

CAMELLIA CULTIVAR EVALUATION

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ABSTRACT: Nineteen *Camellia japonica* cultivars were planted in field beds in December, 2002. The purpose of this trial is to evaluate the winter hardiness of the flower buds and the time of flowering. ‘Professor Charles S. Sargeant’ had the most open blooms of the cultivars in this trial on the January and February, 2004 observation dates. In March and April, ‘April Tryst’ produced more blooms than the other cultivars except for ‘Jurys Yellow’ in March and ‘Turnadot’ in April.

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KEY WORDS: Camellia, *Camellia japonica*, cold hardiness

MATERIALS AND METHODS: This trial was conducted at the North Mississippi Research & Extension Center in Verona, Mississippi. Field beds were prepared in a Quitman silt loam soil. Raised beds were prepared for the plantings to facilitate drainage. The rows were spaced 10 ft apart and the camellias were spaced 8 ft between plants within the row. Weeds were controlled by hand cultivation and post-emergence herbicides. Water was supplied through drip irrigation in the absence of rainfall. Plastic drip irrigation tape, which delivers .22 gal/min/100 ft, was placed in the center of the bed. The beds were fertigated with 100 ppm N from Peter’s 20-20-20 once per week.

The experimental design was a randomized complete block with six replications. The experimental unit was one plant. The data recorded in this experiment were number of flower buds in January 2004, number of open blooms on multiple dates from January through April, and landscape rating. The foliage rating was an evaluation of the general foliage condition of the camellia plants. There was considerable leaf drop and leaf discoloration in some plants. Thus, a cultivar could have a large number of open blooms and at the same time have a low landscape rating.

Data 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.

RESULTS AND DISCUSSION: ‘April Tryst’ had the greatest number of flower buds on the January 16, 2004 observation date (Table 2). ‘Turnadot’, ‘Professor Charles S. Sargeant’, ‘Pink Icicle’, ‘Kumasaka’, ‘April Remembered’, ‘Jurys Yellow’, ‘April Dawn’, ‘April Kiss’, and ‘Spring Promise’ were in the statistical grouping that had the second highest number of flower buds. ‘Professor Charles S. Sargeant’ had the most open blooms on the January 21, 2004 observation date (Table 3). ‘Spring Promise’, ‘Meredith’, ‘April Remembered’, and ‘Turnadot’ also had blooms in January while the other cultivars in the trial had no blooms. ‘Professor

Table 6. Number of open flower blooms and plant landscape rating of camellia cultivars in April, 2004 in a field trial at the North Mississippi Research & Extension Center.

Cultivar	Number open flowers			Foliage rating ^z		
	April 17	April 23	April average	April 17	April 23	April average
April Tryst	10.5 a ^y	7.8 a	9.2 a	2.7 a-c	2.7 a	2.7 a-c
Turnadot	7.4 ab	5.4 ab	6.4 ab	2.0 c-e	2.6 a	2.3 b-d
Kumasaka	5.0 bc	4.8 a-c	4.4 bc	2.2 b-e	2.2 a	2.2 b-d
Blood of China	4.8 bc	4.0 b-d	4.4 bc	2.0 c-e	2.0 a	2.0 d
Paulette Goddard	2.0 cd	2.2 b-d	2.1 c-e	2.5 a-d	2.5 a	2.5 a-d
Prof. Ch. S. Sargeant	1.7 cd	2.0 cd	1.8 c-e	2.3 a-e	2.3 a	2.3 b-d
Pink Icicle	0.8 d	1.0 d	0.9 de	2.4 a-e	2.6 a	2.5 a-d
April Kiss	0.7 d	1.2 d	0.8 de	2.5 a-e	2.2 a	2.5 a-d
Jury's Yellow	0.7 d	1.4 d	1.0 de	3.0 a	3.0 a	3.0 a
Bette Sette	0.7 d	1.8 cd	1.2 c-e	2.7 a-c	2.7 a	2.7 a-c
April Snow	0.7 d	2.3 b-d	1.5 c-e	2.8 ab	2.8 a	2.8 ab
Spring's Promise	0.2 d	1.4 d	0.7 e	2.8 ab	2.6 a	2.7 a-c
Meredith	0.2 d	1.6 cd	0.9 de	2.2 b-e	2.6 a	2.5 a-d
C.M Hoovey	0.2 d	1.7 cd	0.9 de	2.8 ab	2.7 a	2.7 a-c
April Remembered	0.0 d	1.6 cd	0.8 de	2.8 ab	2.8 a	2.8 ab
Bereneice Boddy	0.0 d	2.7 b-d	1.6 c-e	1.8 de	2.3 a	2.3 b-d
Arctic Snow	0.0 d	2.0 cd	1.0 de	1.7 e	1.7 a	1.0 e
April Blush	0.0 d	2.6 b-d	1.3 c-e	2.3 a-e	2.6 a	2.7 a-c
April Dawn	0.0 d	2.0 cd	1.0 de	2.2 b-e	2.4 a	2.1 cd

^z Foliage rating: 5 = good foliage and appearance, 1 = poor foliage and appearance

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

Table 4. Number of open flower blooms and plant landscape rating of camellia cultivars in February, 2004 in a field trial at the North Mississippi Research & Extension Center.

Cultivar	Number open flowers					Foliage rating ^z				
	Feb 2	Feb 11	Feb 16	Feb 24	February average	Feb 2	Feb 11	Feb 16	Feb 24	February average
Prof. Ch. S. Sargeant	12.5 a ^y	13.2 a	8.8 a	6.5 a	10.2 a	1.7 cd	1.7 de	1.7 de	2.0 cd	1.7 g
Spring's Promise	4.0 b	5.0 b	2.7 b	4.5 a	4.0 b	2.5 ab	2.2 a-d	2.3 a-d	3.0 a	2.5 a-d
Pink Icicle	1.3 c	1.5 c	0.8 bc	2.0 b	1.5 c	2.3 a-c	2.2 a-d	2.2 b-d	2.2 b-d	2.2 d-f
April Remembered	1.2 c	1.6 c	1.0 bc	2.0 b	1.4 c	2.8 a	2.2 a-d	2.8 ab	2.8 ab	2.6 a-c
Turnadot	0.4 c	0.0 c	0.0 c	0.8 b	0.3 cd	2.4 ab	2.5 a-c	2.2 b-d	3.0 a	2.5 a-d
April Kiss	0.2 c	0.5 c	0.5 bc	1.5 b	0.9 cd	2.5 ab	2.5 a-c	2.2 a-d	2.2 a-d	2.5 a-d
Meredith	0.2 c	0.0 c	2.0 bc	0.8 b	0.3 cd	2.2 a-d	2.0 b-d	2.4 a-d	2.2 b-d	2.3 b-f
Bereneice Boddy	0.2 c	0.3 c	0.0 c	1.8 b	0.7 cd	2.2 a-d	2.0 b-d	1.8 cd	2.5 a-c	2.3 b-f
April Blush	0.0 c	0.0 c	0.7 bc	1.0 b	0.6 cd	2.2 a-d	2.8 a	2.3 a-d	2.7 a-c	2.5 a-d
April Dawn	0.0 c	0.0 c	0.4 c	0.8 b	0.4 cd	2.5 ab	2.5 a-c	2.6 a-c	2.4 a-d	2.4 a-e
April Snow	0.0 c	0.0 c	0.0 c	0.0 c	0.0 d	2.5 ab	2.5 a-c	1.8 cd	2.3 a-d	2.3 c-f
April Tryst	0.0 c	0.0 c	0.0 c	0.0 c	0.0 d	2.8 a	2.7 ab	2.5 a-c	3.0 a	2.7 a
Arctic Snow	0.0 c	0.0 c	0.0 c	0.0 c	0.0 d	1.0 e	1.0 e	1.0 e	1.7 d	1.0 h
Bette Sette	0.0 c	0.0 c	0.0 c	0.0 c	0.0 d	2.7 a	2.3 a-d	2.5 a-c	2.7 a-c	2.5 a-d
Blood of China	0.0 c	0.0 c	0.0 c	0.0 c	0.0 d	1.8 b-d	1.8 cd	2.0 cd	2.3 a-d	2.0 fg
C.M Hoovey	0.0 c	0.0 c	0.0 c	0.2 b	0.1 d	2.8 a	2.2 a-d	3.0 a	2.8 ab	2.7 ab
Jury's Yellow	0.0 c	0.0 c	0.0 c	0.0 c	0.0 d	2.8 a	2.2 a-c	2.5 a-c	2.5 a-c	2.5 a-d
Kumasaka	0.0 c	0.0 c	0.2 c	0.0 c	0.1 d	2.2 a-d	2.0 b-d	1.7 de	2.5 a-c	2.0 e-g
Paulette Goddard	0.0 c	0.0 c	0.0 c	0.0 c	0.0 d	1.6 de	2.2 a-d	2.2 b-d	2.0 cd	2.0 fg

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Table 5. Number of open flower blooms and plant landscape rating of camellia cultivars in March, 2004 in a field trial at the North Mississippi Research & Extension Center.

Cultivar	Number open flowers					Foliage rating ^z				
	March 8	March 17	March 22	March 30	March average	March 8	March 17	March 22	March 30	March average
April Remembered	10.8 a ^y	8.4 b-d	3.4 c-e	2.4 d	5.7 c-e	2.8 a-c	2.8 a-c	3.0 a	2.8 a	2.8 a
Pink Icicle	9.3 ab	8.4 b-d	4.4 c-e	2.4 d	6.8 b-d	2.2 c-e	2.0 d-f	2.2 bc	2.6 a	2.2 fg
April Kiss	6.0 bc	4.0 c-e	0.2 e	2.5 d	3.3 e-g	2.2 b-e	2.2 c-f	2.5 ab	2.2 a	2.5 c-f
Spring's Promise	6.0 bc	4.3 c-e	3.2 c-e	2.0 d	4.0 d-g	2.8 ab	3.0 ab	3.0 a	2.8 a	2.9 a
Jury's Yellow	5.3 c	16.8 a	14.0 b	3.3 cd	9.9 ab	2.5 a-d	2.5 b-d	2.8 a	3.0 a	2.7 a-d
Turnadot	5.0 cd	9.2 bc	13.2 b	7.4 ab	8.7 bc	2.8 a-c	3.2 a	3.0 a	2.4 a	2.8 a
April Dawn	4.2 c-e	11.8 ab	5.2 c-e	3.0 d	5.9 c-e	2.6 a-d	2.6 a-d	2.6 ab	2.6 a	2.5 b-f
Prof. Ch. S. Sargeant	2.5 c-f	1.7 e	1.2 de	2.7 d	2.0 fg	1.8 e	1.8 ef	1.8 cd	2.5 a	2.0 g
April Blush	1.5 d-f	1.3 e	0.8 de	3.3 cd	1.5 fg	3.0 a	2.8 a-c	2.8 a	2.5 a	2.9 a
April Tryst	1.5 d-f	13.5 ab	22.8 a	10.3 a	12.0 a	3.0 a	3.0 ab	3.0 a	2.7 a	2.9 a
Meredith	1.4 d-f	1.2 e	1.0 de	2.2 d	1.6 fg	2.4 a-e	2.4 b-e	2.8 a	2.6 a	2.6 a-e
Bereneice Boddy	1.3 d-f	1.0 e	0.3 e	4.5 b-d	2.0 fg	2.5 a-d	2.5 b-d	2.7 ab	2.5 a	2.8 ab
C.M Hoovey	1.2 fe	1.7 e	0.2 e	2.5 d	1.4 fg	2.8 ab	3.0 ab	3.0 a	2.7 a	2.9 a
Paulette Goddard	1.0 ef	2.0 e	3.0 c-e	5.0 b-d	2.7 e-g	2.0 de	2.2 c-e	2.7 a	2.5 a	2.4 d-f
Bette Sette	0.5 ef	5.0 c-e	7.2 c	3.3 cd	4.0 d-g	2.7 a-c	3.0	3.0 a	2.8 a	2.9 a
Kumasaka	0.4 ef	3.6 de	6.4 cd	6.8 a-c	4.1 d-f	2.6 a-d	2.6 a-d	2.8 a	2.2 a	2.5 b-f
Arctic Snow	0.0 f	0.2 e	0.0 e	2.7 d	0.7 g	1.0 f	1.7 f	1.7 d	1.7 a	1.5 h
Blood of China	0.0 f	0.2 e	1.7 c-e	4.5 b-d	1.6 fg	2.2 c-e	2.3 c-e	2.7 ab	2.2 a	2.3 e-g
April Snow	0.0 f	0.0 e	1.0 de	3.3 cd	1.1 fg	2.7 a-c	2.8 a-c	2.8 a	2.8 a	2.8 a-c

^z Foliage rating: 5 = good foliage and appearance, 1 = poor foliage and appearance

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Charles S. Sargeant' again had the greatest number of open blooms in February over 4 observation dates (Table 4). 'Spring Promise' had the second greatest number of open blooms in February. The landscape rating of 'Professor Charles S. Sargeant' was low due to leaf drop. 'Arctic Snow' had the lowest landscape rating of all the cultivars in February. 'April Tryst' had the greatest number of open blooms on four observation dates in March compared to all other cultivars in the trial except for 'Jurys Yellow' (Table 5). Again, 'Arctic Snow' was rated lowest in landscape appearance. In two observation dates in April, 'April Tryst' again had a greater number of open blooms than the cultivars in the trial except 'Turnadot' (Table 6).

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

Cultivar	Season	Flower
April Blush	Spring Mid-late	Pink semi-double
April Dawn	Spring Mid-late	Variegated formal double
April Kiss	Spring Early-mid	Red formal double
April Remembered	Spring Early-late	Pink semi-double
April Snow	Spring-late	White rose form
April Tryst	Spring Mid-late	Red anemone
Arctic Snow	Fall	White single
Bereneice Boddy	Winter	Pink peony
Bette Sette	Spring Late	Pink double
Blood of China	Winter	Red loose peony
C.M Hoovey	Winter	Red double
Jury's Yellow	Winter	White anemone
Kumasaka	Winter	Red peony
Meredith	Spring-late	Pink/ crimson semi-double
Paulette Goddard	Winter	Red peony
Pink Icicle	Spring Mid-late	Pink loose peony
Prof. Charles S. Sargeant	Mid	Red anemone
Spring's Promise	Spring Early-late	Rose red single
Turnadot	Winter	Red peony

Table 2. Number of flower buds per camellia bush on January 16, 2004 in a field trial at the North Mississippi Research & Extension Center.

Cultivar	Number of buds
April Tryst	53.8 a ^z
Turnadot	33.8 b
Prof. Charles S. Sargeant	30.0 bc
Pink Icicle	29.8 bc
Kumasaka	26.2 b-d
April Remembered	21.7 b-e
Jury's Yellow	21.5 b-e
April Dawn	20.0 b-f
April Kiss	18.7 b-g
Spring's Promise	18.5 b-g
Bette Sette	15.5 c-g
Paulette Goddard	13.0 c-g
Blood of China	12.0 d-g
Arctic Snow	11.2 d-g
April Snow	5.9 e-g
Bereneice Boddy	5.5 e-g
April Blush	4.0 fg
Meredith	3.2 fg
C.M Hoovey	2.0 g

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Table 3. Number of open flower blooms and plant landscape rating of camellia cultivars on January 21, 2004 in a field trial at the North Mississippi Research & Extension Center.

Cultivar	Number open flowers	Foliage rating ^z
Prof. Charles S. Sargeant	15.3 a ^y	2.0 cd
Spring's Promise	1.6 b	2.8 ab
Meredith	0.7 bc	2.0 cd
April Remembered	0.4 bc	2.8 ab
Turnadot	0.2 bc	2.6 a-c
April Snow	0.0 c	3.0 a
Arctic Snow	0.0 c	1.7 d
Bereneice Boddy	0.0 c	2.2 b-d
Bette Sette	0.0 c	2.3 a-d
April Blush	0.0 c	2.0 cd
April Dawn	0.0 c	2.2 a-d
April Kiss	0.0 c	2.8 ab
April Tryst	0.0 c	3.0 a
Blood of China	0.0 c	2.5 a-c
C.M Hoovey	0.0 c	2.7 a-c
Jury's Yellow	0.0 c	2.7 a-c
Kumasaka	0.0 c	2.2 b-d
Paulette Goddard	0.0 c	2.0 cd
Pink Icicle	0.0 c	2.2 a-d
Spring's Promise	0.0 c	2.8 ab

^z Foliage rating: 5 = good foliage and appearance, 1 = poor foliage and appearance

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