

AN OVERVIEW OF 2001 ACTIVITIES IN THE LOUISIANA “L”
SUGARCANE VARIETY DEVELOPMENT PROGRAM

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The primary objective of the Louisiana Agricultural Experiment Station (LAES) Sugarcane Variety Development Program is to contribute to the profitability of the Louisiana sugarcane industry by developing improved sugarcane varieties.

Sugarcane variety development in the LAES is carried out by a team of scientists (Table 1). The LAES sugarcane breeding team and the United States Department of Agriculture (USDA) sugarcane breeding team work independently yet cooperatively to produce “L” and “HoCP or Ho” varieties, respectively. The best varieties from the two programs are brought together for evaluation at the outfield test locations. Outfield testing is conducted by personnel of the LAES, the USDA, and the American Sugar Cane League in accordance with the provisions of the “Three-way Agreement of 1978.” After yield data for one crop cycle (plant cane, first stubble, and second stubble) are collected in the outfield, those varieties that show promise are released for commercial production.

Table 1. Members of the LAES Sugarcane Breeding and Variety Development Team in 2001.

Team Member	Budgetary Unit	Responsibility
Kenneth Gravois	Sugar Research Station	Program Leader
Keith Bischoff	Sugar Research Station	Selection
Gene Reagan	Entomology	Insect Resistance
Jeff Hoy	Plant Pathology & Crop Physiology	Disease Resistance
Jim Griffin	Plant Pathology & Crop Physiology	Herbicide Tolerance
Sonny Viator	Iberia Research Station	Variety Testing
Joel Hebert	Sugar Research Station	Variety Testing
Gert Hawkins	Sugar Research Station	Sucrose Laboratory
Chris LaBorde	Sugar Research Station	Photoperiod and Crossing
Al Orgeron	Sugar Research Station	Outfield Variety Testing
Harold Schexnayder, Sr.	St. Gabriel Research Station	Farm Manager

A total of 97,898 seedlings from 233 crosses from the 2000 crossing series were planted in the field in the spring of 2001. A total of 93,790 seedlings survived transplanting. The 96% survival was excellent after transplanting in mid-April. The majority of the seedlings were from crosses of commercial varieties and elite experimental varieties. Selection will be carried out in 2002 when the seedlings are in the first stubble crop.

Photoperiod treatments to induce flowering began on May 31 and continued until September 10. Flowering in 2001 was excellent, with 531 crosses being made. Germination tests were conducted in December and indicated excellent germination for the 2001 crossing campaign. Seed production for 2001 was 569,552.

In the fall of 2001, individual selection was practiced on 38,422 first stubble seedlings that represented the 1999 crossing series. Family selection (top 82% in 2001) was utilized based on information from the cross appraisal study. Of the 38,422 clones, 3,369 were selected and planted to establish the first-line trials.

Established procedures were used to advance superior clones of the 1998 crossing series from first-line trials to second-line trials (759 clones) and of the 1997 crossing series from second-line trials to increase trials (392 clones). After preliminary ratings for cane yield and plant type in August, clones with acceptable ratings were further evaluated for lodging, borer damage, presence of disease, presence of pith/tube, and Brix/sugar per ton.

The best 37 experimental varieties from the 1996 crossing series were assigned permanent variety designations in the fall of 2001. Newly assigned varieties were entered in replicated nursery trials at three on-station locations (St. Gabriel Research Station, USDA Ardoyne Farm, Iberia Research Station). “L” and “HoCP or Ho” varieties of the 2001 assignment series were exchanged in the fall of 2001 to plant cooperative infield and nursery tests the following year.

Experimental varieties were replanted in infield and off-station nursery tests (13 varieties of the 2000 series), introduced to the outfield tests (four varieties of the 1999 series), and planted in outfield tests (two varieties of the 1997 series and two varieties of the 1998 series). Breeding personnel assisted Dr. Jeff Hoy and Dr. Gene Reagan to enter experimental varieties in the sugarcane smut and sugarcane borer resistance trials, respectively.

The distribution of “L” experimental clones through stages of testing in 2001 is presented in Table 2. The practice of planting nursery trials at multiple locations allows efficient identification of superior varieties in each assignment series.

Table 2. Number of “L” varieties by assignment series at the most advanced stage of testing in 2001.

Series	Stage of Testing	Number of experimental varieties
L 1997	Outfield - Replanted and harvested as plant cane; Off-station nurseries - 2 nd stubble harvested	2
L 1998	Outfield - Planted; On-station nurseries - 2 nd stubble harvested; Off-station nurseries - 1 st stubble harvested	2
L 1999	Outfield - Introduced; On-station Nurseries 1 st stubble harvested; Off-station nurseries - plant cane harvested.	4
L 2000	On-station nurseries plant cane harvested; Off-station nurseries planted.	13
L 2001	Assignment - On-station nurseries planted	37

Progress in the LAES Sugarcane Variety Development Program would not be possible without the financial support of the director of the LAES and the Louisiana sugar industry through the American Sugar Cane League.

Rainfall for 2001 at the St. Gabriel Research Station is reported in Table 3. Total rainfall for the year was 67.76 inches, which was 119 percent of normal annual rainfall. A dry spring (April and March) was followed by an excessively wet June. Tropical storm Allison contributed to June rainfall that was 399% of normal precipitation. Freezing temperatures during the winter of 2000-2001 contributed to less than normal amounts of sugarcane rust. Pith in experimental varieties was low compared to other years, likely because of a more normal rain fall pattern during the growing season.

Table 3. 2001 rainfall reported by date at the St. Gabriel Research Station, St. Gabriel, Louisiana.

January	Rainfall (in.)	Comments		Rainfall (in.)	Comments
7	0.60		29	1.13	
9	0.01			3.67	76% Normal
11	0.19				
15	0.60		February		
16	0.52		9	0.84	
18	0.16		12	0.01	
19	0.45		13	0.02	
24	0.01		16	0.09	

	Rainfall (in.)	Comments
25	0.22	
28	1.16	
	2.34	74% Normal
March		
1	0.25	
2	0.15	
3	1.8	
9	0.72	
12	1.55	
14	1.77	
17	0.15	
24	0.20	
27	0.10	
28	2.05	
	8.74	189% Normal
April		
24	2.25	54% Normal
May		
8	0.48	
11	0.12	
22	0.20	
31	0.70	
	1.50	35% Normal
June		
4	0.65	
5	3.60	

	Rainfall (in.)	Comments
6	6.40	
7	5.90	
8	1.70	
9	0.30	
10	1.7	
21	0.20	
27	0.20	
28	0.10	
29	0.15	
	20.90	399% Normal
July		
4	0.12	
5	3.80	
11	1.80	
12	0.10	
21	0.62	
26	0.36	
27	0.05	
28	1.60	
29	0.90	
31	0.13	
	9.48	159% Normal
August		
1	0.46	
2	0.03	
5	0.73	
6	0.37	
7	0.51	

	Rainfall (in.)	Comments
8	0.33	
10	0.79	
11	0.20	
12	0.17	
14	1.00	
15	0.85	
19	0.08	
26	0.03	
27	0.07	
28	0.03	
29	0.24	
30	0.02	
31	0.40	
	6.31	112% Normal
September		
1	0.35	
2	1.46	
4	1.35	
6	0.45	
7	0.37	
8	0.12	
9	0.04	
21	0.07	
	4.21	95% Normal
October		
5	0.04	
6	0.39	

	Rainfall (in.)	Comments
10	0.70	
11	1.00	
12	0.15	
13	2.50	
	4.78	153% Normal
November		
22	0.13	
23	0.04	
24	0.32	
28	0.05	
29	0.47	
	1.01	25% Normal
December		
13	1.32	
17	0.54	
22	0.18	
28	0.50	
31	0.03	
	2.57	46% Normal
TOTAL 2001	67.76	119% NORMAL

Data provided by Dr. Richard Bengtson, Department of Biological and Agricultural Engineering.

2001 PHOTOPERIOD AND CROSSING IN THE LOUISIANA “L” SUGARCANE VARIETY DEVELOPMENT PROGRAM

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Photoperiod induction and crossing are the first stages in the Louisiana “L” Sugarcane Variety Development Program. For subsequent stages to be successful, success must first be achieved at crossing. The objective of crossing is to produce not only a large number of seed, but viable “true” seed from the most desirable crosses. Viable “true” seed is seed that has a sufficient germination count. This seed will then be advanced to the seedling stage of the Sugarcane Variety Development Program.

Cuttings of potential parent varieties used for the 2001 crossing season were planted in the fall of 2000. After establishing the plants from the cuttings, the plants were fertilized biweekly with a 200 ppm solution of Peter’s 20-20-20. In late January 2001, the cuttings were then transferred to can culture. In early April, the cans were moved from the greenhouse to the photoperiod rail carts. Soluble fertilizer applications were continued on a biweekly basis. Fertilization was discontinued in early- to mid-May to condition the plants for floral induction. Three additional applications of dry granular fertilizer (8-24-24, one Tbs/can) were applied to the cans during July, August, and September. A reduced nitrogen ratio makes a higher C:N ratio, which is more desirable for the ease of flowering.

Natural lighting and six light-tight chambers (photoperiod bays) were used to impose photoperiod treatments. To prevent overwhelming the crossing facilities, two flowering peaks were planned for late September and early October. Records of varietal flowering, past photoperiod response, and pollen production were used to determine the most appropriate photoperiod treatment for each variety. Poor flowering varieties or those varieties with no flowering history were generally scheduled within the late peak and the shortest inductive treatments (bays 1 and 2). The first photoperiod treatments were begun on May 30. All photoperiod treatments (time from artificial sunrise to natural sunset) were initiated with a minimum of 34 consecutive days of 12½ hours of constant day length. After the initial constant photoperiod days, day length was shortened by one minute per day. Treatments differed by the number of days with constant day length and the date on which the decline of photoperiod was initiated. All photoperiod treatments were discontinued on September 10, 2000, when natural day length was 12½ hours and decreasing.

Photoperiod treatments require pulling the carts out of the photoperiod bays at their appropriate time each morning to receive full sunlight. On certain days when the weather was severe, the carts were pushed back into the photoperiod chambers to protect the parental varieties from wind damage. While in the photoperiod chambers, artificial lighting was used. In addition to artificial lighting, the doors were partially opened to allow natural light to enter the chambers.

Flowering percentage of total stalks was excellent on the photoperiod carts in 2001 (Tables 1-2). Total flowering percentage for the six bays was 55% which was comprised from 1,553 stalks. With an adequate germination rate, this is more than adequate tassels to accomplish sufficient seed production. In 2001, our newest commercial variety, HOCP 91-555, flowered for the first time in our program. Four tassels were acquired from eight total stalks. Because of its low pollen quantity, it was used mainly as a female. Although we have had problems achieving tassels from LHO83-153 variety, five tassels were

obtained from nine total stalks. The mean flowering dates (Table 1) were earlier than in years past with the exception of Bay 1.

Crossing began on September 7 and ended on November 9, 2001. A total of 861 tassels of 100 varieties were used to produce 529 total crosses yielding 569,552 viable seed with 509,992 seed produced from biparental crosses (Table 3). The germination of seed from biparental crosses was high (average 151 viable seed per gram fuzz). The germination rate is one of two components that measure the success of this stage in the crossing program, the other component being photoperiod induction. Close attention was made in maintaining high relative humidity levels within the crossing house. Seed production in 2001 was excellent for the Louisiana “L” Sugarcane Variety Development Program.

The parents grown in the crossing greenhouse (carts 7 and 8) were used to make the first approximation of the flowering characteristics of new varieties by comparing the date of tasseling of new varieties to those of known varieties (Tables 4 and 6). Varietal flowering dates were recorded from December 3 through December 17, 2001. Conditions for natural flowering were good. The data collected will be used to gage photoperiod response for the upcoming crossing season.

Table 1. Summary of 2001 photoperiod treatments†.

Bay	Cart	Treatment Start Date	Days of Constant Photoperiod	Date Photoperiod Decline Started	Days of Declining Photoperiod		Mean Flowering Date	Total Stalks	Percent Flowered
					Peak 1	Peak 2			
1	A	June 26	34	July 30	62	77	Oct 31±6	93	28
1	B	June 26	34	July 30	62	77	Nov 5±5	91	10
1	C	June 26	34	July 30	62	77	Nov 4±3	90	11
2	A	June 16	34	July 20	72	87	Oct 9±9	81	81
2	B	June 16	34	July 20	72	87	Oct 3±11	87	69
2	C	June 16	34	July 20	72	87	Oct 3±11	94	67
3	A	May 30	37	July 6	87	102	Sept 26±9	83	87
3	B	May 30	37	July 6	87	102	Sept 24±12	91	71
3	C	May 30	37	July 6	87	102	Sept 23±11	92	72
4	A	May 30	37	July 6	87	102	Oct 2±11	84	65
4	B	May 30	37	July 6	87	102	Oct 3±10	89	53
4	C	May 30	37	July 6	87	102	Oct 12±9	82	43
5	A	June 4	36	July 10	82	97	Oct 6±12	84	73
5	B	June 4	36	July 10	82	97	Oct 15±12	83	30
5	C	June 4	36	July 10	82	97	Oct 25±10	78	31
6	A	May 30	41	July 10	82	97	Oct 6±13	79	89
6	B	May 30	41	July 10	82	97	Oct 6±12	84	58
6	C	May 30	41	July 10	82	97	Oct 8±14	88	66

† Decline rate = 1 minute/day; all bays were heated.

Table 2. Summary of can, variety, and flower information on bays 1-6 subjected to photoperiod treatments.

Varieties used in crossing	Cans with stalks	Cans with tassels	Total stalks	Total tassels	Mean stalks per can	Mean tassels per can†	Mean pollen rating‡	Mean days to flower§
----- number -----								days
100	324	240	1553	861	4.89	3.59	4.9	86
					±1.52	±1.64	±1.5	±13

† Based upon cans with tassels.

‡ Rating of 1 to 4 being male and 5 to 9 being female.

§ Days from decline date to flowering.

Table 3. Summary of 2001 crossing and seed production.

Type of cross	Crosses	Sum of seed production	Mean seed production per cross	Mean seed production per female tassel	Mean germination per gram seed
----- number -----					
Biparental	455	509,992	1125 ± 1312	1077 ± 1201	151 ± 141
Polycross	18	19,388	1077 ± 947	750 ± 702	137 ± 132
Self	56	40,172	718 ± 942	715 ± 944	102 ± 131
Total	529	569,552	1079 ± 1271	1027 ± 1168	145 ± 140

Table 4. Summary of can, variety, and flowering information on bays 7 and 8 under natural photoperiod.

Total Cans	Cans used	Total Varieties		Varieties Flowering		Mean stalks per can	Mean tassels per can†
		Known flowering response	Unknown flowering response	Known flowering response	Unknown flowering response		
----- number -----							
108	13	1	12	1	6	3.4 ± 1.3	3.4 ± 1.3

† Based upon cans with tassels.

Table 5. Varietal flowering summary in 2001 in the photoperiod bays.

VARIETY	Days of Constant Photoperiod	Mean Days to Flower	Pollen Rating	Total Stalk Number	Total Flowers	Percent Flowering Stalks
CP65-357	34	82±2	6±1	8	2	25
CP70-321	37	88±5	7	8	4	50
CP77-405	34	69±3	4±1	3	3	100
CP78-317	34	92±4	5±1	9	2	22
CP79-318	34	84±4	5±1	10	5	50
CP79-348	39±1	69±1	3	8	4	50
CP82-550	41	.	.	5	.	.
CP83-644	39±1	99±3	7	20	8	40
CP91-572	34	66	.	9	6	67
HO89-889	40±1	97±2	5±1	7	4	57
HO95-988	36	90±2	5	24	16	67
HOCP00-961	38±1	62±1	6	12	12	100
HOCP85-845	37	96±3	4	40	26	65
HOCP88-739	38±1	95±3	6	17	9	53
HOCP89-846	35	86±2	6	30	22	73
HOCP90-941	39±1	70±1	4	11	11	100
HOCP91-552	35	81±3	4	20	18	90
HOCP91-555	39±1	106±2	7	8	4	50
HOCP92-618	37	86±1	4	8	8	100
HOCP92-624	35	71±2	7	44	29	66
HOCP92-648	35	81±2	7	35	19	54
HOCP94-806	37	106±3	5	10	9	90
HOCP95-951	37	73±1	5	13	13	100
HOCP96-509	37	106±2	5	33	9	27
HOCP96-522	34	76±5	5	17	11	65
HOCP96-540	36	81±2	4	29	24	83
HOCP96-561	37	94±1	4	19	14	74
HOCP97-606	36	87±3	5	32	12	38
HOCP97-609	36	82±2	5	27	26	96
HOCP97-621	35	84±2	4	18	13	72
HOCP97-645	37	101±3	5	10	3	30
HOCP98-741	38±1	83±4	5±1	10	6	60
HOCP98-771	37	119±4	7	4	2	50
HOCP98-776	35	79±3	5	14	14	100
HOCP98-778	36	99±4	5	14	9	64
HOCP98-781	34	70±5	5±1	8	6	75
HOCP99-804	34	.	.	15	.	.
HOCP99-808	34	.	.	12	.	.
HOCP99-825	39±1	83±3	6	10	8	80
HOCP99-833	34	97±2	5±1	7	5	71
L00-247	34	.	.	12	.	.
L00-249	39±1	98±1	5	12	5	42
L00-254	38±1	109±2	5±1	13	6	46
L00-255	39±1	.	.	8	.	.

Table 5. Continued.

VARIETY	Days of Constant Photoperiod	Mean Days to Flower	Pollen Rating	Total Stalk Number	Total Flowers	Percent Flowering Stalks
L00-257	36±1	81±5	3	9	2	22
L00-259	38±1	98±2	4±1	12	4	33
L00-260	38±2	83±5	4	4	4	100
L00-261	38±1	.	.	10	.	.
L00-263	34	.	.	5	.	.
L00-264	38±1	86±5	7	10	5	50
L00-266	38±1	90	3	12	1	8
L00-268	39±1	96±6	4±1	12	4	33
L00-271	37±1	79±2	4	11	5	45
L00-273	37±1	90±1	5	8	3	38
L00-275	38±1	.	.	10	.	.
L00-278	37±1	.	.	7	.	.
L75-056	35±1	66	3	7	1	14
L89-113	39±1	92±3	3	20	11	55
L91-255	35	73±6	5±1	22	6	27
L91-281	35	76±2	5	19	13	68
L92-312	39±1	94±3	3	11	9	82
L92-321	36	90±8	6±1	8	2	25
L93-363	35	68	5	13	3	23
L93-386	39±1	88±3	5±1	8	7	88
L93-391	39±1	96±3	6	10	10	100
L93-399	39±1	97±3	7	12	11	92
L94-426	36	79±1	6	33	29	88
L94-428	37	91±5	5	26	14	54
L94-432	39	89±2	4	21	16	76
L94-433	38±1	115±4	3	5	3	60
L96-040	36	85±2	4	10	9	90
L96-092	38±1	111±4	4±1	15	3	20
L97-128	35	75±2	6	23	20	87
L97-137	39±1	80±7	5±1	14	5	36
L98-197	36	83±3	4±1	12	3	25
L98-207	35	86±2	4	49	17	35
L98-209	37	93±2	4	29	25	86
L99-213	37	98	4	9	2	22
L99-214	35	92±2	6±1	17	3	18
L99-221	36	75±2	6	11	11	100
L99-226	38	85±2	4	20	19	95
L99-231	38±1	103±7	6	12	5	42
L99-233	35	71±2	4	20	14	70
L99-234	36±1	74±1	4	10	10	100
L99-238	39±1	103±1	5±1	6	4	67
L99-240	37	.	.	7	.	.
LCP81-010	35	79±2	5	27	16	59
LCP82-089	39±1	87±4	3±1	16	6	38

Table 5. Continued.

VARIETY	Days of Constant Photoperiod	Mean Days to Flower	Pollen Rating	Total Stalk Number	Total Flowers	Percent Flowering Stalks
LCP83-137	39±1	105±8	6±1	8	2	25
LCP85-313	39±1	95±5	7	12	6	50
LCP85-384	36	87±1	3	110	67	61
LCP86-454	37	83±4	4±1	22	5	23
LCP87-492	34	72±1	6	12	6	50
LHO83-153	38±1	83±3	6	9	5	56
LHO92-314	39±1	96±2	4±1	16	12	75
TUCCP77-042	35	90±1	5	29	20	69
US80-004	37	101±5	6±1	6	2	33
US96-002	37	91±3	7	5	3	60
US99-002	34	88±2	6	5	4	80
US99-004	34	94±2	6±1	4	4	100

Table 6. Summary of varietal response to natural photoperiod in 2001.

VARIETY	First Flower Date	Mean Flower Date	Flowers
HOCP00-961	337	342±6	5
L00-247	354	354	2
L00-259	341	348±7	4
L00-266	354	354	3
L00-268	354	354	3
LCP85-384	354	354	2
US99-002	337	339±2	5

Table 7. Crosses and seed made in 2001 sorted by cross number.

CROSS	FEMALE	MALE	SEED	XL01-014	L93-363	HOCP95-951	0
XL01-001	HOCP92-624	HOCP91-552	6898	XL01-015	HOCP95-951	HOCP95-951	0
XL01-002	HOCP91-552	HOCP91-552	2095	XL01-016	L93-363	HOCP98-776	0
XL01-003	HOCP92-624	L99-233	6923	XL01-017	HOCP98-776	HOCP98-776	0
XL01-004	L99-233	L99-233	1458	XL01-018	L99-221	L91-255	30
XL01-005	L97-128	L99-233	405	XL01-019	L97-128	L91-255	0
XL01-006	HOCP92-624	HOCP00-961	511	XL01-020	L91-255	L91-255	11
XL01-007	HOCP00-961	HOCP00-961	59	XL01-021	L97-128	HOCP90-941	0
XL01-008	L75-056	01P1	92	XL01-022	HOCP92-624	HOCP90-941	9
XL01-009	HOCP91-552	01P1	694	<u>CROSS</u>	<u>FEMALE</u>	<u>MALE</u>	<u>SEED</u>
XL01-010	LCP81-010	01P2	0	XL01-023	L99-221	HOCP90-941	8
XL01-011	HOCP00-961	01P2	87	XL01-024	LCP81-010	HOCP90-941	133
<u>CROSS</u>	<u>FEMALE</u>	<u>MALE</u>	<u>SEED</u>	XL01-025	HOCP90-941	HOCP90-941	30
XL01-012	HOCP92-648	HOCP95-951	35	XL01-026	L97-128	HOCP96-540	27
XL01-013	L97-128	HOCP95-951	0	XL01-027	HOCP92-624	HOCP96-540	58

Table 7. Continued.

XL01-028	L99-221	HOCP96-540	16	XL01-071	HOCP97-609	L99-234	91
XL01-029	L91-281	HOCP96-540	240	XL01-072	L99-234	L99-234	439
XL01-030	HOCP96-540	HOCP96-540	251	XL01-073	HOCP00-961	L97-137	166
XL01-031	HOCP92-624	HOCP98-776	5	XL01-074	L91-281	L97-137	870
XL01-032	L99-221	HOCP98-776	0	XL01-075	HOCP90-941	L97-137	351
XL01-033	L91-281	HOCP98-776	194	XL01-076	HOCP95-951	L97-137	977
XL01-034	HOCP00-961	HOCP90-941	101	XL01-077	L97-137	L97-137	72
XL01-035	L91-281	HOCP90-941	43	XL01-078	HOCP95-951	LCP82-089	734
XL01-036	L94-426	HOCP90-941	59	XL01-079	HOCP97-609	LCP82-089	709
XL01-037	HOCP92-648	HOCP90-941	41	XL01-080	L99-226	LCP82-089	836
XL01-038	HOCP97-609	HOCP90-941	0	XL01-081	LCP82-089	LCP82-089	1281
XL01-039	L94-426	CP79-348	11	XL01-082	HOCP92-624	LCP85-384	295
XL01-040	CP79-348	CP79-348	172	XL01-083	HOCP92-648	LCP85-384	1483
XL01-041	HOCP00-961	HOCP96-540	8	XL01-084	HOCP96-522	LCP85-384	122
XL01-042	L94-426	HOCP96-540	106	XL01-085	L99-226	LCP85-384	895
XL01-043	HOCP92-648	HOCP96-540	118	XL01-086	CP77-405	LCP85-384	2376
XL01-044	HOCP92-624	HOCP95-951	23	XL01-087	HOCP98-781	LCP85-384	0
XL01-045	L94-426	HOCP95-951	14	XL01-088	L91-255	LCP85-384	235
XL01-046	HOCP92-624	HOCP85-845	0	XL01-089	L94-426	LCP85-384	263
XL01-047	L94-426	HOCP85-845	0	XL01-090	HOCP89-846	LCP85-384	218
XL01-048	L97-128	HOCP85-845	0	XL01-091	HOCP95-951	CP79-348	718
XL01-049	HOCP85-845	HOCP85-845	158	XL01-092	HOCP97-609	CP79-348	69
XL01-050	LCP86-454	LCP85-384	891	XL01-093	HOCP98-776	CP79-348	1199
XL01-051	HOCP98-781	LCP85-384	299	XL01-094	HOCP97-609	HOCP00-961	142
XL01-052	L94-426	LCP85-384	282	XL01-095	HOCP98-776	HOCP00-961	527
XL01-053	L94-428	LCP85-384	110	XL01-096	L98-197	HOCP00-961	1342
XL01-054	HOCP90-941	LCP85-384	760	XL01-097	HOCP97-609	HOCP89-846	214
XL01-055	HOCP98-741	LCP85-384	1116	XL01-098	HOCP98-776	HOCP89-846	26
XL01-056	LCP85-384	LCP85-384	335	XL01-099	HOCP89-846	HOCP89-846	25
XL01-057	HOCP98-781	HOCP96-540	533	XL01-100	HOCP91-552	HOCP96-540	1041
XL01-058	L94-428	HOCP96-540	589	XL01-101	HOCP92-648	HOCP96-540	1175
XL01-059	HOCP95-951	HOCP96-540	809	XL01-102	HOCP95-951	HOCP96-540	281
XL01-060	CP70-321	L99-226	38	XL01-103	HOCP90-941	L98-209	61
XL01-061	HOCP98-781	L99-226	227	XL01-104	HOCP92-624	L98-209	661
XL01-062	HOCP92-624	L99-226	707	XL01-105	L94-426	L98-209	93
XL01-063	L94-426	L99-226	38	XL01-106	L98-209	L98-209	730
XL01-064	HOCP97-609	L99-226	264	CROSS	FEMALE	MALE	SEED
CROSS	FEMALE	MALE	SEED	XL01-107	HOCP92-648	L99-234	386
XL01-065	HOCP00-961	L99-226	49	XL01-108	HOCP95-951	L99-234	143
XL01-066	L99-226	L99-226	165	XL01-109	HO95-988	LCP85-384	1211
XL01-067	L94-426	L99-234	162	XL01-110	HOCP85-845	LCP85-384	1160
XL01-068	HOCP90-941	L99-234	240	XL01-111	HOCP89-846	LCP85-384	339
XL01-069	L91-281	L99-234	700	XL01-112	HOCP92-648	LCP85-384	1283
XL01-070	HOCP00-961	L99-234	54				

Table 7. Continued.

XL01-113	LCP82-089	LCP85-384	496	XL01-155	HOCPP88-739	LCP85-384	489
XL01-114	HOCPP96-522	LCP85-384	512	XL01-156	L92-321	LCP85-384	0
XL01-115	L00-264	LCP85-384	440	XL01-157	LCP81-010	LCP85-384	3017
XL01-116	L00-271	LCP85-384	310	XL01-158	L96-040	LCP85-384	1128
XL01-117	L94-426	LCP85-384	430	XL01-159	HOCPP89-846	LCP85-384	482
XL01-117.5	HO91-572	LCP85-384	460	XL01-160	HOCPP85-845	HOCPP92-618	2026
XL01-118	HO95-988	HOCPP89-846	96	XL01-161	HOCPP92-624	HOCPP92-618	3662
XL01-119	HOCPP96-522	HOCPP89-846	481	XL01-162	HOCPP98-741	HOCPP92-618	6234
XL01-120	HOCPP96-540	HOCPP89-846	862	XL01-163	L00-271	HOCPP92-618	107
XL01-121	LCP85-384	HOCPP89-846	704	XL01-164	L96-040	HOCPP92-618	641
XL01-122	HOCPP92-624	L91-255	4977	XL01-165	HOCPP89-846	HOCPP92-618	2509
XL01-123	HOCPP96-522	L91-255	567	XL01-166	L99-226	HOCPP92-618	2349
XL01-124	HOCPP96-540	L91-255	3959	XL01-167	LCP87-492	HOCPP92-618	189
XL01-125	HOCPP97-606	L91-255	325	XL01-168	LCP85-384	HOCPP92-618	1018
XL01-126	HOCPP98-776	L91-255	811	XL01-169	HOCPP92-618	HOCPP92-618	408
XL01-127	HOCPP92-624	HOCPP96-561	111	XL01-170	HOCPP98-776	L99-233	3589
XL01-128	HOCPP96-522	HOCPP96-561	520	XL01-171	HOCPP99-825	L99-233	44
XL01-129	HOCPP99-825	HOCPP96-561	38	XL01-172	L94-426	L99-233	473
XL01-130	HOCPP96-561	HOCPP96-561	65	XL01-173	L96-040	L99-233	906
XL01-131	HOCPP92-624	HOCPP98-741	1173	XL01-174	L99-226	L99-233	3082
XL01-132	HOCPP97-609	HOCPP98-741	657	XL01-175	LCP85-384	L99-233	2271
XL01-133	HOCPP99-825	HOCPP98-741	72	XL01-176	L99-233	L99-233	1990
XL01-134	HOCPP98-741	HOCPP98-741	957	XL01-177	HOCPP98-776	HOCPP96-540	3002
XL01-135	HOCPP92-624	L00-257	861	XL01-178	L99-221	HOCPP96-540	380
XL01-136	HOCPP99-825	L00-257	24	XL01-179	L99-234	HOCPP96-540	832
XL01-138	L00-257	L00-257	43	XL01-180	HOCPP97-606	01P3	45
XL01-139	HOCPP96-522	L98-209	117	XL01-181	HOCPP97-609	01P3	1637
XL01-140	L00-271	L98-209	76	XL01-182	L94-428	01P3	2069
XL01-141	L94-426	L98-209	118	XL01-183	L98-197	01P3	1035
XL01-142	HOCPP92-624	L99-226	124	XL01-184	CP77-405	L98-207	3783
XL01-143	HOCPP96-522	L99-226	188	XL01-185	LCP81-010	L98-207	2382
XL01-144	HOCPP96-540	L99-226	1466	XL01-186	L99-234	L98-207	2603
XL01-145	HOCPP92-624	L99-234	1469	XL01-187	L98-207	L98-207	285
XL01-146	L94-426	L99-234	142	XL01-188	HOCPP85-845	L99-233	3569
XL01-147	L97-137	L99-234	392	XL01-189	LCP81-010	L99-233	4482
XL01-148	L97-137	L94-428	673	XL01-190	LCP86-454	L99-233	695
CROSS	FEMALE	MALE	SEED	CROSS	FEMALE	MALE	SEED
XL01-149	L99-221	L94-428	931	XL01-191	LHO83-153	L99-233	353
XL01-150	L99-233	L94-428	505	XL01-192	HOCPP97-609	L99-233	4536
XL01-151	LCP81-010	L94-428	1068	XL01-193	L00-260	L99-233	1514
XL01-152	HOCPP97-609	HO91-572	816	XL01-194	L96-040	L99-233	824
XL01-153	HO91-572	HO91-572	0	XL01-195	L99-234	L99-233	1264
XL01-154	LHO83-153	LCP85-384	832	XL01-196	LCP85-384	01P4	1541

Table 7. Continued.

XL01-198	L98-209	01P4	1310	XL01-241	L94-428	MISC	613
XL01-199	L99-226	01P4	666	XL01-242	L94-428	L94-428	480
XL01-200	L99-234	01P4	1530	XL01-244	HO95-988	L89-113	620
XL01-201	HOC985-845	HOC96-540	1335	XL01-245	HOC92-624	L89-113	1189
XL01-202	L93-386	HOC96-540	1217	XL01-246	L94-426	L89-113	257
XL01-203	L00-271	HOC96-540	379	XL01-247	L94-432	L89-113	1552
XL01-204	L94-432	HOC96-540	281	XL01-248	L96-040	L89-113	268
XL01-205	L96-040	HOC96-540	285	XL01-249	L99-226	L89-113	3572
XL01-206	L99-221	HOC96-540	1083	XL01-250	LCP81-010	L89-113	1866
XL01-207	HOC96-540	HOC96-540	2067	XL01-251	HO95-988	HOC96-540	1879
XL01-208	HOC92-624	L94-426	350	XL01-252	HOC92-618	HOC96-540	1291
XL01-210	L00-260	L94-426	124	XL01-253	HOC97-606	HOC96-540	35
XL01-211	L97-128	L94-426	215	XL01-254	TUCCP77-042	HOC96-540	139
XL01-212	L99-221	L94-426	170	XL01-255	HOC98-776	L91-281	532
XL01-213	LCP87-492	L94-426	47	XL01-256	HOC99-825	L91-281	725
XL01-214	L94-426	L94-426	15	XL01-257	L94-426	L91-281	777
XL01-215	TUCCP77-042	LCP85-384	104	XL01-258	L94-432	L91-281	1379
XL01-216	HOC97-621	LCP85-384	5654	XL01-259	L97-128	L91-281	417
XL01-217	LCP81-010	LCP85-384	1918	XL01-260	LCP81-010	L91-281	5214
XL01-218	LCP86-454	LCP85-384	2573	XL01-261	LCP85-384	L91-281	1108
XL01-219	US96-002	LCP85-384	779	XL01-262	L91-281	L91-281	19
XL01-220	HO95-988	TUCCP77-042	966	XL01-263	L99-226	TUCCP77-042	2951
XL01-221	HOC989-846	TUCCP77-042	1984	XL01-264	L94-426	TUCCP77-042	254
XL01-222	L97-128	TUCCP77-042	432	XL01-265	HOC989-846	TUCCP77-042	0
XL01-223	L98-209	TUCCP77-042	915	XL01-266	TUCCP77-042	TUCCP77-042	180
XL01-224	CP70-321	TUCCP77-042	24	XL01-267	HOC97-606	TUCCP77-042	202
XL01-225	HOC92-618	TUCCP77-042	2071	XL01-268	L97-128	TUCCP77-042	704
XL01-226	HOC99-825	TUCCP77-042	9	XL01-269	L94-432	TUCCP77-042	687
XL01-227	L94-432	TUCCP77-042	788	XL01-270	HOC989-846	LCP85-384	2215
XL01-228	LCP86-454	TUCCP77-042	1828	XL01-271	HOC92-618	LCP85-384	991
XL01-229	TUCCP77-042	TUCCP77-042	138	XL01-272	L91-281	LCP85-384	1874
XL01-230	HO95-988	HOC97-609	778	XL01-273	L93-399	LCP85-384	1009
XL01-231	HOC985-845	HOC97-609	3074	XL01-274	L94-432	LCP85-384	1202
XL01-232	HOC91-552	HOC97-609	1258	XL01-275	HO95-988	LCP85-384	1961
XL01-233	HOC97-609	HOC97-609	1310	XL01-276	LCP85-384	LCP85-384	490
XL01-234	HOC97-621	L98-207	6639	XL01-277	HO95-988	L98-207	1679
CROSS	FEMALE	MALE	SEED	CROSS	FEMALE	MALE	SEED
XL01-235	L91-255	L98-207	1130	XL01-278	HOC985-845	L98-207	2344
XL01-236	L94-426	L98-207	475	XL01-279	HOC92-624	L98-207	2073
XL01-237	L94-432	L98-207	2538	XL01-280	L98-207	L98-207	257
XL01-238	LCP81-010	L98-207	2869	XL01-281	HOC92-624	L92-312	1799
XL01-239	HO95-988	L94-428	724	XL01-282	L94-432	L92-312	1186
XL01-240	HOC92-624	L94-428	1237	XL01-283	LCP81-010	L92-312	2452

Table 7. Continued.

XL01-284	L92-312	L92-312	741	XL01-326	HOC92-618	LCP85-354	968
XL01-285	HOC98-846	HOC98-741	785	XL01-327	L93-399	LCP85-384	644
XL01-286	HOC97-606	HOC98-741	13	XL01-328	US96-002	LCP85-384	859
XL01-287	L98-209	HOC98-741	779	XL01-329	HOC92-648	HOC97-609	1468
XL01-288	L97-128	HOC98-741	101	XL01-330	L93-399	HOC85-845	1228
XL01-289	L99-221	HOC98-741	44	XL01-331	L94-432	HOC85-845	2173
XL01-290	HOC98-741	HOC98-741	163	XL01-332	L97-128	HOC85-845	444
XL01-291	L00-257	01P4	1169	XL01-333	HOC96-540	L89-113	4137
XL01-292	L00-271	01P4	195	XL01-334	HOC96-561	L89-113	1068
XL01-293	L00-273	HOC96540	352	XL01-335	HOC97-609	L89-113	1256
XL01-294	L99-226	HOC96-540	3515	XL01-336	CP65-357	L92-312	2197
XL01-295	L00-268	HOC96-540	2497	XL01-337	CP70-321	L92-312	183
XL01-296	HOC92-618	HOC96-540	2127	XL01-338	CP79-318	L92-312	2350
XL01-297	L99-214	HOC97-621	1391	XL01-339	LCP81-010	L92-312	2967
XL01-298	HOC96-561	HOC97-621	931	XL01-340	HOC96-509	L92-312	3235
XL01-299	L00-260	HOC97-621	1231	XL01-341	HOC99-825	L92-312	363
XL01-300	CP89-846	HOC97-621	2634	XL01-342	HOC88-739	L99-226	55
XL01-301	HOC97-621	HOC97-621	2923	XL01-343	LHO92-314	L99-226	1447
XL01-302	LCP81-010	LCP82-089	3354	XL01-344	HO95-988	L99-226	2315
XL01-303	HOC96-561	LCP82-089	1537	XL01-345	HOC92-648	L99-226	1543
XL01-304	L97-128	LCP82-089	1489	XL01-346	HOC97-609	L99-226	1079
XL01-305	LCP82-089	LCP82-089	3268	XL01-347	HOC98-776	L99-226	973
XL01-306	HOC92-648	L94-426	1439	XL01-348	HOC97-609	LCP82-089	998
XL01-307	HOC97-606	L94-426	26	XL01-349	LOO-273	LCP82-089	261
XL01-308	HOC98-846	L94-426	194	XL01-350	L96-040	LCP82-089	825
XL01-309	L00-264	L94-432	2441	XL01-351	LHO92-314	LCP85-384	1560
XL01-310	HOC96-561	L94-432	1066	XL01-352	HOC97-621	01P5	3412
XL01-311	L91-281	L94-432	2989	XL01-353	L00-266	01P5	2326
XL01-312	LH083-153	L94-432	47	XL01-354	L98-207	01P5	1504
XL01-313	L94-432	L94-432	361	XL01-355	TUCCP77-042	01P5	76
XL01-314	CP79-318	L98-209	2409	XL01-356	CP83-644	HOC97-621	1466
XL01-315	HOC88-739	L98-209	95	XL01-357	HOC92-648	HOC97-621	1063
XL01-316	HOC92-624	L98-209	340	XL01-358	HOC94-806	HOC97-621	1819
XL01-317	HOC92-648	L98-209	0	XL01-359	HOC97-609	HOC97-621	1733
XL01-318	L93-391	L98-209	2222	XL01-360	L94-426	HOC97-621	1020
XL01-319	LCP81-010	L98-209	2459	XL01-361	L98-209	HOC97-621	627
CROSS	FEMALE	MALE	SEED	CROSS	FEMALE	MALE	SEED
XL01-320	CP89-846	L98-209	3519	XL01-362	L99-231	HOC97-621	2612
XL01-321	L98-209	L98-209	1847	XL01-363	L99-233	HOC97-621	1980
XL01-322	CP79-318	LCP85-384	2121	XL01-364	LCP85-384	HOC97-621	739
XL01-323	HO95-988	LCP85-384	1437	XL01-365	CP83-644	HOC96-561	588
XL01-324	HOC88-739	LCP85-384	317	XL01-366	HO89-889	HOC96-561	2568
XL01-325	L93-391	LCP85-384	1850	XL01-367	HOC85-845	HOC96-561	1899

Table 7. Continued.

XL01-368	HOCP92-648	HOCP96-561	1785	XL01-410	HOCP96-540	LCP85-384	1141
XL01-369	L91-281	HOCP96-561	788	XL01-411	HOCP98-778	LCP85-384	439
XL01-370	LCP85-313	HOCP96-561	84	XL01-412	LCP85-313	LCP85-384	340
XL01-371	US80-004	HOCP96-561	2300	XL01-413	TUCCP77-042	LCP85-384	140
XL01-372	TUCCP77-042	HOCP96-561	73	XL01-414	US96-002	LCP85-384	1167
XL01-373	LHO83-153	HOCP96-561	241	XL01-415	HOCP97-645	L98-209	0
XL01-374	HOCP96-540	HOCP96-561	4319	XL01-416	L93-399	L98-209	301
XL01-375	HOCP97-645	HOCP96-561	41	XL01-417	TUCCP77-042	L98-209	353
XL01-376	HOCP96-561	HOCP96-561	163	XL01-418	CP83-644	HOCP98-778	1637
XL01-377	L93-391	L92-312	412	XL01-419	L89-113	HOCP98-778	2155
XL01-378	L94-428	L92-312	2672	XL01-420	HOCP97-606	HOCP98-778	18
XL01-379	L99-231	L92-312	1970	XL01-421	HO89-889	LHO92-314	3448
XL01-380	L98-209	L92-312	1016	XL01-422	L94-426	LHO92-314	739
XL01-381	L92-312	L92-312	248	XL01-423	L97-128	LHO92-314	378
XL01-382	CP83-644	LHO92-314	1092	XL01-424	HOCP89-846	HOCP96-561	1316
XL01-383	L99-214	LHO92-314	1271	XL01-425	LCP82-089	HOCP96-561	1338
XL01-384	L99-231	LHO92-314	2500	XL01-426	LCP83-137	HOCP96-561	860
XL01-385	L98-209	LHO92-314	832	XL01-427	HO95-988	HOCP96-561	638
XL01-386	LCP85-384	LHO92-314	2079	XL01-428	HOCP92-648	HOCP96-561	655
XL01-387	LHO92-314	LHO92-314	68	XL01-429	HOCP96-509	HOCP96-561	504
XL01-388	LCP86-454	LCP85-384	3313	XL01-430	HOCP88-739	LCP85-384	472
XL01-389	L93-399	LCP85-384	1143	XL01-431	HOCP94-806	LCP85-384	6130
XL01-390	L93-391	LCP85-384	1070	XL01-432	CP83-644	L99-226	157
XL01-391	L00-273	LCP85-384	191	XL01-433	L92-321	L99-226	640
XL01-392	L00-264	LCP85-384	437	XL01-434	HOCP94-806	L99-226	1389
XL01-393	L00-259	LCP85-384	275	XL01-435	HOCP96-509	L99-226	2390
XL01-394	HOCP92-648	LCP85-384	1342	XL01-436	L93-399	L99-226	91
XL01-395	HOCP96-561	HOCP85-845	646	XL01-437	L94-426	L99-226	326
XL01-396	HOCP99-825	HOCP85-845	183	XL01-438	L99-226	L99-226	297
XL01-397	TUCCP77-042	HOCP85-845	72	XL01-439	HO89-889	L99-233	6138
XL01-398	HOCP85-845	HOCP85-845	364	XL01-440	HOCP94-806	L99-233	386
XL01-399	HOCP97-606	L94-428	367	XL01-441	L99-214	L99-233	418
XL01-400	L00-249	L94-428	237	XL01-442	L99-233	L99-233	1772
XL01-401	L00-264	L94-428	469	XL01-443	L96-040	LCP85-384	1937
XL01-402	L93-399	HOCP97-621	1104	XL01-444	TUCCP77-042	LCP85-384	429
XL01-403	HOCP98-778	HOCP97-621	2026	XL01-445	HOCP96-509	LCP85-384	5244
CROSS	FEMALE	MALE	SEED	CROSS	FEMALE	MALE	SEED
XL01-404	L94-432	HOCP97-621	1957	XL01-446	CP70-321	L98-209	94
XL01-405	CP65-357	L99-226	109	XL01-447	CP79-318	L98-209	2551
XL01-406	HOCP88-739	L99-226	150	XL01-448	US80-004	L98-209	1616
XL01-407	HOCP92-648	L99-226	244	XL01-449	CP83-644	HOCP96-540	1941
XL01-408	L99-226	L99-226	319	XL01-450	HOCP91-555	HOCP96-540	981
XL01-409	HOCP88-739	LCP85-384	274	XL01-451	HOCP97-645	HOCP96-540	180

Table 7. Continued.

XL01-452	HOCP96-540	HOCP96-540	4220	XL01-494	L94-428	L98-209	32
XL01-453	HO89-889	HOCP85-845	823	XL01-495	CP83-644	L99-226	5996
XL01-454	L00-249	HOCP85-845	366	XL01-496	HOCP91-555	L99-226	678
XL01-455	L93-399	HOCP85-845	887	XL01-497	L93-391	L99-226	292
XL01-456	L99-238	L94-432	4284	XL01-498	L91-255	HOCP96-509	359
XL01-457	L00-249	L94-432	1027	XL01-499	HOCP92-648	HOCP96-509	2022
XL01-458	HOCP98-741	L94-432	3054	XL01-500	HOCP89-846	HOCP96-509	1228
XL01-459	CP83-644	L99-238	2907	XL01-501	LCP85-313	HOCP97-609	533
XL01-460	HO95-988	L99-238	1281	XL01-502	L00-254	HOCP97-609	4503
XL01-461	TUCCP77-042	L99-238	509	XL01-503	US99-002	HOCP97-609	3765
XL01-462	L99-238	L99-238	267	XL01-504	HOCP97-609	HOCP97-609	437
XL01-463	HOCP97-606	L96-092	1059	XL01-505	LHO92-314	L98-209	2737
XL01-464	US99-002	L96-092	2412	XL01-506	L89-113	L98-209	1078
XL01-465	HOCP85-845	L96-092	1061	XL01-507	HOCP99-833	L98-209	211
XL01-466	L96-092	L96-092	2327	XL01-508	L00-254	L98-209	4969
XL01-467	HOCP91-555	HOCP96-509	1396	XL01-509	US99-004	L98-209	1957
XL01-468	LCP85-313	HOCP96-509	724	XL01-510	L93-399	L98-209	237
XL01-469	HOCP96-561	HOCP96-509	902	XL01-511	L98-209	L98-209	1820
XL01-470	HOCP96-509	HOCP96-509	211	XL01-512	HOCP88-739	HOCP91-552	9
XL01-471	HOCP91-552	CP79-318	1415	XL01-513	HOCP98-776	HOCP91-552	7797
XL01-472	HOCP98-778	CP79-318	526	XL01-514	L99-231	HOCP91-552	2039
XL01-473	L98-207	CP79-318	1300	XL01-515	CP78-317	HOCP91-552	396
XL01-474	CP79-318	CP79-318	87	XL01-516	HOCP91-552	HOCP91-552	1836
XL01-475	HOCP85-845	HO95-988	409	XL01-517	HOCP96-522	L98-209	832
XL01-476	HOCP91-555	HO95-988	37	XL01-518	HOCP98-771	L98-209	0
XL01-477	L98-207	HO95-988	24	XL01-519	L93-391	L98-209	24
XL01-478	HO95-988	HO95-988	0	XL01-520	L98-209	L98-209	1042
XL01-479	HOCP96-509	LCP85-384	349	XL01-521	HOCP91-555	LCP85-384	40
XL01-480	HOCP98-778	LCP85-384	929	XL01-522	HOCP89-846	HO95-988	17
XL01-481	TUCCP77-042	LCP85-384	192	XL01-523	US99-004	HO95-988	0
XL01-482	L00-254	LCP85-384	828	XL01-524	HOCP91-555	HOCP98-776	231
XL01-483	L98-207	HOCP85-845	2167	XL01-525	HOCP98-776	HOCP98-776	145
XL01-484	US99-002	HOCP85-845	2499	XL01-526	HOCP99-833	HOCP85-845	84
XL01-485	US99-004	HOCP85-845	3997	XL01-527	HOCP92-624	HOCP85-845	254
XL01-486	US99-002	HOCP94-806	1148	XL01-528	L99-231	HOCP85-845	383
XL01-487	L96-040	HOCP94-806	56	XL01-529	HOCP92-624	HOCP96-540	388
<u>CROSS</u>	<u>FEMALE</u>	<u>MALE</u>	<u>SEED</u>	<u>CROSS</u>	<u>FEMALE</u>	<u>MALE</u>	<u>SEED</u>
XL01-488	L97-137	HOCP94-806	240	XL01-530	HOCP96-522	HOCP96-540	62
XL01-489	HOCP98-778	L92-312	106	XL01-531	HOCP98-778	HOCP96-540	41
XL01-490	CP78-317	L92-312	40	TOTAL			569,552
XL01-491	HOCP98-781	L92-312	36				
XL01-492	CP83-644	L98-209	579				
XL01-493	HOCP88-739	L98-209	102				

Table 7. Continued.

SELECTIONS, ADVANCEMENTS, AND ASSIGNMENTS OF THE LOUISIANA "L" SUGARCANE VARIETY DEVELOPMENT PROGRAM FOR THE YEAR 2001

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SUMMARY

In the selection phase of the Louisiana "L" Program, superior clones are advanced through the single stool, first line, second line, and increase stages of the breeding program. In the first stubble crop of the second-line trials, those clones with acceptable breeding or commercial value are assigned a permanent variety number. A total of 98,371 seedlings from 211 crosses were planted in the field in the spring of 2001. The majority of these seedlings are progeny of crosses among commercial and elite experimental varieties. In the fall of 2001, family selection was practiced on the 46,783 stubble seedlings surviving the winter. This selection resulted in the planting of 3,371 6-foot first-line trial plots. At the same time, superior clones were also selected and advanced through subsequent stages (759 to second line trials, 392 to the increase stage). Assignment of permanent "L01" numbers were given to the 37 best clones of the 1996 crossing series.

PROCEDURES

In the selection stage of the Louisiana Sugarcane Variety Development Program, single stools are established from seed generated in the crossing stage. After evaluating and selecting the families for cane yield potential in the cross appraisal studies, clones with desirable phenotypes are selected and advanced through single stool, first line, second line, and increase stages. In the first stubble crop of the second-line trials, clones judged to have breeding or commercial value are assigned a permanent variety number and advanced to the nursery stage of testing.

RESULTS AND DISCUSSION

A total of 98,371 seedlings from 211 crosses of the 2000 crossing series were planted to the field in the spring of 2001 (Table 1). Many of these seedlings were progeny of crosses among commercial and superior experimental varieties. In the fall of 2001, individual selection was practiced on the 46,783 stubble single stools of the 1999 crossing series that survived the winter. The 3,371 clones selected and advanced from the single stools were planted in 6-foot first-line trial plots. Dates of planting and harvesting of all plots in the selection phase of the program can be found in Table 2.

Over 3,000 first-line trial plots of the 1998 crossing series were rated for cane yield and pest resistance in August of 2001 (Table 3). After screening for cane yield rating, acceptable clones were further evaluated for pest resistance (diseases and borer injury), stalk quality, and Brix (Table 3). This second stage of advancement was concluded with the planting of 759 clones in 16-foot second-line trial plots.

Stalk counts were made on the 735 plant cane second-line trial plots of the 1997 crossing series in August 2001. Based on these counts and the previously described criteria, 392 clones were planted in two 16-foot plots representing the increase stage of the program (Table 4). One replication is planted

in light soil, and the other replication is planted in heavy soil. These clones will be candidates for assignment in 2002. Of the 206 candidates from the first stubble crop of the second-line trials, the best 37 clones from the 1996 crossing series were assigned permanent "L01" numbers (Table 5). These newly assigned "L01" varieties were then planted in replicated nursery trials at three on-station locations (St. Gabriel Research Station, Iberia Research Station, and USDA Ardoyne Farm).

The advancement summary of clones from crosses made in 1996 through 1999 is shown in Table 6. Crosses are sorted by female parent in ascending order, with the percentile ranking given for each cross in each stage of the program. Results of the 2000 crossing series plant cane cross appraisal in 2001 are presented in Table 7.

Table 1. Summary of selections, advancements and assignments made during 2001 by the Louisiana, "L", Sugarcane Variety Development Program's personnel.

Crossing series	Crosses		Plants surviving transplanting	Over-wintered plants	Advanced to			
	Progeny test	Selection program			1st line	2nd line	Increase	On-Station Nurseries (L01 Assignments)
	----- number of clones -----							
X96	239	252	63468	49213	3392	705	206	37
X97	75	174	71416	48322	3901	735	392	
X98	125	193	64467	54794	3012	759		
X99		312	74263	46783	3371			
X00	76	211	98371					

Table 2. Dates of seedling and line trials planted or harvested in 2001.

Crossing Series	Test	Crop	Date Planted	Date Harvested
X00	Seedlings	Planted	4/16 - 20/01	
X00	Progeny Test	Planted	4/20/01	12/7 -10/01
X99	Seedlings	First Stubble	4/7 - 24/00	
X99	First Line Trials	Planted	9/14 - 9/17/01	
X98	First Line Trial	Plant Cane	9/7 - 14/00	
X97	First Line Trial	First Stubble	9/13- 17/00	10/29/01
X98	Second Line Trial	Planted	9/26/01	
X97	Second Line Trial	Plant Cane	9/20/00	11/26/01
X96	Second Line Trial	First Stubble	9/23/99	10/8/01
X95	Second Line Trial	Second Stubble	10/19/98	10/3/01
X97	Light Soil Increase	Planted	10/2/01	
X96	Light Soil Increase	Plant Cane	9/26/00	10/28/01
X95	Light Soil Increase	First Stubble	10/5/99	10/18/01
X94	Light Soil Increase	Second Stubble	10/27/98	10/1/01
X97	Heavy Soil Increase	Planted	10/2/01	10/8/00
X96	Heavy Soil Increase	Plant Cane	9/26/00	12/7/01
X95	Heavy Soil Increase	First Stubble	10/5/99	10/16/01
X94	Heavy Soil Increase	Second Stubble	10/27/98	10/1/01

Table 3. Numbers of experimental clones dropped for identified faults in the 1998 crossing series first-line trials.

Trait	Fault	
	Frequency	Percent
----- 3012 clones enter first round of evaluation -----		
Initial Selection (Rating)	1655	54.9
-----1357 clones enter second round of evaluation-----		
Borers	27	0.9
Leaf Scald	4	0.1
Lodged	58	1.9
Pith / Tube	179	5.9
Short	24	0.8
Diameter	46	1.5
Smut	19	0.6
Other	10	0.4
----- 2022 clones dropped -----		
----- 990 clones enter third round of evaluation -----		
Brix	231	7.7
Clones advanced to second clonal trial	759	25.2

Table 4. Number of experimental clones dropped for identified faults in the 1997 crossing series second-line trial prior to advancement to the increase stage.

Trait	Fault	
	Frequency	Percent
----- 735 clones enter first round of evaluation -----		
Stalk count <85 per plot	244	33.2
Lodged	39	5.3
Pith / Tube	36	4.9
Short	11	1.5
Diameter	2	0.3
Smut	7	1.0
Borers	4	0.5
----- 343 clones dropped -----		
Clones advanced to Increase stage	392	53.3

Table 5. Mean yield data of 2001 “L” assignments from first stubble second-line trial plots.

VARIETY	Female	Male	Sugar per acre	Cane Yield	Sugar per ton	Stalk Weight	Stalk Number
			lbs/A	tons/A	lbs/ton	lbs	stalks/A
CP70-321	CP61-039	CP57-614	8099	48.6	169	2.89	33124
LCP85-384	CP77-310	CP77-407	9980	58.7	170	2.12	55660
HOCP85-845	CP72-370	CP77-403	8088	41.4	199	2.25	36300
L2001-279	LCP85-384	HOCP93-754	9591	56.5	170	1.86	60803
L2001-280	L93-363	LCP85-384	11308	45.1	250	1.97	45829
L2001-281	LCP86-429	LCP85-384	11096	58.2	191	2.27	51274
L2001-282	LHO92-307	HOCP92-678	8901	49.9	178	2.34	42653
L2001-283	L93-365	LCP85-384	9525	47.6	200	2.56	37208
L2001-284	CP65-357	LCP85-384	9274	56.9	163	2.22	51274
L2001-285	LCP85-384	HOCP93-754	10157	58.9	172	1.91	61710
L2001-286	LHO92-307	HOCP92-678	9608	48.0	200	2.52	38115
L2001-287	L93-363	LCP85-384	11436	56.4	203	2.22	50820
L2001-288	L93-363	LCP85-384	9874	53.3	185	2.35	45375
L2001-289	LCP81-010	LCP85-384	10477	59.4	176	2.62	45375
L2001-290	L94-424	LCP85-384	10919	61.1	179	2.45	49913
L2001-291	L93-363	LCP85-384	10473	42.5	247	1.89	44921
L2001-292	CP65-357	LCP85-384	13552	61.9	219	3.21	38569
L2001-293	CP65-357	LCP85-384	13975	68.4	204	1.97	69424
L2001-294	L93-365	L92-312	12200	67.9	180	2.20	61710
L2001-295	HOCP85-845	L94-432	9126	45.9	199	2.25	40838
L2001-296	CP65-357	LCP85-384	16604	67.8	245	2.90	46736
L2001-297	HOCP92-648	LCP85-384	15528	75.5	206	2.43	62164
L2001-298	HOCP92-648	LCP85-384	9009	55.0	164	2.33	47190
L2001-299	L93-365	LCP85-384	14767	71.9	205	2.64	54450
L2001-300	LCP86-422	LCP85-384	12540	75.4	166	2.66	56719
L2001-301	HOCP93-749	LCP85-384	12053	54.7	220	2.71	40384
L2001-302	HOCP92-648	HO89-889	10752	51.5	209	2.16	47644
L2001-303	LCP85-313	CP79-348	9811	52.7	186	2.30	45829
L2001-304	HOCP93-749	LCP85-384	13116	61.9	212	3.10	39930
L2001-305	HOCP92-624	CP77-310	9776	52.6	186	1.87	56265
L2001-306	HOCP93-767	L94-431	14278	65.6	218	2.45	53543
L2001-307	HOCP93-746	LCP85-384	9987	47.8	209	2.34	40838
L2001-308	HOCP88-739	LCP85-384	12104	61.5	197	2.58	47644
L2001-309	HOCP93-746	LCP85-384	9615	51.0	188	1.63	62618
L2001-310	HOCP93-746	L88-063	9895	57.7	172	1.73	66701
L2001-311	HOCP88-739	LCP85-384	13683	80.6	170	2.03	79406
L2001-312	HOCP93-746	LCP85-384	8758	44.7	196	2.29	39023
L2001-313	HOCP93-767	L93-365	10011	44.5	225	2.18	40838
L2001-314	HOCP88-739	LCP85-384	7483	47.9	156	1.76	54450
L2001-315	HOCP93-746	LCP85-384	9013	51.9	174	2.22	46736

Table 6. Continued.

Table 6. Advancement summary of crosses in the 1996 through 1999 crossing series.

Female	Male	Survive	1 st Line		2 nd Line		Increase		Assignment	
			No.	Rank pcnt'l	No.	Rank pcnt'l	No.	Rank pcnt'l	No.	Rank pcnt'l
<u>1996 Crossing Series</u>										
CP65-357	CP77-407	72	9	81	4	95	0	35	0	46
CP65-357	HOCp85-845	209	26	80	0	25	0	35	0	46
CP65-357	HOCp91-573	245	26	74	3	64	0	35	0	46
CP65-357	HOCp93-749	98	0	23	0	25	0	35	0	46
CP65-357	L91-255	157	0	23	0	25	0	35	0	46
CP65-357	L92-319	89	10	78	3	86	1	89	0	46
CP65-357	L94-431	75	32	99	3	90	0	35	0	46
CP65-357	LCP82-089	84	5	59	1	62	0	35	0	46
CP65-357	LCP85-384	750	91	80	35	92	15	96	4	97
CP72-370	CP79-348	248	0	23	0	25	0	35	0	46
CP72-370	HOCp85-845	497	0	23	0	25	0	35	0	46
CP72-370	HOCp91-552	435	0	23	0	25	0	35	0	46
CP72-370	L92-312	150	18	79	7	92	2	93	0	46
CP72-370	LHO92-307	200	0	23	0	25	0	35	0	46
CP77-310	CP72-370	243	0	23	0	25	0	35	0	46
CP77-310	CP77-407	97	14	84	5	94	1	88	0	46
CP77-310	HOCp91-573	200	0	23	0	25	0	35	0	46
CP77-310	HOCp92-618	157	20	81	1	56	0	35	0	46
CP78-357	HOCp93-750	98	15	88	3	84	1	87	0	46
CP78-357	HOCp93-754	112	9	65	4	87	0	35	0	46
CP79-318	HO89-889	103	10	70	5	94	0	35	0	46
CP79-318	HOCp85-845	1143	65	57	14	64	5	76	0	46
CP79-318	HOCp91-573	248	0	23	0	25	0	35	0	46
CP79-318	HOCp92-618	247	0	23	0	25	0	35	0	46
CP79-318	L92-312	245	7	49	1	53	0	35	0	46
CP79-318	L94-431	72	0	23	0	25	0	35	0	46
CP79-318	L94-436	112	0	23	0	25	0	35	0	46
CP79-318	LCP85-384	1281	126	71	20	69	8	83	0	46
CP79-318	LCP85-384	178	0	23	0	25	0	35	0	46
CP79-318	LCP85-384	356	0	23	0	25	0	35	0	46
CP79-318	LHO92-314	725	0	23	0	25	0	35	0	46
CP79-318	US90-018	81	0	23	0	25	0	35	0	46
CP79-318	US92-010	177	0	23	0	25	0	35	0	46
CP79-348	HOCp93-746	68	0	23	0	25	0	35	0	46
CP79-348	HOCp93-765	226	0	23	0	25	0	35	0	46
CP79-348	L92-312	40	8	94	4	99	0	35	0	46
CP82-550	CP79-348	108	12	77	3	81	0	35	0	46

Table 6. Continued.

Female	Male	Survive	1 st Line		2 nd Line		Increase		Assignment	
			No.	Rank pct'l	No.	Rank pct'l	No.	Rank pct'l	No.	Rank pct'l
CP82-550	HOCP92-624	118	9	64	5	91	0	35	0	46
CP82-550	L91-255	92	0	23	0	25	0	35	0	46
CP82-550	LCP82-089	322	33	72	3	60	0	35	0	46
CP83-644	CP84-730	104	7	61	2	75	0	35	0	46
CP83-644	HOCP85-845	179	16	67	5	81	3	94	0	46
CP83-644	HOCP91-527	197	0	23	0	25	0	35	0	46
CP83-644	HOCP93-749	347	0	23	0	25	0	35	0	46
CP83-644	L91-255	462	51	77	4	59	0	35	0	46
CP83-644	L92-312	284	17	59	2	57	0	35	0	46
CP83-644	L94-431	43	5	78	3	97	1	98	0	46
CP83-644	L94-438	428	0	23	0	25	0	35	0	46
CP83-644	LCP82-089	237	0	23	0	25	0	35	0	46
CP83-644	LCP85-313	240	41	90	4	71	1	75	0	46
CP83-644	LCP85-384	367	0	23	0	25	0	35	0	46
CP83-644	LCP86-454	277	0	23	0	25	0	35	0	46
CP84-730	HOCP85-845	383	0	23	0	25	0	35	0	46
CP84-730	L92-312	300	32	75	5	71	2	83	0	46
CP84-730	LCP85-384	231	22	70	3	66	0	35	0	46
CP88-702	L91-255	104	0	23	0	25	0	35	0	46
CP88-702	LCP85-384	438	38	66	3	56	2	79	0	46
CP89-805	LCP85-384	235	0	23	0	25	0	35	0	46
CP89-805	LCP85-384	247	0	23	0	25	0	35	0	46
CP89-831	HOCP85-845	282	0	23	0	25	0	35	0	46
CP89-831	HOCP91-527	103	18	91	8	98	2	95	0	46
CP89-831	LCP82-089	85	0	23	0	25	0	35	0	46
CP89-831	LCP85-384	214	31	85	6	82	3	93	0	46
CP89-831	US90-018	109	25	97	8	98	2	94	0	46
HO89-889	LCP82-089	620	0	23	0	25	0	35	0	46
HOCP85-845	HOCP93-765	482	0	23	0	25	0	35	0	46
HOCP85-845	L89-136	201	9	53	3	69	1	80	0	46
HOCP85-845	L94-432	482	10	47	4	58	2	74	1	93
HOCP88-739	CP72-370	180	0	23	0	25	0	35	0	46
HOCP88-739	CP77-310	104	21	94	4	89	0	35	0	46
HOCP88-739	CP77-407	100	0	23	0	25	0	35	0	46
HOCP88-739	HO89-889	106	0	23	0	25	0	35	0	46
HOCP88-739	HOCP85-845	367	0	23	0	25	0	35	0	46
HOCP88-739	L91-255	218	8	50	3	67	0	35	0	46
HOCP88-739	L94-431	96	0	23	0	25	0	35	0	46
HOCP88-739	LCP82-089	87	0	23	0	25	0	35	0	46

Table 6. Continued.

Female	Male	Survive	1 st Line		2 nd Line		Increase		Assignment	
			No.	Rank pct'l	No.	Rank pct'l	No.	Rank pct'l	No.	Rank pct'l
HOCP88-739	LCP85-384	248	16	60	11	91	3	90	0	46
HOCP88-739	LCP85-384	679	123	92	19	82	9	92	3	94
HOCP88-739	LCP86-454	133	0	23	0	25	0	35	0	46
HOCP88-739	LCP87-472	248	0	23	0	25	0	35	0	46
HOCP90-923	CP79-348	494	148	98	19	89	8	94	0	46
HOCP90-923	HOCP92-618	249	0	23	0	25	0	35	0	46
HOCP90-923	HOCP92-618	177	0	23	0	25	0	35	0	46
HOCP90-923	HOCP93-749	225	0	23	0	25	0	35	0	46
HOCP90-923	L91-255	179	0	23	0	25	0	35	0	46
HOCP90-923	L94-436	197	0	23	0	25	0	35	0	46
HOCP90-923	LHO92-314	96	0	23	0	25	0	35	0	46
HOCP91-527	L92-312	31	4	82	0	25	0	35	0	46
HOCP91-527	L92-319	162	0	23	0	25	0	35	0	46
HOCP91-575	CP70-321	227	16	62	2	59	1	77	0	46
HOCP91-575	HOCP93-750	92	7	64	0	25	0	35	0	46
HOCP91-575	L91-255	104	17	89	3	83	0	35	0	46
HOCP91-575	L93-365	448	25	57	7	69	2	78	0	46
HOCP91-575	LCP85-384	103	15	85	4	90	0	35	0	46
HOCP91-575	LCP86-454	461	0	23	0	25	0	35	0	46
HOCP92-618	CP79-348	235	0	23	0	25	0	35	0	46
HOCP92-618	US92-010	99	4	52	1	61	0	35	0	46
HOCP92-624	CP77-310	194	3	46	1	55	1	81	1	96
HOCP92-624	HOCP85-845	493	0	23	0	25	0	35	0	46
HOCP92-624	L91-255	95	0	23	0	25	0	35	0	46
HOCP92-624	LCP85-384	488	71	85	7	68	4	84	0	46
HOCP92-645	HOCP93-765	232	0	23	0	25	0	35	0	46
HOCP92-645	L91-255	101	0	23	0	25	0	35	0	46
HOCP92-645	LCP86-422	59	4	61	0	25	0	35	0	46
HOCP92-648	HO89-889	94	4	53	2	76	2	97	1	98
HOCP92-648	HOCP85-845	452	48	74	8	72	1	71	0	46
HOCP92-648	HOCP91-573	483	0	23	0	25	0	35	0	46
HOCP92-648	HOCP92-618	230	46	94	20	98	3	92	0	46
HOCP92-648	HOCP92-618	80	17	95	0	25	0	35	0	46
HOCP92-648	HOCP93-744	240	0	23	0	25	0	35	0	46
HOCP92-648	HOCP93-749	384	0	23	0	25	0	35	0	46
HOCP92-648	L92-312	241	4	47	3	65	0	35	0	46
HOCP92-648	L92-319	227	11	55	4	72	1	77	0	46

Table 6. Continued.

Female	Male	Survive	1 st Line		2 nd Line		Increase		Assignment	
			No.	Rank pct'l	No.	Rank pct'l	No.	Rank pct'l	No.	Rank pct'l
HOCP92-648	L94-431	79	12	87	3	89	0	35	0	46
HOCP92-648	LCP85-384	460	72	88	10	77	6	92	2	94
HOCP92-648	LHO92-314	228	0	23	0	25	0	35	0	46
HOCP92-648	LHO92-314	148	0	23	0	25	0	35	0	46
HOCP92-648	LHO92-314	214	0	23	0	25	0	35	0	46
HOCP92-648	US80-004	245	19	64	4	70	1	74	0	46
HOCP92-654	CP70-321	91	0	23	0	25	0	35	0	46
HOCP92-654	HOCP85-845	228	0	23	0	25	0	35	0	46
HOCP92-654	L92-312	187	0	23	0	25	0	35	0	46
HOCP92-654	L92-319	97	0	23	0	25	0	35	0	46
HOCP92-654	L92-319	102	0	23	0	25	0	35	0	46
HOCP92-654	LCP82-089	457	0	23	0	25	0	35	0	46
HOCP92-654	LCP86-454	47	0	23	0	25	0	35	0	46
HOCP92-664	HOCP92-624	252	23	68	1	53	0	35	0	46
HOCP92-664	HOCP93-749	225	0	23	0	25	0	35	0	46
HOCP92-664	L92-319	91	17	93	2	77	0	35	0	46
HOCP92-664	L93-365	246	0	23	0	25	0	35	0	46
HOCP92-664	L94-438	102	6	58	0	25	0	35	0	46
HOCP92-664	LCP86-454	101	4	52	1	60	0	35	0	46
HOCP93-744	CP77-407	175	0	23	0	25	0	35	0	46
HOCP93-744	CP77-407	190	6	50	1	55	0	35	0	46
HOCP93-744	HOCP85-845	263	0	23	0	25	0	35	0	46
HOCP93-744	LCP85-384	395	0	23	0	25	0	35	0	46
HOCP93-744	LCP87-472	188	0	23	0	25	0	35	0	46
HOCP93-744	LHO92-307	155	0	23	0	25	0	35	0	46
HOCP93-744	LHO92-307	181	0	23	0	25	0	35	0	46
HOCP93-746	HOCP85-845	416	0	23	0	25	0	35	0	46
HOCP93-746	HOCP93-750	101	0	23	0	25	0	35	0	46
HOCP93-746	L88-063	104	17	89	3	83	2	95	1	98
HOCP93-746	L93-363	100	14	83	0	25	0	35	0	46
HOCP93-746	LCP85-384	340	58	90	16	93	12	98	4	99
HOCP93-749	CP77-310	97	7	62	2	76	2	96	0	46
HOCP93-749	HOCP85-845	148	0	23	0	25	0	35	0	46
HOCP93-749	HOCP92-618	86	13	86	3	87	2	98	0	46
HOCP93-749	HOCP92-624	111	25	97	3	80	0	35	0	46
HOCP93-749	L88-063	96	0	23	0	25	0	35	0	46

Table 6. Continued.

Female	Male	Survive	1 st Line		2 nd Line		Increase		Assignment	
			No.	Rank pct'l	No.	Rank pct'l	No.	Rank pct'l	No.	Rank pct'l
HOCP93-749	L92-312	35	20	99	6	99	2	99	0	46
HOCP93-749	LCP82-089	251	13	56	2	57	1	72	0	46
HOCP93-749	LCP85-384	95	0	23	0	25	0	35	0	46
HOCP93-749	LCP85-384	424	49	78	14	86	8	95	2	95
HOCP93-749	LCP86-454	109	9	66	1	59	1	85	0	46
HOCP93-749	US92-010	100	0	23	0	25	0	35	0	46
HOCP93-750	US90-018	100	0	23	0	25	0	35	0	46
HOCP93-767	CP89-805	100	0	23	0	25	0	35	0	46
HOCP93-767	HOCP92-618	90	0	23	0	25	0	35	0	46
HOCP93-767	L93-365	459	26	57	7	69	2	76	1	93
HOCP93-767	L94-431	179	9	56	2	61	2	89	1	97
HOCP93-767	LCP86-422	103	0	23	0	25	0	35	0	46
L78-063	HOCP85-845	370	18	55	1	52	1	71	0	46
L88-063	L91-255	81	11	83	3	88	1	91	0	46
L90-181	HOCP91-552	34	5	86	0	25	0	35	0	46
L90-181	HOCP92-618	234	0	23	0	25	0	35	0	46
L90-181	HOCP93-750	192	11	57	1	55	0	35	0	46
L90-181	LCP86-454	633	51	66	1	51	0	35	0	46
L90-191	CP72-370	98	9	69	2	75	0	35	0	46
L90-191	HOCP92-618	196	0	23	0	25	0	35	0	46
L91-255	HOCP91-573	222	7	50	4	73	1	78	0	46
L92-312	L91-255	220	0	23	0	25	0	35	0	46
L92-319	HOCP92-664	112	10	67	2	73	0	35	0	46
L93-363	CP70-321	95	0	23	0	25	0	35	0	46
L93-363	HOCP92-618	79	12	87	0	25	0	35	0	46
L93-363	L92-312	88	9	72	2	78	1	90	0	46
L93-363	LCP85-384	344	37	76	20	96	8	98	4	98
L93-363	US90-018	186	22	79	6	85	2	88	0	46
L93-365	HOCP92-624	255	12	54	1	52	0	35	0	46
L93-365	L92-312	214	16	63	8	88	1	80	1	95
L93-365	LCP85-384	680	90	83	21	85	9	92	2	94
L93-378	HOCP93-765	242	19	64	3	65	0	35	0	46
L93-378	LHO92-314	194	19	71	0	25	0	35	0	46
L93-397	US90-018	82	0	23	0	25	0	35	0	46
L94-407	LCP85-384	229	0	23	0	25	0	35	0	46
L94-407	LCP85-384	252	17	61	3	62	0	35	0	46

Table 6. Continued.

Female	Male	Survive	1 st Line		2 nd Line		Increase		Assignment	
			No.	Rank pct'l	No.	Rank pct'l	No.	Rank pct'l	No.	Rank pct'l
L94-422	L92-319	167	11	60	3	73	1	82	0	46
L94-422	L94-431	175	0	23	0	25	0	35	0	46
L94-424	LCP85-384	672	34	56	15	78	1	70	1	92
L94-428	L93-365	232	9	51	1	54	0	35	0	46
L94-428	LCP86-454	232	17	63	1	54	0	35	0	46
L94-431	L92-312	79	10	81	2	80	0	35	0	46
L94-431	LCP85-313	87	0	23	0	25	0	35	0	46
L94-433	HOCP93-754	225	18	65	3	67	1	77	0	46
L94-433	L92-319	213	0	23	0	25	0	35	0	46
LCP81-010	CP70-321	248	12	55	3	64	1	73	0	46
LCP81-010	CP72-370	439	29	60	8	74	2	78	0	46
LCP81-010	HOCP85-845	712	12	47	2	52	0	35	0	46
LCP81-010	HOCP93-765	232	0	23	0	25	0	35	0	46
LCP81-010	L89-136	238	0	23	0	25	0	35	0	46
LCP81-010	L94-432	233	0	23	0	25	0	35	0	46
LCP81-010	LCP85-384	2368	67	49	18	57	7	72	1	92
LCP81-010	LHO92-307	138	0	23	0	25	0	35	0	46
LCP82-089	HOCP91-552	220	2	46	0	25	0	35	0	46
LCP83-137	HO89-889	54	12	96	1	74	0	35	0	46
LCP83-137	HOCP93-750	106	19	92	3	83	1	86	0	46
LCP83-137	LCP85-384	170	28	89	5	84	0	35	0	46
LCP83-137	LCP86-422	233	52	96	12	94	2	85	0	46
LCP85-313	CP70-321	46	13	98	1	77	0	35	0	46
LCP85-313	CP77-407	248	3	46	0	25	0	35	0	46
LCP85-313	CP79-348	501	13	48	7	67	3	82	1	92
LCP85-313	CP79-348	230	24	74	3	66	1	76	0	46
LCP85-313	HOCP85-845	251	32	81	6	79	1	72	0	46
LCP85-313	HOCP92-618	753	70	69	18	79	6	84	0	46
LCP85-313	HOCP93-750	79	0	23	0	25	0	35	0	46
LCP85-313	L91-255	99	6	59	3	84	1	87	0	46
LCP85-313	L94-431	256	12	54	1	52	0	35	0	46
LCP85-313	LCP82-089	165	7	53	1	56	0	35	0	46
LCP85-313	LHO92-314	252	0	23	0	25	0	35	0	46
LCP85-384	HOCP93-754	41	4	71	3	97	3	99	2	99
LCP86-422	HOCP93-749	91	0	23	0	25	0	35	0	46
LCP86-422	HOCP93-750	205	8	51	0	25	0	35	0	46

Table 6. Continued.

Female	Male	Survive	1 st Line		2 nd Line		Increase		Assignment	
			No.	Rank pct'l	No.	Rank pct'l	No.	Rank pct'l	No.	Rank pct'l
LCP86-422	L92-312	62	0	23	0	25	0	35	0	46
LCP86-422	LCP85-384	207	37	92	11	95	2	86	1	95
LCP86-429	CP70-321	223	0	23	0	25	0	35	0	46
LCP86-429	CP72-370	251	0	23	0	25	0	35	0	46
LCP86-429	CP72-370	36	0	23	0	25	0	35	0	46
LCP86-429	CP77-310	232	23	71	2	58	0	35	0	46
LCP86-429	CP77-407	218	19	66	4	74	1	79	0	46
LCP86-429	HOC92-618	167	0	23	0	25	0	35	0	46
LCP86-429	HOC92-618	81	18	96	5	96	0	35	0	46
LCP86-429	HOC93-744	79	0	23	0	25	0	35	0	46
LCP86-429	HOC93-750	85	9	74	4	93	1	90	0	46
LCP86-429	HOC93-765	211	0	23	0	25	0	35	0	46
LCP86-429	HOC93-765	242	0	23	0	25	0	35	0	46
LCP86-429	L91-255	103	11	75	1	60	1	87	0	46
LCP86-429	L94-432	241	0	23	0	25	0	35	0	46
LCP86-429	LCP85-384	167	17	72	2	63	1	82	1	97
LCP86-429	LCP85-384	597	0	23	0	25	0	35	0	46
LCP86-454	HOC93-750	243	25	73	3	65	2	84	0	46
LCP86-454	HOC93-765	242	0	23	0	25	0	35	0	46
LCP86-454	L92-312	237	34	84	5	76	1	75	0	46
LCP86-454	L93-363	99	12	80	7	97	0	35	0	46
LCP87-023	CP78-2114	46	8	91	0	25	0	35	0	46
LCP87-023	HOC91-576	108	12	77	4	88	0	35	0	46
LCP87-023	HOC92-618	220	0	23	0	25	0	35	0	46
LCP87-023	HOC92-678	108	0	23	0	25	0	35	0	46
LCP87-023	HOC93-746	53	0	23	0	25	0	35	0	46
LCP87-023	L94-432	236	0	23	0	25	0	35	0	46
LCP87-023	LHO92-307	106	0	23	0	25	0	35	0	46
LCP87-472	HOC93-765	245	0	23	0	25	0	35	0	46
LCP87-472	L94-432	250	7	48	3	63	0	35	0	46
LHO83-153	L91-255	90	8	67	4	91	0	35	0	46
LHO92-307	CP70-321	212	8	51	3	68	1	80	0	46
LHO92-307	CP72-370	237	0	23	0	25	0	35	0	46
LHO92-307	HOC85-845	461	86	93	21	92	1	71	0	46
LHO92-307	HOC92-678	398	41	73	7	72	3	83	2	96
LHO92-307	LCP85-384	1107	0	23	0	25	0	35	0	46

Table 6. Continued.

Female	Male	Survive	1 st Line		2 nd Line		Increase		Assignment	
			No.	Rank pct'l	No.	Rank pct'l	No.	Rank pct'l	No.	Rank pct'l
LHO92-314	CP84-730	77	19	98	2	80	1	91	0	46
LHO92-314	L92-312	93	13	83	1	61	1	88	0	46
US78-020	L91-255	104	0	23	0	25	0	35	0	46
US78-020	LCP82-089	183	6	50	3	70	1	81	0	46
US79-010	CP72-370	93	18	93	5	95	2	97	0	46
US79-010	HOCP85-845	86	13	86	1	62	0	35	0	46
US79-010	L92-319	102	0	23	0	25	0	35	0	46
US79-010	LCP82-089	81	14	90	0	25	0	35	0	46
US90-021	CP72-370	106	10	69	4	88	0	35	0	46
US90-021	HOCP91-552	222	46	95	7	85	2	85	0	46
US90-021	HOCP93-765	250	27	76	7	81	1	73	0	46
US90-021	L89-136	240	54	97	6	79	1	75	0	46
US90-027	HOCP92-664	117	0	23	0	25	0	35	0	46

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CP77-310	HOCP85-845	237	0	14	0	20	0	25	.	.
CP77-310	HOCP92-618	333	26	62	4	64	1	55	.	.
CP77-310	HOCP92-618	246	20	65	3	65	0	25	.	.
CP77-310	US78-020	81	0	14	0	20	0	25	.	.
CP77-407	CP88-769	220	0	14	0	20	0	25	.	.
CP77-407	LCP82-089	105	23	96	6	97	5	98	.	.
CP79-318	CP87-609	243	0	14	0	20	0	25	.	.
CP79-318	CP94-856	241	19	64	0	20	0	25	.	.
CP79-318	HO94-850	335	15	41	3	59	1	55	.	.
CP79-318	HO95-988	341	0	14	0	20	0	25	.	.
CP79-318	HOCP85-845	247	15	48	0	20	0	25	.	.
CP79-318	HOCP92-618	247	19	62	2	49	1	58	.	.
CP79-318	L88-072	238	22	73	2	53	0	25	.	.
CP79-318	US78-020	109	7	52	1	59	0	25	.	.
CP79-348	L91-255	484	21	40	8	70	2	60	.	.
CP80-356	LCP82-089	246	17	55	0	20	0	25	.	.
CP82-550	L91-255	243	19	62	0	20	0	25	.	.
CP83-644	LCP85-384	722	57	64	21	86	10	81	.	.
CP84-1198	TCP87-3388	344	6	32	0	20	0	25	.	.
CP84-722	LCP82-089	240	9	38	0	20	0	25	.	.

Table 6. Continued.

Female	Male	Survive	1 st Line		2 nd Line		Increase		Assignment	
			No.	Rank pct'l	No.	Rank pct'l	No.	Rank pct'l	No.	Rank pct'l
CP85-830	US78-020	229	17	58	5	79	0	25	.	.
CP87-626	HOCP95-950	112	0	14	0	20	0	25	.	.
CP88-769	HOCP85-845	111	14	87	0	20	0	25	.	.
CP89-805	LCP85-336	108	0	14	0	20	0	25	.	.
CP89-831	HOCP94-806	243	30	86	4	70	4	85	.	.
CP89-843	LCP86-454	480	11	33	2	45	1	53	.	.
CP89-845	CP91-534	234	20	69	7	86	5	92	.	.
CP94-1996	LHO83-153	244	11	41	2	51	0	25	.	.
HO93-771	HOCP92-678	236	15	52	5	78	4	86	.	.
HO93-771	HOCP93-775	235	23	76	10	94	9	97	.	.
HO93-771	LHO83-153	345	38	82	4	64	2	64	.	.
HO94-850	L95-482	939	39	40	8	55	3	56	.	.
HO95-985	CP88-769	244	20	66	2	51	0	25	.	.
HO95-985	L88-063	111	0	14	0	20	0	25	.	.
HO95-985	L95-461	343	33	75	8	81	4	77	.	.
HO95-985	L96-044	425	0	14	0	20	0	25	.	.
HO95-988	LCP82-089	244	0	14	0	20	0	25	.	.
HOCP85-845	SELF	221	0	14	0	20	0	25	.	.
HOCP85-845	US78-020	250	10	39	0	20	0	25	.	.
HOCP88-739	HO94-850	97	24	98	4	94	1	76	.	.
HOCP88-739	L94-428	108	0	14	0	20	0	25	.	.
HOCP88-739	LCP81-010	194	20	78	3	67	2	76	.	.
HOCP88-739	LCP85-384	105	18	94	5	96	4	97	.	.
HOCP89-846	L96-044	106	0	14	0	20	0	25	.	.
HOCP90-923	LHO83-153	465	15	36	5	63	3	67	.	.
HOCP90-941	HOCP92-618	239	0	14	0	20	0	25	.	.
HOCP90-941	HOCP93-750	938	80	69	29	87	11	77	.	.
HOCP90-941	SELF	421	51	84	4	61	2	64	.	.
HOCP91-542	CP91-559	483	40	67	15	88	4	69	.	.
HOCP92-618	HOCP93-775	485	36	58	4	51	2	59	.	.
HOCP92-618	US95-1001	240	0	14	0	20	0	25	.	.
HOCP92-624	CP79-318	110	17	91	0	20	0	25	.	.
HOCP92-624	CP84-772	1348	11	29	3	42	1	50	.	.
HOCP92-624	HOCP85-845	361	39	80	7	76	3	70	.	.
HOCP92-624	HOCP92-618	250	27	80	4	68	3	78	.	.
HOCP92-624	L94-428	808	115	90	7	58	5	66	.	.

Table 6. Continued.

Female	Male	Survive	1 st Line		2 nd Line		Increase		Assignment	
			No.	Rank pct'l	No.	Rank pct'l	No.	Rank pct'l	No.	Rank pct'l
HOCP92-624	LCP81-010	493	34	55	6	65	6	78	.	.
HOCP92-624	LCP85-384	245	25	77	2	51	0	25	.	.
HOCP92-624	LCP85-384	1944	238	85	54	85	30	83	.	.
HOCP92-624	LCP85-384	256	33	87	5	77	5	90	.	.
HOCP92-624	US95-1001	341	0	14	0	20	0	25	.	.
HOCP92-631	LHO83-153	503	0	14	0	20	0	25	.	.
HOCP92-648	L90-191	106	14	88	2	74	1	74	.	.
HOCP92-648	L91-255	706	53	60	1	40	1	52	.	.
HOCP92-648	L94-428	230	14	48	2	58	0	25	.	.
HOCP92-648	LCP81-010	232	47	95	9	93	4	87	.	.
HOCP92-648	LCP87-472	493	28	46	4	49	3	65	.	.
HOCP92-648	US90-018	106	0	14	0	20	0	25	.	.
HOCP92-654	HOCP93-752	453	0	14	0	20	0	25	.	.
HOCP93-744	CP77-407	221	0	14	0	20	0	25	.	.
HOCP93-744	HOCP85-845	869	0	14	0	20	0	25	.	.
HOCP93-746	HOCP85-845	1206	111	73	27	80	9	67	.	.
HOCP93-746	L94-426	240	13	44	2	52	1	61	.	.
HOCP93-746	LCP82-089	228	15	53	6	83	6	93	.	.
HOCP93-746	LHO83-153	243	0	14	0	20	0	25	.	.
HOCP93-746	US95-1014	234	23	76	4	71	3	79	.	.
HOCP93-750	HOCP90-941	249	0	14	0	20	0	25	.	.
HOCP93-775	SELF	250	24	74	10	93	4	84	.	.
HOCP93-775	US93-016	245	0	14	0	20	0	25	.	.
HOCP94-806	L91-255	684	0	14	0	20	0	25	.	.
HOCP94-806	L94-428	393	0	14	0	20	0	25	.	.
HOCP95-950	LCP82-089	461	0	14	0	20	0	25	.	.
HOCP96-569	HOCP93-775	487	30	50	6	66	2	58	.	.
L88-063	HOCP92-618	223	0	14	0	20	0	25	.	.
L88-063	L91-255	472	45	74	17	90	12	93	.	.
L88-072	HOCP85-845	1655	75	41	13	48	6	57	.	.
L88-072	L96-044	240	0	14	0	20	0	25	.	.
L89-113	LHO83-153	236	17	56	2	55	0	25	.	.
L89-136	HOCP85-845	237	29	85	2	53	1	62	.	.
L90-191	LCP82-089	476	27	46	5	62	4	70	.	.
L91-255	HOCP85-845	103	17	93	2	76	0	25	.	.
L91-281	CP87-626	251	22	71	5	77	5	91	.	.

Table 6. Continued.

Female	Male	Survive	1 st Line		2 nd Line		Increase		Assignment	
			No.	Rank pct'l	No.	Rank pct'l	No.	Rank pct'l	No.	Rank pct'l
L91-281	LCP81-010	96	26	98	9	99	6	99	.	.
L91-281	LCP84-222	107	15	90	4	91	4	95	.	.
L91-288	HOCP92-618	247	0	14	0	20	0	25	.	.
L92-321	HOCP85-845	234	0	14	0	20	0	25	.	.
L93-363	HOCP85-845	243	20	66	5	78	2	68	.	.
L94-424	LCP85-384	1473	96	52	28	75	21	82	.	.
L94-426	CP84-772	400	97	97	14	90	6	83	.	.
L94-426	L95-477	106	9	69	5	95	4	96	.	.
L94-428	L93-365	109	8	57	3	84	1	72	.	.
L94-428	LCP87-472	108	2	33	1	60	1	73	.	.
L94-432	L91-255	211	19	72	7	89	6	94	.	.
L94-432	LCP81-010	481	19	39	3	47	1	53	.	.
L94-432	LCP86-454	105	23	96	7	98	2	90	.	.
L95-495	CP79-318	232	0	14	0	20	0	25	.	.
L95-495	CP85-830	90	0	14	0	20	0	25	.	.
L95-495	HO95-988	232	20	70	2	56	1	63	.	.
L95-495	HOCP85-845	216	0	14	0	20	0	25	.	.
L96-013	HOCP85-845	243	26	79	4	70	1	59	.	.
L96-024	LCP82-089	465	24	43	10	79	4	71	.	.
L96-044	LCP81-010	104	10	75	0	20	0	25	.	.
L96-048	LCP87-472	242	15	50	1	44	1	60	.	.
L96-051	CP85-830	212	35	93	12	97	4	89	.	.
L96-060	L95-477	611	0	14	0	20	0	25	.	.
L96-060	L96-044	703	0	14	0	20	0	25	.	.
L96-060	LCP82-089	712	0	14	0	20	0	25	.	.
L96-071	LCP82-089	685	51	58	13	75	7	75	.	.
LCP81-010	HOCP85-845	1691	47	35	0	20	0	25	.	.
LCP81-010	HOCP85-845	1405	0	14	0	20	0	25	.	.
LCP81-010	L88-072	456	27	47	2	47	1	54	.	.
LCP81-010	L89-136	110	12	81	2	72	2	88	.	.
LCP81-010	L91-281	1403	51	37	12	56	4	54	.	.
LCP81-010	L94-432	1431	51	37	2	40	1	50	.	.
LCP81-010	L95-477	1064	132	86	25	82	14	81	.	.
LCP81-010	L96-044	105	104	99	8	98	5	98	.	.
LCP81-010	LCP82-089	734	42	46	3	44	0	25	.	.
LCP81-010	LCP85-384	106	9	69	0	20	0	25	.	.

Table 6. Continued.

Female	Male	Survive	1 st Line		2 nd Line		Increase		Assignment	
			No.	Rank pct'l	No.	Rank pct'l	No.	Rank pct'l	No.	Rank pct'l
LCP81-010	LCP85-384	1057	57	44	24	81	15	82	.	.
LCP81-010	LCP87-472	893	11	31	0	20	0	25	.	.
LCP81-010	US78-020	914	9	30	2	42	1	51	.	.
LCP82-089	HOCP94-806	679	0	14	0	20	0	25	.	.
LCP82-089	LCP87-472	321	6	33	1	43	1	56	.	.
LCP85-313	HOCP85-845	237	9	38	0	20	0	25	.	.
LCP85-313	HOCP85-845	387	35	72	11	85	5	80	.	.
LCP85-313	HOCP85-845	234	45	95	9	92	3	79	.	.
LCP85-313	L88-072	112	7	51	2	72	2	87	.	.
LCP85-313	LCP82-089	728	39	44	5	48	1	51	.	.
LCP85-313	LCP85-336	105	20	94	1	61	1	74	.	.
LCP85-336	L96-024	109	0	14	0	20	0	25	.	.
LCP85-336	LCP85-384	842	97	82	27	89	14	85	.	.
LCP85-384	HOCP85-845	349	42	83	15	95	12	94	.	.
LCP85-384	US95-1075	461	28	48	4	58	4	71	.	.
LCP86-429	HOCP92-618	109	9	67	2	73	2	89	.	.
LCP86-429	L88-072	436	0	14	0	20	0	25	.	.
LCP86-429	L91-255	940	71	61	13	67	6	66	.	.
LCP86-429	L94-428	484	0	14	0	20	0	25	.	.
LCP86-429	L95-477	227	37	92	7	87	2	72	.	.
LCP86-429	LCP85-336	1167	56	43	2	41	0	25	.	.
LCP86-429	LCP85-384	446	59	88	12	83	9	91	.	.
LCP86-429	LCP87-472	236	16	54	2	55	0	25	.	.
RSB90-22	US95-1014	453	11	34	0	20	0	25	.	.
US78-020	HOCP85-845	240	18	60	1	45	1	61	.	.
US79-010	HOCP94-806	234	32	89	4	71	1	63	.	.
US80-004	LCP84-222	94	7	58	0	20	0	25	.	.
US80-004	LCP87-472	95	15	91	1	62	0	25	.	.
US80-004	US78-020	196	0	14	0	20	0	25	.	.
US90-021	HO94-850	239	19	64	1	45	0	25	.	.
US90-025	US90-020	103	7	54	1	62	0	25	.	.
US90-027	97P2	187	19	77	7	91	7	95	.	.
US90-027	L95-477	230	0	14	0	20	0	25	.	.
US90-20	HOCP92-678	236	0	14	0	20	0	25	.	.
US90-25	US92-11	241	2	29	0	20	0	25	.	.
US92-11	CP88-757	232	0	14	0	20	0	25	.	.

Table 6. Continued.

Female	Male	Survive	1 st Line		2 nd Line		Increase		Assignment	
			No.	Rank pct'l	No.	Rank pct'l	No.	Rank pct'l	No.	Rank pct'l
US93-16	HOCP93-750	464	49	79	11	82	8	87	.	.
US95-1036	RSB90-24	248	0	14	0	20	0	25	.	.
US96-1	HO93-769	245	29	83	4	68	2	68	.	.
US96-1	SELF	242	0	14	0	20	0	25	.	.
US96-2	HOCP93-775	484	14	35	0	20	0	25	.	.
US96-2	LCP86-454	360	25	55	1	43	0	25	.	.
US96-2	LHO83-153	250	4	31	0	20	0	25	.	.
US96-6	HO94-851	219	0	14	0	20	0	25	.	.
US96-6	SELF	246	0	14	0	20	0	25	.	.
<u>1998 Crossing Series</u>										
CP65-357	98P1	234	20	76	0	14	.	.	.	.
CP78-357	HOCP92-624	448	43	84	11	80	.	.	.	.
CP78-357	HOCP96-561	351	24	64	7	71	.	.	.	.
CP79-318	98P3	85	9	86	3	92	.	.	.	.
CP79-318	HOCP85-845	461	7	25	1	30	.	.	.	.
CP79-318	HOCP89-846	207	14	64	1	41	.	.	.	.
CP79-318	HOCP94-836	351	5	24	0	14	.	.	.	.
CP79-318	HOCP95-947	79	0	11	0	14	.	.	.	.
CP79-318	L95-495	593	44	68	2	34	.	.	.	.
CP79-318	LCP82-089	187	16	77	1	43	.	.	.	.
CP79-318	LCP82-089	242	36	96	9	93	.	.	.	.
CP79-318	LCP85-384	251	34	95	16	98	.	.	.	.
CP79-348	US96-006	657	25	41	2	33	.	.	.	.
CP82-550	L96-045	62	0	11	0	14	.	.	.	.
CP83-644	CP79-318	211	9	44	1	40	.	.	.	.
CP83-644	HO94-856	231	0	11	0	14	.	.	.	.
CP83-644	HOCP85-845	964	27	32	3	34	.	.	.	.
CP83-644	HOCP92-624	245	29	90	9	93	.	.	.	.
CP83-644	HOCP95-947	237	0	11	0	14	.	.	.	.
CP83-644	HOCP96-538	246	29	90	5	72	.	.	.	.
CP83-644	L89-113	93	0	11	0	14	.	.	.	.
CP83-644	L95-477	1616	107	62	49	90	.	.	.	.
CP83-644	L95-495	540	0	11	0	14	.	.	.	.
CP83-644	L96-044	225	0	11	0	14	.	.	.	.
CP83-644	LCP81-010	1306	51	42	18	63	.	.	.	.

Table 6. Continued.

Female	Male	Survive	1 st Line		2 nd Line		Increase		Assignment	
			No.	Rank pct'l	No.	Rank pct'l	No.	Rank pct'l	No.	Rank pct'l
CP83-644	LCP81-010	232	7	34	2	48	.	.	.	.
CP83-644	LCP82-089	1328	80	56	34	82	.	.	.	.
CP83-644	US80-004	101	8	72	0	14	.	.	.	.
CP85-803	L89-113	221	21	83	9	96	.	.	.	.
HO95-985	HOCP85-845	250	28	88	5	71	.	.	.	.
HO95-985	HOCP85-845	397	7	26	2	42	.	.	.	.
HO95-985	L96-040	227	37	98	6	85	.	.	.	.
HO95-985	LCP81-010	452	9	28	3	44	.	.	.	.
HO95-985	LCP81-010	340	21	57	3	49	.	.	.	.
HO95-985	LCP82-089	238	12	48	3	58	.	.	.	.
HO95-985	LCP85-384	106	12	88	7	98	.	.	.	.
HO95-988	HOCP85-845	250	6	30	1	36	.	.	.	.
HO95-988	L89-113	230	17	68	6	83	.	.	.	.
HO95-988	L94-426	105	14	94	4	95	.	.	.	.
HO95-988	L95-495	109	7	59	1	52	.	.	.	.
HO96-566	HOCP92-624	240	22	82	4	65	.	.	.	.
HO96-566	HOCP96-538	394	48	92	5	58	.	.	.	.
HOCP92-618	LCP81-010	689	0	11	0	14	.	.	.	.
HOCP92-624	HO96-565	91	3	36	0	14	.	.	.	.
HOCP92-624	HOCP85-845	249	20	73	10	95	.	.	.	.
HOCP92-624	HOCP85-845	944	71	69	22	78	.	.	.	.
HOCP92-624	HOCP96-509	103	10	85	3	86	.	.	.	.
HOCP92-624	L89-113	427	32	69	10	79	.	.	.	.
HOCP92-624	L96-040	241	35	96	9	94	.	.	.	.
HOCP92-624	L96-045	643	22	38	7	55	.	.	.	.
HOCP92-624	L96-045	240	19	72	1	38	.	.	.	.
HOCP92-624	L97-121	220	17	71	3	62	.	.	.	.
HOCP92-624	LCP85-384	344	24	65	10	86	.	.	.	.
HOCP92-624	LCP85-384	1146	69	56	30	84	.	.	.	.
HOCP92-648	L96-040	234	15	59	5	76	.	.	.	.
HOCP92-648	L97-121	1179	16	24	2	29	.	.	.	.
HOCP92-648	L97-133	242	16	62	1	38	.	.	.	.
HOCP92-648	LCP81-010	564	29	49	3	43	.	.	.	.
HOCP92-648	LCP82-089	92	7	70	2	76	.	.	.	.
HOCP92-654	98P3	621	0	11	0	14	.	.	.	.
HOCP92-654	HOCP85-845	473	0	11	0	14	.	.	.	.

Table 6. Continued.

Female	Male	Survive	1 st Line		2 nd Line		Increase		Assignment	
			No.	Rank pct'l	No.	Rank pct'l	No.	Rank pct'l	No.	Rank pct'l
HOCP92-654	L94-426	1215	0	11	0	14	.	.	.	.
HOCP92-654	L96-083	480	0	11	0	14	.	.	.	.
HOCP94-836	HOCP95-998	1135	0	11	0	14	.	.	.	.
HOCP96-500	L89-113	543	20	39	11	72	.	.	.	.
HOCP96-500	LCP81-010	497	17	38	2	36	.	.	.	.
HOCP96-500	LCP81-010	470	30	59	8	66	.	.	.	.
HOCP96-500	LCP85-384	901	47	50	12	61	.	.	.	.
HOCP96-515	HO96-565	227	14	57	4	68	.	.	.	.
HOCP96-519	HOCP95-998	591	42	66	15	82	.	.	.	.
HOCP96-519	HOCP96-538	333	9	31	1	33	.	.	.	.
HOCP96-522	HOCP95-947	236	9	41	1	38	.	.	.	.
HOCP96-522	LCP82-089	508	24	46	8	65	.	.	.	.
HOCP96-538	CP78-317	226	0	11	0	14	.	.	.	.
HOCP96-538	HOCP85-845	455	0	11	0	14	.	.	.	.
HOCP96-538	HOCP92-624	233	0	11	0	14	.	.	.	.
HOCP96-538	LCP82-089	1074	45	44	20	69	.	.	.	.
HOCP96-546	HOCP85-845	395	19	47	1	31	.	.	.	.
HOCP96-546	L96-044	665	0	11	0	14	.	.	.	.
HOCP96-561	L96-045	85	0	11	0	14	.	.	.	.
L89-113	LCP82-089	713	27	41	10	63	.	.	.	.
L89-163	HOCP94-836	111	6	51	0	14	.	.	.	.
L89-163	HOCP95-947	430	60	95	13	89	.	.	.	.
L89-163	LCP81-010	1296	14	23	2	28	.	.	.	.
L91-255	HOCP96-561	650	0	11	0	14	.	.	.	.
L91-255	L89-113	384	0	11	0	14	.	.	.	.
L91-255	LCP85-384	533	35	62	9	66	.	.	.	.
L94-428	LCP86-454	234	0	11	0	14	.	.	.	.
L95-461	HO94-856	500	52	85	15	88	.	.	.	.
L95-461	HOCP92-624	244	8	36	3	57	.	.	.	.
L95-461	HOCP94-836	247	7	32	1	36	.	.	.	.
L95-495	CP78-2114	93	5	51	0	14	.	.	.	.
L95-495	HO96-565	220	13	55	2	51	.	.	.	.
L95-495	HOCP85-845	374	0	11	0	14	.	.	.	.
L95-495	HOCP96-500	224	0	11	0	14	.	.	.	.
L95-495	L89-113	414	45	87	13	90	.	.	.	.
L95-495	L96-045	196	0	11	0	14	.	.	.	.

Table 6. Continued.

Female	Male	Survive	1 st Line		2 nd Line		Increase		Assignment	
			No.	Rank pct'l	No.	Rank pct'l	No.	Rank pct'l	No.	Rank pct'l
L95-495	L96-083	77	10	93	1	61	.	.	.	.
L96-040	L96-044	694	58	75	12	67	.	.	.	.
L96-040	L97-149	229	0	11	0	14	.	.	.	.
L96-040	LCP82-089	567	67	90	17	88	.	.	.	.
L96-040	US96-006	245	22	81	5	73	.	.	.	.
L96-045	HOCP85-845	108	8	68	2	69	.	.	.	.
L96-060	HOCP95-998	227	0	11	0	14	.	.	.	.
L96-060	L95-495	349	6	26	1	32	.	.	.	.
L96-060	LCP82-089	344	14	43	3	49	.	.	.	.
L96-072	HOCP85-845	234	12	49	2	47	.	.	.	.
L96-072	HOCP89-846	100	0	11	0	14	.	.	.	.
L96-072	LCP82-089	392	32	74	13	91	.	.	.	.
L96-078	HOCP95-947	107	9	75	1	53	.	.	.	.
L97-104	L97-146	444	29	60	4	50	.	.	.	.
L97-104	LCP82-089	241	21	79	6	81	.	.	.	.
L97-113	L96-044	97	3	34	2	74	.	.	.	.
L97-113	LCP81-010	244	1	23	0	14	.	.	.	.
L97-121	HOCP92-624	101	17	98	7	99	.	.	.	.
L97-121	HOCP96-561	882	40	45	8	51	.	.	.	.
L97-121	LCP81-010	237	26	87	5	75	.	.	.	.
L97-128	HOCP95-998	235	8	38	0	14	.	.	.	.
L97-128	LCP81-010	899	17	27	6	45	.	.	.	.
L97-146	LCP85-384	219	18	74	9	96	.	.	.	.
L97-149	LCP81-010	225	0	11	0	14	.	.	.	.
LCP81-010	HOCP96-550	235	8	38	3	59	.	.	.	.
LCP81-010	L95-495	225	5	29	0	14	.	.	.	.
LCP81-010	L97-149	343	24	65	6	68	.	.	.	.
LCP81-010	LCP82-089	1194	4	22	2	29	.	.	.	.
LCP82-089	HOCP96-527	427	0	11	0	14	.	.	.	.
LCP82-089	L89-113	746	0	11	0	14	.	.	.	.
LCP82-089	LCP86-454	166	0	11	0	14	.	.	.	.
LCP85-384	CP78-2114	314	23	66	6	70	.	.	.	.
LCP85-384	L96-045	221	28	92	6	85	.	.	.	.
LCP85-384	LCP82-089	1223	192	97	28	77	.	.	.	.
LCP85-384	LCP82-089	237	40	99	7	87	.	.	.	.
LCP85-384	LCP86-454	211	7	36	2	53	.	.	.	.

Table 6. Continued.

Female	Male	Survive	1 st Line		2 nd Line		Increase		Assignment	
			No.	Rank pct'l	No.	Rank pct'l	No.	Rank pct'l	No.	Rank pct'l
LCP86-429	L94-428	753	16	28	2	31	.	.	.	.
LCP87-492	CP78-2114	203	26	93	7	92	.	.	.	.
MISC	98P2	231	13	52	3	61	.	.	.	.
MISC	CP78-317	245	21	77	2	46	.	.	.	.
MISC	HOCP85-845	600	35	54	14	78	.	.	.	.
MISC	HOCP92-624	404	35	79	10	80	.	.	.	.
MISC	HOCP96-500	219	19	79	2	51	.	.	.	.
MISC	L89-113	486	25	49	5	54	.	.	.	.
MISC	L89-163	251	23	82	1	36	.	.	.	.
MISC	L94-426	243	23	83	11	97	.	.	.	.
MISC	L95-495	198	8	42	3	64	.	.	.	.
MISC	L96-044	229	13	53	5	77	.	.	.	.
MISC	L96-045	243	29	91	5	74	.	.	.	.
MISC	L97-146	241	14	54	2	46	.	.	.	.
MISC	LCP81-010	101	9	80	0	14	.	.	.	.
MISC	LCP85-384	243	16	62	3	57	.	.	.	.
MISC	LCP86-454	214	5	30	1	40	.	.	.	.
US77-017	HOCP85-845	235	7	34	3	59	.	.	.	.
US77-017	HOCP92-624	247	20	73	3	56	.	.	.	.
US93-015	CP78-2114	228	0	11	0	14	.	.	.	.
US93-015	L96-044	252	0	11	0	14	.	.	.	.
US93-016	CP78-2114	203	12	55	1	42	.	.	.	.
US93-016	L95-495	583	28	47	5	48	.	.	.	.
US93-016	L96-045	247	11	45	3	56	.	.	.	.
US93-016	LCP86-454	38	1	31	1	84	.	.	.	.
US96-006	CP78-2114	234	0	11	0	14	.	.	.	.
US96-006	L97-121	241	0	11	0	14	.	.	.	.
US96-006	L97-155	102	0	11	0	14	.	.	.	.
US96-006	US96-006	206	18	79	1	42	.	.	.	.
<u>1999 Crossing Series</u>										
CP65-357	L95-482	407	16	50	.	.	.	.	.	.
CP65-357	LCP85-384	94	20	99	.	.	.	.	.	.

Table 6. Continued.

Female	Male	Survive	1 st Line		2 nd Line		Increase		Assignment	
			No.	Rank pct'l	No.	Rank pct'l	No.	Rank pct'l	No.	Rank pct'l
CP65-357	LCP85-384	190	24	95	.	.	.	.	.	.
CP70-321	LCP82-089	176	3	31	.	.	.	.	.	.
CP72-370	HO95-988	469	24	62	.	.	.	.	.	.
CP77-405	HOCP92-618	185	0	12	.	.	.	.	.	.
CP77-405	HOCP95-931	178	0	12	.	.	.	.	.	.
CP77-405	HOCP97-621	393	17	56	.	.	.	.	.	.
CP77-405	L90-191	197	0	12	.	.	.	.	.	.
CP77-405	L94-426	207	1	25	.	.	.	.	.	.
CP77-405	L94-428	377	0	12	.	.	.	.	.	.
CP77-405	L94-428	354	0	12	.	.	.	.	.	.
CP77-405	L96-040	377	0	12	.	.	.	.	.	.
CP77-405	LCP85-384	176	0	12	.	.	.	.	.	.
CP77-405	US90-018	182	0	12	.	.	.	.	.	.
CP78-357	HOCP92-618	207	23	92	.	.	.	.	.	.
CP78-357	L94-432	1106	75	73	.	.	.	.	.	.
CP78-357	L96-030	214	21	91	.	.	.	.	.	.
CP78-357	US90-018	188	6	42	.	.	.	.	.	.
CP79-318	HO95-988	375	0	12	.	.	.	.	.	.
CP79-318	HOCP94-806	232	2	26	.	.	.	.	.	.
CP79-318	HOCP95-931	162	0	12	.	.	.	.	.	.
CP79-318	L97-137	544	20	47	.	.	.	.	.	.
CP79-318	LCP81-010	214	0	12	.	.	.	.	.	.
CP79-318	LCP85-384	698	32	58	.	.	.	.	.	.
CP79-318	LCP85-384	407	17	55	.	.	.	.	.	.
CP79-318	LCP85-384	161	28	98	.	.	.	.	.	.
CP79-348	HOCP92-618	211	0	12	.	.	.	.	.	.
CP79-348	L94-426	1079	18	31	.	.	.	.	.	.
CP82-550	LCP81-010	84	3	45	.	.	.	.	.	.
CP83-644	HOCP97-621	93	2	35	.	.	.	.	.	.
CP83-644	L91-255	194	14	75	.	.	.	.	.	.
CP83-644	L91-255	399	27	73	.	.	.	.	.	.
CP83-644	L96-030	64	12	99	.	.	.	.	.	.
CP83-644	L96-040	140	11	81	.	.	.	.	.	.
CP83-644	L96-063	435	33	77	.	.	.	.	.	.
CP83-644	L98-207	141	7	61	.	.	.	.	.	.
CP83-644	LCP81-010	384	16	55	.	.	.	.	.	.

Table 6. Continued.

Female	Male	Survive	1 st Line		2 nd Line		Increase		Assignment	
			No.	Rank pct'l	No.	Rank pct'l	No.	Rank pct'l	No.	Rank pct'l
CP83-644	LCP82-089	347	23	71	.	.	.	.	.	.
CP83-644	LCP85-384	398	0	12	.	.	.	.	.	.
CP88-702	HOCP92-618	179	6	43	.	.	.	.	.	.
CP88-702	L94-428	243	7	39	.	.	.	.	.	.
CP88-702	LCP86-454	86	2	37	.	.	.	.	.	.
CP89-879	HOCP92-618	213	9	55	.	.	.	.	.	.
CP89-879	L91-255	347	24	74	.	.	.	.	.	.
CP89-879	L94-426	212	6	38	.	.	.	.	.	.
CP89-879	L94-428	413	51	95	.	.	.	.	.	.
CP89-879	L94-428	148	0	12	.	.	.	.	.	.
CP89-879	L96-030	221	18	81	.	.	.	.	.	.
CP89-879	LCP81-010	237	12	62	.	.	.	.	.	.
CP89-879	LCP81-010	210	4	32	.	.	.	.	.	.
HO89-889	LCP85-384	730	42	67	.	.	.	.	.	.
HO95-985	CP77-405	232	18	79	.	.	.	.	.	.
HO95-985	HOCP85-845	163	9	65	.	.	.	.	.	.
HO95-985	HOCP95-931	190	3	31	.	.	.	.	.	.
HO95-985	L91-255	376	29	78	.	.	.	.	.	.
HO95-985	L94-426	200	15	76	.	.	.	.	.	.
HO95-985	L94-428	190	10	64	.	.	.	.	.	.
HO95-985	L98-209	236	12	62	.	.	.	.	.	.
HO95-985	LCP85-384	168	27	98	.	.	.	.	.	.
HO95-988	LCP82-089	181	0	12	.	.	.	.	.	.
HO96-565	HOCP92-618	206	14	73	.	.	.	.	.	.
HO96-565	LCP85-384	152	21	96	.	.	.	.	.	.
HOCP85-845	99P3	194	0	12	.	.	.	.	.	.
HOCP85-845	L97-137	209	18	83	.	.	.	.	.	.
HOCP89-846	L94-428	374	20	64	.	.	.	.	.	.
HOCP92-618	LCP85-384	218	9	53	.	.	.	.	.	.
HOCP92-624	99P4	170	7	53	.	.	.	.	.	.
HOCP92-624	HO89-889	431	53	95	.	.	.	.	.	.
HOCP92-624	HOCP85-845	238	15	69	.	.	.	.	.	.
HOCP92-624	HOCP92-618	83	3	45	.	.	.	.	.	.
HOCP92-624	HOCP95-931	206	0	12	.	.	.	.	.	.
HOCP92-624	L75-056	453	0	12	.	.	.	.	.	.
HOCP92-624	L91-255	366	35	90	.	.	.	.	.	.

Table 6. Continued.

Female	Male	Survive	1 st Line		2 nd Line		Increase		Assignment	
			No.	Rank pct'l	No.	Rank pct'l	No.	Rank pct'l	No.	Rank pct'l
HOCP92-624	L94-426	185	12	70	.	.	.	.	.	.
HOCP92-624	L94-428	168	9	64	.	.	.	.	.	.
HOCP92-624	L95-482	433	16	47	.	.	.	.	.	.
HOCP92-624	L97-137	407	23	66	.	.	.	.	.	.
HOCP92-624	LCP81-010	789	17	35	.	.	.	.	.	.
HOCP92-624	LCP85-384	86	7	81	.	.	.	.	.	.
HOCP92-624	LCP86-454	634	48	77	.	.	.	.	.	.
HOCP92-648	HOCP95-931	233	37	97	.	.	.	.	.	.
HOCP92-648	HOCP96-509	362	0	12	.	.	.	.	.	.
HOCP92-648	L91-255	204	7	43	.	.	.	.	.	.
HOCP92-648	L96-063	359	27	76	.	.	.	.	.	.
HOCP92-648	LCP85-384	625	64	91	.	.	.	.	.	.
HOCP92-648	LCP85-384	627	29	58	.	.	.	.	.	.
HOCP92-648	US90-018	219	9	53	.	.	.	.	.	.
HOCP94-806	HOCP85-845	453	34	76	.	.	.	.	.	.
HOCP94-806	HOCP92-618	389	34	84	.	.	.	.	.	.
HOCP94-806	HOCP97-621	91	1	27	.	.	.	.	.	.
HOCP94-806	HOCP97-621	420	36	83	.	.	.	.	.	.
HOCP95-931	L75-056	638	35	65	.	.	.	.	.	.
HOCP96-509	HO89-889	170	7	53	.	.	.	.	.	.
HOCP96-509	HOCP92-618	227	5	35	.	.	.	.	.	.
HOCP96-509	L75-056	460	56	94	.	.	.	.	.	.
HOCP96-509	L94-428	204	8	50	.	.	.	.	.	.
HOCP96-509	L94-432	352	10	38	.	.	.	.	.	.
HOCP96-509	L95-482	151	14	87	.	.	.	.	.	.
HOCP96-509	L97-117	523	44	82	.	.	.	.	.	.
HOCP96-509	LCP85-384	351	7	34	.	.	.	.	.	.
HOCP96-518	LCP85-384	306	0	12	.	.	.	.	.	.
HOCP96-519	L94-428	213	1	25	.	.	.	.	.	.
HOCP96-519	LCP86-454	239	0	12	.	.	.	.	.	.
HOCP96-522	HO95-988	392	19	59	.	.	.	.	.	.
HOCP96-522	HOCP92-618	83	0	12	.	.	.	.	.	.
HOCP96-522	L91-255	76	7	86	.	.	.	.	.	.
HOCP96-522	L95-482	332	5	30	.	.	.	.	.	.
HOCP96-522	L96-026	215	0	12	.	.	.	.	.	.
HOCP96-522	L98-209	155	9	67	.	.	.	.	.	.

Table 6. Continued.

Female	Male	Survive	1 st Line		2 nd Line		Increase		Assignment	
			No.	Rank pct'l	No.	Rank pct'l	No.	Rank pct'l	No.	Rank pct'l
HOCP96-522	LCP82-089	325	14	56	.	.	.	.	.	.
HOCP96-522	LCP85-384	219	21	90	.	.	.	.	.	.
HOCP96-522	LCP85-384	1031	71	74	.	.	.	.	.	.
HOCP96-522	US96-001	203	32	97	.	.	.	.	.	.
HOCP96-525	L94-428	394	0	12	.	.	.	.	.	.
HOCP96-525	L94-432	344	0	12	.	.	.	.	.	.
HOCP96-525	LCP85-384	460	0	12	.	.	.	.	.	.
HOCP97-609	HOCP85-845	224	19	83	.	.	.	.	.	.
HOCP97-609	HOCP97-621	431	40	87	.	.	.	.	.	.
HOCP97-609	L94-426	140	0	12	.	.	.	.	.	.
HOCP97-609	LCP86-454	211	15	75	.	.	.	.	.	.
HOCP97-620	LCP81-030	355	28	81	.	.	.	.	.	.
HOCP97-621	HOCP85-845	389	0	12	.	.	.	.	.	.
HOCP97-621	LCP85-384	1086	40	47	.	.	.	.	.	.
HOCP97-641	HOCP94-806	234	11	59	.	.	.	.	.	.
HOCP97-646	L75-056	361	7	32	.	.	.	.	.	.
HOCP97-646	L95-482	170	2	28	.	.	.	.	.	.
HOCP97-670	L94-432	229	13	66	.	.	.	.	.	.
HOCP97-670	L94-432	173	19	92	.	.	.	.	.	.
HOCP97-697	L94-426	194	7	45	.	.	.	.	.	.
L75-056	L98-207	243	19	79	.	.	.	.	.	.
L89-113	HO95-988	388	26	72	.	.	.	.	.	.
L89-113	HOCP85-845	178	6	43	.	.	.	.	.	.
L89-113	HOCP92-618	435	17	50	.	.	.	.	.	.
L89-113	L91-255	399	0	12	.	.	.	.	.	.
L89-113	L94-428	462	0	12	.	.	.	.	.	.
L89-113	L94-428	423	17	51	.	.	.	.	.	.
L89-113	L94-432	366	0	12	.	.	.	.	.	.
L89-113	LCP82-089	197	4	34	.	.	.	.	.	.
L90-191	HOCP94-806	85	3	44	.	.	.	.	.	.
L90-191	LCP82-089	222	0	12	.	.	.	.	.	.
L91-255	HO89-889	375	6	31	.	.	.	.	.	.
L91-255	HOCP95-931	167	5	40	.	.	.	.	.	.
L91-255	L94-428	195	3	30	.	.	.	.	.	.
L91-255	LCP82-089	413	0	12	.	.	.	.	.	.
L91-255	LCP82-089	359	28	79	.	.	.	.	.	.

Table 6. Continued.

Female	Male	Survive	1 st Line		2 nd Line		Increase		Assignment	
			No.	Rank pct'l	No.	Rank pct'l	No.	Rank pct'l	No.	Rank pct'l
L91-255	LCP85-384	646	79	94	.	.	.	.	.	.
L91-255	US90-018	207	5	37	.	.	.	.	.	.
L94-426	HOCP85-845	175	5	39	.	.	.	.	.	.
L94-426	LCP82-089	224	3	29	.	.	.	.	.	.
L94-426	LCP85-384	225	17	77	.	.	.	.	.	.
L94-428	LCP86-454	150	0	12	.	.	.	.	.	.
L94-432	CP78-357	326	28	83	.	.	.	.	.	.
L94-432	HO95-988	176	0	12	.	.	.	.	.	.
L94-432	HOCP85-845	183	7	49	.	.	.	.	.	.
L94-432	HOCP92-618	407	0	12	.	.	.	.	.	.
L94-432	HOCP97-621	323	14	56	.	.	.	.	.	.
L94-432	HOCP97-670	221	0	12	.	.	.	.	.	.
L94-432	L91-255	203	8	50	.	.	.	.	.	.
L94-432	L98-209	342	23	72	.	.	.	.	.	.
L94-432	LCP85-384	690	64	87	.	.	.	.	.	.
L94-432	US93-015	189	7	47	.	.	.	.	.	.
L95-482	LCP82-089	542	13	37	.	.	.	.	.	.
L96-026	CP83-644	158	0	12	.	.	.	.	.	.
L96-026	HO95-988	504	33	70	.	.	.	.	.	.
L96-026	HOCP85-845	198	0	12	.	.	.	.	.	.
L96-026	HOCP85-845	302	12	51	.	.	.	.	.	.
L96-026	HOCP97-670	421	28	72	.	.	.	.	.	.
L96-026	L91-255	340	11	42	.	.	.	.	.	.
L96-026	LCP81-010	237	0	12	.	.	.	.	.	.
L96-026	LCP82-089	190	0	12	.	.	.	.	.	.
L96-030	HO95-988	193	18	87	.	.	.	.	.	.
L96-030	HOCP96-525	208	9	56	.	.	.	.	.	.
L96-040	HOCP95-931	404	0	12	.	.	.	.	.	.
L96-040	L94-426	206	7	43	.	.	.	.	.	.
L96-092	HOCP96-525	160	0	12	.	.	.	.	.	.
L97-113	HOCP85-845	167	24	97	.	.	.	.	.	.
L97-113	L91-255	188	0	12	.	.	.	.	.	.
L97-113	LCP81-010	205	16	79	.	.	.	.	.	.
L97-113	US96-005	425	5	28	.	.	.	.	.	.
L97-117	L94-432	197	0	12	.	.	.	.	.	.
L97-121	L94-428	231	3	29	.	.	.	.	.	.

Table 6. Continued.

Female	Male	Survive	1 st Line		2 nd Line		Increase		Assignment	
			No.	Rank pct'l	No.	Rank pct'l	No.	Rank pct'l	No.	Rank pct'l
L97-121	L94-432	158	18	93	.	.	.	.	.	.
L97-121	US90-018	227	9	51	.	.	.	.	.	.
L97-128	HO95-988	420	37	85	.	.	.	.	.	.
L97-128	L91-255	473	0	12	.	.	.	.	.	.
L97-128	LCP85-384	859	0	12	.	.	.	.	.	.
L97-137	US96-001	194	6	41	.	.	.	.	.	.
L97-142	HO95-988	390	0	12	.	.	.	.	.	.
L97-142	HO95-988	215	0	12	.	.	.	.	.	.
L97-142	LCP82-089	195	0	12	.	.	.	.	.	.
L97-143	L94-428	166	6	45	.	.	.	.	.	.
L97-147	L94-432	165	15	86	.	.	.	.	.	.
L98-191	HOCP97-621	87	10	93	.	.	.	.	.	.
L98-207	HOCP85-845	200	6	40	.	.	.	.	.	.
L98-207	HOCP92-618	329	17	63	.	.	.	.	.	.
L98-207	L94-428	372	0	12	.	.	.	.	.	.
L98-207	L94-432	816	41	61	.	.	.	.	.	.
L98-207	LCP81-010	379	24	69	.	.	.	.	.	.
LCP81-010	HOCP95-931	208	0	12	.	.	.	.	.	.
LCP81-010	HOCP97-621	402	8	34	.	.	.	.	.	.
LCP81-010	L91-255	417	24	67	.	.	.	.	.	.
LCP81-010	L94-432	1029	0	12	.	.	.	.	.	.
LCP81-010	LCP81-030	208	0	12	.	.	.	.	.	.
LCP81-010	LCP85-384	1113	110	91	.	.	.	.	.	.
LCP81-010	LCP85-384	1564	64	53	.	.	.	.	.	.
LCP81-030	L94-432	112	0	12	.	.	.	.	.	.
LCP82-089	HOCP97-621	182	11	68	.	.	.	.	.	.
LCP85-384	99P3	387	37	90	.	.	.	.	.	.
LCP86-454	99P4	238	7	39	.	.	.	.	.	.
LCP86-454	HO95-988	599	13	35	.	.	.	.	.	.
LCP86-454	L96-040	146	0	12	.	.	.	.	.	.
LCP86-454	LCP85-384	207	19	86	.	.	.	.	.	.
LCP86-454	LCP85-384	1098	103	88	.	.	.	.	.	.
LHO83-153	LCP82-089	192	10	63	.	.	.	.	.	.
LHO83-153	LCP85-384	189	18	89	.	.	.	.	.	.
US79-010	HOCP85-845	348	20	66	.	.	.	.	.	.
US79-010	HOCP92-618	219	14	70	.	.	.	.	.	.

Table 6. Continued.

Female	Male	Survive	1 st Line		2 nd Line		Increase		Assignment	
			No.	Rank pcnt'l	No.	Rank pcnt'l	No.	Rank pcnt'l	No.	Rank pcnt'l
US79-010	L94-426	206	0	12	.	.	.	.	.	.
US79-010	LCP85-384	186	9	59	.	.	.	.	.	.
US79-010	LCP86-454	439	56	96	.	.	.	.	.	.
US80-004	HOCP92-618	71	1	29	.	.	.	.	.	.
US80-004	L94-428	188	7	47	.	.	.	.	.	.
US90-018	HOCP85-845	409	2	25	.	.	.	.	.	.
US90-018	L94-428	364	13	45	.	.	.	.	.	.
US90-018	L94-428	515	12	37	.	.	.	.	.	.
US90-021	LCP81-010	179	11	69	.	.	.	.	.	.
US90-021	LCP81-030	206	0	12	.	.	.	.	.	.
US93-016	L94-426	192	9	59	.	.	.	.	.	.
US93-016	L94-428	267	0	12	.	.	.	.	.	.
US93-016	L94-428	205	10	60	.	.	.	.	.	.
US93-016	LCP85-384	101	2	34	.	.	.	.	.	.
US93-016	LCP85-384	181	2	27	.	.	.	.	.	.
US96-001	US90-018	340	30	85	.	.	.	.	.	.
US96-005	L94-428	379	15	51	.	.	.	.	.	.

Table 7. Plant weight and rank summary statistics from the 2000 crossing series plant cane cross appraisal test at the St. Gabriel Research Station in 2001.

Female	Male	Plant Weight		Kg/Plant	Pcnt'l				
		Kg/Plant	Pcnt'l						
						HOC98-741	HOC98-845	3.77	48
L99-224	L99-233	5.46	98			HOC98-717	LCP85-384	3.76	47
LCP87-492	L99-233	5.01	97			L98-198	US79-010	3.66	46
L94-428	L99-226	4.93	96			L93-399	L99-224	3.61	44
L99-224	L91-255	4.87	94			L99-229	L90-191	3.55	43
L99-224	L99-226	4.83	93			TUCCP77-042	HOC92-618	3.54	42
L99-229	LCP81-010	4.77	92			US96-002	L99-226	3.52	40
US79-010	L96-040	4.70	90			HOC92-618	L99-233	3.47	39
L98-207	L99-233	4.69	89			HOC97-645	L98-197	3.46	38
HOC98-776	LCP81-010	4.59	88			HOC92-624	L99-226	3.44	36
HOC96-522	L99-226	4.53	86			L99-224	US79-010	3.43	35
HOC97-645	L99-226	4.46	85			HOC95-950	L99-237	3.40	33
L98-209	L99-233	4.46	84			HOC96-561	L99-229	3.40	33
CP79-318	L99-233	4.42	82			L99-226	L99-233	3.35	31
CP78-317	L99-229	4.35	81			HOC98-776	HOC98-845	3.34	30
L99-224	LCP81-010	4.32	80			L97-128	LCP85-384	3.33	28
HOC96-561	L99-233	4.31	78			HOC98-776	L91-281	3.30	27
HOC92-624	US80-004	4.25	77			L98-207	00P5	3.27	26
LCP87-492	L91-255	4.24	76			L97-128	L99-229	3.27	25
US79-010	L99-234	4.23	75			L98-158	US79-010	3.27	23
HOC96-561	HOC98-845	4.22	73			L99-226	HOC96-540	3.26	22
LCP86-454	L99-234	4.14	72			LCP81-010	L99-234	3.24	21
L91-281	L99-237	4.08	71			HOC97-606	L89-113	3.14	19
LCP85-384	L99-226	4.07	69			HOC98-776	HOC97-621	3.08	18
HOC92-648	HOC97-609	4.07	68			HOC98-776	L89-113	3.06	17
L93-399	L99-233	4.06	67			L99-237	HOC98-845	2.98	15
L94-432	L99-224	4.05	65			HOC98-743	L98-209	2.98	14
HOC98-717	L91-255	4.05	64			HOC98-743	L99-226	2.90	13
HOC92-624	L99-229	4.02	63			HOC98-776	L96-040	2.84	11
L94-426	L99-233	4.02	61			L99-226	LCP85-384	2.74	10
L99-229	LCP85-384	4.00	60			HOC96-561	HOC98-648	2.70	9
US92-010	L91-281	3.99	59			L99-237	HOC98-648	2.64	7
US96-001	L99-226	3.98	57			HOC91-552	L99-233	2.57	6
US79-010	L94-428	3.94	56			L96-040	HOC98-776	2.27	5
HOC98-741	HOC97-609	3.92	55			L99-245	HOC98-845	2.24	3
L90-191	US96-001	3.90	53			HOC98-743	US96-001	1.99	2
CP79-318	HOC98-845	3.89	52			L98-197	HOC96-522	1.67	1
L93-399	L99-226	3.89	51						
HOC94-867	L99-226	3.87	50						

2001 LOUISIANA SUGARCANE VARIETY DEVELOPMENT PROGRAM
NURSERY AND INFIELD VARIETY TRIALS

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Five years after the initial hybridization of parents, clones that have met or exceeded criteria for important characteristics at previous selection stages are assigned permanent numbers by each of the Louisiana Sugarcane Variety Development Programs. The LSU AgCenter program assigns variety designations of “L”, and the USDA program assigns variety designations of “HO” and “HOCP.” These varieties are planted in replicated nursery and infield tests at locations across the southern Louisiana sugarcane growing areas.

One objective of the nursery and infield stages is to identify and select varieties that will perform well across the range of environments a commercial variety will encounter in Louisiana. Nursery tests are initially planted at three on-station locations (USDA-ARS, Ardoyne Farm, Iberia Research Station, and St. Gabriel Research Station) during the year of assignment, and four to five additional and different off-station locations are planted the year after assignment. In 2001, both LSU AgCenter and USDA varieties were planted together both in the nursery and infield trials. The locations, soil types, dates of planting, and dates of harvest are listed in Table 1.

The on-station nursery trials were planted in single row (6-foot centers), 16-foot plots with 4-foot alleys. The off-station nurseries (Blake Newton Farm, Danny Stoute, and Westfield) were planted in single row, 20-foot plots with 5-foot alleys. The infield tests (Blackberry and Sugarland Farms) were planted in two row, 25-foot plots with 5-foot alleys. The experimental design for both nursery and infield tests was a randomized complete block with two replications per location. Three commercial check varieties, CP70-321, HOCP 85-845, and LCP 85-384, were planted in tests for comparison. Beginning in 2001, HOCP91-555 replaced CP70-321 as a check variety.

A combine harvester/weigh wagon system was used to cut and weigh harvested plots for the infield tests. This system worked extremely well, with the immediate benefit of the amount of labor required for the collection of the data being reduced. The accuracy of data collection was improved because of the absence of internal sugarcane jams in the combine harvester (soldier harvesters frequently jam), the absence of errors in topper height adjustment between plots, and the minimization of errors in terms of sugarcane missed and not weighed. The infield variety trials are also important for screening experimental varieties for suitability to mechanical harvesting.

Millable stalk counts for both nursery and infield tests were made in August. During the harvest season, 10-stalk samples were harvested by hand and stripped of leaves for the nursery tests. A 15-stalk sample was harvested by hand and stripped of leaves for the infield tests and sent to the USDA Ardoyne Farm and analyzed using the pre-breaker press. Samples from the nursery tests were weighed and milled at the sucrose laboratory in St. Gabriel to obtain a juice sample for analysis. Brix and pol readings were

used to estimate theoretical recoverable sugar per ton as estimated by the Winter-Carp formula as reported by Gravois and Milligan (1992). Cane yield for the nursery tests was estimated as the product of stalk weight and stalk number. Cane yield for the infield tests was determined from the plot weights. Sugar per acre was calculated as the product of sugar per ton and cane yield.

The 2001 sugarcane crop experienced a reasonably normal growing season throughout most of the year. Spring and early summer were dry and followed by excessive rains from tropical storm Allison. Growing conditions for the remainder of the year were good. Warm and dry conditions persisted during most of the fall harvest season, and all locations were harvested before the first freeze. Recommended cultural practices were used at all test locations.

LCP85-384 has been the leading variety in Louisiana since 1998. Approximately, 78% of Louisiana's harvested sugarcane acreage was in LCP85-384 for 2001. For comparison, LC85-384 is highlighted in the tables. To adjust for missing data, the statistical analysis calculated least square means (SAS 8.01 Proc Mixed). Mean separation used least square means probability differences where $P=0.05$. Varieties that are significantly higher or lower than LCP85-384 are denoted by a plus (+) or minus (-), respectively, next to the value for each trait.

References:

Gravois, K.A. and S.B. Milligan. 1992. Genetic relationships between fiber and sugarcane yield components. *Crop Sci.* 32: 62-66.

Table 1. 2001 Location, soil texture, and planting and harvest dates for the nursery and infield nursery tests.

Series	Location†	Stage	Soil Texture‡	Planting Date	Harvest Dates			Varieties	
					1999	2000	2001	No. Planted	No. Harvested
1997	Ardoyne*	Nursery	Csl	11/4/97	11/2	10/12	9/26	56	2
1997	St. Gabriel	Infield	Sc	8/25/98	11/15	10/16	10/9	43	2
1997	Gonsoulin	Nursery	Cosl	8/26/98	11/8	9/28	9/26	26	2
1997	Stoute	Nursery	Bsc	8/28/98	11/8	10/25	9/26	26	2
1997	Westfield	Nursery	Sc	8/26/98	11/17	10/25	9/26	26	2
1998	Ardoyne	Nursery	Csl	10/15/98	12/7	11/1	10/18	53	2
1998	Iberia	Nursery	Bsc	10/14/98	12/6	11/1	10/3	53	2
1998	St. Gabriel	Nursery	Sc	10/16/98	11/18	11/1	9/30	53	2
1998	Gonsoulin	Nursery	Cosl	8/13/99		11/30	11/7	44	4
1998	Blackberry	Infield	Csl	8/24/99		11/30	12/4	65	11
1998	Stoute	Nursery	Bsc	8/20/99		11/15	10/16	13	2
1998	Westfield	Nursery	Csl	8/17/99		12/16	11/13	44	4
1999	Ardoyne	Nursery	Csl	10/20/99		11/20	11/19	34	4
1999	Iberia	Nursery	Bsc	10/19/99		11/30	10/25	34	4
1999	St. Gabriel	Nursery	Sc	10/18/99		11/15	10/18	34	4
1999	Blackberry	Infield	Csl	8/17/00			12/4	39	14
1999	Newton	Nursery	Mosl	8/24/00			11/12	39	10
1999	Stoute	Nursery	Bsc	8/18/00			11/15	16	4
1999	Sugarland	Infield	Cosl	8/23/00			12/6	39	13
1999	Westfield	Nursery	Csl	8/21/00			10/18	39	10
2000	Ardoyne	Nursery	Csl	10/12/00			11/19	33	13
2000	Iberia	Nursery	Bsc	10/13/00			11/19	33	13
2000	St. Gabriel	Nursery	Sc	10/12/00			12/9	33	13
2000	Newton	Nursery	Mosl	8/24/01				48	
2000	Stoute	Nursery	Bsc	8/23/01				13	
2000	Westfield	Nursery	Csl	9/18/01				48	
2000	Blackberry	Infield	Csl	8/21/01				48	
2000	Sugarland	Infield	Cosl	8/22/01				47	
2001	Ardoyne	Nursery	Csl	10/18/01				37	
2001	Iberia	Nursery	Bsc	10/22/01				37	
2001	St. Gabriel	Nursery	Sc	10/9/01				37	

Table 1. Continued.

* Harvest date in 1998 was 12/7.

† Ardoyne-U.S.D.A. Ardoyne Farm (Terrebonne), Blackberry Farm (Vacherie), Gonsoulin-R. Gonsoulin Farm (Iberia), Iberia-Iberia Research Station (Iberia), Newton-Blake Newton Farm (Avoyelles), St. Gabriel-Saint Gabriel Research Station (Iberville), Stoute-D. Stoute Farm (St. Martin), Sugarland Farm (Youngsville), Westfield-Westfield Plantation (Assumption)

‡ Bsc-Baldwin silty clay, Csl-Commerce silt loam, Cosl-Coteau silt loam, Csl-Jeanerette silt loam, Sc-Sharkey clay Mosl-Moreland silt loam.

Table 2. 2001 Nursery third-stubble means of the 1997 "L" assignment series in light soil at Ardoyne Farm, Chacahoula, La.

Variety	Sugar per Acre (lbs/A)	Cane Yield (tons/A)	Sugar per Ton (lbs/ton)	Stalk Weight (lbs)	Stalk Number (stalks/A)
CP70-321	7053	35.1	202	2.00	35166 -
LCP85-384	8223	42.5	198	1.60	52181
HOCP85-845	6883	33.1	208	1.76	37434 -
L97-128	9378	39.0	241	1.68	46736
L97-137	9075	44.1	204	1.77	49459

Table 3. 2001 Infield† second-stubble means of the 1997 "L" assignment series in heavy soil at St. Gabriel Research Station, St. Gabriel, La.

Variety	Sugar per Acre (lbs/A)	Cane Yield (tons/A)	Sugar per Ton (lbs/ton)	Stalk Weight (lbs)	Stalk Number (stalks/A)
CP70-321	3355 -	17.1 -	197 +	1.74	19635 -
LCP85-384	6504	39.3	165	1.75	44954
HOCP85-845	4492 -	23.3 -	194 +	1.61	29166 -
L97-128	7557	38.2	198 +	1.99	38412
L97-137	5225 -	31.1 -	169	1.80	34797 -

† Harvested with combine harvester.

Table 4. 2001 Nursery second-stubble means of the 1997 "L" assignment series in light soil at Ronnie Gonsoulin Farm, New Iberia, La.

Variety	Sugar per Acre (lbs/A)	Cane Yield (tons/A)	Sugar per Ton (lbs/ton)	Stalk Weight (lbs)	Stalk Number (stalks/A)
CP70-321	5835	30.7	190	1.91	32216
LCP85-384	6059	37.9	159	1.57	48551
HOCP85-845	7297	38.0	195	1.95	38796
L97-128	11069 +	49.5	224	1.87	53316
L97-137	8470	53.8 +	158	2.04 +	52862

Table 5. 2001 Nursery second-stubble means of the 1997 "L" assignment series in heavy soil at Danny Stoute's Farm, Cecilia, La.

Variety	Sugar per Acre (lbs/A)	Cane Yield (tons/A)	Sugar per Ton (lbs/ton)	Stalk Weight (lbs)	Stalk Number (stalks/A)
CP70-321	6011	34.2	175	1.71	39930 -
LCP85-384	8468	45.9	180	1.43	63752
HOCP85-845	5536	31.6	175	1.52	41745 -
L97-128	6538	31.3	206	1.75	35846 -
L97-137	7966	44.6	175	1.63	54450 -

Table 6. 2001 Nursery second-stubble means of the 1997 "L" assignment series in heavy soil at Westfield, Painscourtville, La.

Variety	Sugar per Acre (lbs/A)	Cane Yield (tons/A)	Sugar per Ton (lbs/ton)	Stalk Weight (lbs)	Stalk Number (stalks/A)
CP70-321	6078 -	30.5 -	199	1.71 +	36300 -
LCP85-384	8916	50.6	175	1.36	75096
HOCP85-845	7441	37.0 -	202 +	1.83 +	40837 -
L97-128	11005	61.5 +	197	1.89 +	65340
L97-137	10800	62.2 +	194	1.61	77818

Table 7. 2001 Nursery second-stubble means of the 1998 "L" assignment series in light soil at Ardoyne Farm, Chacahoula, La.

Variety	Sugar per Acre (lbs/A)	Cane Yield (tons/A)	Sugar per Ton (lbs/ton)	Stalk Weight (lbs)	Stalk Number (stalks/A)
CP70-321	10892	45.5	239	2.56 +	35619 -
LCP85-384	13486	56.2	239	1.75	64206
HOCP85-845	12258	51.3	239	2.28	44921 -
L98-207	14411	57.1	253	1.80	63298
L98-209	13280	54.1	246	2.36 +	45829 -

Table 8. 2001 Nursery second-stubble means of the 1998 "L" assignment series in heavy soil at Iberia Research Station, Jeanerette, La.

Variety	Sugar per Acre	Cane Yield	Sugar per Ton	Stalk Weight	Stalk Number
	(lbs/A)	(tons/A)	(lbs/ton)	(lbs)	(stalks/A)
CP70-321	7659	39.0	196	2.51	31082 -
LCP85-384	10412	54.5	191	1.74	62618
HOCP85-845	7715	36.9	209 +	2.03	35393 -
L98-207	10994	49.5	222 +	1.78	55584
L98-209	13528	68.5	197	2.45	55584

Table 9. 2001 Nursery second-stubble means of the 1998 "L" assignment series in heavy soil at St. Gabriel Research Station, St. Gabriel, La.

Variety	Sugar per Acre	Cane Yield	Sugar per Ton	Stalk Weight	Stalk Number
	(lbs/A)	(tons/A)	(lbs/ton)	(lbs)	(stalks/A)
CP70-321	5690	35.6 -	158	2.06	34031 -
LCP85-384	9847	68.1	145	1.76	77591
HOCP85-845	3581 -	20.6 -	174	1.43	28813 -
L98-207	8430	48.5	170	1.64	58988 -
L98-209	12223	71.1	171	2.16	65794

Table 10. 2001 Nursery first-stubble means of the 1998 "HOCP" and "L" assignment series in light soil at Ronnie Gonsoulin Farm, New Iberia, La.

Variety	Sugar per Acre	Cane Yield	Sugar per Ton	Stalk Weight	Stalk Number
	(lbs/A)	(tons/A)	(lbs/ton)	(lbs)	(stalks/A)
CP70-321	13103 -	50.8 -	258	2.94 +	34666 -
TUCCP77-042	10096 -	41.1 -	246	2.56	32125 -
LCP85-384	17251	65.8	262	2.20	59714
HOCP85-845	11115 -	43.3 -	256	2.38	36481 -
L98-207	15100	56.7	265	1.76	64251
L98-209	17558	66.1	266	2.59	51183 -
HOCP98-741	14255	58.4	244	3.12 +	37389 -

Table 11. 2001 Infield† first-stubble means of the 1998 "HOCP" and "L" assignment series in light soil at Blackberry Farm, Vacherie, La.

Variety	Sugar per Acre (lbs/A)	Cane Yield (tons/A)	Sugar per Ton (lbs/ton)	Stalk Weight (lbs)	Stalk Number (stalks/A)	Fiber %
CP70-321	8443 -	30.4	280	2.22	27363 -	10.8
TUCCP77-042	11339	46.1	248 -	2.49	36992	13.3
LCP85-384	12637	42.7	296	1.95	44150	11.4
HOCP85-845	10718	37.4	286	2.67 +	28398 -	14.1 +
HOCP96-540	13423	43.6	308	2.59 +	33921	12.2
L97-128	12546	43.4	289	2.69 +	32368 -	12.9
L97-137	11350	42.4	267	2.26	37563	12.1
HOCP97-609	10223	37.3	272	2.27	33036	12.1
L98-207	9755 -	37.9	259	1.73	43967	12.5
L98-209	9685 -	32.5	298	2.51	26433 -	13.9
HOCP98-741	12753	45.9	278	3.19 +	28754 -	14.2 +

† Harvested with combine harvester.

Table 12. 2001 Nursery first-stubble means of the 1998 "L" assignment series in heavy soil at Danny Stoute's Farm, Cecilia, La.

Variety	Sugar per Acre (lbs/A)	Cane Yield (tons/A)	Sugar per Ton (lbs/ton)	Stalk Weight (lbs)	Stalk Number (stalks/A)
CP70-321	6760 -	36.5 -	186 -	2.05	35393 -
LCP85-384	12070	55.7	216	2.16	51728
HOCP85-845	5316 -	26.2 -	204	2.08	25229 -
L98-207	11869	49.6	240	1.79 -	55539
L98-209	12396	58.4	212	2.24	52091

Table 13. 2001 Nursery first-stubble means of the 1998 "HOCP" and "L" assignment series in light soil at Westfield, Paincourtville, La.

Variety	Sugar per Acre (lbs/A)	Cane Yield (tons/A)	Sugar per Ton (lbs/ton)	Stalk Weight (lbs)	Stalk Number (stalks/A)
CP70-321	12184	43.5 -	280	2.16 +	40293 -
TUCCP77-042	19895	89.6 +	222 -	2.82 +	63525
LCP85-384	15857	56.5	279	1.81	62436
HOCP85-845	13987	50.0	281	2.46 +	40656 -
L98-207	18629	66.5	280	2.02	66248
L98-209	21571 +	81.2 +	266	2.72 +	59532
HOCP98-741	15707	61.9	253	2.89 +	43016 -

Table 14. 2001 Nursery first-stubble means of the 1999 "L" assignment series in light soil at Ardoyne Farm, Chacahoula, La.

Variety	Sugar per Acre (lbs/A)	Cane Yield (tons/A)	Sugar per Ton (lbs/ton)	Stalk Weight (lbs)	Stalk Number (stalks/A)
CP70-321	13374 -	48.1 -	278	3.03	31763 -
LCP85-384	18920	66.1	286	2.44	54223
HOCP85-845	13089 -	46.8 -	280	2.40	39023 -
L99-213	15181 -	50.0 -	304	2.19	45829 -
L99-226	18536	64.3	288	3.39 +	38569 -
L99-231	15051 -	52.2 -	288	2.45	42879 -
L99-233	14140 -	50.4 -	279	2.37	42653 -

Table 15. 2001 Nursery first-stubble means of the 1999 "L" assignment series in heavy soil at Iberia Research Station, Jeanerette, La.

Variety	Sugar per Acre (lbs/A)	Cane Yield (tons/A)	Sugar per Ton (lbs/ton)	Stalk Weight (lbs)	Stalk Number (stalks/A)
CP70-321	11197	49.8	224	2.74 +	36300 -
LCP85-384	12661	52.9	239	2.09	50593
HOCP85-845	8614	37.1 -	232	2.15	34712 -
L99-213	11558	50.4	230	1.98	50820
L99-226	16718	62.7	266 +	3.32 +	37888 -
L99-231	12147	46.1	264	2.45 +	37661 -
L99-233	13868	55.0	252	2.29	48098

Table 16. 2001 Nursery first-stubble means of the 1999 "L" assignment series in heavy soil at St. Gabriel Research Station, St. Gabriel, La.

Variety	Sugar per Acre (lbs/A)	Cane Yield (tons/A)	Sugar per Ton (lbs/ton)	Stalk Weight (lbs)	Stalk Number (stalks/A)
CP70-321	6479 -	32.0 -	204	2.23	28586 -
LCP85-384	9702	52.0	187	2.10	49913
HOCP85-845	5110 -	25.9 -	197	2.08	24956 -
L99-213	10510	48.6	217 +	1.86	52181
L99-226	5712 -	25.9 -	219 +	1.80	28586 -
L99-231	10435	50.1	209 +	2.08	48097
L99-233	10131	59.3	171	2.23	53316

Table 17. 2001 Infield† plant cane means of the 1999 “HOCP” and “L” assignment series in light soil at Blackberry Farm, Vacherie, La.

Variety	Sugar per Acre (lbs/A)	Cane Yield (tons/A)	Sugar per Ton (lbs/ton)	Stalk Weight (lbs)	Stalk Number (stalks/A)	Fiber %
CP70-321	8580	29.6	289	2.55	22317	13.2
LCP85-384	7975	30.9	256	2.32	26655	11.1
HOCP85-845	8569	30.3	283	2.36	25911	12.6
L99-213	9605	34.0	283	1.98	34345	15.7 +
L99-226	12371 +	40.3 +	307 +	2.99 +	27409	11.5
L99-231	7174	25.9	277	2.18	23775	10.9
L99-233	8699	33.2	258	2.16	30896	13.6 +
HOCP99-804	8729	30.6	285	2.70	23014	12.1
HOCP99-808	8156	29.5	277	1.85	31907	11.2
HOCP99-815	8099	28.8	280	2.21	26035	12.6
HOCP99-825	9184	33.0	277	2.65	24869	12.1
HOCP99-832	5270	19.6 -	266	1.28 -	31455	10.9
HOCP99-866	10320	39.5	261	3.16 +	25259	10.6
HOCP99-870	8741	35.4	247	1.92	37233	13.8 +

† Harvested with combine harvester.

Table 18. 2001 Nursery plant cane means of the 1999 “HOCP” and “L” assignment series in light soil at Newton Farm, Bunkie, La.

Variety	Sugar per Acre (lbs/A)	Cane Yield (tons/A)	Sugar per Ton (lbs/ton)	Stalk Weight (lbs)	Stalk Number (stalks/A)
CP70-321	14270	60.0	238	3.01	39930 -
LCP85-384	15623	67.1	234	2.41	55584
HOCP85-845	11999	55.4	216 -	2.58	43106 -
L99-213	13092	51.2	256 +	2.04	50139
L99-226	21220	79.1	270 +	3.28 +	47190
L99-231	11762	46.7	252 +	2.40	38796 -
L99-233	15525	66.2	235	2.34	57173
HOCP99-804	10104	42.6 -	237	2.18	39023 -
HOCP99-808	11746	49.9	236	2.24	44694
HOCP99-815	15941	64.1	249	2.87	44694
HOCP99-825	15778	61.7	256 +	2.73	45375
HOCP99-866	16188	69.1	235	3.87 +	35619 -
HOCP99-870	13981	60.7	230	2.59	46736

Table 19. 2001 Nursery plant cane means of the 1999 "L" assignment series in heavy soil at Danny Stoute's Farm, Cecilia, La.

Variety	Sugar per Acre (lbs/A)	Cane Yield (tons/A)	Sugar per Ton (lbs/ton)	Stalk Weight (lbs)	Stalk Number (stalks/A)
CP70-321	9184	40.3	226	2.90 +	27679
LCP85-384	10801	43.4	255	2.25	39023
HOCP85-845	7246	30.3	240	2.22	27225
L99-213	8277	31.7	263	1.44 -	44014
L99-226	16415	63.7	256	2.90 +	43787
L99-231	11818	43.8	271	2.17	39930
L99-233	12436	50.2	249	2.07	49005

Table 20. 2001 Infield† plant cane means of the 1999 "HOCP" and "L" assignment series in light soil at Sugarland Farm, Youngsville, La.

Variety	Sugar per Acre (lbs/A)	Cane Yield (tons/A)	Sugar per Ton (lbs/ton)	Stalk Weight (lbs)	Stalk Number (stalks/A)	Fiber %
CP70-321	11190 +	41.2 +	271	3.08 +	26820	12.6
LCP85-384	8112	32.3	253	2.24	29876	11.1
HOCP85-845	10879 +	39.2	277	2.69	29154	12.6
L99-213	10815 +	36.5	296 +	2.25	32804	15.5 +
L99-226	11017 +	36.3	305 +	2.97 +	24787	11.2
L99-231	7279	25.8	282	2.29	22960	12.6
L99-233	8129	32.0	254	1.83	35226	12.2
HOCP99-804	9153	32.0	286	2.63	24433	10.9
HOCP99-808	8470	30.0	282	2.14	28159	12.3
HOCP99-815	11732 +	40.5 +	290	2.38	34453	14.8 +
HOCP99-825	10422 +	39.2	266	2.49	31726	11.8
HOCP99-866	12685 +	45.3 +	280	3.75 +	24817	10.1
HOCP99-870	10685 +	38.3	279	1.88	40790	14.3 +

† Harvested with combine harvester.

Table 21. 2001 Nursery plant cane means of the 1999 "HOCP" and "L" assignment series in light soil at Westfield, Paincourtville, La.

Variety	Sugar per Acre (lbs/A)	Cane Yield (tons/A)	Sugar per Ton (lbs/ton)	Stalk Weight (lbs)	Stalk Number (stalks/A)
CP70-321	16567	64.7	257	2.68 +	48324 -
LCP85-384	14619	59.0	248	1.77	66474
HOCP85-845	14441	60.8	238	2.40 +	50593 -
L99-213	17428	67.2	252	1.72	79179
L99-226	22246 +	82.2	272	2.80 +	58307
L99-231	11048	48.7	228	1.81	53996
L99-233	15704	67.9	234	1.92	72146
HOCP99-804	12877	65.3	198	2.21	58988
HOCP99-808	9978	50.5	194 -	1.88	53769
HOCP99-815	16188	60.3	268	2.18	55358
HOCP99-825	15350	74.8	206	2.97 +	50366 -
HOCP99-866	16353	68.0	242	2.99 +	45148 -
HOCP99-870	13957	60.4	232	1.78	68970

Table 22. 2001 Nursery plant cane means of the 2000 "L" assignment series in light soil at Ardoyne Farm, Chacahoula, La.

Variety	Sugar per Acre (lbs/A)	Cane Yield (tons/A)	Sugar per Ton (lbs/ton)	Stalk Weight (lbs)	Stalk Number (stalks/A)
CP70-321	8451 -	32.6 -	259	2.57	25410 -
LCP85-384	13811	54.9	251	2.58	42653
HOCP85-845	12947	55.6	233	2.81	39703
L00-247	9305 -	46.4	201 -	2.28	40838
L00-249	9638 -	35.6 -	271	2.28	31309 -
L00-250	9647 -	42.6 -	226 -	2.55	33804
L00-255	12118	46.4	261	2.66	34939
L00-257	11033 -	39.5 -	280 +	2.02 -	39023
L00-259	10528 -	44.8	233	2.44	36754
L00-263	13819	57.4	240	2.30	49913
L00-264	13921	60.5	230	2.87	42426
L00-266	9460 -	38.1 -	248	2.65	28813 -
L00-268	12599	51.6	245	2.36	43787
L00-270	12122	53.1	231	2.24	46963
L00-271	8923 -	33.2 -	268	2.15	31989 -
L00-273	10835 -	47.1	230	3.24 +	29040 -

Table 23. 2001 Nursery plant cane means of the 2000 "L" assignment series in heavy soil at Iberia Research Station, Jeanerette, La.

Variety	Sugar per Acre (lbs/A)	Cane Yield (tons/A)	Sugar per Ton (lbs/ton)	Stalk Weight (lbs)	Stalk Number (stalks/A)
CP70-321	9107	33.8	270	2.31	29267 -
LCP85-384	11201	41.5	270	2.21	37661
HOCP85-845	13017	50.0	261	2.93 +	34031
L00-247	8802	35.4	252	2.04	34485
L00-249	7921	29.2	273	1.91	30628
L00-250	8142	34.6	235 -	2.28	30174
L00-255	10929	40.3	271	2.60 +	30855
L00-257	7950	28.9	275	1.91	30401
L00-259	12256	45.4	270	2.36	38569
L00-263	10799	40.1	268	2.07	37888
L00-264	12471	47.2	264	2.67 +	35393
L00-266	10642	41.1	259	2.25	36527
L00-268	13461	49.0	274	2.43	40384
L00-270	12260	46.0	267	2.39	38569
L00-271	9064	33.2	272	2.16	30628
L00-273	8796	34.6	254	2.51	27679 -

Table 24. 2001 Nursery plant cane means of the 2000 "L" assignment series in heavy soil at St. Gabriel Research Station, St. Gabriel, La.

Variety	Sugar per Acre (lbs/A)	Cane Yield (tons/A)	Sugar per Ton (lbs/ton)	Stalk Weight (lbs)	Stalk Number (stalks/A)
CP70-321	12492	46.4 -	269	2.67	34485 -
LCP85-384	14145	61.3	231	2.59	47644
HOCP85-845	12027	51.7	234	2.80	36981
L00-247	10987	58.2	188	2.45	47417
L00-249	11608	48.5	240	2.19 -	44241
L00-250	13336	64.2	208	2.86	44921
L00-255	15637	59.7	261	3.08 +	38796
L00-257	13555	50.3	270	2.57	39476
L00-259	14977	62.7	240	2.74	45602
L00-263	10348	48.6	212	2.30	42426
L00-264	14423	73.3	196	2.82	51954
L00-266	12014	50.8	237	2.40	42653
L00-268	13837	58.4	237	2.72	43106
L00-270	11628	49.2	237	2.23	44241
L00-271	9439 -	38.1 -	248	2.08 -	36754 -
L00-273	11227	52.1	216	2.72	38115

Table 25. 2001 Nursery and Infield second-stubble means of the 1997 "L" assignment series across locations.

Variety	Sugar per Acre (lbs/A)	Cane Yield (tons/A)	Sugar per Ton (lbs/ton)	Stalk Weight (lbs)	Stalk Number (stalks/A)
CP70-321	5320 -	28.1 -	190 +	1.77 +	32020 -
LCP85-384	7487	43.5	170	1.52	58088
HOCP85-845	6191	32.5 -	191 +	1.72 +	37636 -
L97-128	9042	45.1	202 +	1.87 +	48228
L97-137	8115	47.9	169	1.77 +	54982

Table 26. 2001 Nursery second-stubble means of the 1998 "L" assignment series across locations.

Variety	Sugar per Acre (lbs/A)	Cane Yield (tons/A)	Sugar per Ton (lbs/ton)	Stalk Weight (lbs)	Stalk Number (stalks/A)
CP70-321	8081 -	40.0 -	198	2.37 +	33577 -
LCP85-384	11248	59.6	192	1.75	68138
HOCP85-845	7851 -	36.3 -	207 +	1.92	36376 -
L98-207	11278	51.7	215 +	1.74	59290
L98-209	13010	64.5	205	2.32 +	55736

Table 27. 2001 Nursery and Infield first-stubble means of the 1998 "HOCP" and "L" assignment series across locations.

Variety	Sugar per Acre (lbs/A)	Cane Yield (tons/A)	Sugar per Ton (lbs/ton)	Stalk Weight (lbs)	Stalk Number (stalks/A)
CP70-321	10122 -	40.3	251	2.34	34429 -
TUCCP77-042	12837	57.8	224 -	2.60 +	43832 -
LCP85-384	14454	55.2	263	2.03	54507
HOCP85-845	10284 -	39.2 -	257	2.40 +	32691 -
L98-207	13838	59.7	261	1.82	57501
L98-209	15303	59.5	260	2.51 +	47310
HOCP98-741	13299	54.3	244	3.05 +	36004 -

Table 28. 2001 Nursery first-stubble means of the 1999 "L" assignment series across locations.

Variety	Sugar per Acre	Cane Yield	Sugar per Ton	Stalk Weight	Stalk Number
	(lbs/A)	(tons/A)	(lbs/ton)	(lbs)	(stalks/A)
CP70-321	10350	43.3	235	2.67	32216 -
LCP85-384	13761	57.0	237	2.21	51576
HOCP85-845	8938 -	36.6 -	236	2.21	32897 -
L99-213	12416	49.6	250	2.01	49610
L99-226	13655	51.0	258	2.83 +	35014 -
L99-231	12544	49.5	254	2.33	42879
L99-233	12713	54.9	243	2.29	48022

Table 29. 2001 Nursery and Infield plant cane means of the 1999 "HOCP" and "L" assignment series across locations.

Variety	Sugar per Acre	Cane Yield	Sugar per Ton	Stalk Weight	Stalk Number	Fiber
	(lbs/A)	(tons/A)	(lbs/ton)	(lbs)	(stalks/A)	%
CP70-321	11958	47.2	256	2.84 +	33214 -	12.9
LCP85-384	11426	46.5	249	2.20	43523	11.1
HOCP85-845	10627	43.2	251	2.45	35198 -	12.6
L99-213	11844	44.1	270 +	1.88 -	48096	15.6 +
L99-226	16654 +	60.3 +	282 +	2.99 +	40296	11.4
L99-231	9816	38.2 -	262	2.17	35891 -	11.7
L99-233	12099	49.9	246	2.06	48889	12.9 +
HOCP99-804	9936	41.7	250	2.41	35858 -	11.5
HOCP99-808	9308	39.1	245	2.01	39127	11.7
HOCP99-815	12711	47.5	270	2.39	39629	13.7 +
HOCP99-825	12404	51.3	249	2.69 +	37578	12.0
HOCP99-832	8120	34.2	247	1.31 -	43616	10.9
HOCP99-866	13607	54.6	253	3.42 +	32205 -	10.3
HOCP99-870	11562	48.7	245	2.02	47926	14.1 +

Table 30. 2001 Nursery plant cane means of the 2000 "L" assignment series across locations.

Variety	Sugar per Acre (lbs/A)	Cane Yield (tons/A)	Sugar per Ton (lbs/ton)	Stalk Weight (lbs)	Stalk Number (stalks/A)
CP70-321	10016 -	37.6 -	266	2.52	29721 -
LCP85-384	13053	52.5	251	2.46	42653
HOCP85-845	12664	52.4	243	2.85 +	36905
L00-247	9698 -	46.7	214 -	2.26	40913
L00-249	9722 -	37.8 -	261	2.13 -	35393 -
L00-250	10375 -	47.1	223 -	2.56	36300 -
L00-255	12895	48.8	264	2.78 +	34863 -
L00-257	10846	39.5 -	275 +	2.17	36300 -
L00-259	12587	51.0	248	2.51	40308
L00-263	11655	48.7	240	2.22	43409
L00-264	13605	60.3	230 -	2.79 +	43258
L00-266	10705 -	43.3 -	248	2.43	35998 -
L00-268	13299	53.0	252	2.50	42426
L00-270	12003	49.4	245	2.29	43258
L00-271	9142 -	34.8 -	263	2.13 -	33124 -
L00-273	10286 -	44.6	234	2.82 +	31611 -

2001 LOUISIANA “HoCP” NURSERY VARIETY TRIALS ^{1/}

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The nursery testing stage of the USDA sugarcane breeding program begins in the fifth year after crossing. It is at this time that superior varieties in the first stubble of second line trials are assigned permanent “HoCP” or “Ho” numbers. Because a major objective of the sugarcane breeding program is to select varieties that give consistent yields across a range of environmental conditions, nursery yield trials are planted in three different regions of the sugarcane industry.

USDA nursery tests are planted the year of assignment at Ardoyne Farm near Chacahoula, Iberia Research Station in Jeanerette, and St. Gabriel Research Station in St. Gabriel. Plots in these two-replication tests are one row wide and 16-feet long with a 4-foot alley between plots. At least three commercial varieties including CP 70-321, HoCP 85-845, LCP 85-384, and/or HoCP 91-555 are included in each replication as controls. Varieties from the USDA program advanced for further testing in the year following assignment are combined with varieties from the LSU program and replanted in two nurseries and two infield tests on commercial farms. Plot length in these two-replication nursery tests have been increased to 20-feet, with a 4-foot alley between plots.

Nursery plots are rated for stand (population) and vigor in both the spring (May) and summer (August). Stalk counts representing mature millable stalks are made in August. For USDA nursery trials, a 15-stalk sample is hand-cut from each plot during the harvest season and taken to the Juice and Milling Quality Laboratory at Ardoyne Farm, where they are weighed and processed for sucrose analysis. In the replant nurseries, a 10-stalk sample is hand-cut from each plot and sent to the Juice and Milling Quality Laboratory at Ardoyne Farm or the St. Gabriel Sucrose Laboratory. Brix, pol, and fiber content are then used to estimate the yield of theoretical recoverable sugar (TRS) per ton of cane. Results from these analyses, along with mature millable stalk counts, are used to calculate yield of sugar per acre, yield of cane per acre, mean stalk weight, and number of stalks per acre. Varieties with adequate yields (both tonnage and sugar per ton) and disease and insect resistance are advanced for further testing.

Varieties from the 1996 through the 2000 HoCP series were harvested from nursery trials in 2001. The 2001 HoCP assignment series were planted to three locations in 2001. Varieties from the 2000 HoCP series were combined with varieties from the 2000 LSU series and replanted on four commercial farms (two nurseries trials and two infield trials). Test locations, planting dates, and harvest dates can be found in Table 1. Analysis of variance was performed for each test and also for each series by crop. Least significant differences were calculated using Fisher’s LSD test. Results from trials harvested in 2001, along with combined analyses where applicable, can be found in Tables 2 to 20.

^{1/} HoCP Varieties selected at Houma (Ho), La from seed produced at Canal Point (CP), Fla., from Louisiana parents.

Table 1. 2001 Planting and harvest dates of “HoCP” nursery tests.

Series	Location ^{2/}	Soil Texture ^{3/}	Planting Date	Harvest Dates			
				1998	1999	2000	2001
1996	BSP	Csl	9/15/97	11/19	11/04	10/20	10/15
1996	GKF	Sc	9/22/97	11/20	11/03	10/05	10/09
1997	BSP	Csl	9/25/98		11/22	10/20	10/15
1997	GKF	Sc	10/15/98		11/19	10/05	10/09
1997	IRS	Bsc	10/14/98		11/16	10/31	10/23
1998	AFH	Sc	10/07/98		12/06	10/24	10/02
1998	AFL	Csl	10/07/98		12/07	11/15	10/05
1998	STG	Csl	10/23/98		11/23	10/30	10/19
1999	AFL	Csl	10/20/99			11/27	10/31
1999	IRS	Bsc	10/19/99			11/29	10/23
1999	STG	Csl	10/21/99			11/28	11/08
2000	AFL	Csl	10/27/00				11/21
2000	IRS	Bsc	10/31/00				11/26
2000	STG	Csl	10/30/00				12/07
2001	AFL	Csl	10/18/01				
2001	IRS	Bsc	10/23/01				
2001	STG	Csl	10/19/01				

^{2/} AFH = Ardoyne Farm Heavy soil in Chacahoula, AFL = Ardoyne Farm Light soil in Chacahoula, BSP = Bon Secour Plantation in St. James, GKF = Godfrey Knight Farm in Thibodaux, IRS = Iberia Research Station in Jeanerette, STG = St. Gabriel Research Station in St. Gabriel.

^{3/} Bsc = Baldwin silty clay, Csl = Commerce silt loam, Sc = Sharkey clay

Table 2. Means of the 1996 HoCP and Ho series third-stubble nursery variety trial on a Commerce silt loam soil at Bon Secour Plantation in St. James, La. in 2001.

Variety	Sugar per acre (lbs.)	Tons per acre (tons)	Sugar per ton (lbs.)	Weight per stalk (lbs.)	Stalks per acre (no.)
CP 70-321	4360 -	20.8 -	203	1.85	21553 -
LCP 85-384	11235	44.8	250	1.45	62618
HoCP 85-845	9094	38.0	240	1.75	43560
HoCP 96-540	12269	56.4	218	2.02	55811
LSD _(.05)	5639	20.6	N.S.	N.S.	26645

Table 3. Means of the 1996 HoCP and Ho series third-stubble nursery variety trial on a Sharkey clay soil at Godfrey Knight Farms in Thibodaux, La. in 2001.

Variety	Sugar per acre (lbs.)	Tons per acre (tons)	Sugar per ton (lbs.)	Weight per stalk (lbs.)	Stalks per acre (no.)
CP 70-321	4734	21.1	219 +	1.34 +	30855 -
LCP 85-384	5734	30.5	188	0.95	64886
HoCP 85-845	3667	16.7	220 +	1.05	31989 -
HoCP 96-540	8533	37.7	227 +	1.22	61937
LSD _(.05)	3590	15.8	20	0.36	20507

Table 4. Combined means of the 1996 HoCP and Ho series third-stubble nursery variety trials in 2001.

Variety	Sugar per acre (lbs.)	Tons per acre (tons)	Sugar per ton (lbs.)	Weight per stalk (lbs.)	Stalks per acre (no.)
CP 70-321	4547 -	21.0 -	211	1.60 +	26204 -
LCP 85-384	8484	37.7	219	1.20	63752
HoCP 85-845	6381	27.3 -	230	1.40	37775 -
HoCP 96-540	10401	47.0	222	1.62 +	58874
LSD _(.05)	2570	10.0	N.S.	0.34	12926

Table 5. Means of the 1997 HoCP and Ho series second-stubble nursery variety trial on a Commerce silt loam soil at Bon Secour Plantation in St. James, La. in 2001.

Variety	Sugar per acre (lbs.)	Tons per acre (tons)	Sugar per ton (lbs.)	Weight per stalk (lbs.)	Stalks per acre (no.)
CP 70-321	9383	40.1	235	2.17 +	36981 -
LCP 85-384	12028	51.2	234	1.54	66248
HoCP 85-845	8860	36.8	239	1.87	39249 -
HoCP 97-609	9999	39.7	251	1.91	41064
LSD _(.05)	N.S.	N.S.	N.S.	0.61	26553

Table 6. Means of the 1997 HoCP and Ho series second-stubble nursery variety trial on a Sharkey clay soil at Godfrey Knight Farms in Thibodaux, La. in 2001.

Variety	Sugar per acre (lbs.)	Tons per acre (tons)	Sugar per ton (lbs.)	Weight per stalk (lbs.)	Stalks per acre (no.)
CP 70-321	9684	40.3	243	1.82	44014 -
LCP 85-384	9821	42.9	230	1.42	60576
HoCP 85-845	7771	32.4 -	240	1.58	41064-
HoCP 97-609	7836	33.5	232	1.51	44468 -
LSD _(.05)	N.S.	10.2	N.S.	N.S.	15474

Table 7. Means of the 1997 HoCP and Ho series second-stubble nursery variety trial on a Baldwin silty clay soil at Iberia Research Station in Jeanerette, La. in 2001.

Variety	Sugar per acre (lbs.)	Tons per acre (tons)	Sugar per ton (lbs.)	Weight per stalk (lbs.)	Stalks per acre (no.)
CP 70-321	9621 -	40.6 -	237	2.63 +	30855 -
LCP 85-384	13180	52.8	250	1.79	58988
HoCP 85-845	8839 -	35.9 -	248	1.86	38569 -
HoCP 97-609	12803	53.8	238	2.51 +	43106 -
LSD _(.05)	3030	10.5	N.S.	0.41	8337

Table 8. Combined means of the 1997 HoCP and Ho series second-stubble nursery variety trials in 2001.

Variety	Sugar per acre (lbs.)	Tons per acre (tons)	Sugar per ton (lbs.)	Weight per stalk (lbs.)	Stalks per acre (no.)
CP 70-321	9563	40.3	238	2.20 +	37283 -
LCP 85-384	11676	49.0	238	1.58	61937
HoCP 85-845	8490 -	35.0 -	242	1.77	39628 -
HoCP 97-609	10213	42.4	240	1.97 +	42879 -
LSD ₍₀₅₎	2564	9.7	N.S.	0.2	7545

Table 9. Means of the 1998 HoCP and Ho series second-stubble nursery variety trial on a Commerce silt loam soil at Ardoyne Farm in Chacahoula, La., in 2001.

Variety	Sugar per acre (lbs.)	Tons per acre (tons)	Sugar per ton (lbs.)	Weight per stalk (lbs.)	Stalks per acre (no.)
CP 70-321	10546	47.9	220	2.39 +	40157 -
LHo 83-153	11186	49.6	225	1.98 +	50139 -
LCP 85-384	12433	55.4	224	1.69	66021
HoCP 85-845	8788 -	37.7 -	233	1.97	38342 -
HoCP 98-741	13462	61.7	218	2.92 +	42199 -
LSD ₍₀₅₎	3462	12.6	13	0.29	6773

Table 10. Means of the 1998 HoCP and Ho series second-stubble nursery variety trial on a Sharkey clay soil at Ardoyne Farm in Chacahoula, La., in 2001.

Variety	Sugar per acre (lbs.)	Tons per acre (tons)	Sugar per ton (lbs.)	Weight per stalk (lbs.)	Stalks per acre (no.)
CP 70-321	3854 -	19.7	199	1.26	31309
LHo 83-153	4464	24.1	185	1.38	34939
LCP 85-384	7275	31.9	228	1.51	42199
HoCP 85-845	7135	31.5	227	1.45	43333
HoCP 98-741	8814	40.0	222	2.00 +	39703
LSD ₍₀₅₎	3111	14.1	N.S.	0.16	11895

Table 11. Means of the 1998 HoCP and Ho series second-stubble nursery variety trial on a Commerce silt loam soil at St. Gabriel Research Station in St. Gabriel, La. in 2001.

Variety	Sugar per acre (lbs.)	Tons per acre (tons)	Sugar per ton (lbs.)	Weight per stalk (lbs.)	Stalks per acre (no.)
CP 70-321	9734	39.9	243	2.34 +	34258 -
LHo 83-153	7253	35.0	207	1.64	42653
LCP 85-384	10512	50.4	205	1.79	56038
HoCP 85-845	5689 -	25.2 -	221	1.81	26544 -
HoCP 98-741	12194	55.0	222	2.76 +	39930 -
LSD _(.05)	4258	17.3	N.S.	0.40	15978

Table 12. Combined means of the 1998 HoCP and Ho series second-stubble nursery variety trial in 2001.

Variety	Sugar per acre (lbs.)	Tons per acre (tons)	Sugar per ton (lbs.)	Weight per stalk (lbs.)	Stalks per acre (no.)
CP 70-321	8044 -	35.8 -	221	1.99 +	35241 -
LHo 83-153	7634 -	36.2 -	206	1.67	42577 -
LCP 85-384	10073	45.9	219	1.66	54753
HoCP 85-845	7204 -	31.5 -	227	1.74	36073 -
HoCP 98-741	11490	52.2	221	2.56 +	40611 -
LSD _(.05)	1650	6.7	20	0.14	5504

Table 13. Means of the 1999 HoCP series first-stubble nursery variety trial on a Commerce silt loam soil at Ardoyne Farm in Chacahoula, La., in 2001.

Variety	Sugar per acre (lbs.)	Tons per acre (tons)	Sugar per ton (lbs.)	Weight per stalk (lbs.)	Stalks per acre (no.)
CP 70-321	11744	43.4	270 -	2.64 +	32897 -
LCP 85-384	14477	49.7	291	1.94	51274
HoCP 85-845	12463	44.2	282	2.28	38796 -
HoCP 99-804	12766	46.7	274 -	2.30 +	40384 -
HoCP 99-808	12523	43.8	287	1.83	47871
HoCP 99-815	11053 -	39.9	277	1.79	44694
HoCP 99-825	13001	47.3	275 -	2.43 +	38796 -
HoCP 99-866	13948	53.4	261 -	2.62 +	41064 -
HoCP 99-870	10651 -	41.8	255 -	1.66	50593
LSD _(.05)	3308	11.6	16	0.35	10043

Table 14. Means of the 1999 HoCP series first-stubble nursery variety trial on a Baldwin silty clay soil at Iberia Research Station in 2001.

Variety	Sugar per acre (lbs.)	Tons per acre (tons)	Sugar per ton (lbs.)	Weight per stalk (lbs.)	Stalks per acre (no.)
CP 70-321	11797	53.7	221	2.79 +	38342 -
LCP 85-384	13066	53.1	245	2.05	51728
HoCP 85-845	8711	37.5	231	2.12	35393 -
HoCP 99-804	12750	52.8	242	2.40	44014
HoCP 99-808	10119	40.9	247	1.78	46283
HoCP 99-815	11500	48.0	240	2.11	45375
HoCP 99-825	12628	51.1	249	2.59	39249 -
HoCP 99-866	11577	49.0	239	2.94 +	33124 -
HoCP 99-870	10884	49.0	222	1.93	51047
LSD _(.05)	N.S.	N.S.	N.S.	0.66	9394

Table 15. Means of the 1999 HoCP series first-stubble nursery variety trial on a Sharkey clay soil at St. Gabriel Research Station in St. Gabriel, La., in 2001.

Variety	Sugar per acre (lbs.)	Tons per acre (tons)	Sugar per ton (lbs.)	Weight per stalk (lbs.)	Stalks per acre (no.)
CP 70-321	12532 -	46.5 -	268	2.82	32897 -
LCP 85-384	20205	75.8	267	2.44	62391
HoCP 85-845	11057 -	40.6 -	273	2.34	34712 -
HoCP 99-804	15543	54.4 -	286	2.52	43333 -
HoCP 99-808	17848	61.2	287	2.41	50593 -
HoCP 99-815	14877	54.8 -	272	2.92	37661 -
HoCP 99-825	17655	64.8	272	2.87	45148 -
HoCP 99-866	11762 -	48.3 -	244	2.72	35619 -
HoCP 99-870	12944 -	55.3 -	234	1.93 -	57626
LSD _(.05)	5591	15.4	36	0.50	8668

Table 16. Combined means of the 1999 HoCP series first-stubble nursery variety trials in 2001.

Variety	Sugar per acre (lbs.)	Tons per acre (tons)	Sugar per ton (lbs.)	Weight per stalk (lbs.)	Stalks per acre (no.)
CP 70-321	12025 -	47.9 -	253 -	2.75 +	34712 -
LCP 85-384	15916	59.5	268	2.14	55131
HoCP 85-845	10744 -	40.8 -	262	2.25	36300 -
HoCP 99-804	13686	51.3	267	2.40	42577 -
HoCP 99-808	13497 -	48.6 -	274	2.00	48249 -
HoCP 99-815	12477 -	47.6 -	263	2.27	42577 -
HoCP 99-825	14428	54.4	265	2.63 +	41064 -
HoCP 99-866	12429 -	50.2 -	248 -	2.76 +	36603 -
HoCP 99-870	11493 -	48.7 -	237 -	1.84 -	53089
LSD ₍₀₅₎	2354	8.4	14	0.27	4850

Table 17. Means of the the 2000 HoCP and Ho series plant cane nursery variety trial on a Commerce silt loam soil at Ardoyne Farm in Chacahoula, La., in 2001.

Variety	Sugar per acre (lbs.)	Tons per acre (tons)	Sugar per ton (lbs.)	Weight per stalk (lbs.)	Stalks per acre (no.)
CP 70-321	12266	45.6	270 +	3.07 +	29721 -
LCP 85-384	12336	51.5	238	2.36	44014
HoCP 85-845	12473	46.9	266 +	2.87 +	32897 -
HoCP 00-905	14355	57.7	249	2.64	43787
HoCP 00-909	11214	44.5	252	2.98 +	29948 -
HoCP 00-912	9383	44.9	209 -	3.15 +	28813 -
HoCP 00-914	14218	54.0	265 +	2.98 +	36527
HoCP 00-917	10955	42.8	256	2.18	39476
HoCP 00-920	14463	57.2	253	2.84	40384
HoCP 00-921	9895	38.1 -	260	2.25	33804 -
HoCP 00-923	10794	45.3	236	2.92 +	31536 -
HoCP 00-925	9087 -	33.4 -	271 +	1.75 -	38115
HoCP 00-926	11168	41.6	268 +	2.31	36073 -
HoCP 00-927	12744	49.7	256	2.53	39249
HoCP 00-928	15408	56.7	272 +	3.16 +	35846 -
HoCP 00-930	15871 +	56.2	282 +	3.01 +	37434
HoCP 00-931	13292	54.5	244	3.39 +	32216 -
HoCP 00-932	13413	48.3	277 +	3.32 +	29040 -
HoCP 00-933	12740	56.0	227	2.94 +	38115
HoCP 00-934	11866	43.3	274 +	3.04 +	28586 -

Table 17. Continued.

Variety	Sugar per acre (lbs.)	Tons per acre (tons)	Sugar per ton (lbs.)	Weight per stalk (lbs.)	Stalks per acre (no.)
HoCP 00-935	11789	49.3	239	2.62	37208
HoCP 00-936	11152	41.8	267 +	2.47	33804
HoCP 00-937	11765	41.5	283 +	2.40	34712 -
HoCP 00-938	11530	45.7	252	2.89 +	31763 -
HoCP 00-939	16348 +	62.5	262	2.87 +	43560
HoCP 00-940	11087	39.8 -	279 +	2.41	33124 -
HoCP 00-941	13671	59.3	230	3.60 +	32897 -
HoCP 00-942	13636	49.8	274 +	2.83	35166 -
HoCP 00-943	10767	38.2 -	282 +	2.16	35393 -
HoCP 00-945	14501	56.4	258	2.86 +	39703
HoCP 00-947	9686	32.9 -	298 +	2.34	27906 -
HoCP 00-948	12541	47.5	264 +	2.59	36754
HoCP 00-949	10774	40.4	267 +	2.28	35619 -
HoCP 00-950	13849	46.5	299 +	2.77	33578 -
HoCP 00-951	12878	47.6	270 +	2.24	42653
HoCP 00-953	12852	49.8	258	2.97 +	33578 -
HoCP 00-957	12033	44.8	268 +	2.52	35619 -
Ho 00-960	16370 +	71.2 +	230	2.84	50139
LSD ₍₀₅₎	3135	11.3	25	0.50	7654

Table 18. Means of the 2000 HoCP and Ho series plant cane nursery variety trial on a Baldwin silty clay soil at Iberia Research Station in 2001.

Variety	Sugar per acre (lbs.)	Tons per acre (tons)	Sugar per ton (lbs.)	Weight per stalk (lbs.)	Stalks per acre (no.)
CP 70-321	13620	47.6	287	2.89 +	32897 -
LCP 85-384	12181	48.2	253	2.18	44468
HoCP 85-845	11227	41.1	273	2.74 +	30174 -
HoCP 00-905	12837	51.4	250	2.67	38569
HoCP 00-909	11274	41.5	272	2.87 +	29040 -
HoCP 00-912	8799	36.4 -	243	2.77 +	26318 -
HoCP 00-914	10093	37.2	268	2.66	27906 -
HoCP 00-917	10717	48.8	217 -	2.15	45602
HoCP 00-920	11090	44.1	253	2.45	35846 -
HoCP 00-921	10488	45.1	234	2.39	37661 -
HoCP 00-923	8477 -	41.7	203 -	2.42	34485 -

Table 18. Continued.

Variety	Sugar per acre (lbs.)	Tons per acre (tons)	Sugar per ton (lbs.)	Weight per stalk (lbs.)	Stalks per acre (no.)
HoCP 00-925	8609 -	31.5 -	273	2.11	29948 -
HoCP 00-926	10813	41.4	264	2.13	38342
HoCP 00-927	11030	41.3	267	2.38	34712 -
HoCP 00-928	9418	35.1 -	268	2.73 +	25864 -
HoCP 00-930	11447	46.7	244	2.80 +	33351 -
HoCP 00-931	10203	39.4	259	2.63	29948 -
HoCP 00-932	15693	59.7	259	3.47 +	34031 -
HoCP 00-933	13204	54.6	243	2.85 +	38342
HoCP 00-934	14617	58.4	249	3.09 +	37661 -
HoCP 00-935	11100	49.3	225	2.37	41745
HoCP 00-936	8584 -	35.7 -	240	1.90	37888 -
HoCP 00-937	15419	51.7	298 +	2.80 +	36981 -
HoCP 00-938	10058	39.8	254	2.67	29721 -
HoCP 00-939	12893	47.5	271	2.56	37208 -
HoCP 00-940	12640	46.6	272	2.90 +	31989 -
HoCP 00-941	11351	49.8	228	3.17 +	31536 -
HoCP 00-942	11468	44.4	259	2.50	35619 -
HoCP 00-943	7560 -	31.7 -	238	1.85	34258 -
HoCP 00-945	10063	39.3	256	2.55	30855 -
HoCP 00-947	11220	39.2	286	2.07	38115 -
HoCP 00-948	11763	41.9	280	2.70 +	31082 -
HoCP 00-949	9133	36.6 -	249	2.62	27906 -
HoCP 00-950	14224	49.2	288 +	2.79 +	35166 -
HoCP 00-951	12212	46.7	261	2.25	41518
HoCP 00-953	10224	40.2	254	2.32	34712 -
HoCP 00-957	10863	44.0	247	2.50	35393 -
Ho 00-960	11670	52.5	222	2.49	42199
Ho 00-961	8573 -	38.7	223	2.03	38796
LSD ₍₀₅₎	3559	11.6	35	0.50	6233

Table 19. Means of the 2000 HoCP and Ho series plant cane nursery variety trial on a Commerce silt loam soil at St. Gabriel Research Station in St. Gabriel, La., in 2001.

Variety	Sugar per acre (lbs.)	Tons per acre (tons)	Sugar per ton (lbs.)	Weight per stalk (lbs.)	Stalks per acre (no.)
CP 70-321	13009	55.2	235	3.14 +	35166 -
LCP 85-384	10921	53.3	205	2.15	49686
HoCP 85-845	13162	50.8	259 +	2.71 +	37434 -
HoCP 00-905	13456	61.5	218	3.00 +	41291 -
HoCP 00-909	12370	48.3	256 +	2.66	36300 -
HoCP 00-912	10116	57.8	176	3.11 +	37434 -
HoCP 00-914	8305	38.9 -	215	2.18	35846 -
HoCP 00-917	11531	56.6	206	1.97	57399 +
HoCP 00-920	11149	53.2	209	2.75 +	38796 -
HoCP 00-921	10703	47.0	228	2.35	40157 -
HoCP 00-923	10975	53.8	205	2.83 +	38115 -
HoCP 00-925	8766	36.2 -	242 +	1.85	39249 -
HoCP 00-926	10214	46.6	219	2.43	38569 -
HoCP 00-927	11839	52.8	224	2.47	42879 -
HoCP 00-928	13559	53.7	252 +	2.79 +	38569 -
HoCP 00-930	13550	53.6	253 +	2.70 +	39930 -
HoCP 00-931	9071	47.5	190	2.90 +	32670 -
HoCP 00-932	11893	54.1	218	3.76 +	28813 -
HoCP 00-933	11075	61.6	179	2.82 +	43560
HoCP 00-934	10907	52.1	210	2.98 +	34712 -
HoCP 00-935	10757	55.2	194	2.64	41972 -
HoCP 00-936	8340	42.3	198	1.74	48551
HoCP 00-937	13731	51.8	265 +	2.43	42653 -
HoCP 00-938	13760	58.0	237	2.81 +	41291 -
HoCP 00-939	14952 +	62.4	241	2.73 +	45602
HoCP 00-940	13690	52.8	260 +	2.61	40384 -
HoCP 00-941	11052	47.6	234	2.79 +	34258 -
HoCP 00-942	14352 +	58.2	247 +	2.94 +	39476 -
HoCP 00-943	11903	53.2	225	2.23	47644
HoCP 00-945	12070	54.1	224	2.66	40838 -
HoCP 00-947	10919	45.4	241	2.18	41745 -
HoCP 00-948	11676	49.5	237	2.65	37434 -
HoCP 00-949	11610	50.2	231	2.59	38796 -
HoCP 00-950	15981 +	62.4	257 +	2.82 +	44468
HoCP 00-951	12775	54.4	237	2.32	46963
HoCP 00-953	13716	56.6	243 +	3.04 +	37208 -
HoCP 00-957	11447	55.5	204	2.68 +	41291 -

Table 19. Continued.

Variety	Sugar per acre (lbs.)	Tons per acre (tons)	Sugar per ton (lbs.)	Weight per stalk (lbs.)	Stalks per acre (no.)
Ho 00-960	11553	68.7 +	168	3.07 +	44921
Ho 00-961	8093	47.1	173	1.75	53769
LSD ₍₀₅₎	3227	13.3	37	0.53	6755

Table 20. Combined means of the 2000 HoCP and Ho series plant cane nursery variety trials in 2001.

Variety	Sugar per acre (lbs.)	Tons per acre (tons)	Sugar per ton (lbs.)	Weight per stalk (lbs.)	Stalks per acre (no.)
CP 70-321	12965	49.5	264 +	3.03 +	32594 -
LCP 85-384	11813	51.0	232	2.23	46056
HoCP 85-845	12287	46.2	266 +	2.77 +	33502 -
HoCP 00-905	13549	56.9	239	2.77 +	41216 -
HoCP 00-909	11619	44.8	260 +	2.83 +	31763 -
HoCP 00-912	9433 -	46.4	210 -	3.01 +	30855 -
HoCP 00-914	10872	43.4 -	249	2.60 +	33426 -
HoCP 00-917	11068	49.4	226	2.10	47493
HoCP 00-920	12234	51.5	238	2.68 +	38342 -
HoCP 00-921	10362	43.4 -	241	2.33	37208 -
HoCP 00-923	10082	46.9	215	2.72 +	34712 -
HoCP 00-925	8821 -	33.7 -	262 +	1.90	35771 -
HoCP 00-926	10732	43.2 -	251	2.29	37661 -
HoCP 00-927	11871	47.9	249	2.46	38947 -
HoCP 00-928	12795	48.5	264 +	2.89 +	33426 -
HoCP 00-930	13623	52.2	260 +	2.83 +	36905 -
HoCP 00-931	10856	47.1	231	2.97 +	31611 -
HoCP 00-932	13666	54.0	251 +	3.52 +	30628 -
HoCP 00-933	12340	57.4	216	2.87 +	40006 -
HoCP 00-934	12463	51.2	244	3.04 +	33653 -
HoCP 00-935	11215	51.3	219	2.54 +	40308 -
HoCP 00-936	9359 -	39.9 -	235	2.04	40081 -
HoCP 00-937	13638	48.4	282 +	2.54 +	38115 -
HoCP 00-938	11783	47.8	248	2.79 +	34258 -
HoCP 00-939	14731 +	57.4	258 +	2.72 +	42123 -
HoCP 00-940	12472	46.4	270 +	2.64 +	35166 -
HoCP 00-941	12025	52.2	230	3.19 +	32897 -

Table 20. Continued.

Variety	Sugar per acre (lbs.)	Tons per acre (tons)	Sugar per ton (lbs.)	Weight per stalk (lbs.)	Stalks per acre (no.)
HoCP 00-942	13152	50.8	260 +	2.76 +	36754 -
HoCP 00-943	10077	41.0 -	248	2.08	39098 -
HoCP 00-945	12211	49.9	246	2.69 +	37132 -
HoCP 00-947	10608	39.1 -	275 +	2.20	35922 -
HoCP 00-948	11994	46.3	260 +	2.65 +	35090 -
HoCP 00-949	10506	42.4 -	249	2.50	34107 -
HoCP 00-950	14685 +	52.7	281 +	2.79 +	37737 -
HoCP 00-951	12622	49.6	256 +	2.27	43711
HoCP 00-953	12264	48.8	252 +	2.78 +	35166 -
HoCP 00-957	11448	48.1	240	2.57 +	37434 -
Ho 00-960	13198	64.1 +	207 -	2.80 +	45753
Ho 00-961	8600 -	42.8 -	204 -	1.92	45671
LSD ₍₀₅₎	1884	6.9	19	0.29	3921

2001 USDA INFIELD VARIETY TRIALS AT ARDOYNE FARM

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Infield variety tests have traditionally been planted one, two, and three years after assignment at Ardoyne Farm in Chacahoula, La. In 1999, the USDA program began planting an off-station infield trial (at Blackberry Farms in Vacherie, La.) in conjunction with the breeding program at the LSU AgCenter. In 2000, an additional location was planted at Sugarland Acres in Youngsville, La. It is now standard practice to plant varieties that are active the year after assignment to infield tests at these two locations. Besides these tests, one additional test is still planted at Ardoyne Farm with varieties that are advanced for further testing two years after assignment.

Infield tests planted at Ardoyne Farm still use a traditional infield plot size of three rows wide by 16-feet long, compared to the two row wide by 24-feet long plots used in off-station infield tests. Although both plot sizes encompass the same area, the two-row plots are more efficient to harvest on commercial farms, where it is necessary to use a farmer's combine harvester and his operator to harvest tests. Because all infield tests are now harvested with a combine harvester, the two-row plot size may be used in future infield tests planted at Ardoyne Farm. Infield tests are planted in a randomized complete block design with two replications and include at least three commercial varieties CP 70-321, HoCP 85-845, LCP 85-384, and/or HoCP 91-555 for use as checks.

Recommended culture practices were used at the USDA Ardoyne Farm in 2001. In late March, Karmex (2 lb/A), Prowl (3 qt/A), and Weedmaster (1 qt/A) were applied to all infield tests at Ardoyne Farm. Tests were fertilized at a rate of 100-30-60 lbs per acre in late April. Prowl (3 qt/A) was broadcast just prior to layby in mid-May. Atrazine (2 lb/A) was broadcast in late June. Fields were monitored for sugarcane borer infestations through the growing season. Confirm (6 oz./A) was applied by airplane on July 27 and September 3 in 2001.

In the tests at Ardoyne Farm, a 15-stalk sample was cut from each active plot just prior to harvest and sent to the juice analysis lab. Each bundle was weighed in the lab and a five-stalk sub-sample was obtained from each bundle and run through the pre-breaker at Ardoyne Farm for fiber analysis. The remaining 10-stalks were run through the roller-mill and a juice sample was obtained and sent to the lab for analysis. Brix and pol were obtained and used to estimate sucrose, purity, and TRS for each sample.

Planting and harvest dates can be found in Table 1. Results from individual tests can be found in Tables 2 through 6. An analysis of variance was performed for each test. Least significant differences were calculated using Fisher's LSD test, where appropriate.

Table 1. 2001 Planting and harvest dates of infield tests at Ardoyne Farm.

Series	Location†	Soil Texture‡	Planting Date	Harvest Dates			Varieties	
				1999	2000	2001	No. Planted	No. Harvested*
1995	AFH	Sc	8/31/98	11/18	**	10/03	8	1
1996	AFL	Csl	8/27/98	11/29	11/14	10/05	38	1
1997	AFL	Csl	10/3/98	11/30	11/22	10/05	39	1
1997	AFL	Csl	8/20/99		11/22	11/02	12	3
1998	AFL	Sc	10/2/00			11/15	10	4
1999	AFH	Sc	9/27/01				10	

† AFL-Ardoyne Farm light soil, AFH-Ardoyne Farm heavy soil.

‡ Csl-Commerce silt loam, Sc-Sharkey clay

* No. harvested does not include varieties used for “check” plots.

** Plots were unharvestable because of physical damage by wildlife.

Table 2. Means of the 1995 Ho series second-stubble infield variety test on heavy soil at Ardoyne Farm in 2001.

Variety	Sugar/ acre (lbs.)	Tons/ acre (tons)	Sugar/ ton (lbs.)	Weight/ stalk (lbs.)	Stalks/ acre (no.)
CP 70-321	1374	7.7	167	1.22	12238
LCP 85-384	3902	21.6	182	1.31	32983
HoCP 85-845	3548	16.5	215	1.39	23813
Ho 95-988	5186	28.2	182	1.43	39931
LSD _{0.05}	2918	14.5	NS	NS	22153

Table 3. Means of the 1996 HoCP and L series second-stubble infield variety test on light soil at Ardoyne Farm in 2001.

Variety	Sugar/ acre (lbs.)	Tons/ acre (tons)	Sugar/ ton (lbs.)	Weight/ stalk (lbs.)	Stalks/ acre (no.)	Fiber (%)
CP 70-321	3860 -	16.9 -	229	1.79 +	19057 -	11.3
LCP 85-384	6059	25.1	241	1.23	40923	11.6
HoCP 85-845	4705	19.9	235	1.40	28275 -	12.6 +
HoCP 96-540	7362	32.5 +	227	1.66	39172	10.9 -
LSD _{0.05}	1674	6.5	NS	0.43	7272	0.5

Table 4. Means of the 1997 HoCP series second-stubble infield variety test on light soil at Ardoyne Farm in 2001.

Variety	Sugar/ acre	Tons/ acre	Sugar/ ton	Weight/ stalk	Stalks/ acre	Fiber
	(lbs.)	(tons)	(lbs.)	(lbs.)	(no.)	(%)
CP 70-321	4935 -	19.9 -	248	1.54	25873 -	11.6
LCP 85-384	6688	29.3	228	1.57	37648	10.0
HoCP 85-845	5536 -	21.9 -	252 +	1.63	26835 -	13.1
HoCP 97-609	4707 -	22.1 -	212	1.67	26361 -	11.5
LSD _{0.05}	1093	6.0	22	NS	7997	NS

Table 5. Means of the 1997 HoCP and L series first-stubble infield variety test on light soil at Ardoyne Farm in 2001.

Variety	Sugar/ acre	Tons/ acre	Sugar/ ton	Weight/ stalk	Stalks/ acre	Fiber
	(lbs.)	(tons)	(lbs.)	(lbs.)	(no.)	(%)
CP 70-321	8407	31.9	263	2.69 +	23735 -	11.8
LCP 85-384	8461	31.8	266	1.73	36567	12.0
HoCP 85-845	8562	32.5	264	2.13	30969	13.3 +
L 97-128	9893	35.7	278	1.92	37393	12.3
L 97-137	9359	37.5	249	1.77	42884	11.5
HoCP 97-606	7806	33.5	233 -	1.81	36911	12.6
HoCP 97-609	7620	30.1	253	1.80	34179	11.9
LSD _{0.05}	NS	6.9	29	0.70	10557	0.9

Table 6. Means of the 1998 HoCP and L series plant cane infield variety test on heavy soil at Ardoyne Farm in 2001.

Variety	Sugar/ acre	Tons/ acre	Sugar/ ton	Weight/ stalk	Stalks/ acre	Fiber
	(lbs.)	(tons)	(lbs.)	(lbs.)	(no.)	(%)
CP 70-321	8025 -	31.5 -	254	2.49	25351 -	13.4
LCP 85-384	10256	40.0	257	2.13	37644	13.7
HoCP 85-845	8012 -	29.5 -	271 +	2.45	24363 -	16.0 +
TUCCP 77-42	8031 -	34.0 -	236 -	2.90 +	23478 -	15.7 +
L 98-207	9871	37.8	261	1.92	39506	15.3 +
L 98-209	9658	38.0	254	2.40	31712	13.1
HoCP 98-741	10182	38.1	267	3.21 +	23753 -	13.0
LSD _{0.05}	1051	3.9	14	0.44	8038	1.5

2001 OUTFIELD VARIETY TRIALS¹

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The outfield variety trials are the final stage of testing experimental varieties for their potential commercial production in Louisiana. Results from these trials are used in both variety advancement and crossing decisions. The outfield variety trials are cooperatively conducted at nine commercial locations throughout the Louisiana sugarcane belt by the Louisiana Agricultural Experiment Station, The United States Department of Agriculture - Agricultural Research Service, and the American Sugar Cane League.

To be considered for release, an experimental variety must equal or exceed the performance of commercial varieties with regard to yield and harvestability across locations, crops, and years. Accurate varietal evaluation requires overall yield performance information in addition to performance under adverse harvest conditions. The objective of this report is to provide overall and specific location yield data by crop for the 2001 outfield tests. Also included are multi-year yield analyses for appropriate test varieties.

The experimental design used at each outfield location was a randomized complete block design with three replications per location. To reflect industry practices, all locations were harvested with a combine harvester. Plots harvested were three rows wide (6-foot rows) and 32-feet long with a 5-foot alley between plots. Two locations (Alma and Glenwood) harvested in 2001 had two-row plots that were 50 feet long with 5-foot alleys. All tests planted in 2001 had two-row plots that were 50 feet long with 5-foot alleys. Test plots harvested by combine were weighed with an electronic weigh wagon with load cells mounted on each axle and the hitch. A 15-stalk, whole-stalk sample, not stripped of leaves, was taken from each plot and sent to the USDA sucrose lab. Samples were hand cut for all tests. The samples were weighed, milled, and the juice analyzed for Brix and pol. Pounds of theoretical recoverable sugar per ton of cane are reported.

Cane yield for each plot was estimated by plot weight, less 14% to adjust for leaf-trash weight and 10% for harvest efficiency. Stalk number was calculated by dividing adjusted cane yield by stalk weight. Adjustments made to cane yield resulted in lower estimated stalk numbers than

¹The data for this report were obtained through a cooperative effort of personnel from the Louisiana Agricultural Experiment Station - LSU AgCenter, USDA - Agricultural Research Service, Sugarcane Research Unit, and the American Sugar Cane League in accordance to the provisions of the "Three-way Agreement of 1978." The testing program would not be possible without the full cooperation of the growers at each outfield location.

those commonly achieved by growers. No adjustment is made to stalk weight to account for leaf trash.

Interpreting one year of yield data can be misleading because varieties may differ in relative performance from year to year. Across location means can likewise be misleading since a variety, experimental or commercial, may not perform consistently at all locations. Multi-year and -location testing attempts to solve these problems by averaging the inconsistent performances.

LCP85-384 has been the leading variety in Louisiana since 1998 with about 78% of the sugarcane acreage in 2001. For comparison, LCP85-384 is highlighted in the tables. To adjust for missing data, the analysis calculated least square means (SAS 8.01 Proc Mixed). Mean separation used least square means probability differences ($P=0.05$). Varieties that are significantly higher or lower than LCP85-384 are denoted by a plus(+) or minus(-), respectively, next to the value for each trait.

Ten experimental varieties were introduced to the outfield locations for seed increase in 2001 (Table 1). Seven experimental and three commercial varieties were planted at nine outfield locations. Twenty-nine tests were harvested in 2001 including nine plant cane, eight first-stubble, eight second-stubble, three third-stubble, and one fourth-stubble (Table 2).

Varietal yields are reported by crop and trait with overall means and individual location data in the same table (Tables 3-22) and in summary tables by crop (Tables 23-26). One fourth-stubble test was harvested in 2001 at Lanoux plantation (Table 27). Combined analysis of 2000 through 2001 plant-cane crops (Table 28) is included to aid in the evaluation of the experimental variety HOCP96-540. Combined analysis of 1996 through 2001 plant-cane crops (Table 29), 1997 through 2001 first-stubble crops (Tables 30), 1998 through 2001 second-stubble crops (Tables 31), and 1997 through 2001 third-stubble crops (Tables 32) are included to aid in the evaluation of the commercial varieties.

The variety HO95-988 was dropped in 2000, but it was harvested in 2001 to collect data for breeding purposes. The variety continues to perform well in yields of sugar per acre.

The most advanced experimental variety, HOCP96-540, was in both plant-cane and first-stubble tests in 2001. HOCP96-540 had sugar per acre and cane yields that were significantly higher than LCP85-384 in the plant-cane crop. In the first-stubble crop, HOCP96-540 produced significantly higher cane yield than LCP85-384. The variety tends to have a larger stalk size and lower population than LCP85-384. Based on current data and observations, HOCP96-540 is classified as resistant to smut and mosaic and moderately resistant to leaf scald. Data are incomplete on determining HOCP96-540's reaction to the sugarcane borer. HOCP96-540 is an erect variety and harvested well in outfield tests. The parents of HOCP96-540 are LCP86-454 x LCP85-384.

L97-128 had the highest sugar per acre in the plant-cane outfield tests. The variety had sugar per acre, cane yield, and sugar per ton significantly higher than LCP85-384 in the plant-cane crop. L97-128 tends to have a larger stalk size and lower population than LCP85-384. The variety is resistant to mosaic and leaf scald, moderately resistant to smut, and susceptible to the sugarcane borer. L97-128 is an erect variety and harvested well in outfield tests. The parents of L97-128 are LCP81-10 x LCP85-384.

Table 1. 2001 Commercial and experimental varieties planted in the outfield.

Commercial Varieties	Experimental Varieties		Experimental Varieties Introduced to the Outfield		
LCP85-384	TucCP77-42	HOCP97-609	L99-213	HOCP99-804	HOCP989-825
HOCP85-845	HOCP96-540	L98-207	L99-226	HOCP99-808	HOCP99-866
HOCP91-555	L97-128	L98-209	L99-231	HOCP99-815	HOCP99-870
	L97-137		L99-233		

Table 2. Harvest and planting dates for all outfield locations harvested in 2001.

Location	Parish	2001 Plant Date	Plant cane		First stubble		Second stubble		Third stubble	
			2001 Harvest Date	2000 Plant Date	2001 Harvest Date	1999 Plant Date	2001 Harvest Date	1998 Plant Date	2001 Harvest Date	1997 Plant Date
Allain	St. Mary	9/19	10/25	09/27	10/25	09/14	10/25	10/01	**	**
Alma	Pointe Coupee	9/14	12/14	08/30	**	**	**	**	**	**
Bon Secour	St. James	9/8	12/03	08/24	12/03	09/13	10/24	09/25	**	**
Georgia	Lafourche	9/15	11/08	09/19	11/08	08/24	11/08	10/21	**	**
Glenwood	Assumption	9/25	11/27	08/23	10/30	08/26	10/30	09/22	10/30	09/09
Lanaux†	St. John	9/05	12/06	09/06	11/07	09/15	11/07	10/06	10/18	9/18
Levert-St.John	St. Martin	9/19	12/04	09/01	11/01	08/18	11/01	09/29	**	**
Magnolia	Terrebonne	10/4	10/26	10/04	10/23	08/23	10/23	10/02	**	**
R.Hebert	Iberia	9/27	12/05	09/05	11/30	08/25	10/16	09/24	11/30	9/16

† Lanaux 4th stubble test harvested on 10/18/01 and planted on 10/01/96 .

** No test harvested at this location.

Table3. Plant cane sugar per acre for four commercial and four experimental varieties at nine outfield locations in 2001.

Variety	Heavy		Light								Mean
	Allains	Magnolia	Alma	Bon Secour	Georgia	Glenwood	Lanaux	R. Hebert	St. John		
	(lbs/A)										
CP70-321	5719 -	4965	10025	7947	5976 -	8194	8138 -	8514	6245 -	7325	
LCP85-384	6923	4986	9611	8438	7090	8241	9333	7952	7638	7801	
HOCP85-845	5912 -	5283	9117	7655	5814 -	9324	7794 -	7315	6269 -	7165 -	
HOCP91-555	6748	5969 +	10093	7790	6642	8353	8768	7294	7719	7708	
HOCP96-540	7031	5585 +	11679	11508 +	7544	10539 +	10546 +	8963	8802 +	9133 +	
L97-128	7543	6228 +	12950 +	9222	8154 +	10365 +	10511 +	10332 +	8777 +	9342 +	
L97-137	6956	5375	10330	7078	7030	8364	8195 -	8612	8628	7841	
HOCP97-609	6414	5057	9773	7567	6700	9306	8960	8526	8133	7826	

† Significant differences, higher or lower, from LCP85-384 are indicated next to the value by a plus(+) or minus(-), respectively.

Table 4. Plant cane cane yield for four commercial and four experimental varieties at nine outfield locations in 2001.

Variety	Heavy		Light								Mean
	Allains	Magnolia	Alma	Bon Secour	Georgia	Glenwood	Lanaux	R. Hebert	St. John		
	(tons/A)										
CP70-321	22.7 -	19.5 -	37.2	32.1	23.9	30.0	30.2	29.6	22.8 -	27.6 -	
LCP85-384	29.0	22.9	34.8	31.1	27.5	32.8	34.0	27.5	27.5	29.7	
HOCP85-845	24.4 -	21.7	38.0	31.9	24.0	34.7	32.6	27.4	23.9	28.7	
HOCP91-555	27.8	25.1 +	26.9	30.0	25.4	32.8	32.9	26.3	27.9	29.5	
HOCP96-540	29.8	23.6	42.2 +	41.9 +	30.2	41.0 +	38.9 +	30.6	31.3 +	34.4 +	
L97-128	28.2	24.0	43.5 +	35.5 +	30.2	38.5 +	38.0 +	35.3 +	32.5 +	34.0 +	
L97-137	27.9	23.3	37.4	27.7 -	30.1	39.7 +	35.0	30.2	32.2 +	31.5	
HOCP97-609	26.8	21.2 -	33.3	29.0	27.2	34.9	33.6	30.1	29.0	29.5	

† Significant differences, higher or lower, from LCP85-384 are indicated next to the value by a plus(+) or minus(-), respectively.

Table 5. Plant cane sugar per ton for four commercial and four experimental varieties at nine outfield locations in 2001.

Variety	Heavy		Light							Mean
	Allains	Magnolia	Alma	Bon Secour	Georgia	Glenwood	Lanaux	R. Hebert	St. John	
	(lbs/ton)									
CP70-321	252	255 +	275	247	250	273	269	287	275	265
LCP85-384	238	217	277	273	258	252	275	290	278	262
HOCP85-845	242	244 +	240 -	241	242	269	239 -	267	263	249 -
HOCP91-555	243	238 +	274	259	262	255	267	278	276	261
HOCP96-540	236	237	276	275	250	257	271	293	281	264
L97-128	268 +	259 +	297	260	270	269	276	293	271	274 +
L97-137	249	231	277	256	233 -	212	234 -	285	268	249 -
HOCP97-609	240	239 +	294	261	246	267	267	284	280	264

† Significant differences, higher or lower, from LCP85-384 are indicated next to the value by a plus(+) or minus(-), respectively.

Table 6. Plant cane stalk weight for four commercial and four experimental varieties at nine outfield locations in 2001.

Variety	Heavy		Light							Mean
	Allains	Magnolia	Alma	Bon Secour	Georgia	Glenwood	Lanaux	R. Hebert	St. John	
	(lbs)									
CP70-321	2.11	2.47 +	2.33	2.48 +	2.50	2.32	2.46	2.88 +	2.46	2.45 +
LCP85-384	2.14	1.94	2.05	1.99	2.10	1.97	2.49	2.24	2.40	2.15
HOCP85-845	2.38	2.40 +	2.68 +	2.49 +	2.25	2.86 +	2.55	2.42	2.31	2.48 +
HOCP91-555	2.36	2.03	2.17	1.80	1.98	2.00	2.36	2.05	2.46	2.13
HOCP96-540	2.84 +	2.45 +	2.77 +	2.67 +	2.50	2.66 +	2.90 +	2.59	2.66	2.67 +
L97-128	2.76 +	2.53 +	2.65 +	2.84 +	3.04 +	2.83 +	3.12 +	2.72	3.12 +	2.84 +
L97-137	2.37	2.27	2.17	1.99	2.42	1.82	2.18	2.64	2.18	2.23
HOCP97-609	2.55 +	2.37 +	2.48	2.51 +	2.59 +	2.51 +	2.46	2.48	2.48	2.49 +

† Significant differences, higher or lower, from LCP85-384 are indicated next to the value by a plus(+) or minus(-), respectively.

Table 7. Plant cane stalk number for four commercial and four experimental varieties at nine outfield locations in 2001.

Variety	Heavy		Light								Mean
	Allains	Magnolia	Alma	Bon Secour	Georgia	Glenwood	Lanaux	R. Hebert	St. John		
	(stalks/A)										
CP70-321	21511 -	15886 -	32302	25969 -	19306 -	26025	24623	20548	18545 -	22746 -	
LCP85-384	27235	23848	33864	31301	26335	33477	27321	24952	22962	27922	
HOCP85-845	20620 -	18170 -	28351	25599 -	21378	24579 -	25639	22824	20807	23107 -	
HOCP91-555	23861	24858	34284	33208	25856	32749	27986	25644	22815	27918	
HOCP96-540	20967 -	19348 -	30926	31711	24221	30930	26803	23674	23561	25794	
L97-128	20806 -	19106 -	33378	25143 -	20027 -	27168	24505	26028	20929	24121 -	
L97-137	23618	20663	35000	28123	25146	45052 +	32485 +	23837	29617 +	29282	
HOCP97-609	20996 -	18302 -	27755	23192 -	20995 -	28574	27510	24299	23508	23903 -	

† Significant differences, higher or lower, from LCP85-384 are indicated next to the value by a plus(+) or minus(-), respectively.

Table 8. First-stubble sugar per acre for four commercial and two experimental varieties at eight outfield locations in 2001.

Variety	Heavy		Light						Mean
	Allains	Magnolia	Bon Secour	Georgia	Glenwood	Lanaux	R. Hebert	St. John	
	(lbs/A)								
CP70-321	3406 -	4340	8143	7303 -	5804 -	5699 -	9491	6436	6328 -
LCP85-384	4896	4750	9386	8638	9442	7513	10757	7309	7836
HOCP85-845	3987 -	5274	7634 -	6274 -	8391	5612 -	9670	5790 -	6579 -
HOCP91-555	5595	5661	7536 -	7547	8622	6776	10988	7363	7511
HO95-988	5054	5416	10301	8406	9982	7275	12039	8533 +	8376
HOCP96-540	5329	6170 +	10145	7332 -	9881	8212	12053	8684 +	8476

† Significant differences, higher or lower, from LCP85-384 are indicated next to the value by a plus(+) or minus(-), respectively.

†† Variety HO95-988 was dropped, but was harvested to collect data for breeding purposes.

Table 9. First-stubble cane yield for four commercial and two experimental varieties at eight outfield locations in 2001.

Variety	Heavy		Light						Mean	
	Allains	Magnolia	Bon Secour	Georgia	Glenwood	Lanaux	R. Hebert	St. John		
	(tons/A)									
CP70-321	13.7 -	16.2	30.6	28.1 -	21.9 -	21.3 -	32.6	26.5 -	23.9 -	
LCP85-384	19.1	16.9	34.2	32.4	33.6	28.4	37.7	31.8	29.2	
HOCP85-845	16.5 -	19.3 +	28.8 -	24.3 -	30.5	23.1 -	35.0	25.7 -	25.4 -	
HOCP91-555	20.5	19.7 +	27.9 -	26.9 -	30.4	23.8 -	38.3	29.6	27.1	
HO95-988	20.7	21.8 +	35.6	29.1	35.4	28.1	40.8	34.9	30.8 +	
HOCP96-540	21.8 +	22.0 +	38.4	28.6	37.9	32.9 +	42.2	37.8 +	32.7 +	

† Significant differences, higher or lower, from LCP85-384 are indicated next to the value by a plus(+) or minus(-), respectively.

†† Variety HO95-988 was dropped, but was harvested to collect data for breeding purposes.

Table 10. First-stubble sugar per ton for four commercial and two experimental varieties at eight outfield locations in 2001.

Variety	Heavy		Light						Mean	
	Allains	Magnolia	Bon Secour	Georgia	Glenwood	Lanaux	R. Hebert	St. John		
	(lbs/ton)									
CP70-321	249	267	266	260	266	268	291	244	264	
LCP85-384	256	281	274	267	282	264	285	231	268	
HOCP85-845	242	275	266	259	276	243 -	276	227	258	
HOCP91-555	273	288	270	281	284	285 +	287	249	277	
HO95-988	244	248	289	288 +	282	258	295	244	269	
HOCP96-540	244	281	265	256	261 -	250	286	231	259	

† Significant differences, higher or lower, from LCP85-384 are indicated next to the value by a plus(+) or minus(-), respectively.

†† Variety HO95-988 was dropped, but was harvested to collect data for breeding purposes.

Table 11. First-stubble stalk weight for four commercial and two experimental varieties at eight outfield locations in 2001.

Variety	Heavy		Light						Mean
	Allains	Magnolia	Bon Secour	Georgia	Glenwood	Lanaux	R. Hebert	St. John	
	(lbs)								
CP70-321	1.47	1.95	3.02 +	2.59 +	2.04	2.54 +	2.97 +	2.31 +	2.36 +
LCP85-384	1.65	1.67	1.98	1.92	1.77	1.91	2.00	1.62	1.81
HOCP85-845	1.61	2.02	2.40 +	1.98	2.10	1.99	2.43	1.91	2.06 +
HOCP91-555	1.58	1.44	1.73	1.88	1.77	2.02	1.73	1.82	1.75
HO95-988	1.85	2.07 +	2.64 +	2.32 +	2.37	2.50 +	2.54 +	2.36 +	2.33 +
HOCP96-540	1.59	1.86	2.27	2.35 +	2.02	2.45 +	2.58 +	2.40 +	2.19 +

† Significant differences, higher or lower, from LCP85-384 are indicated next to the value by a plus(+) or minus(-), respectively.

†† Variety HO95-988 was dropped, but was harvested to collect data for breeding purposes.

Table 12. First-stubble stalk number for four commercial and two experimental varieties at eight outfield locations in 2001.

Variety	Heavy		Light						Mean
	Allains	Magnolia	Bon Secour	Georgia	Glenwood	Lanaux	R. Hebert	St. John	
	(stalks/A)								
CP70-321	18847	16747	20364 -	21821 -	21523 -	16693 -	22207 -	22720 -	20115 -
LCP85-384	23558	20420	35328	33717	39052	30001	37983	39773	32479
HOCP85-845	20442	19197	24161 -	24760 -	29390 -	23274 -	28966 -	26879 -	24634 -
HOCP91-555	26396	27821 +	32194	28529 -	34232	24154	44263 +	32493 -	31260
HO95-988	22397	21107	26993 -	25313 -	30061 -	23762 -	32764	29785 -	26523 -
HOCP96-540	27409	23776	34062	24477 -	37517	27222	32999	31502 -	29870

† Significant differences, higher or lower, from LCP85-384 are indicated next to the value by a plus(+) or minus(-), respectively.

†† Variety HO95-988 was dropped, but was harvested to collect data for breeding purposes.

Table 13. Second-stubble sugar per acre for four commercial and one experimental varieties at eight outfield locations in 2001.

Variety	Heavy		Light							Mean
	Allains	Magnolia	Bon Secour	Georgia	Glenwood	Lanaux	R. Hebert	St. John		
	(lbs/A)									
CP70-321	4451 -	3863	6768 -	7486	7182	7572	6825 -	4493 -	6100 -	
LCP85-384	5869	4094	9278	7824	8664	8159	7947	7548	7413	
HOCP85-845	3695 -	4785	7530 -	7444	8857	7660	6433 -	5970 -	6549 -	
HOCP91-555	5342	4657	**	7778	8732	8520	8792 +	6910	7394	
HO95-988	5105	4859	8723	9425 +	9188	8895	8948 +	8662	7956	

† Significant differences, higher or lower, from LCP85-384 are indicated next to the value by a plus(+) or minus(-), respectively.

†† Variety HO95-988 was dropped, but was harvested to collect data for breeding purposes.

** Variety HOCP91-555 was not planted.

Table 14. Second-stubble cane yield for four commercial and one experimental varieties at eight outfield locations in 2001.

Variety	Heavy		Light							Mean
	Allains	Magnolia	Bon Secour	Georgia	Glenwood	Lanaux	R. Hebert	St. John		
	(tons/A)									
CP70-321	19.1 -	13.6	29.4 -	29.6	26.6 -	28.1	31.6 -	20.9 -	24.9 -	
LCP85-384	23.6	13.0	37.9	30.9	33.0	30.8	35.0	30.0	29.2	
HOCP85-845	15.3 -	16.1	28.7 -	28.4 -	31.2	29.0	27.4 -	24.5	25.3 -	
HOCP91-555	20.8	14.3	**	28.5 -	29.7	28.8	33.9	26.0	26.7 -	
HO95-988	21.5	16.6 +	34.0	34.1 +	33.3	31.7	36.6	33.0	30.0	

† Significant differences, higher or lower, from LCP85-384 are indicated next to the value by a plus(+) or minus(-), respectively.

†† Variety HO95-988 was dropped, but was harvested to collect data for breeding purposes.

** Variety HOCP91-555 was not planted.

Table 15. Second-stubble sugar per ton for four commercial and one experimental varieties at eight outfield locations in 2001.

Variety	Heavy		Light						Mean
	Allains	Magnolia	Bon Secour	Georgia	Glenwood	Lanaux	R. Hebert	St. John	
	(lbs/ton)								
CP70-321	232	283 -	231	253	269	270	216	216 -	247 -
LCP85-384	249	317	245	254	262	265	228	252	259
HOCP85-845	241	297	263	262	267	264	235	245	259
HOCP91-555	257	325	**	273 +	294 +	296 +	260 +	265	280 +
HO95-988	238	292 -	257	277 +	275	280	245	262	266

† Significant differences, higher or lower, from LCP85-384 are indicated next to the value by a plus(+) or minus(-), respectively.

†† Variety HO95-988 was dropped, but was harvested to collect data for breeding purposes.

** Variety HOCP91-555 was not planted.

Table 16. Second-stubble stalk weight for four commercial and one experimental varieties at eight outfield locations in 2001.

Variety	Heavy		Light						Mean
	Allains	Magnolia	Bon Secour	Georgia	Glenwood	Lanaux	R. Hebert	St. John	
	(lbs)								
CP70-321	2.13 +	1.77 +	2.24 +	2.30	2.05	2.69 +	2.40	2.35	2.24 +
LCP85-384	1.68	1.26	1.79	2.04	1.68	2.02	1.85	1.70	1.75
HOCP85-845	1.69	1.55 +	1.71	2.19	2.01	2.34	1.98	1.77	1.91 +
HOCP91-555	1.62	1.22	**	1.79	1.65	1.96	1.71	1.58	1.64
HO95-988	1.79	1.70 +	1.88	2.29	2.16 +	2.42 +	2.11	2.15	2.06 +

† Significant differences, higher or lower, from LCP85-384 are indicated next to the value by a plus(+) or minus(-), respectively.

†† Variety HO95-988 was dropped, but was harvested to collect data for breeding purposes.

** Variety HOCP91-555 was not planted.

Table 17. Second-stubble stalk number for four commercial and one experimental varieties at eight outfield locations in 2001.

Variety	Heavy		Light							
	Allains	Magnolia	Bon Secour	Georgia	Glenwood	Lanaux	R. Hebert	St. John	Mean	
	(stalks/A)									
CP70-321	17965 -	15401 -	26450 -	25882	26070 -	21010 -	26898 -	19436 -	22444 -	
LCP85-384	28364	20842	42740	30743	39418	30460	38045	36596	33225	
HOCP85-845	18094 -	20768	34109 -	26018	33005	25190 -	28049 -	28735 -	26616 -	
HOCP91-555	25820	23555	**	32215	37188	29408	39671	33089 -	32555	
HO95-988	24246	19672	37196	30007	31609	26379 -	35565	31696 -	29410 -	

† Significant differences, higher or lower, from LCP85-384 are indicated next to the value by a plus(+) or minus(-), respectively.

†† Variety HO95-988 was dropped, but was harvested to collect data for breeding purposes.

** Variety HOCP91-555 was not planted.

Table 18. Third-stubble sugar per acre for four commercial varieties at three outfield locations in 2001.

Variety	Light			Mean
	Glenwood	Lanaux	R. Hebert	
			(lbs/A)	
CP70-321	2888 -	4554 -	6277 -	4573 -
LCP85-384	7946	5952	9315	7738
HOCP85-845	7106	6838	8208	7384
HOCP91-555	6368	5143	8870	6794

† Significant differences, higher or lower, from LCP85-384 are indicated next to the value by a plus(+) or minus(-), respectively.

Table 19. Third-stubble cane yield for four commercial varieties at three outfield locations in 2001.

Variety	Light			Mean
	Glenwood	Lanaux	R. Hebert	
			(tons/A)	
CP70-321	11.2 -	19.6 -	22.9 -	17.9 -
LCP85-384	30.4	25.8	32.5	29.6
HOCP85-845	27.3	27.9	28.7	28.0
HOCP91-555	24.3	20.4 -	28.8	24.5

† Significant differences, higher or lower, from LCP85-384 are indicated next to the value by a plus(+) or minus(-), respectively.

Table 20. Third-stubble sugar per ton for four commercial varieties at three outfield locations in 2001.

Variety	Light			Mean
	Glenwood	Lanaux	R. Hebert	
			(lbs/ton)	
CP70-321	257	232	272	254
LCP85-384	261	230	286	259
HOCP85-845	260	246	286	264
HOCP91-555	261	252 +	308	274

† Significant differences, higher or lower, from LCP85-384 are indicated next to the value by a plus(+) or minus(-), respectively.

Table 21. Third-stubble stalk weight ton for four commercial varieties at three outfield locations in 2001.

Variety	Light			Mean
	Glenwood	Lanaux	R. Hebert	
	(lbs)			
CP70-321	2.09 +	2.21 +	2.24	2.18 +
LCP85-384	1.58	1.42	1.95	1.65
HOCP85-845	1.90	1.86 +	1.97	1.91 +
HOCP91-555	1.42	1.62	1.81	1.61

† Significant differences, higher or lower, from LCP85-384 are indicated next to the value by a plus(+) or minus(-), respectively.

Table 22. Third-stubble stalk number for four commercial varieties at three outfield locations in 2001.

Variety	Light			Mean
	Glenwood	Lanaux	R. Hebert	
	(stalks/A)			
CP70-321	10739 -	17736 -	20519 -	16331 -
LCP85-384	38674	36836	33720	36410
HOCP85-845	28783 -	29788	29281	29284
HOCP91-555	34801	25303 -	32076	30727

† Significant differences, higher or lower, from LCP85-384 are indicated next to the value by a plus(+) or minus(-), respectively.

Table 23. 2001 plant cane means from nine outfield locations: Allains, Alma, Bon Secour, Georgia, Glenwood, Lanaux, Magnolia, R. Hebert, and St. John farms.

Variety	Sugar per Acre	Cane Yield	Sugar per Ton	Stalk Weight	Stalk Number
	(lbs/A)	(tons/A)	(lbs/ton)	(lbs)	(stalks/A)
CP70-321	7325	27.6 -	265	2.45 +	22746 -
LCP85-384	7801	29.7	262	2.15	27922
HOCP85-845	7165 -	28.7	249 -	2.48 +	23107 -
HOCP91-555	7708	29.5	261	2.13	27918
HOCP96-540	9133 +	34.4 +	264	2.67 +	25794
L97-128	9342 +	34.0 +	274 +	2.84 +	24121 -
L97-137	7841	31.5	249 -	2.23	29282
HOCP97-609	7826	29.5	264	2.49 +	23903 -

Table 24. 2001 first-stubble means from eight outfield locations: Allains, Bon Secour, Georgia, Glenwood, Lanaux, Magnolia, R. Hebert, and St. John farms.

Variety	Sugar per Acre	Cane Yield	Sugar per Ton	Stalk Weight	Stalk Number
	(lbs/A)	(tons/A)	(lbs/ton)	(lbs)	(stalks/A)
CP70-321	6328 -	23.9 -	264	2.36 +	20115 -
LCP85-384	7836	29.2	268	1.81	32479
HOCP85-845	6579 -	25.4 -	258	2.06 +	24634 -
HOCP91-555	7511	27.1	277	1.75	31260
HO95-988	8376	30.8	269	2.33 +	26523 -
HOCP96-540	8476	32.7 +	259	2.19 +	29870

Table 25. 2001 second-stubble means from eight outfield locations: Allains, Bon Secour, Georgia, Glenwood, Lanaux, Magnolia, R. Hebert, and St. John farms.

Variety	Sugar per Acre	Cane Yield	Sugar per Ton	Stalk Weight	Stalk Number
	(lbs/A)	(tons/A)	(lbs/ton)	(lbs)	(stalks/A)
CP70-321	6100 -	24.9 -	247 -	2.24 +	22444 -
LCP85-384	7413	29.2	259	1.75	33225
HOCP85-845	6549 -	25.3 -	259	1.91 +	26616 -
HOCP91-555	7394	26.7 -	280 +	1.64	32555
HO95-988	7956	30.0	266	2.06 +	29410 -

Table 26. 2001 third-stubble means from three outfield locations: Glenwood, Lanaux, and R. Hebert farms.

Variety	Sugar per Acre	Cane Yield	Sugar per Ton	Stalk Weight	Stalk Number
	(lbs/A)	(tons/A)	(lbs/ton)	(lbs)	(stalks/A)
CP70-321	4573 -	17.9 -	254	2.18 +	16331 -
LCP85-384	7738	29.6	259	1.65	36410
HOCP85-845	7384	28.0	264	1.91 +	29284
HOCP91-555	6794	24.5	274	1.61	30727

Table 27. 2001 fourth-stubble means from Lanaux farms.

Variety	Sugar per Acre	Cane Yield	Sugar per Ton	Stalk Weight	Stalk Number
	(lbs/A)	(tons/A)	(lbs/ton)	(lbs)	(stalks/A)
CP70-321	5680 -	24.3 -	233	2.13	22971 -
CP72-370	4461 -	18.1 -	248	1.77	20534 -
CP79-318	7085	30.1 -	235	1.98	30981 -
LCP82-089	6203 -	27.6 -	224	1.81	30720 -
LHO83-153	5318 -	25.9 -	205	1.75	29829 -
LCP85-384	7430	33.7	221	1.80	38085
HOCP85-845	7290	32.0	228	2.06	31137
HOCP91-555	8060	30.7	264 +	1.77	34766

Table 28 Combined plant cane means across outfield locations from 2000 to 2001.

Variety	Sugar per Acre	Cane Yield	Sugar per Ton	Stalk Weight	Stalk Number
	(lbs/A)	(tons/A)	(lbs/ton)	(lbs)	(stalks/A)
CP70-321	7413	28.5	258	2.53 +	22298 -
LCP85-384	7947	29.9	265	2.08	29117
HOCP85-845	7170 -	29.5	243 -	2.51 +	23339 -
HOCP91-555	8027	30.1	258	2.16	29040
HOCP96-540	9366 +	35.7 +	261	2.67 +	26982 -

Table 29. Combined plant cane means across outfield locations from 1996 to 2001.

Variety	Sugar per Acre	Cane Yield	Sugar per Ton	Stalk Weight	Stalk Number
	(lbs/A)	(tons/A)	(lbs/ton)	(lbs)	(stalks/A)
CP70-321	7868 -	29.8 -	263 -	2.74 +	21999 -
LCP85-384	8804	32.8	268	2.31	28752
HOCP85-845	7847 -	32.0	245 -	2.62 +	24585 -
HOCP91-555	8397 -	31.8	264 -	2.32	27723 -

Table 30. Combined first-stubble means across outfield locations from 1997 to 2001.

Variety	Sugar per Acre	Cane Yield	Sugar per Ton	Stalk Weight	Stalk Number
	(lbs/A)	(tons/A)	(lbs/ton)	(lbs)	(stalks/A)
CP70-321	7679 -	28.5 -	270	2.50 +	22900 -
LCP85-384	9077	33.4	272	1.98	34052
HOCP85-845	7988 -	30.9 -	258 -	2.28 +	27297 -
HOCP91-555	8509 -	30.8 -	275	1.96	31840 -

Table 31. Combined second-stubble means across outfield locations from 1998 to 2001.

Variety	Sugar per Acre	Cane Yield	Sugar per Ton	Stalk Weight	Stalk Number
	(lbs/A)	(tons/A)	(lbs/ton)	(lbs)	(stalks/A)
CP70-321	6743 -	26.5 -	255 -	2.29 +	23269 -
LCP85-384	8105	30.8	264	1.72	36444
HOCP85-845	7433 -	29.0 -	255 -	2.02 +	28795 -
HOCP91-555	7549 -	27.5 -	275 +	1.64 -	33771 -

Table 32. Combined third-stubble means across outfield locations from 1999 to 2001.

Variety	Sugar per Acre	Cane Yield	Sugar per Ton	Stalk Weight	Stalk Number
	(lbs/A)	(tons/A)	(lbs/ton)	(lbs)	(stalks/A)
CP70-321	5966 -	22.9 -	259	2.30 +	19855 -
LCP85-384	7810	29.6	264	1.67	35929
HOCP85-845	8142	31.5	259	2.14 +	29533 -
HOCP91-555	7621	27.6	275 +	1.72	32493

SUCROSE LABORATORY AT ST. GABRIEL

G. L. Hawkins and K. A. Gravois
Sugar Research Station

More than 3,600 samples were processed at the St. Gabriel Sucrose Laboratory during the 2001 harvest season (Table 1). Standard laboratory procedures, which include use of the ABC Clarifier, were used to measure the Brix and pol of the juice. Personnel in the lab tested a new clarifier, Octapol®, developed by Baddley Chemical to measure the juice pol. Compared to the ABC Clarifier the Octapol® was found to clarify fresh and stale sugarcane juice while using the same amount of product. The ABC Clarifier does not clarify stale sugarcane juice as easily. The ABC Clarifier active ingredients tend to break down more quickly; therefore, it requires more product to clarify the same amount of raw juice. The juice was extracted via a three-roller mill for 3,613 samples. The laboratory numbers were recorded on the sample tags and returned to the researchers, along with the computer file that contains Brix, pol, and theoretical recoverable sugar per ton of cane.

Table 1. Number of sugarcane samples processed at the St. Gabriel Sucrose Laboratory during the 2001 harvest season.

Project Area	Leader	Number of Samples
Agronomy	Chuck Kennedy	491
Entomology	Eugene Reagan	80
Iberia Research Station	William Hallmark	716
	Howard Viator	35
Plant Pathology and Crop Physiology	Jeffrey Hoy	216
	James Griffin	185
LCES	Ben Legendre	11
USDA	Ted Kornecki	36
Sugar Research Station	Line Trials	893
	Infield	10
	Increase	144
	Nursery	312
	Planting Rate	72
	Germination	298
	Kenneth Gravois	114
TOTAL		3613

LAES SUGARCANE TISSUE CULTURE LABORATORY

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Certis USA, LLC, and Sugar Research Station

During the 2001-2002 production season, more than 30,000 plantlets were regenerated in the Louisiana Agricultural Experiment Station tissue culture laboratory. A total of 28,700 plantlets were turned over to Certis USA, LLC, Kleentek Div., for transplanting into the greenhouse at Houma. The number of plantlets transplanted for each cultivar are listed at Table 1. To minimize somaclonal variation, plantlets from all cultivars were generated through meristem production method.

Table 1. The number of tissue-culture-derived plantlets of different cultivars transplanted in the greenhouse.

Cultivar	Meristem production
CP 70-321	1,296
LCP 85-384	19,998
HoCP 91-555	4,810
HoCP 96-540	1,002
L97-137	72
L98-207	82
CP 89-2143	1,440
TOTAL	28,700