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Vegetable Variety Trials, 1973[1]

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VEGETABLE VARIETY and breeding line[3] trials were conducted at the Gulf Coast Substation, Fairhope; the Chilton Area Horticulture Substation, Clanton; the North Alabama Horticulture Substation, Cullman; the Sand Mountain Substation, Crossville; and the Main Station at Auburn. All trials were conducted in randomized replicated plots. Recommended fertilizer rates and applications for each crop and locations were used. Disease and insect control measures were applied on a regular schedule throughout the growing season and irrigation was applied as needed. Summaries of results from these trials are reported in this publication.

RESULTS

Bell Pepper (at Cullman). Seed were planted in the greenhouse at Auburn March 15, and seedlings were transplanted into the field May 31. Plants were spaced 2 feet apart in 44-inch rows. Three harvest were made beginning July 25, and ending August 21. Weather and growing conditions were favorable. Yields of marketable fruit were higher than in 1972, Table 1. Hybrid No. 19 and World Beater were the two highest yielding varieties of marketable fruit and also produced the highest number of pods per plant. Miss Belle produced the largest pod size. This variety is a recent release from the Mississippi Agricultural and Forestry Experiment Station and has shown good characteristics in our area. Several other varieties also had good pod size. Burpee's Bellringer and Yolo Select Pack produced the least number of pods per plant. Varieties Canape, Hybrid No. 19, Pick-A-Peck, and Early Bountiful do not have typical bell pepper type fruits, however, where this feature is not important these varieties are very productive.

TABLE 1. BELL PEPPER VARIETY TRIAL, CULLMAN, 1973[1]

Variety	Marketable yield/acre	Mean pod weight	Marketable fruits per plant
	Cwt.	*Lb.*	*No.*
Bellaire	62.03	.28	3.8
Burpee's Bellringer	41.45	.29	2.4
California Wonder	65.70	.24	4.7
Canape	75.01	.17	7.3
Delaware Belle	66.89	.24	4.8
Early Bountiful	75.73	.19	6.6
Emerald Giant	50.29	.28	3.0
Hybrid No. 19	139.00	.23	10.2
Keystone Resistant Giant No. 3	48.09	.27	3.0
Miss Belle	99.45	.31	5.4
Pick-A-Peck	86.22	.18	8.2
Titan (TMR)	63.98	.28	3.9
Twilley's Big Pack	52.24	.23	3.8
World Beater	130.28	.22	10.0
Yolo Select Pack	45.07	.28	2.7
Yolo Wonder L	67.13	.28	4.0

[1] Soil test p = 340 (high); k = 150 (high); pH = 5.6. 1 ton of limestone applied per acre.

Hybrid Cabbage (at Auburn). Seed were planted in the greenhouse on January 14, and seedlings were transplanted 15 inches apart in 40-inch rows on February 28. Excellent yields were obtained for all the varieties, Table 2. Round Dutch is not a hybrid but was included in the study for its productiveness and adaptability. Prime Pak and Headmaster produced the highest yields per acre and the highest mean head weights. Market Prize had the most uniform head size. Headmaster was the most variable variety

[1] Data presented in this publication is a true evaluation of each entry. Variety and company names are used for identification and does not imply endorsement of one over the other.

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[3] Seed and seed stocks of breeding lines are not available for planting until named and released.

TABLE 2. HYBRID CABBAGE VARIETY TRIAL, AUBURN, 1973[1]

Variety	Marketable yield acre	Mean head weight	Uniformity of heads[2]	Growing days	Color[3]	Harvest
	Cwt.	*Lb.*	*Lb.*	*No.*		*No.*
Blue Chip	333.4	3.19	±1.04	85	G	1
Headmaster	369.2	3.53	±1.30	92	BG	1
Jet Pak	341.6	3.27	± .79	74	G	1
King Cole	299.0	2.86	± .78	74	G	1
Market Prize	344.8	3.30	± .49	85	G	1
Prim Pak	396.6	3.89	± .85	92	BG	1
Round Dutch	347.6	3.41	± .60	85	DG	3

[1] Soil test p = 410 (very high); k = 70 (low); pH = 5.5. 1 ton limestone applied per acre.
[2] Standard deviation.
[3] Color = G, green; BG, blue green; DG, dark green.

for head size. Jet Pak was the earliest maturing variety. King Cole was harvested too early in this study and should have a higher number of growing days than is reported. All varieties were harvested once-over except Round Dutch.

Egg Plant (at Cullman). Seed were started March 29, in the greenhouse at Auburn and seedlings were transplanted May 31. Plants were spaced 2 feet apart in 5-foot rows. Seven harvests were made from July 10, and ending August 28. Good yields of marketable fruit were produced from all but one variety, Table 3. Long Purple is a very attractive fruit but is very soft and has a tender skin. The plant is heavily colored with purple and would do well as a flower bed type for home production. Peerless Hybrid produced a very good fruit type at Cullman. The fruits were elongated 6 to 9 inches and had a dark purple skin. Jersey King Hybrid is also a good fruit type with plant characteristics very similar to Peerless Hybrid. Black Beauty is perhaps the standard for egg plant in this area, but its fruit is somewhat rough and not well shaped.

TABLE 3. EGG PLANT VARIETY TRIAL, CULLMAN, 1973[1]

Variety	Marketable yield per acre and fruit size			
	No. 1	Fruit size	No. 2	Fruit size
	Cwt.	*Lb.*	*Cwt.*	*Lb.*
Black Beauty	292.02	.90	87.69	.81
Black Magic	317.81	.84	90.92	.84
Black Oval	416.86	.82	38.80	.81
Early Beauty Hybrid	277.05	.48	110.23	.43
Florida Highbush	228.38	.88	135.68	.89
Florida Market	140.72	.79	157.17	.79
Hybrid No. 29	298.67	.98	76.43	1.03
Jersey King Hybrid	322.03	.68	66.29	.64
Long Purple	66.42	.49	163.95	.60
Mission Bell	258.13	.77	140.55	.87
Peerless Hybrid	316.25	.69	66.56	.73
Pompano Pride	201.01	.80	49.07	.81

[1] Soil test p = 330 (high); k = 190 (high); pH = 5.6. 1 ton of limestone applied per acre.

Fresh Market Cucumbers (at Cullman). Seed were planted June 10, in hill 6-inches apart in 44-inch rows. Twelve harvests were made from August 2, until August 31. Victory trellised and Victory produced the highest yields of marketable fruit, Table 4. A small increase in yield was obtained by trellising and spraying was made easier. All the varieties except XP 10485 had acceptable color, shape, uniformity and vine vigor. Poinsett and TXP-B had excellent fruit color and shape.

TABLE 4. SLICER CUCUMBER TRIAL, CULLMAN, 1973[1]

Variety	Total marketable	Fruit weight	Color[2]	Shape[2]	Uniformity[2]	Vine[2] vigor
	Cwt.	*Lb.*				
Gemini	224	.37	3	3	4	3
Poinsett	167	.34	4	4	4	4
TXP-B	181	.53	4	4	4	4
Victory	284	.37	3	3	4	3
Victory trellised	290	--	--	--	--	--
XP 10485	245	.40	3	1	4	1

[1] Soil test p = 170 (medium); k = 130 (high); pH = 5.9.
[2] 5 = excellent, 4 = good, 3 = fair, 2 = poor, and 1 = very poor.

Fresh Market Tomatoes (at Fairhope and Cullman). Seed were planted in the greenhouse at Auburn on March 1, for Fairhope and April 1, for Cullman. Seedlings were transplanted April 24, at Fairhope and May 31, at Cullman. Plants were spaced 15-inches apart in 5-foot rows at both locations. At Fairhope, plants were staked and pruned to a two leader system. At Cullman, a split plot was used

TABLE 5. STAKED FRESH MARKET TOMATO TRIAL, FAIRHOPE, 1973[1]

Variety	Marketable yield per acre				Culls			
	5 x 6	6 x 6	6 x 7	Total	Total	Cracks	Catface	Others[2]
	Cwt.	*Cwt.*	*Cwt.*	*Cwt.*	*Cwt.*	*Pct.*	*Pct.*	*Pct.*
Replicated								
Bonnie Nematode Resistant	274	148	29	451	88	45	13	42
AU 72-44	323	89	13	425	96	64	11	25
Terrific VFN	288	110	17	415	138	67	17	16
Walter	209	119	30	358	65	46	18	36
Homestead 61	181	124	27	332	48	41	16	43
Floradel	213	106	9	328	129	53	17	30
Homestead Elite	193	109	24	326	67	50	19	31
AU 72-4	185	124	11	320	72	65	8	27
Sunburst	105	149	55	309	57	17	22	61
Homestead 24	132	132	38	302	30	21	19	60
Tropic	219	75	4	298	80	41	38	21
Homestead 500	138	116	35	289	54	37	5	58
Campbell 28	105	146	36	287	45	2	20	78
AU 4	224	52	5	281	88	35	37	28
Traveler	140	108	25	273	19	3	5	92
Creole	144	102	24	270	77	55	10	35
Chico Grande	135	96	26	257	56	0	6	94
AU 72-5	180	65	6	251	122	67	21	12
Observational								
Monte Carlo VFN	243	156	19	418	107	45	25	30
Avalanche	164	128	11	303	61	8	41	51
MH-1	127	93	32	252	81	12	30	58
Pelican	175	55	13	243	123	27	44	29
Ace 55	120	61	7	188	66	32	38	30
VFN Bush	89	51	11	151	155	64	5	31

[1] Soil test p = 250 (very high); k = 190 (high); pH = 6.2.
[2] Others were mostly tomatoes too small to be marketed in the above sizes. Some were from rots, insect damage and misshapen fruits.

TABLE 6. STAKED AND UNSTAKED FRESH MARKET TOMATO TRIAL, CULLMAN, 1973[1]

Variety	Staked and trellised								Unstaked							
	Marketable yield per acre				Culls				Marketable yield per acre				Culls			
	5 x 6	6 x 6	6 x 7	Total	Total	Cracks	Cat-face	Others[2]	5 x 6	6 x 6	6 x 7	Total	Total	Cracks	Cat-face	Others[2]
	Cwt.	*Cwt.*	*Cwt.*	*Cwt.*	*Cwt.*	*Pct.*	*Pct.*	*Pct.*	*Cwt.*	*Cwt.*	*Cwt.*	*Cwt.*	*Cwt.*	*Pct.*	*Pct.*	*Pct.*
Replicated																
Tropic	46.81	253.06	95.74	395.61	139.64	27	3	70	44.03	175.21	54.57	273.61	142.63	4	34	62
Floradel	57.47	215.77	117.57	390.81	147.17	18	1	81	48.42	135.81	52.21	236.44	132.83	2	12	86
Terrific VFN	85.36	215.99	84.67	386.02	123.53	11	6	83	63.05	148.39	46.61	258.05	148.74	8	16	76
Creole	29.50	208.44	118.41	356.35	160.57	7	5	89	23.12	174.08	77.93	275.13	140.17	4	6	90
Homestead Elite	31.61	215.13	93.09	339.83	152.94	11	4	85	30.76	165.54	63.65	259.95	156.91	6	22	72
Tropi-Red	19.53	216.23	99.41	335.17	235.29	14	2	84	24.78	156.76	70.02	251.56	206.66	4	17	79
Traveler	9.34	177.17	141.88	328.36	172.04	2	3	95	7.28	189.73	107.71	304.72	146.30	2	3	95
Supermarket	7.86	183.45	116.84	308.15	211.52	5	6	89	22.36	177.68	107.67	307.71	189.19	9	4	87
Homestead 500	10.35	185.59	107.55	303.49	210.62	8	4	88	27.57	203.79	90.42	321.78	163.71	3	10	87
Bonnie Nematode Resistant	11.34	172.98	106.07	290.39	169.44	8	2	90	31.31	177.98	68.06	277.35	186.90	3	10	87
Homestead 24	8.45	159.11	108.21	275.77	210.67	6	4	90	17.19	152.01	86.20	255.40	173.98	3	8	89
Walter	3.87	135.27	124.57	263.71	279.55	9	2	89	10.66	136.16	94.00	240.82	226.54	2	11	76
TAMU Monte Grande	11.07	164.74	83.80	259.61	175.28	17	2	81	14.34	114.17	69.32	197.83	167.54	2	22	76
Homestead 61	8.77	133.62	94.13	237.24	202.29	7	3	90	20.39	202.25	72.70	295.34	151.28	5	7	88
Sunburst	.79	94.13	105.06	199.98	344.46	4	1	95	6.80	120.76	110.32	237.88	176.90	2	5	93
Chico Grande	.51	8.45	35.62	44.58	472.42	1	0	99	.77	19.43	65.38	85.58	396.61	0	1	99
Observational																
AU 72-44	49.00	184.74	68.03	301.77	100.82	2	8	90	58.23	139.89	56.08	254.20	88.59	1	3	96
XP 2011	28.30	153.34	93.30	275.54	190.35	1	10	89	15.37	129.89	59.49	204.75	231.96	1	3	96
AU 4	21.99	164.36	48.90	235.25	110.62	10	21	69	28.86	79.29	33.14	141.29	110.34	6	12	82
AU 72-5	10.46	149.65	69.39	229.50	92.47	0	7	93	17.95	109.75	46.25	179.50	97.41	1	31	68
Pelican	22.34	140.31	66.01	228.66	219.66	2	30	68	26.52	110.27	40.64	177.43	191.61	2	40	58
AU 72-4	5.58	78.20	109.01	192.79	143.27	2	4	94	18.30	99.88	66.77	184.95	103.12	2	7	91
Saturn	7.18	65.00	117.17	189.35	149.37	0	5	95	.00	87.41	67.44	154.85	130.20	9	20	71
Venus	.00	82.18	103.26	185.44	125.19	.50	.50	99	.00	98.98	85.35	184.33	149.41	0	14	86

[1] Soil test p = 390 (high); k =160 (low); pH = 5.8. 1 ton of limestone applied per acre.
[2] Others were mostly tomatoes too small to be marketable in the above sizes. Some were from rots, insect damage, and misshapen fruits.

where one-half of the plants was staked using the binder twine trellis system and the other half was left to lie on the ground.

Bonnie Nematode Resistant produced the highest yield of marketable tomatoes at Fairhope, Table 5. An Auburn line, AU 72-44, also performed well. The three most crack resistant varieties were Campbell 28, Traveler and Chico Grande, while Traveler was the most blemish free variety in the trial. Observational Variety Monte Carlo VFN was somewhat rough and flat in shape but otherwise was high yielding. MH-1, a jointless fresh market machine type, had a round, red fruit with good quality. Avalanche produced well, has a round flat fruit type, and was the most crack free of the observational varieties.

Yields and other data are reported in Table 6 for the Cullman trial. At this location staked versus unstaked results are reported. Staked varieties in general produced higher marketable yields than did unstaked. A few varieties did, however, make a higher yield on the ground.

Fruit size was reduced this year and is reflected in the amount of culls reported and the cwts. of 5 x 6's. In the staked trial, Tropic was the highest yielder of marketable fruit and followed closely by Floradel and Terrific VFN. In the unstaked trial Homestead 500 produced the highest yield of marketable fruit. Traveler, Sunburst, and Chico Grande produced the most blemish free of the replicated varieties.

Observational entries Saturn and Venus are small fruited types, but had a high degree of crack and catface resistance this year. Both are resistant to southern bacterial wilt disease. This characteristic makes these two tomatoes very desirable for home gardens that have a southern bacterial wilt problem. AU 72-44 produced the highest marketable yield of the observational varieties whether staked or unstaked.

Pickling Cucumbers (at Auburn). Seed were planted May 1, for the spring crop and August 16, for the fall crops. Plants were spaced 6 inches apart in 40-inch rows. Nine harvests were made for the spring crop from June 15, and ending July 13. Six harvests were made for the fall crop from September 27, until October 16. Spring yields were much higher than fall yields.

Gynoecious varieties Carolina and Explorer produced good yields and both have good pickling qualities, Table 7. Chipper is an older variety that also yielded well. Score is a new release for 1974 and has lots of good pickle characteristics. Line 817A is a monoecious line with excellent color and good pickle shape.

TABLE 7. PICKLING CUCUMBER TRIAL, AUBURN, 1972[1]

Variety	Marketable yield per acre					Harvest season	Color[3]	Fruit shape	Spine color[4]	Vine vigor	Carpel separation[5]	
	Grades[2]											
	No. 1	No. 2	No. 3	No. 4	Total						No. 3's	No. 4's
	Cwt.	*Cwt.*	*Cwt.*	*Cwt.*	*Cwt.*						*Pct.*	*Pct.*
Spring												
Carolina	18	92	177	66	353	Early	G	Excellent	Wh	Excellent	0	0
Earlipik (NK)	13	108	197	48	366	Early	G	Good	Wh	Good	1	0
Explorer	20	110	210	65	405	Medium	G	Excellent	Wh	Excellent	1	0
Mariner (JH)	17	106	191	62	376	Medium	DG	Fair	Wh	Good	1.5	8
72-G2 (NC)	16	111	206	49	382	Early	DG	Good	Wh	Excellent	5	16
Chipper	64	93	200	47	404	Medium	G	Excellent	Wh	Excellent	0	0
Ark. 71-10	21	92	192	40	345	Late	DG	Fair	Wh	Excellent	0	0
Ark. 71-74	30	112	187	38	367	Late	DG	Fair	Wh	Excellent	3	0
Ark. 71-37	25	73	190	70	358	Late	DG	Fair	Wh	Excellent	0	0
14A X 817A (AS)	15	77	137	38	267	Early	G	Good	Wh	Good	0	0
817A (AS)	24	101	133	29	287	Medium	DG	Good	Wh	Excellent	0	0
Score (AS)	27	129	230	7	393	Early	G	Good	Wh	Excellent	0	20
FX3806 (FM)	22	95	182	45	344	Medium	G	Fair	Wh	Excellent	0	0
FX3807 (FM)	28	153	298	53	532	Early	LG	Good	Wh	Excellent	0	25
38ND (JH)	15	105	196	42	355	Early	LG	Fair	Wh	Fair	0	0
3885 (JH)	11	94	160	43	308	Early	G	Good	Wh	Good	0	15
73-G10 (NC)	24	130	184	52	394	Early	DG	Good	Wh	Excellent	0	45
73-G11 (NC)	20	126	197	64	407	Medium	G	Good	Wh	Excellent	0	0
Green Spear (NK)	19	91	175	15	300	Medium	G	Fair	Wh	Excellent	0	0
Exp. 816 (NK)	36	151	220	69	476	Late	G	Fair	Wh	Excellent	0	0
Triple Cross (TAMU)	22	101	159	53	335	Early	G	Good	Wh	Excellent	0	9
Fall												
Carolina	19	52	53	6	130	Medium	G	Good	Wh	Good	0	0
Earlipik (NK)	18	102	104	6	230	Early	LG	Good	Wh	Good	0	0
Explorer	19	70	60	14	163	Medium	LG	Good	Wh	Good	0	0
Mariner (JH)	17	60	61	10	168	Medium	G	Good	Wh	Good	5	0
72-G2 (NC)	14	46	50	10	120	Medium	DG	Good	Wh	Good	0	17
Chipper	9	35	31	2	77	Late	G	Good	Wh	Good	0	0
Ark. 71-10	7	32	14	5	58	Late	DG	Fair	Wh	Fair	0	0
Ark. 71-14	6	29	37	9	81	Late	DG	Fair	Wh	Good	0	0
Ark. 71-37	19	45	63	21	148	Late	DG	Good	Wh	Excellent	4	0
14A X 817A (AS)	24	79	47	12	162	Early	G	Good	Wh	Good	0	0
817A (AS)	14	50	45	3	112	Late	G	Excellent	Wh	Fair	0	0
Score	15	53	48	9	125	Medium	G	Fair	Wh	Good	0	0
FX3806 (FM)	10	41	45	4	100	Early	LG	Fair	Wh	Fair	0	0
FX3807 (FM)	13	60	56	15	144	Medium	LG	Fair	Wh	Fair	0	0
38ND (JH)	18	64	110	15	207	Early	LG	Fair	Wh	Good	0	0
3885 (JH)	17	85	64	12	178	Early	DG	Fair	Wh	Fair	0	0
73-G10 (NC)	20	88	65	8	181	Medium	G	Fair	Wh	Excellent	0	0
73-G11 (NC)	22	88	65	4	179	Early	G	Fair	Wh	Excellent	0	0
Green Spear (NK)	18	81	47	4	150	Medium	G	Fair	Wh	Excellent	0	0
Exp. 816 (NK)	9	34	28	5	76	Medium	G	Fair	Wh	Excellent	0	0
Triple Cross (TAMU)	17	70	72	6	165	Early	LG	Fair	Wh	Excellent	0	0

[1] Spring: Soil test p = 520 (very high); k = 90 (medium); pH = 6.4. Fall: Soil test p = 530 (very high); k = 80 (medium); pH = 5.6. 1 ton of limestone applied per acre.

[2] No. 1 grade ranged up to 1 1/16 inch in diameter; No. 2 grade ranged from 1 1/16 to 1½ inches in diameter; No. 3 grade ranged from 1½ to 2 inches in diameter; No. 4 grade ranged from 2 to 2¼ inches in diameter.

[3] G = green; LG = light green; DG = dark green.

[4] Wh = white.

[5] Carpel separation was based on the per cent of fruits cut that had open or air spaces in the middle.

TABLE 8. POTATO VARIETY TRIAL, CROSSVILLE, ALABAMA, 1973[1]

Variety	Yield per acre		Total	Eye depth[2]	Eye size[3]	Skin color[4]	Shape	Eye appeal[5]
	No. 1	No. 2						
	Cwt.	*Cwt.*	*Cwt.*					
Kennebec	73.81	20.64	94.45	S	S	Wh	Long	4
La Chipper	40.53	19.16	59.69	S	S	Wh	Round	3
Norchip	19.48	11.28	30.76	S	S	Wh	Round	3
Raratan	32.30	7.65	39.95	S	S	Wh/SR	Round	4
Red La Soda	100.98	28.96	129.94	D	L	Red	Round	4
Superior	59.47	18.05	77.52	M	S	Wh/SR	Round	4
Frito-Lay 96	63.93	34.97	98.90	D	L	Wh/SR	Round	3.5
Frito-Lay 162	62.74	20.57	83.31	S	S	Wh/SR	Round	4
Seminole	50.94	11.43	62.37	S	S	Wh/SR	Round	4
Frito-Lay 657	66.38	17.30	83.68	S	S	Wh	Rd./long	4
L71-82	55.91	25.99	81.90	S	S	Wh/SR	Long	3.5
L71-110	62.97	21.61	84.58	D	M	Wh	Round	4
Wis. 623	52.20	43.66	95.86	S	S	Wh	Round	3
Wis. 66-13R-72	121.70	19.16	140.86	D	L	Red	Round	4
Wis. 703	71.95	24.58	96.53	M	M	Wh/SR	Round	4
Wis. 704	23.02	25.84	48.86	S	S	Wh	Round	3
Wis. 707	64.89	19.83	84.72	S	S	Wh/SR	Round	4
Wis. 717	65.71	24.99	90.70	S	S	Wh/SR	Round	3
Wis. 718	92.14	22.80	114.94	S	S	Wh/SR	Rd./long	3.5
B6495-12	101.28	41.21	142.49	S	S	Wh/SR	Long/flat	2.5
B6503-2	77.15	24.13	101.28	S	S	Wh/SR	Long/flat	3
B6516-26	101.28	24.13	125.41	S	S	Wh	Long/flat	2.5
B6567-12	88.95	16.86	105.81	M	M	Wh	Rd./long	3
B6955-24	62.30	19.38	81.68	S	S	Wh	Rd./long	3
B6955-33	70.24	30.22	100.46	S	S	Wh/SR	Round	3.5
B6967-9	58.07	21.16	79.23	M	M	Pink	Round	2.5
B6987-43	55.84	6.76	62.60	S	S	Wh/SR	Round	2.5
B6987-56	112.79	26.44	139.23	M	M	Wh/SR	Round	3
B7132-14	68.83	15.81	84.64	S	S	Wh	Rd./flat	3.5
B7132-25	61.70	45.37	107.07	S	S	Wh	Round	2.5
B7138-11	59.18	25.10	84.28	D	M	Wh/SR	Rd./long	2.5
B7139-4	132.91	17.75	150.66	M	M	Wh/SR	Rd./long	3.5
B7620-4	87.47	13.96	101.43	S	M	Wh/SR	Rd./flat	4
B7629-3	104.10	27.33	131.43	S	S	Wh	Rd./long	3
B7649-5	49.08	16.63	65.71	S	S	Wh	Round	3
B7664-2	61.26	20.57	81.83	S	S	Wh	Round	2.5
B7667-2	42.47	16.63	59.10	S	S	Wh. Russet	Round	3.5
B7680-3	39.43	38.17	77.60	S	S	Wh	Long/flat	3
B7694-1	77.59	32.52	110.11	S	M	Wh	Long/flat	3
B7707-5	60.74	22.35	83.09	S	S	Wh	Round	2.5
B7766-2	72.99	18.86	91.85	S	S	Wh	Rd./flat	2.5
B7768-3	64.30	11.29	75.59	S	S	Wh	Rd./flat	3.5

[1] Soil test p = 310 (high); k = 90 (medium); pH = 5.0. 1000 pounds of basic slag applied per acre.
[2] S = Shallow; M = Medium depth; D = Deep.
[3] S = Small; M = Medium; L = Large.
[4] Wh = White; SR = Some russet.
[5] 5 = Excellent, 4 = Good, 3 = Fair, 2 = Poor and 1 = Very Poor.

Potatoes (at Crossville). Seed potatoes were collected from Maine, Wisconsin, and the USDA in Beltsville, Maryland. These seeds were brought to Auburn and stored at 40 degrees F. until they were planted. Seed pieces were cut to approximately 1½ ounces each and treated for rot control. Seed pieces were presprouted at 55 degrees F. for 2 weeks and planted March 23. Seed were spaced 12 inches apart in 42-inch rows. Plots were harvested July 12. Yields were low for most of the varieties, Table 8. Red La Soda and Wis. 66-13R-72 were the highest yielding red types and B7139-4 and B6495-12 were the two highest yielding white selections. Many selections had some russet skin with B7667-2 having a complete russet skin type. Kennebec and La Chipper are good processing type potatoes.

Snap Beans (at Auburn). Seed were planted April 25 and August 15 respectively for the spring and fall crop. Seed were spaced 2 inches apart in 40-inch rows. Harvest dates varied with the different varieties. Harvest was done once over to simulate machine harvesting. Yields were higher for the spring crop than the fall, Table 9. Line 72 AI-4 produced the highest yield. Eagle was very susceptible to powdery mildew. Astro had very desirable characteristics for both home garden and processing. Early Gallatin also had a good yield and is a good home garden and commercial bean. Sieve sizes were adequate for all varieties except Roma which has a large flat pod that did not fit into the sieve size groups.

TABLE 9. SNAP BEAN VARIETY TRIAL, AUBURN, 1973[1]

Variety	Marketable yield/acre	Growing days	Color[2]	Shape	Straightness[3]	Bean length	Sieve sizes[4]				
							1	2	3	4	5
	Bu.	*No.*				*In.*	*Pct.*	*Pct.*	*Pct.*	*Pct.*	*Pct.*
Spring											
Astro	208	59	G	Round	S	5.00	5	10	16	53	16
BBL Supreme	308	61	G	Round	CTD	5.00	8	23	15	39	15
BBL 272	218	62	DG	Round	SC	4.50	10	20	23	39	8
Eagle	410	63	G	Round	SC	5.00	3	5	13	61	18
Early Gallatin	359	59	G	Round	SC	4.75	3	5	10	42	40
Exp. 116-137	294	60	G	Oval	CTD	4.75	0	5	8	72	15
Exp. 140-2347	216	58	G	Round	S	5.00	3	8	18	58	13
GP 66937-A	276	62	DG	Round	SC	5.00	10	10	17	46	17
Roma	296	58	G	Flat	SC	4.50	0	0	0	17	83
Slenderette	339	58	DG	Round	SC	4.75	0	3	13	66	18
XI68-2988	290	57	DG	Heart	CTD	4.75	6	13	14	50	17
72AI-4	436	59	G	Round	CTD	5.50	3	18	10	54	15
Fall											
Astro	102	61	DG	Round	SC	4.75	14	13	16	36	21
BBL Supreme	146	61	DG	Heart	SC	4.50	23	13	8	33	23
BBL 272	176	61	DG	Heart	SC	4.75	10	15	18	39	18
Eagle	140	61	DG	Heart	SC	5.00	13	10	21	36	20
Early Gallatin	135	61	DG	Round	SC	4.75	0	13	18	49	20
Exp. 116-137	98	57	G	Oval	SC	4.75	18	13	13	33	23
Exp. 140-2347	84	61	G	Heart	SC	5.00	18	13	13	41	15
GP 66937-A	84	57	G	Round	SC	4.50	18	16	11	39	16
Roma	95	57	G	Flat	SC	4.75	0	0	0	0	100
Slenderette	61	61	DG	Heart	SC	4.00	23	13	13	38	13
XI68-2988	85	57	G	Round	SC	4.75	15	13	13	46	13
72AI-4	164	57	G	Heart	SC	5.00	18	10	15	31	26

[1] Spring: Soil test p = 530 (very high); k = 80 (medium); pH = 5.6. 1 ton of limestone applied per acre. Fall: Soil test p = 520 (very high); k = 90 (medium); pH = 6.4.
[2] G = green; LG = light green; DG = dark green.
[3] S = straight; SC = slightly curved; VC = very curved; CTD = curved in two directions.
[4] Sieve size was determined from a 100 pod sample taken at random from the four replications. Sieve denoter canning size grades with size 1 having the smaller diameter and 5 having the larger.

Sweet Corn (at Cullman). Seed were planted May 16, in 44-inch rows and spaced 9 inches apart, leaving two plants per hill. Excellent yields were produced this year, Table 10. Rogers 64-2160 was the highest yielding variety with 3,303 dozen ears per acre. Monarch Advance and Triumphant II produced the largest ear size, while Merit, Monarch Advance, and Triumphant II produced the largest cob diameter. XP 358 had the highest rating for tip cover and ear filling. These two characteristics are excellent for a fresh market corn.

Plant characteristics of each variety are presented in Table 11. Trop. 2 was the tallest variety and Royal Crest was the shortest. Royal Crest, Rogers 64-2160, and Tendersweet had the highest seedling vigor ratings. Royal Crest was the earliest maturing corn in the trial and Trop. 2 was the latest maturing variety. Calumet, Merit, and Monarch Advance were rated the easiest varieties to harvest.

Sweet Potatoes (at Auburn, Clanton, and Cullman). Varieties and breeding lines were collected from the breeders and brought to Auburn in February. Seed were presprouted at 85° F. for 2 weeks before bedding for plant production. Some varieties were in short supply from breeders, therefore, plant production was not enough for adequate planting at all locations.

Plants were set at Auburn May 16, at Clanton May 17, and at Cullman May 31. Yields were average to excellent for the three locations, Table 12. At Auburn Jewel, Red Jewel, and L9-190 produced the highest yields of U.S. No. 1 roots. At Clanton, N.C. 289, M7-21, and L7-182 produced the highest yields of U.S. No. 1 roots. At Cullman, Centennial, Red Jewel, and Jewel produced the highest yields of U.S. No. 1 roots. Red Jewel at Auburn and Cullman and N.C. 289 at Clanton produced the highest percentage of No. 1 roots of the total marketable yield. Jumbos were excessive at Auburn and Cullman on some varieties.

TABLE 10. SWEET CORN VARIETY TRIAL, CULLMAN, 1973[1]

Variety	Ears per acre	Ear weight	Color[2]	Kernel rows	Ear length	Ear diameter	Cob diameter	Row shape[3]	Ear set height	Tip cover[4]	Ear filling[4]	Eye appeal[4]
	Doz.	*Lb.*		*No.*	*In.*	*In.*	*In.*		*In.*			
Butter Sweet	2222	.58	Y	14-16	7.91	1.67	.90	SC	33	3.38	3.50	3.28
Calumet	2585	.57	Y	12-14	8.65	1.51	.73	SC	32	3.53	3.50	3.25
Capitan	2343	.66	Y	14-16	8.51	1.59	.81	S	36	3.63	3.50	3.58
Commander	2343	.69	Y	16-18	8.05	1.62	.87	SC	34	3.23	2.63	3.20
Golden Queen	2421	.65	Y	12-14	7.89	1.58	.82	SC	39	4.13	3.75	3.58
Goldenrod	2706	.60	Y	14-16	8.88	1.53	.77	SC	37	3.75	2.25	2.83
Golden Security	2836	.60	Y	14-16	7.76	1.57	.81	SC	33	4.18	3.13	3.23
Goldie	2274	.57	Y	14-16	7.75	1.67	.86	SC	29	2.95	2.75	2.90
Hybrid Seneca Chief	2129	.56	Y	12-14	8.12	1.50	.76	S	21	3.90	2.75	3.25
Hybrid Seneca Feather	2395	.51	Y	12-14	7.67	1.45	.79	SC	26	4.15	4.25	3.23
Hybrid Seneca Scout	1919	.56	Y	14-16	7.12	1.56	.86	SC	34	3.98	3.63	3.50
Hybrid XP 185 A	2317	.60	Y	12-14	8.22	1.50	.74	S	31	3.65	3.25	3.13
Iochief	2334	.49	Y	14-16	7.50	1.53	.78	SC	37	3.15	1.75	2.58
Keystone Ev. Green Hy.	2257	.60	Wh	16-18	7.70	1.67	.98	S	40	3.93	2.25	2.55
Merit	2283	.62	Y	16-18	7.90	1.76	1.02	SC	36	3.63	3.75	3.45
Monarch Advance	1945	.73	Y	14-16	8.96	1.69	1.03	SC	29	4.20	2.25	2.85
NK-435	2144	.66	Y	14-16	8.85	1.65	.83	SC	20	3.55	1.88	3.05
NK-1791	2343	.64	Y	16-18	7.86	1.73	.97	SC	27	3.48	2.50	3.08
Royal Crest	2576	.38	Y	10-12	6.43	1.28	.78	SC	17	3.00	2.00	1.95
Rogers 64-2160	3303	.51	Y	12	8.35	1.48	.85	SC	24	4.09	1.50	2.68
Rogers 70-1631	2784	.58	Y	16	8.04	1.60	.92	S	23	4.25	2.50	2.83
Rogers 70-2428	2714	.59	Y	14-16	8.20	1.63	.94	S	29	3.80	2.38	2.90
Silverliner	2110	.62	Wh	12	7.90	1.73	.96	S	36	3.20	2.25	2.93
Silver Queen	1971	.68	Wh	12-14	8.05	1.61	.90	SC	38	3.95	3.75	4.00
Sweet-A-Korn WI	2559	.44	Wh	12	6.95	1.44	.83	SC	29	4.18	4.00	3.03
Sweet Tennessee	2516	.63	Y	16	7.82	1.71	.92	SC	39	3.65	3.38	3.20
Tendersweet	2196	.57	Y	14-16	8.39	1.49	.82	SC	34	4.08	4.00	3.30
Triumphant II	2412	.73	Y	16	8.41	1.73	1.05	S	33	3.28	3.00	3.20
Trop. 2	1729	.62	Y	16	8.18	1.47	.81	SC	56	3.78	2.13	2.35
Wintergreen	2481	.52	Y	14	8.14	1.53	.83	SC	27	4.00	3.63	3.30
XP 301Y	2447	.54	Y	14-16	8.16	1.60	.77	SC	29	3.13	2.00	2.23
XP 358	2611	.50	Y	14-16	7.45	1.50	.85	SC	33	4.68	4.63	3.85
XP 362	2317	.64	Y	16-18	7.80	1.74	.89	S	30	4.03	3.50	3.45
Yukon	2490	.62	Y	14	9.22	1.46	.80	SC	23	4.30	2.75	2.75

[1] Soil test p = 310 (high); k = 140 (high); pH = 5.7. 1 ton of limestone applied per acre.
[2] Y = yellow; Wh = white.
[3] S = straight; SC = slightly curved.
[4] Rating index: 5 = Excellent, 4 = Good, 3 = Fair, 2 = Poor, 1 = Very poor.

TABLE 11. PLANT CHARACTERISTICS OF SWEET CORN VARIETIES, CULLMAN, 1973[1]

Variety	Plant height	Seedling vigor[2]	Ease of snapping[3]	Shank length	Growing days
	In.			*In.*	*No.*
Butter Sweet	95	3.05	2.50	3.23	70
Calumet	100	3.80	4.49	3.25	72
Capitan	98	3.63	3.49	4.00	72
Commander	96	3.13	3.60	3.00	72
Golden Queen	105	3.75	3.57	3.50	72
Goldenrod	99	3.30	3.75	3.16	72
Golden Security	101	3.38	3.25	5.06	72
Goldie	92	2.08	4.00	2.76	70
Hybrid Seneca Chief	78	3.00	3.00	4.26	72
Hybrid Seneca Feather	90	3.25	2.25	3.51	70
Hybrid Seneca Scout	94	3.50	3.50	3.23	72
Hybrid XP 185 A	92	3.30	4.00	4.05	72
Iochief	97	2.25	4.00	3.03	70
Keystone Ev. Hybrid	104	3.38	2.88	3.06	75
Merit	96	3.75	4.75	3.15	70
Monarch Advance	94	3.50	4.50	3.17	70
NK-435	88	2.75	2.75	4.40	72
NK-1791	89	3.13	3.50	3.86	72
Royal Crest	71	4.00	2.00	2.37	54
Rogers 64-2160	84	4.13	4.00	3.13	65
Rogers 70-1631	86	3.13	2.25	4.13	65
Rogers 70-2428	92	2.75	2.50	3.85	72
Silver Queen	98	2.38	3.13	3.79	75
Sweet-A-Korn WI	88	3.13	3.00	3.45	68
Sweet Tennessee	102	2.75	3.50	4.98	72
Tendersweet	97	4.00	3.50	3.98	72
Triumphant II	97	3.30	3.50	4.21	72
Trop. 2	131	2.93	2.88	3.88	82
Wintergreen	90	3.25	2.75	3.54	70
XP 301Y	90	3.38	3.00	2.29	70
XP 358	99	3.13	2.75	2.79	68
XP 362	88	3.88	4.00	3.00	72
Yukon	90	2.75	3.50	4.35	65

[1] Soil test p = 310 (high); k = 140 (high); pH = 5.7. 1 ton of limestone applied per acre.

[2] Rating Index: 5 = excellent, 4 = good, 3 = fair, 2 = poor, 1 = very poor.

[3] Rating Index: 5 = very easy, 4 = easy, 3 = average difficulty, 2 = difficult, 1 = very difficult.

TABLE 12. SWEET POTATO VARIETY TRIALS, AUBURN, CLANTON AND CULLMAN, 1973[1]

Variety	Marketable yield per acre				U.S. No. 1 of total	Total solids
	U.S. No. 1[2]	Canners[3]	Jumbo[4]	Total		
	Bu.	*Bu.*	*Bu.*	*Bu.*	*Pct.*	*Pct.*
Auburn						
Centennial	291	36	255	582	50	28.36
Jewel	340	47	162	549	62	25.48
Red Jewel	380	67	79	526	72	26.00
L7-177	174	56	77	307	57	23.19
L7-182	301	54	215	570	53	27.37
L9-163	212	106	53	371	57	27.07
L9-190	350	99	175	624	56	25.67
Lo-132	316	61	84	461	69	28.53
Lo-360	294	40	146	480	61	27.91
M7-21	249	63	96	408	61	28.84
NC-289	280	30	115	425	66	29.97
NC-304	179	45	37	261	83	28.63

(Continued)

TABLE 12 *(Cont.)*. SWEET POTATO VARIETY TRIALS, AUBURN, CLANTON, AND CULLMAN, 1973[1]

Variety	Marketable yield per acre				U.S. No. 1 of total	Total solids
	U.S. No. 1[2]	Canners[3]	Jumbo[4]	Total		
	Bu.	*Bu.*	*Bu.*	*Bu.*	*Pct.*	*Pct.*
Clanton						
Centennial	86	147	116	349	25	27.13
Jewel	95	151	163	409	23	27.07
Red Jewel	75	144	35	254	30	27.41
L7-177	105	126	96	327	32	26.35
L7-182	111	120	69	300	37	27.38
L9-163	-----	----	-----	-----	----	-----
L9-190	103	136	26	265	39	25.57
Lo-132	-----	----	-----	-----	----	-----
Lo-360	-----	----	-----	-----	----	-----
M7-21	110	103	44	257	43	30.28
NC-289	116	132	112	360	32	29.73
NC-304	-----	----	-----	-----	----	-----
Cullman						
Centennial	382	56	82	551	69	24.00
Jewel	326	71	94	491	66	24.75
Red Jewel	349	73	69	491	87	24.00
L7-177	315	54	145	514	61	19.20
L7-182	289	60	173	522	55	26.70
L9-163	125	147	0	272	46	24.38
L9-190	271	86	159	516	53	25.40
Lo-132	-----	----	-----	-----	----	-----
Lo-360	216	113	23	352	61	23.80
M7-21	199	95	17	311	64	27.40
NC-289	293	79	171	543	54	30.20
NC-304	313	93	185	591	53	22.80

[1] Auburn: Soil test p = 170 (medium); k = 70 (low); pH = 5.2. 1 ton of limestone applied per acre.
Cullman: Soil test p = 180 (medium); k = 120 (high); pH = 5.6. 1 ton of limestone applied per acre.
Clanton: no soil test made.

[2] U.S. No. 1 roots were 2 to 3½ inches in diameter, 3 to 9 inches in length, well shaped and free of defects.

[3] Canners were 1 to 2 inches in diameter and 2 to 7 inches in length.

[4] Jumbo roots exceeded the diameter, length and weight requirements of the above two grades but are of marketable quality.

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