

**Onion Variety Trial, Safford Agricultural Center**

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Summary

In response to the request for alternative crop production information, 92 varieties of long-day onions were planted on the Safford Agricultural Center. Many varieties performed well, with the top variety yielding almost 480 cwt per acre. It appears that onions can be a viable alternative crop for some farmers in the upper Gila valley.

Material and Methods

A Pima sandy clay loam soil was prepared so as to have a very fine seed bed. Boligrow (an aluminum sulfate compound from Boliden Corp., Sweden) was applied at a rate of 1000 lbs/ac on top of each bed as a soil amendment. Four rows of onions were planted on top of each 40" bed using Planet Jr. hand planters. Dactal was applied at 14 lbs/ac for weed control. The beds were watered and maintained wet until seedling emergence.

Plants were thinned to leave 2" between plants. Urea was applied, 100 lbs/ac preplant and two side-dress applications of 100 lbs/ac each. The plants were furrow irrigated 15 times during the growing season. The onions were hand harvested, allowed to dry and then sorted and sized by machine. Yields were taken from 10 feet of bed, replicated twice.

The first 87 varieties were planted on 18 April, 1985, the last 8 varieties were recieved late and were planted on 8 May.

Results

**Table 1. Yield (50 lb sacks/ac) and Percent Size Fractions of Varieties.**

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<u>Var #</u>	<u>Name</u>	<u>%Jumbo</u>	<u>%Large</u>	<u>%Medium</u>	<u>%Small</u>	<u>Yield</u>
31	DURANGO PRR	41	46	11	2	956
42	INCA	58	35	5	2	892
38	VALDEZ	43	45	11	1	876
36	MAGNUM	21	58	18	2	866
8	FOXY	7	43	41	9	850
11	HYB. OLYMPIAN	30	42	27	2	850
33	GOLDEN CASCADE	25	51	21	2	802

**VEGETABLE REPORT**

<u>Var #</u>	<u>Name</u>	<u>%Jumbo</u>	<u>%Large</u>	<u>%Medium</u>	<u>%Small</u>	<u>Yield</u>
7	DAI MARU	49	40	10	0	776
46	COLO. 6	61	32	6	1	772
68	PEDRO	16	53	26	4	756
58	GOLDEN TREASURE	36	45	17	3	716
64	RINGMAKER	61	32	6	2	714
45	YEL HYB X100	22	49	27	3	682
32	AVALANCHE	26	51	20	3	676
4	ARMADA XPH 428	51	16	29	5	674
35	WINNER	45	45	8	2	662
62	XPHCRK W133	64	25	9	2	646
26	AC0967R	6	46	43	5	644
9	AUTUMN BEAUTY	20	55	22	4	630
5	CELEBRITY	37	40	19	4	618
87	MOX 1008	41	46	10	3	616
86	NCX1008	19	42	33	5	600
1	PECKHAM	57	36	5	1	594
54	XPH2627	6	50	36	9	592
28	AC8093R	20	46	29	5	592
6	EARLY SHIPPER	23	55	17	4	578
25	AC0370R	11	41	40	8	578
85	SPANISH BEAUTY	15	37	36	12	576
80	FIESTA #76	11	47	34	9	570
30	AC9753R	3	31	56	11	556
59	AUTUMN SURPRISE	26	50	20	4	552
3	VEGA	34	54	7	5	552
63	BRONZE WONDER	29	48	21	3	534
41	BULLRING	24	54	19	2	534
65	BIG MAC	40	45	12	3	530
74	BLANCO DURO	15	54	24	7	524
60	WHITE DELITE	32	45	18	6	514
18	SPARTAN BANNER	3	22	69	6	514
40	GLACIER	18	37	38	8	496
2	YULA	30	45	20	6	492
14	BGS-27 F1	0	17	63	19	480
29	AC9836R	0	38	51	12	470
77	RELIANCE	39	41	17	4	462
66	XPH CRK N76	43	41	13	3	458
52	SWEETHEART	5	34	54	7	450
49	SPANISH MAIN	8	59	29	3	450
51	BULLSEYE	5	45	39	10	434
15	RADAR	5	24	55	16	432
72	SWEET SANDWICH	10	47	34	9	430
24	AC9939R	0	26	62	12	428
22	AC5310R	0	31	53	16	428
75	DEXP 592P	10	59	24	7	418
57	CHALLENGER 80	46	41	8	6	418

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<u>Var #</u>	<u>Name</u>	<u>%Jumbo</u>	<u>%Large</u>	<u>%Medium</u>	<u>%Small</u>	<u>Yield</u>
34	VALIANT	25	48	19	7	416
67	XPH CRKN46	53	32	10	4	416
56	BRONZE MARVEL	21	50	23	6	414
19	AC7949R	0	29	57	15	412
82	MERIT	53	34	9	4	410
55	1624-D55SS	10	55	28	6	408
23	AC8218R	0	37	49	14	376
48	YEL HYB X62	4	47	38	10	374
43	XPH739	30	64	3	4	364
61	WHITE KEEPER	13	44	35	8	364
53	HXP 2610	0	25	62	13	364
12	SUNTAN	0	53	41	5	356
93	COPRA F	0	33	49	18	344
21	AC9901R	0	22	58	20	336
69	XPH CRK N42	41	45	10	4	330
83	EARLY HARVEST	34	40	21	5	330
20	AC5350R	13	37	40	10	320
78	SPAN0-RR	46	40	9	5	312
79	WHITE FIESTA	11	60	22	7	294
17	PSR 385	0	30	56	15	286
13	COPRA F1	0	41	43	16	280
70	EARLY GOLD	0	38	49	13	278
37Y		9	45	37	9	270
37R		0	17	63	20	256
95	YULA	17	46	28	8	242
39	TANGO	0	23	57	20	240
92	KEEPSWEET II	0	39	42	19	238
50	FMX22W8	19	43	33	5	236
81	CARMEN	12	35	39	14	222
16	MOX1008 HYB	70	25	0	5	200
27	AC9704R	8	29	54	9	198
71	BRN BEAUTY K S	0	42	45	13	190
88	SENSATIONAL	0	0	66	34	190
91	SUPER APOLLO	0	25	45	30	182
76	F1 HYB SP 38	0	20	52	28	180
47	YEL. HYB N46	87	13	0	0	150
90	SUPERIOR	0	15	45	41	126
44	NU MEX BR1	0	3	41	56	104
89	BETTER BANNER	0	15	54	31	88
94	SUNTAN F1	0	20	37	43	66
73	COPRA F1	0	0	100	0	28
84	GOLDEN MOSQUE	0	0	97	3	8
AVERAGE		20	38	32	9	458

Field Observations

<u>Var #</u>	<u>Notes</u>
2	Some doubles, small necks
3	Medium bulb size, short neck, little later maturing
4	Early maturing, good bulb size, small neck, softer bulbs, looks to be salt tolerant
5	Good bulb size, few have large necks
9	Small to medium size bulb, uniform bulb shape, later maturity
11	Early maturity, medium bulb size, small necks
13	Inconsistent size of bulbs and necks
16	Large necks, small bulbs, thin skin
28	Early maturity
31	Little later maturing, necks variable, fair bulb size
32	Early maturing, white, more discoloring under scale, may work better in sandy soil
33	Early uniform maturity, uniform bulb size (tapered), solid good plant vigor
35	Some variable neck size
38	Fair, has some big necks
41	Early maturity
42	Uniform maturity, small neck, good bulb size, salt tolerant
46	Late maturity
47	Late maturity, fair bulb size, medium neck, some doubles
49	Fair bulb size, uniform bulbs
54	Medium bulb size, little later maturity
56	Later maturity, medium bulb size, small neck, deep discoloration, not sun tolerant
57	Late maturing, big necks, lots of doubles
58	Little later maturity, good bulb tops, medium size, not quite as big as #4
59	Fair, large necks, variable neck size, variable bulb shape
60	Later maturing, white, good vigor, medium bulb size, stain too deep to clean up when grading
61	Little later, little better size, white, little soft discolor goes 2 scales deep
62	Later maturity, good size and uniform bulbs, good vigor in tops, good shape
63	Later maturing, variable medium size bulbs, little variability in neck size
64	Earlier than #83 by 7-10 days, hard, good size
65	Late maturing
66	Fair bulb size, small necks, soft bulb
67	Later maturity, large neck, short neck, fair size, one double
70	Early maturing, small bulbs

Var # Notes (continued)

- 74 Smaller size
- 77 Late maturity, elongated medium size bulbs, small necks
- 78 Medium size bulbs
- 79 Small white bulbs
- 80 Early maturity, fairly hard bulbs
- 82 Semi-globe shaped, big necks
- 83 Look fair
- 85 Small to medium size bulb
- 87 Fair, little softer bulb, short neck, breaks in outer scale, potential for sunburn or breakdown, semi-globe shape

Discussion

Delaying the planting date from 18 April to 8 May was very detrimental to yield. For example note #2 Yula (18 Apr) yielded 492 sackss/ac while #95 Yula (8 May) yielded only 242 sacks/ac. This would indicate that none of the varieties from #88 to #95 should be compared with the earlier planting.