field beds to evaluate growth response and suitability for cut flower production. ‘Oscar’ was one of the smallest cultivars in this trial while ‘Tradershorn’ required the longest time from planting the corms in the beds to grow a marketable stem.

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MATERIALS AND METHODS: In this trial gladiolus corms were obtained from Leo Berbee Bulb Co. and planted into field beds prepared in a Quitman silt loam soil. Three hundred lb/ac of 8-8-8 fertilizer was broadcast on the study area prior to bed formation. Beds were formed by a press-pan type bed shaper and were 6 in tall and 30 in across the top with bed centers spaced 5 ft apart. Plastic drip irrigation tape, which delivers .22 gal/min/100 ft, was buried 1 in deep in the center of the bed. Irrigation was supplied at one acre-inch of water per week. The beds were fertigated with 100 ppm N from Peter’s 20-20-20 once per week, and irrigated as needed in the absence of rain through the drip tape.

Four corms of each cultivar were planted in each replication of the trial. The corms were planted 4 in deep on the bed in two rows spaced 6 in apart; the corms in each row were spaced one foot (12 in) apart. The bulbs were planted in the field on 5/14/04.

The experimental design was a randomized complete block with four replications of each treatment. There were 4 plants in each replication. The experimental unit consisted of four plants of each cultivar that were planted on two parallel rows that were spaced 12 in apart; the plants in each row were spaced 12 in apart. The data collected during the trial were analyzed by SAS PROC GLM (SAS Institute Inc, Cary, NC). Mean separation was conducted with Fisher’s Protected LSD at the 0.05 significance level. The data collected in this experiment were stem diameter, stem length, and number of stems from 4 corms.

RESULTS AND DISCUSSION: The group of gladioli cultivars that produced the most stems from each block of 4 corms included ‘Peter Pears’, ‘My Love’, ‘Oscar’, ‘Mary Housley’, and ‘Tradershorn’ (Table 2). The number of stems produced for these 5 cultivars were not statistically different from one cultivar to the next. ‘Deciso’ required fewer days to produce a harvestable stem than the other cultivars in this trial except ‘Nova Lux’. ‘Tradershorn’ required the longest time to produce a stem. ‘Oscar’ produced the smallest diameter stem of all the cultivars in this trial except for ‘Yellow Emperor’, and ‘Oscar’ and ‘Blue Conqueror’ produced the shortest stem length in this trial.

Table 1. Description of gladioli grown in field beds at the North Mississippi Research & Extension Center in 2004.

Cultivar	Source	Season	Flower color	Bulb size
Applause	Berbee	early	Cherise red	14/16
Blue Conqueror	Berbee	mid	Dark blue	10/12
D'Artagnon	Berbee	mid	Yellow/Red	14/16
Deciso	Berbee	mid	Pink/Red Blotch	14/16
Mary Housley	Berbee	mid	Cream/Red	14/16
My Love	Berbee	mid	Pink/Cream Heart	14/16
Nova Lux	Berbee	early	Greenish Yellow	10/12
Oscar	Berbee	mid	Blood Red	14/16
Peter Pears	Berbee	early	Salmon w Red	14/16
Traderhorn	Berbee	early	Scarlet Red	14/16
Victor Borge	Berbee	mid	Bright red	14/16
White Propensity	Berbee	late	White	10/12
Yellow Emperor	Berbee	early	Yellow	10/12

Table 2. Days to harvest, stem diameter, stem length, and number of stems from 4 corms of gladioli grown in field beds.

Cultivar	Days to harvest	Stem diameter cm	Stem length cm	Number of stems
Applause	77.3 bc ^z	1.33 a-c	90.7 a	5.7 c-e
Blue Conqueror	76.2 bc	1.23 cd	82.7 d	2.5 f
Dartagnon	73.5 cd	1.3 bc	86.7 c	5.0 d-f
Deciso	67.3 f	1.13 de	89.7 a-c	6.0 b-e
Mary Housley	78.7 b	1.36 ab	90.7 a	7.2 a-d
My Love	78.7 b	1.35 ab	88.7 a-c	8.5 ab
Nova Lux	69.4 ef	1.08 ef	89.3 bc	4.0 ef
Oscar	72.0 de	0.96 g	80.4 d	8.0 a-c
Peter Pears	75.2 b-d	1.09 ef	89.4 a-c	9.2 a
Tradershorn	82.7 a	1.43 a	90.1 ab	6.7 a-d
Victor Borge	76.7 bc	1.29 bc	90.8 a	5.5 c-e
Yellow Emperor	71.7 de	1.00 fg	87.0 bc	5.7 c-e

^z Means with the same letter do not differ at the 5% significance level by Fisher's Protected LSD.