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HA195: A NEW HYBRID COTTON FOR THE SAN JOAQUIN VALLEY, CA

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Introduction

Hazera Seeds Inc. introduced HA195 hybrid cotton to the SJV. HA195 is an F1 hybrid cotton variety from a cross of *Hirsutum* and *Barbadense* inbread lines. The development of HA195 hybrid began in 1992 in Israel. HA195 was selected in SJV for its high yield and superior fiber properties. HA195 is best suited for the marginal growing conditions where Pima varieties are not performing as well. It also showed outstanding yields and water savings on non marginal grounds. HA195 is a full season variety that shows wide adaptation to the various growing conditions in the valley. Adequate seed is available for the 2004 season.

General Characteristics

HA195 is a full season picker type variety. It is a large and wide plant type, especially on fertile soils. Leaves are semi smooth, and fruiting branches are wide with several lateral bolls. Flowers are Pima type with creamier yellow color. Boll shape is similar to Pima, but slightly larger with 3, 4, and 5 locks, and fully open when ready for picking. Seed size is medium with 3,700-4100 seeds per pound.

The most distinctive traits of HA195 are its vigor, early bloom, wide adaptability, high yield, and ELS type fiber. The most profound trait of HA195 is its vigor, which is most visible at the seedling to squaring stage. In many locations, HA195 was 6-12” taller than Pima varieties, and had 3-6 additional fruiting branches, with a total number of fruiting branches of 14-20. Excessive vegetative growth is possible with HA195, but it is effectively controlled with mapiquat chloride. HA195 initiates the first fruiting branch on the fifth node which gives it 5-7 days early initiation of bloom in comparison to Pima varieties. HA195 is widely adaptable to various ground and weather conditions. It performs best in marginal conditions such as high salinity soil and water, heavy clay, sandy grounds, of cool spring weather.

Yield and Quality Performance

HA195 has been tested in variety performance and irrigation trials in SJV since 1999. It was tested by the UC Extension Service and in the performance testing program of the SJV Cotton Board. In these tests, HA195 showed yield increase of 17-48% from the SJV Cotton Board Standard, S7, and as much as 29% more than the number two variety in the test. In the irrigation trials at the West Side Research Station, HA195 showed significant yield increase with irrigation deficit.

The fiber of HA195 approaches Pima quality with a 1.35 length, 46 staple, 35.5 gr/tx strength, 3.9 mic, and 84 uniformity index. It is ginned by roller ginning, and has 32.5% gin turnout.

Summary

HA195 is a new hybrid cotton available from Hazera Seeds Inc. for the SJV growers for the 2004 growing season. It is a full season picker variety type and widely adaptable to the conditions in the SJV. HA195 has extremely high vigor that makes it best fit for the marginal soils such as salinity and heavy clay. Plant morphology is similar to Pima, with small differences in flower color and boll size. Yield testing in 2001-2002 show HA195 to have significant yield increases over Pima varieties. Fiber length, mic, and uniformity are similar to Pima, but strength is lower. Seed supply of HA195 is adequate for 2004 season.

Table 1. California Cotton Board – 2002. Pima Lint Yield Means Combined Across Locations.

Variety	Buena Vista Lbs/ac	Corcoran-south lbs/ac	Corcoran-west lbs/ac	Huron Lbs/ac	Means Across All Sites
HA-195	1751	2158	1734	2631	2069
PH00P-601	1622	1437	1200	1887	1537
PH00P-600	1605	1431	1208	1859	1526
OA-353	1352	1400	972	2076	1450
OA-345	1398	1316	1095	1922	1433
PHX-P101	1431	1420	1114	1725	1423
E-601	1283	1316	1080	1995	1419
BR-007	1465	1349	1028	1780	1406
OA-354	1316	1419	965	1868	1392
OA-355	1381	1275	791	1898	1336
E-104	1270	1271	839	1951	1333
E-202	1260	1237	945	1829	1318
OA-351	1110	1413	929	1790	1311
S-7	1093	1351	836	1920	1300
E-501	1230	1241	886	1786	1286
E101	1091	1093	734	1747	1166
Mean	1354	1383	1383	1022	1419
LSD	205	232	241	241	391
CV%	4	6	8	8	5

Table 2: California Cotton Board – 2001. Pima Lint Yield Means Combined Across Locations.

Variety	Corcoran - North lbs/ac	Corcoran - South lbs/ac	Taft Lbs/ac	Tulare Lbs/ac	Means Across All Sites
HA-195	1749	1689	1623	1774	1709
PHY-76	1141	1060	1402	1260	1216
PHY-88	1135	974	1346	1219	1169
BR-007	1096	1006	1354	1212	1167
E-601	1266	927	1208	1200	1150
OA-353	1178	986	1172	1151	1122
PHX-P101	1091	966	1258	1100	1104
OA-351	1061	920	1169	1162	1078
E-104	1242	931	999	1102	1069
E-102	1134	836	1046	1224	1060
E-501	1154	915	1132	1023	1056
OA-354	1167	744	1174	1106	1048
OA-345	1143	889	1135	1007	1044
S-7	1174	803	907	1128	1003
E-101	1084	699	1022	930	934
Mean	1193	948	1198	1172	
LSD	176	123	116	84	
CV	9	8	7	4	

Table 3: 2002 Irrigation Trial West Side Field Station - Dan Munk UC Extension Service. Yield Lint Pounds Per Acre.

	2 Irrigs.	3 Irrigs.	5 Irrigs.	Avrg.
Pima S7	1516	1675	1914	1702
PHY 72	1711	2035	2309	2018
HA-195	1826	2059	2270	2052
Average	1684	1923	2164	

Table 4: 2001 Irrigation Trial West Side Field Station - Dan Munk UC Extension Service. Yield Lint Pounds Per Acre.

	2 Irrigs.	**3 Irrigs.**	**5 Irrigs.**	***Average***
Pima S7	1862	1963	1996	*1940*
Maxxa	1563	1810	1892	*1755*
HA-195	2191	2586	2527	*2435*
Average	*1872*	*2120*	*2138*	

Table 5: 2002 CA Cotton Board Pima Fiber Traits Combine Across Locations. ITC Lab

Variety	**Length**	**Strength**	**Micronaire**	**Uniformity**	**Elongation**
HA195	1.36	35.5	3.8	86.7	6.2
S7	1.37	41.6	3.8	86.9	4.7
PHY601	1.41	41.4	3.6	87.4	5.0