

Okra Varieties Vary in Pod Shear Force

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Okra pods are edible for a relatively short time after which the pods become too tough and fibrous for consumption. This study was conducted to determine if okra cultivars differ in rate of pod development to identify cultivars that produce large pods with lower shear strength. Eleven okra cultivars and hybrids were planted on May 14, 2003. Plots were over seeded and plants were thinned to an in-row spacing of about 1 fr. The experimental design was a randomized complete block with four reps. Harvest began on July 7. To obtain pods of known maturity, flowers were tagged on the day of anthesis(DOA) and pods were harvested at on day intervals for four days beginning at DOA + 4. Shear strength was measured on a Model T -1200-G Texture Test System using a Model CS-1 Standart Shear-Compression Cell with 10 blades. If pods were over 2 ½ inches long, the proximal 2 ½ inches were used for shear measurements.

‘North and South’ and ‘Cajun Delight’ had the highest yields in the test (Table1). ‘Star of David’, ‘Clemson spineless’ and ;Clemson Spineless 80’ had the largest pods. In general, ‘Star of David’ and ‘Silver Queen’ had pods with the lowest shear force and required the least pot removal force.

Table 1. Pod yield and mean pod weight, shear force, and removal ratings on 11 okra cultivars and hybrids.

Cultivar	Total yield (lbs)	Mean pod wt (oz)	Pod shear force (lbs)			
			DOA ^Z +4	DOA +5	DOA + 6	DC
Cajun Delight	9649ab ^X	0.45g	164bc	265b	345bc	46
Burgundy	5477e	0.53cd	191ab	261b	375ab	36
Star of David	5157e	0.61a	121d	198c	243d	43
Silver Queen	8035bcd	0.57abc	117d	211c	285cd	32
Clemson Spineless	8788bc	0.60a	212a	317a	405ab	47

Clemson Spineless 80	8888bc	0.59ab	191ab	332a	436a	514a	2.6d
Dwarl Long Green Pod	6498de	0.52de	198ab	321a	397ab	465ab	4.2abc
Annie Oakley II	8704bc	0.45g	150cd	259b	338bc	419b	3.8c
Green Best	7997bcd	0.49ef	184abc	276b	369b	514a	4.0bc
North and Soutn	10487a	0.48fg	167bc	271b	353b	434b	4.0bc
Perkins Dwarf	7822cd	0.56bcd	187abc	265b	340bc	435b	3.4c

^z Day of anthesis + 4, +5, +6, and +7 succeeding days.

^y subjective rating on ease of pod removal at DOA +6: 1=pod snamp off easily; 5=pdo requires cutting

^xMeans followed by the same letter are not significantly different, Duncan's multiple range test ($P \leq 0.05$)

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This research represents one season's data and does not constitute recommendations. After sufficient data is collected over the appropriate number of seasons, final recommendations will be made through research and extension publications.