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Growing Heirloom Okra at the Kerr Center

A Preliminary Study, November 2008

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"I used to think a tropical depression was something you cured with a stiff rum and coke, and a walk on the beach. That was before Gustav rolled through Oklahoma in early September and put an end to the heirloom okra trial we'd planted in early June. That was unfortunate. We'd hoped to measure yield, height and other characteristics through the middle of September, at least. But even with this abrupt and untimely termination, we learned a lot about heirloom okra varieties and are pleased to share it with you". — GK

Introduction

Okra is one of the most popular and intriguing vegetables in the Mid-South United States. It not only adds variety, taste and nutrition to Southern cuisine, it is one of the more reliable crops that farmers and gardeners can grow in this climate.

Originating on the African continent, okra is typically heat- and drought-tolerant, with only a small number of serious diseases and insect pests.

What are Heirlooms and Why Bother with Heirloom Okra?

As a descriptor, heirloom tells us that something is probably old and handed down from previous generations. The word means roughly the same thing when we talk about heirloom crops and crop varieties; they are usually old cultivars, no longer in wide use by large-scale commercial growers. Some are truly hand-me-down selections nurtured by generations of family gardeners; others may be early releases from USDA or land grant university breeding programs that remain in use by gardeners and small farmers. One thing everyone agrees on is that all heirlooms are non-hybrid and not genetically-engineered, so that



seed may be saved and re-planted. Still, one person's heirloom can easily be another's modern improved variety.

There are several reasons for Kerr Center's interest in heirloom okra varieties. Aside from the fact that they are a valuable genetic reservoir for plant breeders, many heirlooms still perform well in the field. In addition, they provide profitable production and marketing niches for growers. For example, they might be used to feed the growing consumer interest in heirloom vegetables and traditional foods.

If you grow okra, you probably know of four





or five common varieties that can be found in local stores. You'll be surprised to hear that there are many more. Many of them are heirlooms—selected, developed, and saved by farmers, gardeners, scientists, and now-defunct seed companies.

We acquired 30 different heirloom varieties from four seed companies that specialize in traditional, non-hybrid, heirloom selections, to see how well they would do in southeastern Oklahoma.

The 2008 Kerr Center Trial

We established our heirloom okra trial at the Kerr Center Ranch, on a newly converted pasture that we are converting to organic production. The site features a loam soil with moderately poor drainage, 3.1% organic matter, and pH 6.5. Phosphorus and potassium levels were low and medium respectively.

We planted all 30 varieties on June 5th (somewhat late for southeastern Oklahoma) and side-dressed approximately 710 lbs./ac. of a 3-2-3 commercial organic fertilizer (equivalent in lbs./ac. of 21-14-21 for NPK, respectively) on June 17th. We also sprayed compost tea on July 18th. No herbicides or pesticides were used. Sprinkler irrigation was applied as needed.

We planted twenty-five-foot plots and did NOT replicate the plots. While lack of replication

limited our ability to measure fine differences in performance among varieties, this was not our objective. We were merely hoping to get a general idea of how the heirlooms would perform and which ones seemed most promising...and not.

All varieties had excellent germination. They emerged quickly and evenly within 4–10 days of planting. We thinned plants to roughly 10 inches between plants, and managed very good weed control using hand and machine cultivation.

Details and Discussion

The table shows our findings. The varieties are listed in the order that they began producing harvestable pods. All thirty varieties eventually produced marketable fruit; most did so beginning the final week of July.

Our crew harvested every 2–3 days up to and including September 2nd. On that last day the remnants of Hurricane Gustav did enough damage to terminate the trial. Our yield assessment, therefore, is based on a shortened season. Okra, as most gardeners know, can produce up until the first frost if it is regularly harvested and gets adequate moisture.

Yield Level: Because our plots are not replicated, we only felt comfortable dividing the varieties into four groupings based on yield. Most varieties fell into the high and moderate yield categories. Moderate yielding varieties should not be immediately dismissed—they produced a respectable amount of fruit, just less than those in the high category. A few varieties were very high yielding and showed every indication of continuing to produce at high levels. Low yielding varieties were clearly not competitive during the harvest period and showed no hint of much improvement during the last week of harvest.

Plant Height: We measured plant heights when all but one of the varieties was producing



Heirloom Okra Variety Trial, 2008							
Variety	First Harvestable Fruit	Yield Level	Plant Height 8/14/08	Easy To Harvest	Fruit Type	Fruit Color	Attractive Landscape Plant
Bowling Red	25-Jul	High	30 in.		Standard	Red-tinge	✓
Burgundy	25-Jul	Moderate	46 in.		Standard	Red	✓
Jade	25-Jul	V. High	32 in.		Standard	Green	
Thai	25-Jul	V. High	56 in.	✓	Standard	Green	
Evertender	26-Jul	V. High	38 in.	✓	Standard	Green	
James Hopper	26-Jul	Moderate	37 in.		Standard	Green	
Pentagreen	26-Jul	V. High	30 in.		Standard	Green	
Cajun Jewel	27-Jul	High	25 in.		Standard	Green	
Eagle Pass	27-Jul	High	44 in.		Fat	Green	
My Joanie	27-Jul	High	52 in.		Standard	Green	✓
Alabama Red	28-Jul	Moderate	40 in.		Standard	Green	✓
Louisiana Short	28-Jul	High	46 in.	✓	Fat	Green	
Emerald	29-Jul	High	42 in.		Standard	Green	
Red River	29-Jul	Low	62 in.	✓	Standard	Red	✓
Beck's Gardenville	30-Jul	Moderate	36 in.		Fat	Red-tinge	
Burmese	30-Jul	High	36 in.		Standard	Green	
Hill Country Heirloom Red	30-Jul	Moderate	48 in.		Fat	Green	✓
Jimmy T's	30-Jul	Moderate	37 in.		Standard	Green	
Milsap White	30-Jul	Low	34 in.		Standard	Green	
Perkins Long Pod	30-Jul	Moderate	47 in.		Standard	Green	
Star of David	30-Jul	Moderate	56 in.		Fat	Green	
Stubby	30-Jul	High	44 in.	✓	Fat	Green	
Fife Creek Cowhorn	1-Aug	Moderate	48 in.		Standard	Green	
Clemson Spineless	4-Aug	Moderate	44 in.		Standard	Green	
Cowhorn	4-Aug	High	42 in.		Standard	Green	
Guarjio	6-Aug	Moderate	45 in.		Fat	Green	
Texas Hill Country Red	6-Aug	Moderate	45 in.		Fat	Green	✓
Mammoth	6-Aug	Low	57 in.		Fat	Green	
Stewart's ZeeBest	12-Aug	Low	41 in.		Standard	Green	
African	22-Aug	Low	23 in.		Standard	Red-tinge	✓

fruit. The one variety not in production—'African'—began yielding fruit about one week after we took these measurements. As we approached September 2nd—our last harvest date—a few varieties were already so tall that harvest was becoming inconvenient. Had we continued our harvesting, it would have become problematic within another one or two weeks—a definite disadvantage for commercial producers intent on a long market season. And as might be expected, the taller varieties lodged more readily when Gustav's heavy winds hit them.

Ease of Harvest: This can make a big difference for growers who don't want to waste precious time searching through dense vegetation for pods that are hard to see, only to find them several days later when they are too large to sell. We based ease of harvest on a combination of factors including plant height, foliage density, fruit color contrast, and side branching.

Mid-sized plants, with long internodes and less-dense foliage, were much easier to harvest. Varieties with fewer side branches have most of the fruit on the main stem and are also easier to harvest.

Seed Sources:

VARIETIES:

African, Evertender, James Hopper, Louisiana Short, Mammoth, My Joanie, Pentagreen, Red River, Stubby
from:

Sand Hill Preservation Center
1878 230th Street
Calamus, IA 52729
563.246.2299
www.sandhillpreservation.com

VARIETIES:

Beck's Gardenville, Eagle Pass, Guarijio, Texas Hill Country Red
from:

Native Seeds/SEARCH
526 N. Fourth Avenue
Tucson, AZ 85705
520.622.5561
www.nativeseeds.org

VARIETIES:

Cajun Jewel, Cow Horn, Jade
from:
Southern Exposure Seed Exchange
P.O. Box 460
Mineral, VA 23117
540.894.9480
www.southernexposure.com

VARIETIES:

Alabama Red, Bowling Red, Burgundy, Burmese, Clemson Spineless, Emerald, Fife Creek Cow Horn, Hill Country Heirloom Red, Jimmy T's, Milsap White, Perkins Long Pod, Star of David, Stewart Zee-Best, Thai
from:

Baker Creek Heirloom Seeds
2278 Baker Creek Road
Mansfield, MO 65704
417.924.8917
www.rareseeds.com

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'Evertender' was certainly the easiest. The Southern Exposure Seed Exchange catalog describes it as "unbranched." While this was not true in every case, it was largely so. The pods were extraordinarily easy to find and collect.

Fruit Type & Color: While there are many fine differences among varieties, we observed two main shapes for okra pods—one being the standard, narrow tapered fruit most gardeners are used to, and a much shorter, fatter type of pod. Each variety is clearly of one type or the other. We saw no varieties that were of an intermediate shape.

If you plan to sell okra to a particular market, it would be wise to determine whether your customers prefer a certain pod type. The same is true of pod color. Several varieties produced red or red-tinged pods, which are certainly attractive and novel, though market demand might be limited.

Attractiveness as Landscape Plants: While it is not common to think of vegetables as landscape plants, several okra varieties were quite beautiful and decorative. In all instances, the varieties we noted as decorative featured various shades of red stems and red-tinged leaves and fruit. One variety—'Bowling Red'—had leaves similar in color to red cabbage.

Pest and Disease Tolerance: Throughout the season, we also attempted to rate these varieties on insect pest and disease tolerance. This proved something of a wasted effort. While there was some insect leaf feeding early in the season, it was never problematic and there were not clear differences among varieties. As the season progressed, no insect pest problems were evident at all. Similarly, none of the okra varieties exhibited any plant diseases.

In the Future...

Ours was only a preliminary study. We plan to evaluate more heirloom okra varieties in the coming years. We've already identified some we'd overlooked this past season. If fortunate, we may be able to compare nutrition and taste, also.

We certainly encourage you to try these and other okra varieties yourself. Your experiences might be quite different and we'd like to hear if they are.

The okra trial was a project of the Kerr Center's School of Sustainability. For more information on the School of Sustainability and internships, visit www.kerrcenter.com or call 918.647.9123

