



On-Farm Squash and Tomato Variety Trials

Stacye Johnson, Extension Educator – Knox County

Scott Monroe, Extension Educator – Daviess County

Maria Restrepo, Extension Educator – Pike County

2010 Variety Trial Program

- Four County Collaboration
- 18 Onion Varieties
- 20 Summer Squash Varieties
- 40 Tomato Varieties




And a Horse Named "Kate"

Variety Trials

- Evaluate the performance of varieties under local conditions.
- Assist in building a “track record” for individual varieties.

While trials may identify varieties with greater potential for use in local production, they **DO NOT** identify the “best” variety.

Selection decisions should **not** be based on only one set of trial data.



Even a horse with a good track record doesn't win every time!!!

Summer Squash

- Seeding Date – April 26
- Transplant Date – May 19
- Plastic Mulch Used
 - 3 ft. wide strips
 - 6 ft. centers
- Two Rows Per Plastic Strip
 - 24 inch spacing between plants
 - 12 inch spacing between rows
- Simulated Population = 7,260 plants/acre

Summer Squash (con't)

- Location
 - Local farm near Bramble, IN
- Fertility
 - 3 tons of ag lime per acre
 - 1 ton of poultry litter per acre
- Harvest
 - Harvested 15 times
 - Harvest period was 6/11 – 7/19

Summer Squash (by the numbers)

- 3 Replications
- 20 Varieties
- 60 Plots
- 16 Plants per Plot
- 960 Total Plants
- 3,885 Lbs. Picked
- 6,382 Fruit Harvested

Approximately
3,497 loaves
of zucchini
bread!!!

Zucchini

Variety	Seed Source ^x	#1 Fruit ^y	#2 Fruit ^y	Oversized Fruit ^y	Total Yield ^y	Oversized and #1 Fruit ^{y, z}
Golden Glory	SG	45,073	3,479	4,991	53,543	50,064
#20516	SG	36,905	9,983	7,260	54,148	44,165
Lynx	SW	36,603	4,084	11,344	52,030	47,946
Payroll	SW/RU	36,451	4,386	9,378	50,215	45,829
Cash Flow F1	RU	35,544	4,538	8,924	49,005	44,468
Sebring	SG	35,393	5,445	6,504	47,341	41,896
Reward	HM	35,090	4,538	11,193	50,820	46,283
#5184	SG	33,880	3,479	14,066	51,425	47,946
Dividend	RU	33,426	3,933	5,143	42,501	38,569
Leopard	HM	30,704	3,781	13,159	47,644	43,863
Paycheck	SW	28,284	5,445	12,554	46,283	40,838
Butta	SW	27,981	1,210	19,360	48,551	47,341
#6144	SG	26,166	5,748	17,243	49,156	43,409
#21 ZG	SG	24,654	6,353	12,403	43,409	37,056
#9D4679	SG	24,200	4,386	9,378	37,964	33,578
lsd ($\alpha=.05$)		10,718	2,517	6,119	15,179	14,312

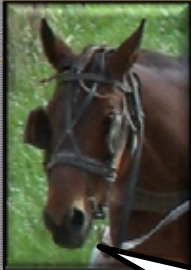
Zucchini Yield Data

Total Yield	Oversized and #1 Fruit	#1 Fruit	Oversized Fruit	#2 Fruit
#20516 (54,148)	Golden Glory (50,064)	Golden Glory (45,073)	Butta (19,360)	#20516 (9,983)
Golden Glory (53,543)	Lynx (47,946)	#20516 (36,905)	#6144 (17,243)	#21 ZG (6,353)
Lynx (52,030)	#5184 (47,946)	Lynx (36,603)	#5184 (14,066)	#6144 (5,748)
#5184 (51,425)	Butta (47,341)	Payroll (36,451)	Leopard (13,159)	Sebring (5,445)
Reward (50,820)	Reward (46,283)	Cash Flow F1 (35,544)	Paycheck (12,554)	Paycheck (5,445)

Zucchini Yield Data

Total Yield
#20516
-54,148
Golden Glory
-53,543
Lynx
-52,030
#5184
-51,425
Reward
-50,820

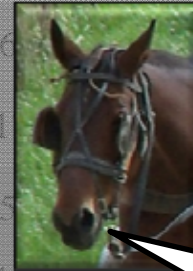
Oversized and #1 Fruit	#1 Fruit	Oversized Fruit	#2 Fruit
Golden Glory	Lynx	Butta	#20516
0.0		-19,360	-9,983
Lynx	Lynx	#6144	#21 ZG
17,946		-17,243	-6,353
5184	Lynx	#6144	#6144
17,946	-36,605	-14,000	-5,748
Butta	Payroll	Leopard	Sebring
17,341	-36,451	-13,159	-5,445
Reward	Cash Flow F1	Paycheck	Paycheck
16,283	-35,544	-12,554	-5,445



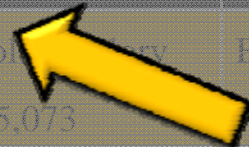
This variety is yellow."

Zucchini Yield Data

Total Yield	Oversized and #1 Fruit	#1 Fruit	Oversized Fruit	#2 Fruit
#20516	Golden Glory	Golden Glory	Butta	#20516
-54,148	-50,064	5,073	19,360	-9,983
Golden Glory	Lynx	20516	#6	#21 ZG
-53,543	-47,946	6,905	-1	-6,353
Lynx	#5184	lynx	#5	#6144
-52,030	-47,946	6,603	-14,066	748
#5184	Butta	ayr	copard	
-51,425	-47,341	6,-	-13,159	-5,445
Reward	Reward	ash Flow F1	Paycheck	Paycheck
-50,820	-46,283	5,544	-12,554	-5,445

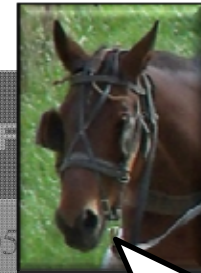


These are the yellow ones.



Zucchini Yield Data

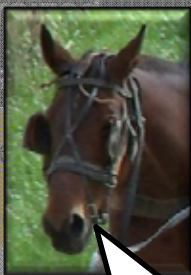
Total Yield	Oversized and #1 Fruit	#1 Fruit
#20516	Golden Glory	Golden Glory
-54,148	-50,064	-45,073
Golden Glory	Lynx	#20516
-53,543	-47,946	-36,905
Lynx	#5184	Lynx
-52,030	-47,946	-36,603
#5184	Butta	Payroll
-51,425	-47,341	-36,451
Reward	Reward	Cash Flow F1
-50,820	-46,283	-35,544



Yep...still yellow.

Zucchini Yield Data

Total Yield	Oversized and	#1 Fruit	Fruit
#20516	Golden Glory	-45,073	Butta
-54,148	Lynx	#20516	-19,360
-53,543	Lynx	#6144	-17,243
-52,030	Lynx	#5184	-14,066
-51,425	Butta	Leopard	-13,159
-50,820	Reward	Cash Flow FI	Paycheck
			-12,554



"Butta... I get it! It's like butter, but pronounced with an East Coast Accent. Ha!"

Zucchini Yield Data

Total Yield	Oversized and #1 Fruit	#1 Fruit	Oversized Fruit
#20516	Golden Glory	Golden Glory	Butta
-54,148	-50,064	-45,073	-19,360
Golden Glory	Lynx	#20516	#6144
-53,543	-47,946	-36,905	-17,243
Lynx	#5184	Lynx	#5184
-52,030	-47,946		-14,066
#5184	Butta		
-51,425	-47,341		-13,151
Reward		low F1	Paycheck
-50,820		-35,544	-12,554



“And finally, the last yellow zucchini.”

#2 Fruit
#20516
-9,983
#21 ZG
-6,353
#6144
-5,748
Sebring
-5,445
Paycheck
-5,445

Zucchini Yield Data

Total Yield	Oversized and #1 Fruit	#1 Fruit	Oversized Fruit	#2 Fruit
#20516 (54,148)	Golden Glory (50,064)	Golden Glory (45,073)	Butta (19,360)	#20516 (9,983)
Golden Glory (53,543)	Lynx (47,946)	#20516 (36,905)	#6144 (17,243)	#21 ZG (6,353)
Lynx (52,030)	#5184 (47,946)	Lynx (36,603)	#5184 (14,066)	#6144 (5,748)
#5184 (51,425)	Butta (47,341)	Payroll (36,451)	Leopard (13,159)	Sebring (5,445)
Reward (50,820)	Reward (46,283)	Cash Flow F1 (35,544)	Paycheck (12,554)	Paycheck (5,445)

Yellow Squash

Variety	Seed Source ^x	#1 Fruit ^y	#2 Fruit ^y	Oversized Fruit ^y	Total Yield ^y	Oversized and #1 Fruit ^{y, z}
Fortune SS6	RU	43,863	2,420	14,066	60,349	57,929
Sunray	RU	34,636	756	11,495	46,888	46,131
Lazor	SW	34,031	908	12,554	47,493	46,585
Cougar	HM	32,065	1,664	12,705	46,434	44,770
Goldprize	SG/RU	25,561	1,210	13,310	40,081	38,871
lsd ($\alpha=.05$)		9,300	1,875	9,103	15,642	15,645

^x SG = Sieger's SW = Seedway RU = Rupp HM = Harris Moran

^y Mean yield (fruit/acre) of three replications.

^z Sum of all harvested oversized and number one fruit.

Yellow Squash Yield Data

Total Yield	Oversized and #1 Fruit	#1 Fruit	Oversized Fruit	#2 Fruit
Fortune SS6 (60,349)	Fortune SS6 (57,929)	Fortune SS6 (43,863)	Fortune SS6 (14,066)	Fortune SS6 (2,420)
Lazor (47,493)	Lazor (46,585)	Sunray (34,636)	Goldprize (13,310)	Cougar (1,664)
Sunray (46,888)	Sunray (46,131)	Lazor (34,031)	Cougar (12,705)	Goldprize (1,210)
Cougar (46,434)	Cougar (44,770)	Cougar (32,065)	Lazor (12,554)	Lazor (908)
Goldprize (40,081)	Goldprize (38,871)	Goldprize (25,561)	Sunray (11,495)	Sunray (756)



Tomato Trial

Tomatoes

- Seeding Date – April 1
- Transplant Date – May 7
- Plastic Mulch Used
 - 3 ft. wide strips
 - 6 ft. centers
 - Drip tape under plastic
- One Row Per Plastic Strip
 - 24 inch spacing between plants
- Simulated Population = 3,630 plants/acre

Tomatoes (con't)

- Location
 - Right beside the squash trial
- Fertility
 - 3 tons of ag lime per acre
 - 1 ton of poultry litter per acre
- Harvest
 - Fruit graded as #1, #2, and culls
 - Harvest period was 7/14 – 10/4





Samples of all 40 tomato varieties prior to our August 4 field day.



Tomatoes (by the numbers)

- 3 Replications
- 40 Varieties
- 120 Plots
- 10 Plants per Plot
- 1,200 Total Plants
- 11,625 Lbs. (#1 and #2) Picked
- 51,919 Total Fruit Harvested

Approximately
7,265 pints
of salsa!!!

Compari Type Tomatoes

Variety	#1 Fruit ^x	#1 Fruit Weight ^y	Percent #1 ^z	#2 Fruit ^x	#2 Fruit Weight ^y	Culls ^x	Percent Culls ^z	Total Yield ^x
Mt. Magic	770,770	40,293	84.7	62,678	3,721	77,561	8.5	911,009

x Mean yield (fruit/acre) of three replications.

y Mean weight (Lbs/acre) of three replications.

z Quantity of indicated grade of fruit as a percentage of total yield (fruit/acre).



Saladette Tomatoes

Variety	#1 Fruit ^x	#1 Fruit Weight ^y	Percent #1 ^z	#2 Fruit ^x	#2 Fruit Weight ^y	Culls ^x	Percent Culls ^z	Total Yield ^x
Picus	169,763	32,156	53.2	104,423	23,293	48,642	14.8	322,828
Patria	137,093	29,827	49.5	107,448	21,864	29,766	11.0	274,307
Rubia	133,463	23,323	42.3	114,224	22,067	58,201	19.9	305,888
#5897	117,854	23,368	39.3	126,808	27,543	56,023	18.6	300,685
Pony Express	102,003	23,958	48.8	75,504	18,695	32,307	15.4	209,814
Rodeo	99,942	21,456	42.0	101,092	22,877	36,865	15.5	237,901
Plum Regal	99,825	23,414	40.6	84,942	19,768	62,194	25.2	246,961
#55293	67,155	11,843	33.2	85,305	16,048	47,432	24.5	199,892

x Mean yield (fruit/acre) of three replications.

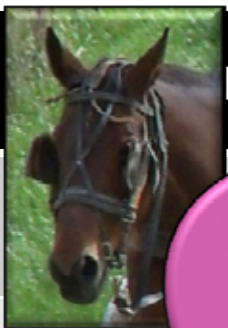
y Mean weight (Lbs/acre) of three replications.

z Quantity of indicated grade of fruit as a percentage of total yield (fruit/acre).

Saladette Tomato Yield Data

Total Yield	#1 Fruit	Percent #1	#2 Fruit	Culls	Percent Culls
Picus (322,828)	Picus (169,763)	Picus (53.2%)	Pony Express (75,504)	Patria (29,766)	Patria (11.0%)
Rubia (305,888)	Patria (137,093)	Patria (49.5%)	Plum Regal (84,942)	Pony Express (32,307)	Picus (14.8%)
#5897 (300,685)	Rubia (133,463)	Pony Express (48.8%)	#55293 (85,305)	Rodeo (36,865)	Pony Express (15.4%)
Patria (274,307)	#5897 (117,854)	Rubia (42.3%)	Rodeo (101,092)	#55293 (47,432)	Rodeo (15.5%)
Plum Regal (246,961)	Pony Express (102,003)	Rodeo (42.0%)	Picus (104,423)	Picus (48,642)	#5897 (18.6%)

Saladette Tomato Yield Data

	#1 Fruit	Percent #1	#2 Fruit	Culls	Percent Culls
	Picus	Picus (3.2%)	Pony Express (75,504)	Patria (29,766)	Patria (11.0%)
Rubia (305,888)	Patria (49.5%)	Plum Regal (84,942)	Pony Express (32,307)	Picus (14.8%)	
#5897 (300,685)	Pony Express (48.8%)	#55293 (85,305)	Rodeo (36,865)	Pony Express (15.4%)	
Patria (274,307)	#5897 (117,854)	Rubia (42.3%)	Rodeo (101,092)	#55293 (47,432)	Rodeo (15.5%)
Plum Regal (246,961)	Pony Express (102,003)	Rodeo (42.0%)	Picus (104,423)	Picus (48,642)	#5897 (18.6%)

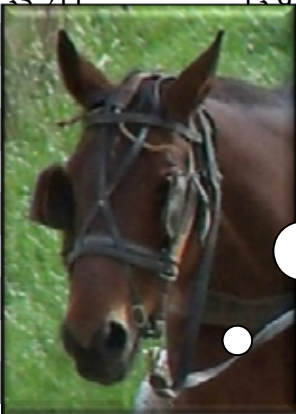
Rodeo? Pony Express? I'm lovin' the horse theme!



Globe Tomatoes

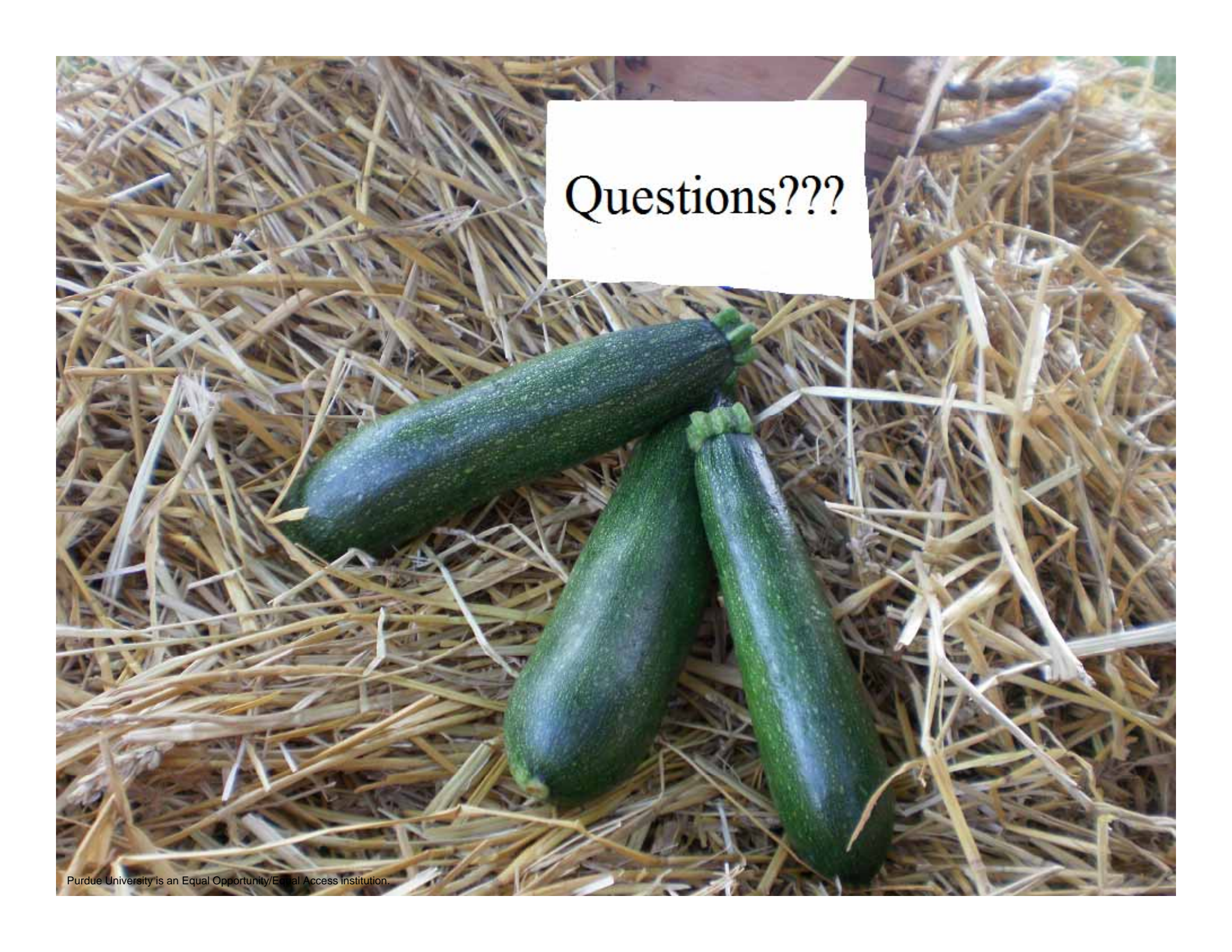
Variety	#1 Fruit ^x	#1 Fruit Weight ^y	Percent #1 ^z	#2 Fruit ^x	#2 Fruit Weight ^y	Culls ^x	Percent Culls ^z	Total Yield ^x
#01522942 PS	58,443	24,291	41.0	48,400	21,447	34,606	24.6	141,449
BHN 876	57,173	17,893	48.6	36,542	12,350	29,040	21.7	122,755
Tribute	50,639	21,432				42,713	29.0	147,560
HM 8849	50,336	20,757				30,976	24.7	125,598
#830702103	46,101	17,015				29,040	21.9	130,438
Tasti-Lee	42,229	17,015				29,706	26.0	120,274
Florida 91	39,930	17,015				26,015	23.3	110,413
BHN 589	39,688	17,015				18,435	27.9	101,156
Nico	39,083	17,015				33,638	31.2	112,893
#830700573	37,813	17,015				41,443	33.4	127,111
Rocky Top	36,421	17,015				42,471	34.1	119,427
Fletcher	35,453	17,015				40,777	34.5	116,886
#01721400 SVR	35,211	13,015				22,135	37.3	117,975
Red Defender	35,211	13,015	28.9	47,614	15,715	40,051	33.9	113,256
#830700572	35,211	13,015	26.9	47,614	22,990	45,920	35.3	126,506
Charger	35,211	13,015	36.0	36,603	20,562	29,282	28.0	98,615
FL 200	35,211	13,015	26.4	40,172	17,227	51,425	38.9	123,783
Applause F1	35,211	13,015	30.9	44,407	20,706	29,524	27.3	105,875
Primo Red	35,211	13,015	25.7	44,770	22,582	35,332	34.2	110,836
LD0978	35,211	13,015	26.6	37,268	16,426	48,037	40.8	116,039
#830700903	35,211	13,015	29.0	36,058	14,868	39,083	37.5	105,452
BHN 963	35,211	13,015	29.5	33,759	15,080	30,976	33.8	91,960
BHN 962	26,257	10,875	27.5	35,816	18,074	39,325	37.6	101,398
Scarlet Red	26,257	11,979	25.1	35,211	17,742	37,147	38.7	98,615
BHN 1009	26,015	9,680	26.6	38,962	18,392	34,969	34.5	99,946
Mt. Spring	25,773	10,300	29.1	40,051	18,816	24,442	26.0	90,266
Mt. Glory	25,652	9,257	30.9	32,549	14,490	25,773	29.8	83,974
SecuriTY 28	24,321	10,799	34.5	27,225	14,490	19,118	28.0	70,664
#830700890	23,232	11,435	27.0	31,702	17,530	29,887	33.8	84,821
#830700112	17,606	7,245	22.4	27,165	13,227	38,599	42.2	83,369
BHN 961	16,819	6,534	17.5	40,051	18,430	39,083	40.6	95,953

Blah, blah, blah....just tell me which horse won the race!



Globe Tomato Yield Data

Total Yield	#1 Fruit	Percent #1	#2 Fruit	Culls	Percent Culls
Tribute (147,560)	#01522942 PS (58,443)	BHN 876 (48.6%)	#830700112 (27,165)	SecuriTY 28 (19,118)	BHN 876 (21.7%)
#01522942 PS (141,449)	BHN 876 (57,173)	#01522942 PS (41.0%)	SecuriTY 28 (27,225)	Mt. Spring (24,442)	#830702103 (21.9%)
#830702103 (130,438)	Tribute (50,639)	HM 8849 (40.0%)	#830700890 (31,702)	Mt. Glory (25,773)	Florida 91 (23.3%)
#830700573 (127,111)	HM 8849 (50,336)	BHN 589 (39.8%)	Mt. Glory (32,549)	Florida 91 (26,015)	#01522942 PS (24.6%)
#830700572 (126,506)	#830702103 (46,101)	Florida 91 (36.2%)	BHN 589 (33,033)	BHN 589 (28,435)	HM 8849 (24.7%)

A photograph of three green zucchinis resting on a bed of dry straw. A white rectangular box with a slightly distressed, torn-edge appearance is centered in the upper half of the image. Inside this box, the text "Questions???" is written in a black, serif font. The zucchinis are arranged in a cluster, with one lying horizontally and two others positioned vertically below it. The straw is a mix of light tan and yellowish-brown, creating a textured background.

Questions???