

AN OVERVIEW OF 2000 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 (plantcane, 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 2000.

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
Daniel Guillot	Sugar Research Station	Outfield Variety Testing
Harold Schexnayder, Sr.	St. Gabriel Research Station	Farm Manager

A total of 93,927 seedlings from 236 crosses from the 1999 crossing series were planted in the field in the spring of 2000. A total of 74,263 seedlings survived transplanting. The 79% survival was due to extremely dry conditions after transplanting in mid-April (Table 3). The majority of the seedlings were from crosses of commercial varieties and elite experimental varieties. Selection will be carried out in 2001 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 2000 was excellent, with 461 crosses being made. Germination tests were conducted in December and indicated excellent germination for the 2000 crossing campaign. Seed production for 2000 was 713,474.

In the fall of 2000, individual selection was practiced on 45,356 first stubble seedlings that represented the 1998 crossing series. Family selection (top 83% in 2000) was utilized based on information from the cross appraisal study. Of the 45,356 clones, 3,014 were selected and planted to establish the first-line trials.

Established procedures were used to advance superior clones of the 1997 crossing series from first-line trials to second-line trials (735 clones) and of the 1996 crossing series from second-line trials to increase trials (206 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 33 experimental varieties from the 1995 crossing series were assigned permanent variety designations in the fall of 2000. Newly assigned varieties were entered in replicated nursery trials at three locations (St. Gabriel Research Station, USDA Ardoyne Farm, Iberia Research Station). “L” and “HoCP or Ho” varieties of the 2000 series were exchanged in the fall of 2000 to plant cooperative infield and nursery tests the following year.

Experimental varieties were replanted in infield and off-station nursery tests (16 varieties of the 1999 series), introduced to the outfield tests (two varieties of the 1998 series), and planted in outfield tests (one variety of the 1995 series and two varieties of the 1997 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 2000 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 2000.

Series	Stage of Testing	Number of experimental varieties
L 1995	Outfield - Replanted and harvested as first stubble	1
L 1996	Outfield - Replanted and harvested as plantcane; Off-station nurseries - 2 nd stubble harvested	0
L 1997	Outfield - Planted; On-station nurseries - 2 nd stubble harvested; Off-station nurseries - 1 st stubble harvested	2
L 1998	Outfield - Introduced; On-station Nurseries 1 st stubble harvested; Off-station nurseries - plantcane harvested.	2
L 1999	On-station nurseries plantcane harvested; Off-station nurseries planted.	16
L 2000	Assignment - On-station nurseries planted	33

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 2000 at the St. Gabriel Research Station is reported in Table 3. Total rainfall for the year was 40.48 inches, which was 71% of normal annual rainfall. Only 0.15 inch rain was recorded in May. A dry spring was followed by below-average rainfall until November. The mild winter of 1999-2000 contributed to higher than normal amounts of sugarcane smut and rust diseases.

Table 3. 2000 rainfall reported by date at the St. Gabriel Research Station, St. Gabriel, Louisiana.

January	Rainfall (in.)	Comments
3	1.10	
8	0.10	
9	0.75	
23	0.90	
27	0.15	
28	0.35	
	3.35	70% Normal
February		
26	1.00	20% Normal
March		
11	0.25	

15	0.85	
16	0.05	

	Rainfall (in.)	Comments
18	1.40	
19	0.15	
27	0.50	
	3.20	69% Normal
April		
3	0.35	
4	0.05	
24	0.55	
	0.95	23% Normal
May		
28	0.15	3% Normal

June	Rainfall (in.)	Comments
4	0.25	
5	0.60	
8	0.20	
9	0.40	
15	0.35	
16	0.20	
18	0.20	
19	0.05	
20	0.35	
26	0.25	
27	1.55	
	4.40	84% Normal
July		
1	1.40	
2	0.15	
23	1.40	
	2.95	50% Normal
August		
8	0.20	
9	0.15	
10	2.00	
22	0.15	
	2.50	44% Normal
September		
8	0.75	
9	1.45	
21	1.35	
	3.55	80% Normal

October	Rainfall (in.)	Comments
5	0.40	
6	0.80	
	1.20	38% Normal
November	Rainfall (in.)	Comments
3	0.07	
6	1.70	
9	2.12	
13	0.70	
16	1.60	

17	0.20	
18	0.70	
19	5.45	
24	1.00	
	13.54	335% Normal
27	0.13	
28	1.24	
	3.49	63% Normal
December		
2	0.05	
6	0.60	

14	0.76	
17	0.25	
19	0.25	
22	0.20	
24	0.01	
Total 2000	40.48	71% Normal
Third driest year in history		

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

2000 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 2000 crossing season were planted in the fall of 1999. After establishing the plants from the cuttings, the plants were fertilized weekly with a 200 ppm solution of Peter’s 20-20-20. In late January 2000, the cuttings were then transferred to can culture. In April, the cans were moved from the greenhouse to the photoperiod rail carts. Soluble fertilizer applications were applied weekly. Fertilization was discontinued in early 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 September 23 and October 8. 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 longest inductive treatments (bays 3, 4, and 6). Easy flowering varieties were generally placed in 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 tassels was good on the photoperiod carts in 2000 (Tables 1-2). Total flowering percentage for the six bays was 38%. There were adequate tassels to accomplish good seed production. In 2000, there were high hopes of using our newest commercial variety, HOCP 91-555, as a

potential parent in many biparental crosses. This goal was unsuccessful because of the long lag phase of flowering for this variety.

Crossing began on September 11 and ended on November 17, 2000. Six-hundred fifteen tassels of 119 varieties were used to produce 473 total crosses yielding 713,474 viable seed with 598,459 seed produced from biparental crosses (Table 3). The germination of seed from biparental crosses was extremely high (average 192 viable seed per gram fuzz). Maintaining high relative humidity is an important factor in achieving high pollen viability. Close attention was made to maintaining high relative humidity. Seed production in 2000 comparable that of 1996, a year where the most viable seed was produced in the history of the Louisiana Sugarcane Variety Development Program. That number in 1996 was 758,905 viable seed produced.

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 November 27 through December 13, 2000. At that time, all varieties that had not tasseled were examined for signs of induction. Conditions for natural flowering were good. Data collected will be used to gage photoperiod response for the upcoming crossing years.

Table 1. Summary of 2000 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 30±8	96	56
1	B	June 26	34	July 30	62	77	Oct 29±9	93	49
1	C	June 26	34	July 30	62	77	Oct 27±11	98	35
2	A	June 16	34	July 20	72	87	Oct 21±12	88	60
2	B	June 16	34	July 20	72	87	Oct 18±11	88	53
2	C	June 16	34	July 20	72	87	Oct 23±13	86	45
3	A	May 30	37	July 6	87	102	Sept 28±12	98	44
3	B	May 30	37	July 6	87	102	Oct 1±15	86	37
3	C	May 30	37	July 6	87	102	Oct 12±13	86	23
4	A	May 30	37	July 6	87	102	Oct 13±16	92	49
4	B	May 30	37	July 6	87	102	Oct 5±14	82	44
4	C	May 30	37	July 6	87	102	Oct 10±20	85	14
5	A	June 4	36	July 10	82	97	Oct 15±15	97	36
5	B	June 4	36	July 10	82	97	Oct 28±12	96	13
5	C	June 4	36	July 10	82	97	Oct 16±14	92	18
6	A	May 30	41	July 10	82	97	Oct 8±16	84	36
6	B	May 30	41	July 10	82	97	Oct 5±16	86	38
6	C	May 30	41	July 10	82	97	Oct 4±11	88	31

† 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
119	324	184	1621	615	5.31	3.34	5.1	92
					±1.62	±1.58	±1.6	±14

[†] 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 2000 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	366	598,459	1635 ± 1654	1613 ± 1640	192 ± 161
Polycross	19	54,697	2878 ± 2688	2348 ± 1948	289 ± 197
Self	88	60,318	685 ± 942	638 ± 951	99 ± 121
Total	473	713,474	1508 ± 1664	1462 ± 1602	179 ± 161

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	108	3	55	1	20	5.2 ± 1.3	3.1 ± 1.6

[†] Based upon cans with tassels.

Table 5. Varietal flowering summary in 2000 in the photoperiod bays.

VARIETY	Days of Constant Photoperiod	Mean Days to Flower	Pollen Rating	Total Stalk Number	Percent Flowering Stalks
CP65-357	35	88±7	7	10	30
CP70-321	39±1	.	.	8	.
CP72-370	36±1	.	.	9	.
CP73-351	41	.	.	5	.
CP77-405	36	92±4	7	15	33
CP78-317	34	77±1	5	13	69
CP78-357	39±1	.	.	12	.
CP79-318	35	101±2	6	14	86
CP79-348	36	.	.	14	.
CP82-550	37±1	.	.	10	.
CP83-644	37	132	6	25	4
CP88-702	39±1	.	.	12	.
CP89-805	35	.	.	10	.
CP89-846	34	96±1	6	11	27
CP89-879	35	.	.	13	.
HO89-889	37	.	.	12	.
HO91-572	36±1	94±5	6±1	15	53
HO95-988	36	106±3	6	23	57
HOCP85-845	36	103±2	4	44	43
HOCP88-739	36	.	.	16	.
HOCP91-552	34	78±1	3	11	100
HOCP91-555	39	.	.	23	.
HOCP92-618	36	105±7	4±1	22	32
HOCP92-624	35	88±2	6	37	84
HOCP92-648	35	100±3	6	21	57
HOCP93-776	41	.	.	8	.
HOCP94-808	41	.	.	4	.
HOCP94-866	41	.	.	3	.
HOCP94-867	37	85	6	3	33
HOCP95-908	37	.	.	3	.
HOCP95-950	37	110±11	6±1	5	40
HOCP95-951	34	94±2	6±1	9	22
HOCP96-503	38±	.	.	16	.
HOCP96-509	36	.	.	24	.
HOCP96-522	35	86±2	5	15	73
HOCP96-540	37±1	91±3	5	23	78
HOCP96-561	39±1	108±3	4	13	69
HOCP97-601	34	93±2	4±1	10	30
HOCP97-606	35	115±8	6±1	11	18
HOCP97-609	36	85±3	4	21	62
HOCP97-621	35	86±4	5±1	12	67
HOCP97-628	41	.	.	2	.
HOCP97-629	41	.	.	3	.

Table 5. Continue.

VARIETY	Days of Constant Photoperiod	Mean Days to Flower	Pollen Rating	Total Stalk Number	Percent Flowering Stalks
HOCP97-641	37	.	.	11	.
HOCP97-645	39±1	94±3	6	16	19
HOCP97-646	36	.	.	14	.
HOCP97-665	37	.	.	11	.
HOCP98-717	35	100±4	6±1	12	25
HOCP98-741	41	95	3	3	33
HOCP98-743	34	91±3	6	6	100
HOCP98-752	34	.	.	5	.
HOCP98-770	34	.	.	3	.
HOCP98-771	34	.	.	2	.
HOCP98-776	35	85±2	5±1	12	83
HOCP98-781	34	80±6	5	3	67
L75-056	34	94	7	6	17
L89-113	38±1	108±5	5±1	17	35
L90-191	37	112±4	5±1	14	36
L90-207	35	76±2	7	16	88
L91-255	35	92±4	5	16	56
L91-281	34	87±1	6	16	100
L92-312	37	132	3	10	10
L93-363	34	93±3	6±1	7	71
L93-399	39±1	99±4	7	12	75
L94-426	35	96±3	5	34	35
L94-428	38	105±4	6	22	55
L94-431	37	.	.	10	.
L94-432	38	98±3	5±1	22	18
L94-433	38±1	119	4	9	22
L95-462	36±1	.	.	27	.
L95-485	39±1	.	.	12	.
L96-026	38±1	.	.	16	.
L96-030	39±1	.	.	12	.
L96-040	34	97±1	4	12	92
L96-092	38±1	.	.	21	.
L97-102	36±1	.	.	19	.
L97-128	34	90±1	7	29	90
L97-137	37	84	3	34	3
L97-154	34	.	.	6	.
L98-158	37	79±6	6	5	60
L98-168	36	.	.	4	.
L98-197	38±1	88±4	5±1	16	50
L98-198	39±1	79±2	7	11	82
L98-207	35	96±5	5±1	23	22
L98-209	36	105±2	4	15	73
L99-213	34	.	.	6	.
L99-220	34	.	.	4	.
L99-224	39±1	95±5	5	12	75

Table 5. Continue.

VARIETY	Days of Constant Photoperiod	Mean Days to Flower	Pollen Rating	Total Stalk Number	Percent Flowering Stalks
L99-226	38±1	90±3	5	16	81
L99-229	34	77±2	5	9	78
L99-231	37	.	.	6	.
L99-233	36	79±3	3	17	65
L99-234	34	106	3	7	29
L99-237	34	84±5	5±1	3	100
L99-240	34	.	.	3	.
L99-243	34	.	.	7	.
L99-245	34	116	7	4	25
LCP81-010	36	87±3	5	31	90
LCP81-030	36	116	3	11	9
LCP82-089	37±1	126	4	22	5
LCP83-137	39±1	.	.	9	.
LCP85-384	37	93±2	3	115	59
LCP86-408	37	.	.	9	.
LCP86-454	37±1	81±7	4±1	22	36
LCP87-492	35	83±2	6	16	88
LHO83-153	39±1	.	.	14	.
TucCP77-042	36	92±1	6	12	92
US79-010	36	94±4	6	15	73
US80-004	38±1	92±5	4±1	9	56
US90-018	36	.	.	16	.
US90-021	37	.	.	9	.
US92-010	39±1	107	3	10	10
US93-016	36	.	.	12	.
US96-001	39±1	100±5	4	10	90
US96-002	37±1	93±7	7	8	50
US99-001	41	.	.	4	.
US99-002	41	67±1	4	5	80
US99-003	41	78±4	6±1	4	100
US99-004	41	98±28	4±1	3	67

Table 6. Summary of varietal flowering response to natural photoperiod in 2000.

VARIETY	First Flower Date	Mean Flower Date	Stalks	Flowers	Percent Flowered
HO98-783	boot stage		11		
HO98-784	emerging		12		
HOCP85-845	induced		11		
HOCP98-702	346	346	11	3	27
HOCP98-703	induced		5		
HOCP98-712	343	346±2	20	11	55
HOCP98-716	induced		10		
HOCP98-718	341	344±3	9	9	100
HOCP98-728	boot stage		6		
HOCP98-734	boot stage		12		
HOCP98-735	induced	.	11	.	.
HOCP98-742	induced	.	6	.	.
HOCP98-746	348	348	4	1	25
HOCP98-749	emerging	.	5	.	.
HOCP98-751	emerging	.	10	.	.
HOCP98-752	boot stage	.	5	.	.
HOCP98-762	341	341	4	2	50
HOCP98-765	348	348	6	5	83
HOCP98-769	boot stage	.	6	.	.
HOCP98-770	boot stage	.	5	.	.
HOCP98-775	boot stage	.	12	.	.
HOCP98-778	boot stage	.	11	.	.
HOCP98-779	boot stage	.	15	.	.
HOCP98-781	343	343	5	2	40
L99-212	boot stage	.	16	.	.
L99-213	boot stage	.	9	.	.
L99-214	343	346±2	24	11	46
L99-215	boot stage	.	11	.	.
L99-216	346	346	11	2	18
L99-217	boot stage	.	13	.	.
L99-218	341	343±2	10	9	90
L99-219	348	348	15	3	20
L99-221	boot stage	.	17	.	.
L99-222	induced	.	11	.	.
L99-223	boot stage	.	16	.	.
L99-225	341	342±3	13	4	31
L99-227	336	339±3	7	5	71
L99-228	346	347±1	9	3	33
L99-230	339	339	7	1	14
L99-231	boot stage	.	7	.	.
L99-232	boot stage	.	6	.	.
L99-234	348	348	2	1	50
L99-235	emerging	.	10	.	.
L99-236	induced	.	11	.	.
L99-237	343	345±3	11	7	64
L99-238	induced	.	6	.	.
L99-239	induced	.	9	.	.

Table 6. Continue.

VARIETY	First Flower	Mean Flower			Percent Flowered
	Date	Date	Stalks	Flowers	
L99-241	348	348	9	3	33
L99-242	induced	.	10	.	.
L99-244	emerging	.	10	.	.
L99-245	emerging	.	6	.	.
L99-326	induced	.	4	.	.
LCP85-384	348	348	12	1	8
LCP86-454	induced	.	6	.	.
US99-001	boot stage	.	5	.	.
US99-002	332	337±3	11	11	100
US99-003	346	346	5	1	20
US99-004	emerging	.	2	.	.

Table 7. Crosses and seed made in 2000 sorted by cross number.

<u>Cross</u>	<u>Female</u>	<u>Male</u>	<u>Seed</u>				
				XL00-026	L98-198	US99-002	25
XL00-001	L90-207	US99-002	0	XL00-027	L98-197	US99-002	882
XL00-002	US99-002	US99-002	84	<u>Cross</u>	<u>Female</u>	<u>Male</u>	<u>Seed</u>
XL00-003	L99-233	US99-002	595	XL00-028	LCP87-492	LCP85-384	313
XL00-004	L90-207	L99-233	0	XL00-029	LCP85-384	LCP85-384	118
XL00-005	L99-233	L99-233	105	XL00-029	LCP85-384	LCP85-384	0
XL00-006	HOC92-624	L99-233	55	XL00-030	LCP87-492	HOC97-609	56
XL00-007	HOC92-624	US99-003	0	XL00-031	LCP81-010	HOC97-609	611
XL00-008	L98-158	US99-003	0	XL00-032	LCP87-492	HOC97-621	20
XL00-009	US99-003	US99-003	0	XL00-033	LCP81-010	HOC97-621	3419
XL00-010	HOC92-624	LCP85-384	105	XL00-034	HOC97-621	HOC97-621	1719
XL00-011	L90-207	LCP85-384	0	XL00-035	L99-233	LCP85-384	2116
XL00-012	LCP85-384	LCP85-384	48	XL00-036	LCP81-010	LCP85-384	2362
XL00-013	HOC92-624	LCP86-454	30	XL00-037	LCP85-384	LCP85-384	268
XL00-014	L90-207	LCP86-454	0	XL00-037	LCP85-384	LCP85-384	407
XL00-015	LCP86-454	LCP86-454	0	XL00-037	LCP85-384	LCP85-384	145
XL00-016	LCP81-010	LCP85-384	729	XL00-038	HOC92-624	HOC97-621	1262
XL00-017	US99-004	LCP85-384	0	XL00-039	L98-198	HOC97-621	450
XL00-018	LCP85-384	LCP85-384	9	XL00-040	HOC98-776	HOC97-621	1173
XL00-018	LCP85-384	LCP85-384	27	XL00-041	HOC97-609	HOC97-621	1257
XL00-019	LCP86-454	LCP85-384	0	XL00-042	HOC98-741	HOC97-609	1414
XL00-020	LCP85-384	LCP85-384	0	XL00-043	L98-198	HOC97-609	303
XL00-020	LCP85-384	LCP85-384	0	XL00-044	LCP87-492	HOC97-609	507
XL00-020	LCP85-384	LCP85-384	20	XL00-045	CP65-357	LCP85-384	775
XL00-021	L98-198	LCP81-010	41	XL00-046	HOC97-621	LCP85-384	1818
XL00-022	LCP81-010	LCP81-010	43	XL00-047	HO91-572	LCP85-384	0
XL00-023	HOC92-624	HOC97-609	533	XL00-048	LCP85-384	LCP85-384	500
XL00-024	HOC97-609	HOC97-609	39	XL00-048	LCP85-384	LCP85-384	102
XL00-025	LCP81-010	US99-002	1019	XL00-049	HOC92-624	HOC96-540	2890

Table 7. Crosses and seed made in 2000 sorted by cross number.

XL00-050	HOCP96-540	HOCP96-540	4873	XL00-094	LCP85-384	LCP85-384	143
XL00-051	HOCP96-540	00P1	10256	XL00-095	HOCP92-618	HOCP96-540	806
XL00-052	LCP81-010	00P1	5029	XL00-096	L90-207	HOCP96-540	51
XL00-053	US99-002	00P1	475	XL00-097	L99-226	HOCP96-540	1478
<u>Cross</u>	<u>Female</u>	<u>Male</u>	<u>Seed</u>	XL00-098	L98-158	US79-010	1094
XL00-054	US99-003	00P1	0	<u>Cross</u>	<u>Female</u>	<u>Male</u>	<u>Seed</u>
XL00-055	CP65-357	L91-255	566	XL00-099	L98-197	US79-010	1794
XL00-056	HOCP92-624	L91-255	1441	XL00-100	L98-198	US79-010	686
XL00-057	HOCP97-609	L91-255	850	XL00-101	L99-224	US79-010	1423
XL00-058	L91-255	L91-255	515	XL00-102	TUCCP77-042	US79-010	20
XL00-059	L94-426	L99-233	1740	XL00-103	US79-010	US79-010	506
XL00-060	L98-158	L99-233	1048	XL00-104	HOCP92-618	L94-426	195
XL00-061	LCP87-492	L99-233	813	XL00-105	L90-207	L94-426	92
XL00-062	L98-197	LCP81-010	61	XL00-106	L98-198	L94-426	325
XL00-063	L98-198	LCP81-010	229	XL00-107	TUCCP77-042	L94-426	0
XL00-064	LCP86-454	LCP85-384	2264	XL00-108	US99-003	L94-426	11
XL00-065	US96-002	LCP85-384	1014	XL00-109	L94-426	L94-426	488
XL00-066	HOCP85-845	LCP85-384	2026	XL00-110	CP78-317	L94-428	244
XL00-067	HOCP96-522	LCP85-384	1349	XL00-111	L99-224	L94-428	309
XL00-068	LCP85-384	LCP85-384	321	XL00-112	L94-428	L94-428	0
XL00-069	HO91-572	LCP81-010	257	XL00-113	HOCP96-522	CP78-317	631
XL00-070	L90-207	LCP81-010	11	XL00-114	LCP81-010	CP78-317	4054
XL00-071	HOCP98-776	LCP81-010	977	XL00-115	CP78-317	CP78-317	247
XL00-072	L98-197	00P2	824	XL00-116	LCP81-010	US96-001	3462
XL00-073	L98-198	00P2	732	XL00-117	L97-137	US96-001	223
XL00-074	HOCP85-845	HOCP96-540	2006	XL00-118	US96-001	US96-001	396
XL00-075	US79-010	HOCP96-540	1822	XL00-119	US80-004	LCP85-384	22
XL00-076	LCP85-384	HOCP96-540	669	XL00-120	LCP85-384	LCP85-384	31
XL00-077	HOCP94-867	L99-226	546	XL00-121	TUCCP77-042	HOCP96-540	25
XL00-078	L99-224	L99-226	2161	XL00-122	HO91-572	HOCP96-540	137
XL00-079	LCP86-454	L99-226	2508	XL00-123	LCP87-492	HOCP96-540	7
XL00-080	US96-001	L99-226	2963	XL00-124	TUCCP77-042	HOCP98-776	13
XL00-081	LCP85-384	L99-226	1202	XL00-125	HOCP98-776	HOCP98-776	53
XL00-082	L99-226	L99-226	946	XL00-126	L97-128	L99-233	501
XL00-083	HOCP92-624	LCP85-384	1707	XL00-127	L98-207	L99-233	1512
XL00-084	HOCP92-618	LCP85-384	219	XL00-128	L99-224	L99-233	1882
XL00-085	TUCCP77-042	LCP85-384	12	XL00-129	L99-233	L99-233	0
XL00-086	US79-010	LCP85-384	2516	XL00-130	HO95-988	HOCP85-845	49
XL00-087	US96-001	LCP85-384	1946	XL00-131	L93-399	HOCP85-845	36
XL00-088	LCP85-384	LCP85-384	312	XL00-132	L99-226	HOCP85-845	74
XL00-088	LCP85-384	LCP85-384	154	XL00-133	LCP81-010	HOCP85-845	1331
XL00-089	US99-050	LCP85-384	154	XL00-134	HOCP85-845	HOCP85-845	241
XL00-090	US99-043	LCP85-384	315	XL00-135	HOCP91-552	L91-255	6452
XL00-090.5	LCP85-384	LCP85-384	138	XL00-136	HOCP97-645	L91-255	110
XL00-091	US80-004	LCP85-384	1694	XL00-138	L93-399	L99-233	352
XL00-092	HOCP98-781	LCP85-384	337	XL00-139	L98-209	L99-233	2190
XL00-093	L99-226	LCP85-384	1592	XL00-140	L99-226	L99-233	1191
XL00-094	LCP85-384	LCP85-384	320	XL00-141	LCP81-010	L99-233	4896

Table 7. Crosses and seed made in 2000 sorted by cross number.

XL00-142	HOC91-552	L99-233	4624	XL00-186	CP78-317	L91-255	152
XL00-143	L93-399	LCP85-384	301	XL00-187	HOC91-552	L91-255	1910
XL00-144	HOC96-522	LCP85-384	726	XL00-188	HOC96-522	L91-255	987
XL00-144.5	HOC91-552	LCP85-384	2832	XL00-189	L91-255	L91-255	562
XL00-145	L97-128	US80-004	437	XL00-190	HOC91-552	L94-432	2027
XL00-146	HOC91-522	US80-004	3960	XL00-191	HOC96-522	L94-432	1543
<u>Cross</u>	<u>Female</u>	<u>Male</u>	<u>Seed</u>	XL00-192	L89-113	L94-432	32
XL00-147	US80-004	US80-004	32	<u>Cross</u>	<u>Female</u>	<u>Male</u>	<u>Seed</u>
XL00-148	L98-197	HOC96-522	1798	XL00-193	L97-128	LCP87-492	759
XL00-149	L99-226	HOC96-522	2408	XL00-194	US79-010	LCP87-492	1913
XL00-150	HOC96-522	HOC96-522	55	XL00-195	HO91-572	LCP87-492	1791
XL00-151	LCP87-492	L99-226	0	XL00-196	LCP87-492	LCP87-492	1880
XL00-152	TUCCP77-042	L99-226	38	XL00-197	CP77-405	LCP85-384	2390
XL00-153	US96-002	L99-226	1332	XL00-198	HO95-988	LCP85-384	662
XL00-154	HOC92-624	LCP86-454	2493	XL00-199	HOC92-648	LCP85-384	4565
XL00-155	LCP85-384	LCP86-454	1083	XL00-200	US80-004	LCP85-384	1881
XL00-156	L94-426	LCP86-454	931	XL00-201	L91-281	LCP85-384	943
XL00-157	LCP86-454	LCP86-454	185	XL00-202	HO91-572	LCP85-384	839
XL00-158	CP79-318	LCP85-384	3323	XL00-203	LCP85-384	LCP85-384	249
XL00-159	US96-001	LCP85-384	2006	XL00-203	LCP85-384	LCP85-384	757
XL00-160	LCP85-384	LCP85-384	916	XL00-203	LCP85-384	LCP85-384	121
XL00-160	LCP85-384	LCP85-384	1570	XL00-204	HOC96-540	HOC91-552	8090
XL00-161	L94-426	L94-432	163	XL00-205	HOC97-609	HOC91-552	3981
XL00-162	LCP87-492	L94-432	1530	XL00-206	L94-432	HOC91-552	2671
XL00-163	US96-002	L94-432	1122	XL00-208	HOC98-741	HOC91-552	2570
XL00-164	L94-432	L94-432	210	XL00-209	HO95-988	L90-191	1261
XL00-165	HOC91-552	LCP85-384	3480	XL00-210	L99-229	L90-191	2730
XL00-166	L91-281	LCP85-384	873	XL00-211	HOC91-552	L90-191	4009
XL00-167	L89-113	LCP85-384	659	XL00-212	L90-191	L90-191	205
XL00-168	CP78-317	LCP85-384	110	XL00-213	HOC92-624	HOC96-561	1517
XL00-169	US79-010	LCP85-384	2995	XL00-214	HOC96-522	HOC96-561	745
XL00-170	L94-428	LCP85-384	1344	XL00-215	HOC98-781	HOC96-561	298
XL00-171	LCP85-384	LCP85-384	403	XL00-216	L91-281	L98-197	3068
XL00-171	LCP85-384	LCP85-384	237	XL00-217	L99-229	L98-197	1195
XL00-172	HOC92-624	L99-226	5062	XL00-219	L98-197	L98-197	1981
XL00-173	HOC96-522	L99-226	3558	XL00-220	CP78-317	L99-237	122
XL00-174	HOC97-645	L99-226	595	XL00-221	HOC95-950	L99-237	1920
XL00-175	HOC98-743	L99-226	3778	XL00-222	L91-281	L99-237	1213
XL00-176	L93-399	L99-226	1332	XL00-223	L99-237	L99-237	571
XL00-177	L94-428	L99-226	2212	XL00-224	LCP87-492	L98-209	4325
XL00-178	L99-229	LCP81-010	1866	XL00-225	US79-010	L98-209	4286
XL00-179	L99-224	LCP81-010	2977	XL00-226	L91-281	L98-209	3745
XL00-180	L97-128	LCP81-010	1420	XL00-227	L98-209	L98-209	1372
XL00-181	L94-428	LCP81-010	1020	XL00-228	CP78-317	LCP85-384	515
XL00-182	LCP81-010	LCP81-010	3914	XL00-229	HOC92-624	LCP85-384	3720
XL00-183	HO95-988	HOC96-561	1154	XL00-230	L91-255	LCP85-384	1672
XL00-184	L94-428	HOC96-561	119	XL00-231	CP77-405	LCP85-384	3231
XL00-185	HOC96-561	HOC96-561	17	XL00-232	L94-426	LCP85-384	1093

Table 7. Crosses and seed made in 2000 sorted by cross number.

XL00-233	LCP85-384	LCP85-384	431	XL00-279	L93-363	L93-363	1120
XL00-234	HOCP92-624	L98-197	3817	XL00-280	HOCP98-743	L98-209	4649
XL00-235	HOCP97-645	L98-197	446	XL00-281	TUCCP77-042	L98-209	114
XL00-236	CP77-405	L98-197	3025	XL00-282	CP89-846	LCP85-384	5835
XL00-237	CP77-405	L98-209	2586	XL00-283	HOCP92-648	LCP85-384	5082
XL00-238	CP78-317	L98-209	1049	XL00-284	L90-191	LCP85-384	5049
XL00-239	HOCP98-743	L98-209	2348	XL00-285	TucCP77-042	LCP85-384	757
XL00-240	CP78-317	L99-229	582	XL00-286	HO95-988	HOCP85-845	1746
<u>Cross</u>	<u>Female</u>	<u>Male</u>	<u>Seed</u>	XL00-287	HOCP92-648	HOCP85-845	3675
XL00-241	HOCP92-624	L99-229	4672	<u>Cross</u>	<u>Female</u>	<u>Male</u>	<u>Seed</u>
XL00-242	HOCP96-540	L99-229	4435	XL00-288	HOCP96-561	HOCP85-845	938
XL00-243	HOCP96-561	L99-229	484	XL00-289	L91-255	HOCP85-845	1108
XL00-244	L90-207	L99-229	174	XL00-290	L99-237	HOCP85-845	1571
XL00-245	L97-128	L99-229	774	XL00-291	L97-128	HOCP85-845	536
XL00-246	L99-229	L99-229	162	XL00-292	HOCP85-845	HOCP85-845	731
XL00-247	HOCP96-540	HOCP91-552	7793	XL00-293	L93-399	L99-224	2122
XL00-248	L93-399	HOCP91-552	1654	XL00-294	L94-426	L99-224	1874
XL00-249	HOCP91-552	HOCP91-552	3821	XL00-295	L94-432	L99-224	1313
XL00-250	L90-207	HOCP98-776	4	XL00-296	L99-224	L99-224	511
XL00-251	L93-399	HOCP98-776	49	XL00-297	HOCP97-609	LCP81-010	987
XL00-252	L96-040	HOCP98-776	588	XL00-298	L96-040	LCP81-010	2380
XL00-253	L97-128	US96-001	1158	XL00-299	HOCP98-776	LCP81-010	4038
XL00-254	HOCP96-540	US96-001	2797	XL00-300	TUCCP77-042	L96-040	222
XL00-255	HOCP98-743	US96-001	2524	XL00-301	L94-426	L96-040	430
XL00-256	TucCP77-042	LCP85-384	245	XL00-302	L91-281	L96-040	2291
XL00-257	L91-255	LCP85-384	802	XL00-303	HOCP98-776	L96-040	2637
XL00-258	L99-229	LCP85-384	643	XL00-304	CP77-405	L96-040	3480
XL00-259	US79-010	LCP85-384	3919	XL00-305	L96-040	L96-040	285
XL00-260	L94-426	LCP85-384	457	XL00-306	CP79-318	HOCP85-845	2066
XL00-261	LCP85-384	LCP85-384	356	XL00-307	HOCP98-776	HOCP85-845	2426
XL00-261	LCP85-384	LCP85-384	531	XL00-308	HOCP97-606	L89-113	1260
XL00-262	HOCP92-624	HOCP96-522	1108	XL00-309	LCP87-492	L89-113	558
XL00-263	L90-207	HOCP96-522	28	XL00-310	HOCP98-776	L89-113	2385
XL00-264	HOCP96-522	HOCP96-522	10	XL00-311	L89-113	L89-113	237
XL00-265	L90-207	HOCP96-561	84	XL00-312	HOCP98-776	L91-281	2449
XL00-266	L97-128	HOCP96-561	212	XL00-313	L91-281	L91-281	2115
XL00-267	LCP81-010	HOCP96-561	964	XL00-314	US92-010	L91-281	742
XL00-268	L90-207	L97-128	0	XL00-315	LCP87-492	L91-281	785
XL00-269	L90-207	CP78-317	36	XL00-316	L90-207	LCP85-384	174
XL00-270	L97-128	CP78-317	49	XL00-317	L93-363	LCP85-384	3911
XL00-271	CP78-317	CP78-317	106	XL00-318	L96-040	LCP85-384	1715
XL00-272	LCP85-384	CP79-318	4664	XL00-319	LCP85-384	LCP85-384	281
XL00-273	HOCP98-743	CP79-318	2194	XL00-320	HOCP92-624	HOCP85-845	895
XL00-274	L98-207	CP79-318	3082	XL00-321	L93-399	HOCP85-845	691
XL00-275	CP79-318	CP79-318	1676	XL00-322	L97-128	HOCP85-845	119
XL00-276	HOCP92-648	L93-363	2795	XL00-323	HOCP92-648	L91-281	2770
XL00-277	L97-128	L93-363	836	XL00-324	L97-128	L91-281	685
XL00-278	LCP85-384	L93-363	1080	XL00-325	HOCP92-624	L91-281	2044

Table 7. Crosses and seed made in 2000 sorted by cross number.

XL00-326	HOCP92-624	US80-004	1040	XL00-373	US96-001	00P4	3037
XL00-327	L97-128	US80-004	902	XL00-374	US96-002	00P4	1696
XL00-328	HO91-572	US80-004	297	XL00-375	CP79-318	LCP85-384	6639
XL00-329	US80-004	US80-004	288	XL00-376	L75-056	LCP85-384	67
XL00-330	HOCP92-624	HOCP92-618	2658	XL00-377	CP79-318	L98-209	6978
XL00-331	L97-128	HOCP92-618	1370	XL00-378	HO95-988	L98-209	1563
XL00-332	TucCP77-042	HOCP92-618	714	XL00-379	HOCP85-845	L98-209	864
XL00-333	HOCP92-618	HOCP92-618	674	XL00-381	HOCP92-624	HOCP97-601	1013
XL00-334	L97-128	L94-428	70	XL00-382	L94-428	HOCP97-601	837
XL00-335	LCP81-010	L94-428	4198	XL00-383	HOCP97-601	HOCP97-601	2004
<u>Cross</u>	<u>Female</u>	<u>Male</u>	<u>Seed</u>	XL00-384	HOCP96-540	L91-281	5788
XL00-336	US79-010	L94-428	1080	<u>Cross</u>	<u>Female</u>	<u>Male</u>	<u>Seed</u>
XL00-337	L94-428	L94-428	670	XL00-385	L94-428	L91-281	1220
XL00-338	HOCP96-522	00P3	2702	XL00-386	L97-128	L91-281	494
XL00-339	HOCP96-561	00P3	1882	XL00-387	L90-191	US96-001	556
XL00-340	HOCP97-601	00P3	3670	XL00-388	L97-128	US96-001	2239
XL00-341	L97-128	00P3	327	XL00-389	US96-001	US96-001	1013
XL00-342	CP65-357	LCP85-384	4065	XL00-390	HOCP95-950	LCP85-384	2986
XL00-343	HO95-988	LCP85-384	1726	XL00-391	HOCP97-621	LCP85-384	5380
XL00-344	HOCP95-951	LCP85-384	1200	XL00-392	CP79-318	L89-113	2122
XL00-345	HOCP98-717	LCP85-384	2171	XL00-393	HOCP85-845	L89-113	1178
XL00-346	L97-128	LCP85-384	475	XL00-394	HOCP92-624	L89-113	871
XL00-347	HOCP97-609	LCP85-384	2714	XL00-395	HOCP92-624	HOCP96-540	1946
XL00-348	LCP85-384	LCP85-384	568	XL00-396	HOCP95-951	HOCP96-540	1133
XL00-349	HO95-988	L98-207	5358	XL00-397	HOCP97-621	HOCP96-540	2962
XL00-350	CP79-318	L98-207	11360	XL00-398	HOCP96-540	HOCP96-540	3063
XL00-351	LCP81-010	L98-207	2434	XL00-399	L97-128	L96-040	73
XL00-352	L98-207	L98-207	2016	XL00-400	L91-255	L96-040	529
XL00-353	HOCP92-648	L98-209	3455	XL00-401	CP79-318	L96-040	2017
XL00-354	HOCP92-624	L98-209	2129	XL00-402	CP79-318	HOCP92-618	3421
XL00-355	L94-426	L98-209	1130	XL00-403	HOCP97-601	HOCP92-618	2432
XL00-356	L98-209	L98-209	1850	XL00-404	L93-363	HOCP92-618	970
XL00-357	HOCP96-561	L99-233	2834	XL00-405	L97-128	L99-224	264
XL00-358	CP79-318	L99-233	4344	XL00-406	L90-191	L99-224	89
XL00-359	HOCP92-618	L99-233	750	XL00-407	HO95-988	HOCP92-624	38
XL00-360	L99-233	L99-233	592	XL00-408	HOCP85-845	HOCP92-624	1691
XL00-361	HOCP92-648	HOCP98-648	1696	XL00-409	HOCP92-648	HOCP92-624	3984
XL00-362	HOCP96-561	HOCP98-648	1839	XL00-410	HOCP96-540	HOCP92-624	4506
XL00-363	L99-237	HOCP98-648	1413	XL00-411	HOCP96-561	HOCP92-624	1017
XL00-364	HOCP98-743	HOCP98-743	2201	XL00-412	HOCP97-609	HOCP92-624	721
XL00-365	HOCP92-624	L91-255	2784	XL00-413	L89-113	HOCP92-624	201
XL00-366	HOCP96-522	L91-255	4203	XL00-414	LCP85-384	HOCP92-624	1277
XL00-367	LCP87-492	L91-255	983	XL00-415	HOCP92-624	HOCP92-624	301
XL00-368	L91-281	L91-255	681	XL00-416	CP89-846	L96-040	168
XL00-369	L91-255	L91-255	1770	XL00-417	HO95-988	L96-040	896
XL00-370	HOCP92-624	00P4	6136	XL00-418	HOCP92-648	L96-040	1232
XL00-371	L90-191	00P4	6937	XL00-419	L89-113	L96-040	730
XL00-372	L91-281	00P4	1614	XL00-420	L93-363	L96-040	683

Table 7. Crosses and seed made in 2000 sorted by cross number.

XL00-421	LCP81-010	L96-040	1621
XL00-422	US79-010	L96-040	2827
XL00-423	HOCP96-540	L94-433	2720
XL00-424	HO95-988	L94-433	512
XL00-425	LCP85-384	L94-433	1214
XL00-426	LCP87-492	L94-433	232
XL00-427	L94-428	L94-433	439
XL00-428	L93-399	HOCP97-621	313
XL00-429	HOCP97-621	HOCP97-621	1615
XL00-430	HOCP92-624	L91-255	816
XL00-431	HOCP98-717	L91-255	1054
XL00-432	L99-224	L91-255	1687
Cross	Female	Male	Seed
XL00-433	HOCP97-606	LCP85-384	856
XL00-434	L99-226	LCP85-384	2015
XL00-435	US96-001	LCP85-384	2756
XL00-436	L99-245	HOCP85-845	8688
XL00-437	HOCP92-618	HOCP85-845	155
XL00-438	LCP81-030	HOCP85-845	948
XL00-439	LCP81-010	L99-234	1303
XL00-440	LCP86-454	L99-234	603
XL00-441	US79-010	L99-234	720
XL00-442	LCP82-089	LCP85-384	6574
XL00-443	HOCP92-648	LCP85-384	1181
XL00-444	L96-040	LCP85-384	723
XL00-445	L98-209	LCP85-384	1037
XL00-446	CP79-318	LCP85-384	7703
XL00-447	HOCP96-540	00P5	1572
XL00-448	L98-207	00P5	4689
XL00-449	US99-004	00P5	2379
XL00-450	HOCP98-717	00P5	738
XL00-451	CP83-644	HOCP97-609	1210
XL00-452	HOCP92-648	HOCP97-609	1872
XL00-453	L94-426	HOCP97-609	0
XL00-454	HOCP97-609	HOCP97-609	133
XL00-455	HOCP96-540	L92-312	3328
XL00-456	L98-207	L92-312	1684
XL00-457	LCP81-010	L92-312	1693
XL00-458	L92-312	L92-312	633
XL00-459	L98-209	L94-428	2457
XL00-460	HO91-572	L94-428	1531
XL00-461	L75-056	L94-433	0
Total			713,474

SELECTIONS, ADVANCEMENTS, AND ASSIGNMENTS OF THE LOUISIANA “L” SUGARCANE VARIETY DEVELOPMENT PROGRAM FOR THE YEAR 2000

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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 74,263 seedlings from 312 crosses were planted in the field in the spring of 2000. The majority of these seedlings are progeny of crosses among commercial and elite experimental varieties. In the fall of 2000, family selection was practiced on the 54,794 stubble seedlings surviving the winter. A total of 45,356 seedlings were used for individual selection. This selection resulted in the planting of 3,012 first-line trial plots. At the same time, superior clones were also selected and advanced through subsequent stages (735 to second line, 206 to increase). Assignment of permanent “L00” numbers were given to the 33 best clones of the 1995 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 74,263 seedlings from 312 crosses of the 1999 crossing series were planted to the field in the spring of 2000 (Table 1). Many of these seedlings were progeny of crosses among commercial and superior experimental varieties. In the fall of 2000, individual selection was practiced on the 54,794 stubble single stools of the 1998 crossing series that survived the winter. Family selection was practiced on the top 83% of the crosses in 2000 based on results obtained in the cross appraisal study. The 3,012 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 3,900 first-line trial plots of the 1997 crossing series were rated for cane yield and pest resistance in August of 2000 (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 735 clones in 16-foot second-line trial plots.

Stalk counts were made on the 705 plantcane second-line trial plots of the 1996 crossing series in August 2000. Based on these counts and the previously described criteria, 206 clones were planted in two 16-foot increase plots (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 2001. Of the 191 candidates from the first stubble crop of the second-line trials, the best 33 clones from the 1995 crossing series were assigned permanent "L00" numbers (Table 5). These newly assigned "L00" varieties were then planted in replicated nursery trials at three locations (St. Gabriel Research Station, Iberia Research Station, and USDA Ardoyne Farm).

The advancement summary of clones from crosses made in 1995 through 1998 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 1999 crossing series plantcane cross appraisal in 2000 are presented in Table 7.

Table 1. Summary of selections, advancements and assignments made during 2000 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	Nursery (Assigned)
	----- number of clones -----							
					--			
X95	154	201	46401	32402	2675	459	191	33
X96	239	252	63468	49213	3392	705	206	
X97	75	174	71416	48322	3901	735		
X98	125	193	64467	54794	3012			
X99		312	74263					

Table 2. Dates of seedling and line trials planted or harvested in 2000.

Crossing Series	Test	Crop	Date Planted	Date Harvested
X99	Seedlings	Planted	4/7 - 24/00	
X98	Seedlings	First Stubble	4/9 - 14/99	
X98	Cross Appraisal	First Stubble	4/14/99	12/8/00
X98	First Line Trial	Planted	9/7 - 14/00	
X97	First Line Trial	Plantcane	9/13- 17/00	
X96	First Line Trial	First Stubble	9/24 - 10/2/99	10/23/00
X97	Second Line Trial	Planted	9/20/00	
X96	Second Line Trial	Plantcane	9/23/99	11/27/00
X95	Second Line Trial	First Stubble	10/19/98	10/8/00
X94	Second Line Trial	Second Stubble	10/2/97	10/10/00
X96	Light Soil Increase	Planted	9/26/00	
X95	Light Soil Increase	Plantcane	10/5/99	11/20/00
X94	Light Soil Increase	First Stubble	10/27/98	11/20/00
X93	Light Soil Increase	Second Stubble	10/29/97	10/8/00
X96	Heavy Soil Increase	Planted	9/26/00	
X95	Heavy Soil Increase	Plantcane	10/5/99	11/15/00
X94	Heavy Soil Increase	First Stubble	10/27/98	10/16/00
X93	Heavy Soil Increase	Second Stubble	10/21/97	10/8/00

Table 3. Numbers of experimental clones dropped for identified faults in the 1997 crossing series first-line trials after the initial selection stage.

Trait	Fault	
	Frequency	Percent
----- 2046 enter 2 nd round of evaluation -----		
Borers	34	12.4
Leaf Scald	55	0.3
Lodged	139	17.2
Pith / Tube	577	53.3
Rust	19	1.4
Short	33	1.0
Small	28	0.7
Smut	47	6.5
Aphids	4	0.3
----- 936 clones dropped -----		
----- 863 clones enter 3 rd round of evaluation -----		
Brix	375	18.3
Clones advanced to second clonal trial	735	81.7

Table 4. Number of experimental clones dropped for identified faults in the 1996 crossing series second-line trial prior to advancement to the increase stage.

Trait	Fault	
	Frequency	Percent
----- First evaluation - 705 clones -----		
Stalk count <85 per plot	210	37.9
Gap	15	0.4
Rust	8	1.5
Leaf Scald	1	1.5
Lodged	70	8.5
Pith / Tube	128	6.3
Short	33	0.2
Small	5	0.7
Smut	26	0.9
Other	3	0.4

----- 499 clones dropped -----

Advanced to Increase stage	206	79.5
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Table 5. Mean yield data of 2000 “L” assignments from first stubble 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	8531	42.1	200	2.2	36754
LCP85-384	CP77-310	CP77-407	8327	46.6	178	1.6	57929
HOC85-845	CP72-370	CP77-403	6783	36.8	174	1.7	43409
L2000-246	HOC88-739	LCP85-384	7878	38.8	203	1.6	47644
L2000-247	L91-281	LHO92-314	10336	51.6	200	1.7	60349
L2000-248	LCP83-137	HOC92-624	10010	54.1	185	1.9	55811
L2000-249	L91-281	LHO92-314	9689	43.8	221	1.4	63525
L2000-250	L91-281	LHO92-314	12714	65.1	195	2.4	53543
L2000-251	HOC85-845	L93-391	8638	40.6	213	1.6	49459
L2000-252	HOC89-846	L93-386	7519	42.3	178	1.7	49459
L2000-253	L89-113	CP83-644	8351	41.7	200	2.0	41291
L2000-254	HOC85-845	CP83-644	8781	42.5	207	1.8	47190
L2000-255	L91-281	LCP82-089	10512	51.9	202	2.2	47644
L2000-256	L89-113	CP83-644	10461	47.7	220	1.8	53543
L2000-257	LCP85-313	CP76-331	10237	45.8	224	1.7	53543
L2000-258	LCP85-384	95P3	9396	42.2	222	1.8	47190
L2000-259	HOC89-846	L92-321	7617	37.4	204	1.3	55811
L2000-260	LCP85-384	95P3	11768	45.8	257	2.1	44468
L2000-261	L91-281	L92-312	10659	41.1	259	1.8	46736
L2000-262	US78-020	LCP85-384	8759	39.2	223	1.3	59441
L2000-263	LCP83-137	CP83-644	5964	31.0	193	1.3	47644
L2000-264	HOC89-846	US77-010	11589	66.9	173	2.3	57173
L2000-265	LCP85-313	L92-355	7685	39.8	193	1.2	68063
L2000-266	HOC89-846	L93-386	8108	45.9	177	1.5	60349
L2000-267	LCP83-137	L92-321	9121	47.9	190	2.0	47190
L2000-268	LCP83-137	CP83-644	12887	62.2	207	1.9	64433
L2000-269	LCP85-313	L93-365	12715	74.0	172	2.2	66701
L2000-270	CP70-330	L92-312	9656	48.5	199	1.9	51274
L2000-271	CP65-357	LCP82-089	14501	59.8	242	2.1	58080
L2000-272	L91-281	LCP86-454	10765	51.0	211	1.9	53996
L2000-273	L91-281	L93-365	12965	57.1	227	2.2	52635
L2000-274	L91-281	L93-365	9723	44.7	218	2.0	45829
L2000-275	LCP83-137	CP83-644	9369	44.1	212	1.8	49005
L2000-276	HOC90-941	LCP82-089	8051	37.6	214	1.7	44468
L2000-277	L91-281	HOC92-624	9144	47.6	192	2.1	44468
L2000-278	HOC90-941	LCP82-089	8737	48.8	179	2.5	38569

Table 6. Advancement summary of crosses in the 1995 through 1998 crossing series.

Female	Male	Survive	1 st Line		2 nd Line		Increase		Assignment	
			No.	pcnt'l	Rank	No.	pcnt'l	Rank	No.	pcnt'l	Rank
<u>1995 Crossing Series</u>										
CP65-357	HOCP90-955	79	14	92	2	85	0	25	0	42
CP65-357	L93-391	417	19	37	3	49	1	57	0	42
CP65-357	LCP82-089	194	42	96	4	79	2	83	1	94
CP70-321	HO93-769	204	0	12	0	18	0	25	0	42
CP70-330	HOCP92-624	203	0	12	0	18	0	25	0	42
CP70-330	L92-312	733	45	47	3	41	1	54	1	85
CP70-330	L93-380	407	10	28	2	44	0	25	0	42
CP70-330	LCP82-089	84	11	81	0	18	0	25	0	42
CP72-370	94P9	81	8	74	2	84	1	88	0	42
CP78-317	LCP81-030	241	18	57	6	85	2	75	0	42
CP79-318	HOCP90-955	74	7	71	0	18	0	25	0	42
CP79-318	US77-010	221	11	40	2	50	1	62	0	42
CP80-323	LCP83-137	142	0	12	0	18	0	25	0	42
CP87-625	HOCP91-552	105	12	78	3	88	2	93	0	42
CP87-625	L92-312	185	11	46	4	81	3	91	0	42
CP89-879	LCP82-089	367	22	47	4	58	3	73	0	42
HO89-889	HOCP92-624	387	39	75	6	70	1	59	0	42
HO89-889	L92-312	426	41	72	4	52	3	70	0	42
HOCP85-845	95P2	185	12	50	0	18	0	25	0	42
HOCP85-845	CP78-317	214	0	12	0	18	0	25	0	42
HOCP85-845	CP79-318	875	50	45	4	43	1	52	0	42
HOCP85-845	CP79-318	220	18	63	1	42	0	25	0	42
HOCP85-845	CP83-644	1058	93	69	14	65	6	67	1	84
HOCP85-845	HOCP91-527	305	21	53	1	39	0	25	0	42
HOCP85-845	HOCP91-552	899	63	54	17	76	4	61	0	42
HOCP85-845	HOCP92-624	784	35	36	4	45	2	58	0	42
HOCP85-845	HOCP92-674	249	13	42	0	18	0	25	0	42
HOCP85-845	L92-312	103	12	79	1	53	0	25	0	42
HOCP85-845	L92-321	101	9	70	1	54	0	25	0	42
HOCP85-845	L92-321	455	29	49	1	38	0	25	0	42
HOCP85-845	L93-391	437	54	80	7	71	2	63	1	87
HOCP85-845	LCP81-030	752	42	45	9	62	1	53	0	42
HOCP85-845	LCP85-371	326	0	12	0	18	0	25	0	42
HOCP85-845	US77-010	457	21	37	3	47	1	55	0	42
HOCP85-845	US78-020	92	7	58	0	18	0	25	0	42

HOCP88-739 L84-290 86 26 98 0 18 0 25 0 42

Table 6. Continue.

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
HOCP88-739	LCP85-384	207	18	68	5	83	2	80	1	92
HOCP89-846	CP78-317	105	9	66	3	88	3	96	0	42
HOCP89-846	HO93-769	235	0	12	0	18	0	25	0	42
HOCP89-846	HOCP91-559	232	0	12	0	18	0	25	0	42
HOCP89-846	HOCP92-674	110	0	12	0	18	0	25	0	42
HOCP89-846	HOCP92-675	453	11	28	5	59	1	56	0	42
HOCP89-846	L92-321	130	14	76	4	90	2	91	1	95
HOCP89-846	L93-363	63	14	97	3	98	2	97	0	42
HOCP89-846	L93-386	134	18	83	5	93	3	94	2	98
HOCP89-846	L93-391	105	17	91	0	18	0	25	0	42
HOCP89-846	LCP81-030	466	30	49	7	68	4	77	0	42
HOCP89-846	LCP82-089	204	27	82	4	77	3	90	0	42
HOCP89-846	LCP86-454	197	0	12	0	18	0	25	0	42
HOCP89-846	LHO92-314	218	11	40	2	51	0	25	0	42
HOCP89-846	US77-010	410	12	29	4	54	3	71	1	87
HOCP89-846	US90-018	114	8	54	3	86	1	77	0	42
HOCP90-923	HO93-769	425	16	33	1	38	1	56	0	42
HOCP90-941	CP91-552	53	10	94	0	18	0	25	0	42
HOCP90-941	HOCP92-674	229	9	34	2	50	0	25	0	42
HOCP90-941	L92-312	244	21	66	4	72	2	74	0	42
HOCP90-941	L92-312	400	0	12	0	18	0	25	0	42
HOCP90-941	L93-363	171	0	12	0	18	0	25	0	42
HOCP90-941	L93-391	223	35	90	6	87	1	61	0	42
HOCP90-941	LCP82-089	96	24	98	7	99	5	99	2	99
HOCP90-957	HOCP92-674	211	0	12	0	18	0	25	0	42
HOCP90-957	L92-310	168	13	59	2	61	1	68	0	42
HOCP90-957	L93-391	86	0	12	0	18	0	25	0	42
HOCP90-957	LCP81-010	449	33	56	5	59	0	25	0	42
HOCP90-957	LCP81-030	208	0	12	0	18	0	25	0	42
HOCP90-957	LCP82-089	99	5	42	0	18	0	25	0	42
HOCP90-963	LCP82-089	250	0	12	0	18	0	25	0	42
HOCP90-963	LCP85-336	148	14	71	1	48	0	25	0	42
HOCP90-963	US77-017	247	20	61	1	40	0	25	0	42
HOCP91-552	95P2	195	9	37	2	57	0	25	0	42

Table 6. Continue.

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
HOCP91-559	L93-365	90	0	12	0	18	0	25	0	42
HOCP91-559	LCP81-030	163	6	32	0	18	0	25	0	42
HOCP92-624	LCP82-089	451	0	12	0	18	0	25	0	42
HOCP92-624	LCP82-089	185	27	87	6	91	2	85	0	42
HOCP92-654	CP76-331	242	0	12	0	18	0	25	0	42
HOCP92-654	HOCP92-654	225	0	12	0	18	0	25	0	42
L75-056	LCP82-089	390	38	73	4	57	2	65	0	42
L89-113	CP83-644	916	64	54	15	72	7	72	2	86
L89-113	HOCP90-957	61	3	39	0	18	0	25	0	42
L90-191	CP89-855	281	41	87	6	80	3	84	0	42
L91-255	US90-018	319	27	65	5	71	0	25	0	42
L91-281	CP78-317	195	0	12	0	18	0	25	0	42
L91-281	CP79-318	227	20	69	0	18	0	25	0	42
L91-281	CP79-318	191	0	12	0	18	0	25	0	42
L91-281	HOCP85-845	236	18	58	4	74	2	76	0	42
L91-281	HOCP90-941	89	14	90	1	60	1	86	0	42
L91-281	HOCP91-552	165	22	82	4	83	2	87	0	42
L91-281	HOCP91-552	70	8	78	3	96	3	98	0	42
L91-281	HOCP92-624	247	9	31	3	63	1	60	1	89
L91-281	HOCP92-674	339	0	12	0	18	0	25	0	42
L91-281	L91-255	492	48	73	7	66	5	82	0	42
L91-281	L92-312	213	24	77	4	75	2	78	1	92
L91-281	L92-312	421	22	42	3	49	3	70	0	42
L91-281	L92-312	219	18	63	3	66	2	78	0	42
L91-281	L92-321	229	0	12	0	18	0	25	0	42
L91-281	L92-321	222	9	35	1	42	0	25	0	42
L91-281	L93-365	426	35	63	13	89	8	92	2	92
L91-281	LCP81-010	152	13	66	1	47	0	25	0	42
L91-281	LCP81-030	174	0	12	0	18	0	25	0	42
L91-281	LCP82-089	408	28	53	5	64	1	57	0	42
L91-281	LCP82-089	388	50	80	6	70	3	73	1	88
L91-281	LCP85-336	331	45	84	11	92	4	87	0	42
L91-281	LCP85-371	169	0	12	0	18	0	25	0	42
L91-281	LCP86-454	228	19	64	11	98	4	92	1	91
L91-281	LHO92-314	215	29	84	10	97	7	98	3	98

Table 6. Continue.

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
L91-281	US77-010	223	3	26	0	18	0	25	0	42
L91-281	US78-020	243	8	29	1	41	0	25	0	42
L92-312	95P2	146	10	51	3	78	0	25	0	42
L92-313	LCP81-030	209	8	33	2	52	1	63	0	42
L92-313	LCP86-450	95	13	85	3	91	1	84	0	42
L93-366	L93-365	195	0	12	0	18	0	25	0	42
L93-399	CP78-317	101	0	12	0	18	0	25	0	42
L93-399	HOCP85-845	165	11	50	0	18	0	25	0	42
L93-399	HOCP91-552	340	0	12	0	18	0	25	0	42
L93-399	L92-312	788	64	61	15	77	4	64	0	42
L93-399	LCP81-030	539	19	31	1	37	0	25	0	42
L93-399	LCP82-089	304	0	12	0	18	0	25	0	42
L93-399	LCP85-336	766	15	27	1	36	0	25	0	42
L93-399	US78-020	234	1	26	0	18	0	25	0	42
LCP81-010	CP76-331	82	14	91	1	63	0	25	0	42
LCP81-010	LCP81-030	1024	35	30	5	44	1	52	0	42
LCP82-089	94P5	88	6	51	0	18	0	25	0	42
LCP82-089	LCP81-010	117	22	93	2	75	0	25	0	42
LCP83-137	CP76-331	198	39	94	3	69	1	64	0	42
LCP83-137	CP83-644	906	67	56	20	82	10	85	3	89
LCP83-137	HOCP91-552	354	17	38	2	46	1	59	0	42
LCP83-137	HOCP92-624	199	29	87	2	56	2	81	1	93
LCP83-137	L92-321	796	61	59	16	78	6	71	1	85
LCP85-313	CP76-331	180	19	75	4	82	1	66	1	94
LCP85-313	CP79-318	196	16	63	6	89	2	82	0	42
LCP85-313	CP83-644	189	0	12	0	18	0	25	0	42
LCP85-313	L92-321	204	0	12	0	18	0	25	0	42
LCP85-313	L92-355	238	12	40	4	73	2	75	1	90
LCP85-313	L93-365	100	15	89	1	55	1	80	1	96
LCP85-313	L93-365	458	25	44	2	42	1	54	0	42
LCP85-313	L93-380	75	6	60	0	18	0	25	0	42
LCP85-313	L93-391	99	0	12	0	18	0	25	0	42
LCP85-313	LCP81-030	243	0	12	0	18	0	25	0	42
LCP85-313	LCP85-384	97	20	95	2	79	0	25	0	42
LCP85-313	LCP86-454	209	11	43	3	67	2	79	0	42

Table 6. Continue.

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
LCP85-341	L93-380	160	0	12	0	18	0	25	0	42
LCP85-341	LCP82-089	192	0	12	0	18	0	25	0	42
LCP85-384	95P3	242	43	92	11	96	6	94	2	96
LCP85-384	LCP82-089	77	7	70	3	94	2	95	0	42
LCP86-429	CP76-331	541	0	12	0	18	0	25	0	42
LCP86-429	CP79-318	202	0	12	0	18	0	25	0	42
LCP86-429	CP83-644	206	43	96	3	68	0	25	0	42
LCP86-429	HOCP92-618	472	0	12	0	18	0	25	0	42
LCP86-429	L92-312	383	15	34	4	57	2	66	0	42
LCP86-429	L92-312	334	21	48	4	62	2	69	0	42
LHO83-153	HO89-889	160	0	12	0	18	0	25	0	42
LHO92-314	CP76-331	351	51	86	12	92	2	68	0	42
UNKNOWN	UNKNOWN	3578	12	25	3	36	1	51	0	42
US78-020	LCP82-089	77	9	79	1	64	1	89	0	42
US78-020	LCP85-384	78	11	85	3	94	1	89	1	97

1996 Crossing Series

CP65-357	CP77-407	72	9	81	4	95	0	35	.	.
CP65-357	HOCP85-845	209	26	80	0	25	0	35	.	.
CP65-357	HOCP91-573	245	26	74	3	64	0	35	.	.
CP65-357	HOCP93-749	98	0	23	0	25	0	35	.	.
CP65-357	L91-255	157	0	23	0	25	0	35	.	.
CP65-357	L92-319	89	10	78	3	86	1	89	.	.
CP65-357	L94-431	75	32	99	3	90	0	35	.	.
CP65-357	LCP82-089	84	5	59	1	62	0	35	.	.
CP65-357	LCP85-384	750	91	80	35	92	15	96	.	.
CP72-370	CP79-348	248	0	23	0	25	0	35	.	.
CP72-370	HOCP85-845	497	0	23	0	25	0	35	.	.
CP72-370	HOCP91-552	435	0	23	0	25	0	35	.	.
CP72-370	L92-312	150	18	79	7	92	2	93	.	.
CP72-370	LHO92-307	200	0	23	0	25	0	35	.	.
CP77-310	CP72-370	243	0	23	0	25	0	35	.	.
CP77-310	CP77-407	97	14	84	5	94	1	88	.	.
CP77-310	HOCP91-573	200	0	23	0	25	0	35	.	.
CP77-310	HOCP92-618	157	20	81	1	56	0	35	.	.

Table 6. Continue.

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
CP78-357	HOCP93-750	98	15	88	3	84	1	87	.	.
CP78-357	HOCP93-754	112	9	65	4	87	0	35	.	.
CP79-318	HO89-889	103	10	70	5	94	0	35	.	.
CP79-318	HOCP85-845	1143	65	57	14	64	5	76	.	.
CP79-318	HOCP91-573	248	0	23	0	25	0	35	.	.
CP79-318	HOCP92-618	247	0	23	0	25	0	35	.	.
CP79-318	L92-312	245	7	49	1	53	0	35	.	.
CP79-318	L94-431	72	0	23	0	25	0	35	.	.
CP79-318	L94-436	112	0	23	0	25	0	35	.	.
CP79-318	LCP85-384	1281	126	71	20	69	8	83	.	.
CP79-318	LCP85-384	178	0	23	0	25	0	35	.	.
CP79-318	LCP85-384	356	0	23	0	25	0	35	.	.
CP79-318	LHO92-314	725	0	23	0	25	0	35	.	.
CP79-318	US90-018	81	0	23	0	25	0	35	.	.
CP79-318	US92-010	177	0	23	0	25	0	35	.	.
CP79-348	HOCP93-746	68	0	23	0	25	0	35	.	.
CP79-348	HOCP93-765	226	0	23	0	25	0	35	.	.
CP79-348	L92-312	40	8	94	4	99	0	35	.	.
CP82-550	CP79-348	108	12	77	3	81	0	35	.	.
CP82-550	HOCP92-624	118	9	64	5	91	0	35	.	.
CP82-550	L91-255	92	0	23	0	25	0	35	.	.
CP82-550	LCP82-089	322	33	72	3	60	0	35	.	.
CP83-644	CP84-730	104	7	61	2	75	0	35	.	.
CP83-644	HOCP85-845	179	16	67	5	81	3	94	.	.
CP83-644	HOCP91-527	197	0	23	0	25	0	35	.	.
CP83-644	HOCP93-749	347	0	23	0	25	0	35	.	.
CP83-644	L91-255	462	51	77	4	59	0	35	.	.
CP83-644	L92-312	284	17	59	2	57	0	35	.	.
CP83-644	L94-431	43	5	78	3	97	1	98	.	.
CP83-644	L94-438	428	0	23	0	25	0	35	.	.
CP83-644	LCP82-089	237	0	23	0	25	0	35	.	.
CP83-644	LCP85-313	240	41	90	4	71	1	75	.	.
CP83-644	LCP85-384	367	0	23	0	25	0	35	.	.
CP83-644	LCP86-454	277	0	23	0	25	0	35	.	.
CP84-730	HOCP85-845	383	0	23	0	25	0	35	.	.

Table 6. Continue.

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
CP84-730	L92-312	300	32	75	5	71	2	83	.	.
CP84-730	LCP85-384	231	22	70	3	66	0	35	.	.
CP88-702	L91-255	104	0	23	0	25	0	35	.	.
CP88-702	LCP85-384	438	38	66	3	56	2	79	.	.
CP89-805	LCP85-384	235	0	23	0	25	0	35	.	.
CP89-805	LCP85-384	247	0	23	0	25	0	35	.	.
CP89-831	HOCP85-845	282	0	23	0	25	0	35	.	.
CP89-831	HOCP91-527	103	18	91	8	98	2	95	.	.
CP89-831	LCP82-089	85	0	23	0	25	0	35	.	.
CP89-831	LCP85-384	214	31	85	6	82	3	93	.	.
CP89-831	US90-018	109	25	97	8	98	2	94	.	.
HO89-889	LCP82-089	620	0	23	0	25	0	35	.	.
HOCP85-845	HOCP93-765	482	0	23	0	25	0	35	.	.
HOCP85-845	L89-136	201	9	53	3	69	1	80	.	.
HOCP85-845	L94-432	482	10	47	4	58	2	74	.	.
HOCP88-739	CP72-370	180	0	23	0	25	0	35	.	.
HOCP88-739	CP77-310	104	21	94	4	89	0	35	.	.
HOCP88-739	CP77-407	100	0	23	0	25	0	35	.	.
HOCP88-739	HO89-889	106	0	23	0	25	0	35	.	.
HOCP88-739	HOCP85-845	367	0	23	0	25	0	35	.	.
HOCP88-739	L91-255	218	8	50	3	67	0	35	.	.
HOCP88-739	L94-431	96	0	23	0	25	0	35	.	.
HOCP88-739	LCP82-089	87	0	23	0	25	0	35	.	.
HOCP88-739	LCP85-384	248	16	60	11	91	3	90	.	.
HOCP88-739	LCP85-384	679	123	92	19	82	9	92	.	.
HOCP88-739	LCP86-454	133	0	23	0	25	0	35	.	.
HOCP88-739	LCP87-472	248	0	23	0	25	0	35	.	.
HOCP90-923	CP79-348	494	148	98	19	89	8	94	.	.
HOCP90-923	HOCP92-618	249	0	23	0	25	0	35	.	.
HOCP90-923	HOCP92-618	177	0	23	0	25	0	35	.	.
HOCP90-923	HOCP93-749	225	0	23	0	25	0	35	.	.
HOCP90-923	L91-255	179	0	23	0	25	0	35	.	.
HOCP90-923	L94-436	197	0	23	0	25	0	35	.	.
HOCP90-923	LHO92-314	96	0	23	0	25	0	35	.	.
HOCP91-527	L92-312	31	4	82	0	25	0	35	.	.

Table 6. Continue.

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
HOCP91-527	L92-319	162	0	23	0	25	0	35	.	.
HOCP91-575	CP70-321	227	16	62	2	59	1	77	.	.
HOCP91-575	HOCP93-750	92	7	64	0	25	0	35	.	.
HOCP91-575	L91-255	104	17	89	3	83	0	35	.	.
HOCP91-575	L93-365	448	25	57	7	69	2	78	.	.
HOCP91-575	LCP85-384	103	15	85	4	90	0	35	.	.
HOCP91-575	LCP86-454	461	0	23	0	25	0	35	.	.
HOCP92-618	CP79-348	235	0	23	0	25	0	35	.	.
HOCP92-618	US92-010	99	4	52	1	61	0	35	.	.
HOCP92-624	CP77-310	194	3	46	1	55	1	81	.	.
HOCP92-624	HOCP85-845	493	0	23	0	25	0	35	.	.
HOCP92-624	L91-255	95	0	23	0	25	0	35	.	.
HOCP92-624	LCP85-384	488	71	85	7	68	4	84	.	.
HOCP92-645	HOCP93-765	232	0	23	0	25	0	35	.	.
HOCP92-645	L91-255	101	0	23	0	25	0	35	.	.
HOCP92-645	LCP86-422	59	4	61	0	25	0	35	.	.
HOCP92-648	HO89-889	94	4	53	2	76	2	97	.	.
HOCP92-648	HOCP85-845	452	48	74	8	72	1	71	.	.
HOCP92-648	HOCP91-573	483	0	23	0	25	0	35	.	.
HOCP92-648	HOCP92-618	230	46	94	20	98	3	92	.	.
HOCP92-648	HOCP92-618	80	17	95	0	25	0	35	.	.
HOCP92-648	HOCP93-744	240	0	23	0	25	0	35	.	.
HOCP92-648	HOCP93-749	384	0	23	0	25	0	35	.	.
HOCP92-648	L92-312	241	4	47	3	65	0	35	.	.
HOCP92-648	L92-319	227	11	55	4	72	1	77	.	.
HOCP92-648	L94-431	79	12	87	3	89	0	35	.	.
HOCP92-648	LCP85-384	460	72	88	10	77	6	92	.	.
HOCP92-648	LHO92-314	228	0	23	0	25	0	35	.	.
HOCP92-648	LHO92-314	148	0	23	0	25	0	35	.	.
HOCP92-648	LHO92-314	214	0	23	0	25	0	35	.	.
HOCP92-648	US80-004	245	19	64	4	70	1	74	.	.
HOCP92-654	CP70-321	91	0	23	0	25	0	35	.	.
HOCP92-654	HOCP85-845	228	0	23	0	25	0	35	.	.
HOCP92-654	L92-312	187	0	23	0	25	0	35	.	.
HOCP92-654	L92-319	97	0	23	0	25	0	35	.	.

Table 6. Continue.

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
HOCP92-654	L92-319	102	0	23	0	25	0	35	.	.
HOCP92-654	LCP82-089	457	0	23	0	25	0	35	.	.
HOCP92-654	LCP86-454	47	0	23	0	25	0	35	.	.
HOCP92-664	HOCP92-624	252	23	68	1	53	0	35	.	.
HOCP92-664	HOCP93-749	225	0	23	0	25	0	35	.	.
HOCP92-664	L92-319	91	17	93	2	77	0	35	.	.
HOCP92-664	L93-365	246	0	23	0	25	0	35	.	.
HOCP92-664	L94-438	102	6	58	0	25	0	35	.	.
HOCP92-664	LCP86-454	101	4	52	1	60	0	35	.	.
HOCP93-744	CP77-407	175	0	23	0	25	0	35	.	.
HOCP93-744	CP77-407	190	6	50	1	55	0	35	.	.
HOCP93-744	HOCP85-845	263	0	23	0	25	0	35	.	.
HOCP93-744	LCP85-384	395	0	23	0	25	0	35	.	.
HOCP93-744	LCP87-472	188	0	23	0	25	0	35	.	.
HOCP93-744	LHO92-307	155	0	23	0	25	0	35	.	.
HOCP93-744	LHO92-307	181	0	23	0	25	0	35	.	.
HOCP93-746	HOCP85-845	416	0	23	0	25	0	35	.	.
HOCP93-746	HOCP93-750	101	0	23	0	25	0	35	.	.
HOCP93-746	L88-063	104	17	89	3	83	2	95	.	.
HOCP93-746	L93-363	100	14	83	0	25	0	35	.	.
HOCP93-746	LCP85-384	340	58	90	16	93	12	98	.	.
HOCP93-749	CP77-310	97	7	62	2	76	2	96	.	.
HOCP93-749	HOCP85-845	148	0	23	0	25	0	35	.	.
HOCP93-749	HOCP92-618	86	13	86	3	87	2	98	.	.
HOCP93-749	HOCP92-624	111	25	97	3	80	0	35	.	.
HOCP93-749	L88-063	96	0	23	0	25	0	35	.	.
HOCP93-749	L92-312	35	20	99	6	99	2	99	.	.
HOCP93-749	LCP82-089	251	13	56	2	57	1	72	.	.
HOCP93-749	LCP85-384	95	0	23	0	25	0	35	.	.
HOCP93-749	LCP85-384	424	49	78	14	86	8	95	.	.
HOCP93-749	LCP86-454	109	9	66	1	59	1	85	.	.
HOCP93-749	US92-010	100	0	23	0	25	0	35	.	.
HOCP93-750	US90-018	100	0	23	0	25	0	35	.	.
HOCP93-767	CP89-805	100	0	23	0	25	0	35	.	.
HOCP93-767	HOCP92-618	90	0	23	0	25	0	35	.	.

Table 6. Continue.

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
HOCP93-767	L93-365	459	26	57	7	69	2	76	.	.
HOCP93-767	L94-431	179	9	56	2	61	2	89	.	.
HOCP93-767	LCP86-422	103	0	23	0	25	0	35	.	.
L78-063	HOCP85-845	370	18	55	1	52	1	71	.	.
L88-063	L91-255	81	11	83	3	88	1	91	.	.
L90-181	HOCP91-552	34	5	86	0	25	0	35	.	.
L90-181	HOCP92-618	234	0	23	0	25	0	35	.	.
L90-181	HOCP93-750	192	11	57	1	55	0	35	.	.
L90-181	LCP86-454	633	51	66	1	51	0	35	.	.
L90-191	CP72-370	98	9	69	2	75	0	35	.	.
L90-191	HOCP92-618	196	0	23	0	25	0	35	.	.
L91-255	HOCP91-573	222	7	50	4	73	1	78	.	.
L92-312	L91-255	220	0	23	0	25	0	35	.	.
L92-319	HOCP92-664	112	10	67	2	73	0	35	.	.
L93-363	CP70-321	95	0	23	0	25	0	35	.	.
L93-363	HOCP92-618	79	12	87	0	25	0	35	.	.
L93-363	L92-312	88	9	72	2	78	1	90	.	.
L93-363	LCP85-384	344	37	76	20	96	8	98	.	.
L93-363	US90-018	186	22	79	6	85	2	88	.	.
L93-365	HOCP92-624	255	12	54	1	52	0	35	.	.
L93-365	L92-312	214	16	63	8	88	1	80	.	.
L93-365	LCP85-384	680	90	83	21	85	9	92	.	.
L93-378	HOCP93-765	242	19	64	3	65	0	35	.	.
L93-378	LHO92-314	194	19	71	0	25	0	35	.	.
L93-397	US90-018	82	0	23	0	25	0	35	.	.
L94-407	LCP85-384	229	0	23	0	25	0	35	.	.
L94-407	LCP85-384	252	17	61	3	62	0	35	.	.
L94-422	L92-319	167	11	60	3	73	1	82	.	.
L94-422	L94-431	175	0	23	0	25	0	35	.	.
L94-424	LCP85-384	672	34	56	15	78	1	70	.	.
L94-428	L93-365	232	9	51	1	54	0	35	.	.
L94-428	LCP86-454	232	17	63	1	54	0	35	.	.
L94-431	L92-312	79	10	81	2	80	0	35	.	.
L94-431	LCP85-313	87	0	23	0	25	0	35	.	.
L94-433	HOCP93-754	225	18	65	3	67	1	77	.	.

Table 6. Continue.

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
L94-433	L92-319	213	0	23	0	25	0	35	.	.
LCP81-010	CP70-321	248	12	55	3	64	1	73	.	.
LCP81-010	CP72-370	439	29	60	8	74	2	78	.	.
LCP81-010	HOC85-845	712	12	47	2	52	0	35	.	.
LCP81-010	HOC93-765	232	0	23	0	25	0	35	.	.
LCP81-010	L89-136	238	0	23	0	25	0	35	.	.
LCP81-010	L94-432	233	0	23	0	25	0	35	.	.
LCP81-010	LCP85-384	2368	67	49	18	57	7	72	.	.
LCP81-010	LHO92-307	138	0	23	0	25	0	35	.	.
LCP82-089	HOC91-552	220	2	46	0	25	0	35	.	.
LCP83-137	HO89-889	54	12	96	1	74	0	35	.	.
LCP83-137	HOC93-750	106	19	92	3	83	1	86	.	.
LCP83-137	LCP85-384	170	28	89	5	84	0	35	.	.
LCP83-137	LCP86-422	233	52	96	12	94	2	85	.	.
LCP85-313	CP70-321	46	13	98	1	77	0	35	.	.
LCP85-313	CP77-407	248	3	46	0	25	0	35	.	.
LCP85-313	CP79-348	501	13	48	7	67	3	82	.	.
LCP85-313	CP79-348	230	24	74	3	66	1	76	.	.
LCP85-313	HOC85-845	251	32	81	6	79	1	72	.	.
LCP85-313	HOC92-618	753	70	69	18	79	6	84	.	.
LCP85-313	HOC93-750	79	0	23	0	25	0	35	.	.
LCP85-313	L91-255	99	6	59	3	84	1	87	.	.
LCP85-313	L94-431	256	12	54	1	52	0	35	.	.
LCP85-313	LCP82-089	165	7	53	1	56	0	35	.	.
LCP85-313	LHO92-314	252	0	23	0	25	0	35	.	.
LCP85-384	HOC93-754	41	4	71	3	97	3	99	.	.
LCP86-422	HOC93-749	91	0	23	0	25	0	35	.	.
LCP86-422	HOC93-750	205	8	51	0	25	0	35	.	.
LCP86-422	L92-312	62	0	23	0	25	0	35	.	.
LCP86-422	LCP85-384	207	37	92	11	95	2	86	.	.
LCP86-429	CP70-321	223	0	23	0	25	0	35	.	.
LCP86-429	CP72-370	251	0	23	0	25	0	35	.	.
LCP86-429	CP72-370	36	0	23	0	25	0	35	.	.
LCP86-429	CP77-310	232	23	71	2	58	0	35	.	.
LCP86-429	CP77-407	218	19	66	4	74	1	79	.	.

Table 6. Continue.

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
LCP86-429	HOCP92-618	167	0	23	0	25	0	35	.	.
LCP86-429	HOCP92-618	81	18	96	5	96	0	35	.	.
LCP86-429	HOCP93-744	79	0	23	0	25	0	35	.	.
LCP86-429	HOCP93-750	85	9	74	4	93	1	90	.	.
LCP86-429	HOCP93-765	211	0	23	0	25	0	35	.	.
LCP86-429	HOCP93-765	242	0	23	0	25	0	35	.	.
LCP86-429	L91-255	103	11	75	1	60	1	87	.	.
LCP86-429	L94-432	241	0	23	0	25	0	35	.	.
LCP86-429	LCP85-384	167	17	72	2	63	1	82	.	.
LCP86-429	LCP85-384	597	0	23	0	25	0	35	.	.
LCP86-454	HOCP93-750	243	25	73	3	65	2	84	.	.
LCP86-454	HOCP93-765	242	0	23	0	25	0	35	.	.
LCP86-454	L92-312	237	34	84	5	76	1	75	.	.
LCP86-454	L93-363	99	12	80	7	97	0	35	.	.
LCP87-023	CP78-2114	46	8	91	0	25	0	35	.	.
LCP87-023	HOCP91-576	108	12	77	4	88	0	35	.	.
LCP87-023	HOCP92-618	220	0	23	0	25	0	35	.	.
LCP87-023	HOCP92-678	108	0	23	0	25	0	35	.	.
LCP87-023	HOCP93-746	53	0	23	0	25	0	35	.	.
LCP87-023	L94-432	236	0	23	0	25	0	35	.	.
LCP87-023	LHO92-307	106	0	23	0	25	0	35	.	.
LCP87-472	HOCP93-765	245	0	23	0	25	0	35	.	.
LCP87-472	L94-432	250	7	48	3	63	0	35	.	.
LHO92-307	CP72-370	237	0	23	0	25	0	35	.	.
LHO83-153	L91-255	90	8	67	4	91	0	35	.	.
LHO92-307	CP70-321	212	8	51	3	68	1	80	.	.
LHO92-307	HOCP85-845	461	86	93	21	92	1	71	.	.
LHO92-307	HOCP92-678	398	41	73	7	72	3	83	.	.
LHO92-307	LCP85-384	1107	0	23	0	25	0	35	.	.
LHO92-314	CP84-730	77	19	98	2	80	1	91	.	.
LHO92-314	L92-312	93	13	83	1	61	1	88	.	.
US78-020	L91-255	104	0	23	0	25	0	35	.	.
US78-020	LCP82-089	183	6	50	3	70	1	81	.	.
US79-010	CP72-370	93	18	93	5	95	2	97	.	.
US79-010	HOCP85-845	86	13	86	1	62	0	35	.	.

Table 6. Continue.

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	L92-319	102	0	23	0	25	0	35	.	.
US79-010	LCP82-089	81	14	90	0	25	0	35	.	.
US90-021	CP72-370	106	10	69	4	88	0	35	.	.
US90-021	HOCP91-552	222	46	95	7	85	2	85	.	.
US90-021	HOCP93-765	250	27	76	7	81	1	73	.	.
US90-021	L89-136	240	54	97	6	79	1	75	.	.
US90-027	HOCP92-664	117	0	23	0	25	0	35	.	.
<u>1997 Crossing Series</u>										
CP77-310	HOCP85-845	237	0	14	0	20	.	.	.	.
CP77-310	HOCP92-618	333	26	62	4	64	.	.	.	.
CP77-310	HOCP92-618	246	20	65	3	65	.	.	.	.
CP77-310	US78-020	81	0	14	0	20	.	.	.	.
CP77-407	CP88-769	220	0	14	0	20	.	.	.	.
CP77-407	LCP82-089	105	23	96	6	97	.	.	.	.
CP79-318	CP87-609	243	0	14	0	20	.	.	.	.
CP79-318	CP94-856	241	19	64	0	20	.	.	.	.
CP79-318	HO94-850	335	15	41	3	59	.	.	.	.
CP79-318	HO95-988	341	0	14	0	20	.	.	.	.
CP79-318	HOCP85-845	247	15	48	0	20	.	.	.	.
CP79-318	HOCP92-618	247	19	62	2	49	.	.	.	.
CP79-318	L88-072	238	22	73	2	53	.	.	.	.
CP79-318	US78-020	109	7	52	1	59	.	.	.	.
CP79-348	L91-255	484	21	40	8	70	.	.	.	.
CP80-356	LCP82-089	246	17	55	0	20	.	.	.	.
CP82-550	L91-255	243	19	62	0	20	.	.	.	.
CP83-644	LCP85-384	722	57	64	21	86	.	.	.	.
CP84-1198	TCP87-3388	344	6	32	0	20	.	.	.	.
CP84-722	LCP82-089	240	9	38	0	20	.	.	.	.
CP85-830	US78-020	229	17	58	5	79	.	.	.	.
CP87-626	HOCP95-950	112	0	14	0	20	.	.	.	.
CP88-769	HOCP85-845	111	14	87	0	20	.	.	.	.
CP89-805	LCP85-336	108	0	14	0	20	.	.	.	.
CP89-831	HOCP94-806	243	30	86	4	70	.	.	.	.
CP89-843	LCP86-454	480	11	33	2	45	.	.	.	.

Table 6. Continue.

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
CP89-845	CP91-534	234	20	69	7	86	.	.	.	.
CP94-1996	LHO83-153	244	11	41	2	51	.	.	.	.
HO95-985	L96-044	425	0	14	0	20	.	.	.	.
HO93-771	HOC92-678	236	15	52	5	78	.	.	.	.
HO93-771	HOC93-775	235	23	76	10	94	.	.	.	.
HO93-771	LHO83-153	345	38	82	4	64	.	.	.	.
HO94-850	L95-482	939	39	40	8	55	.	.	.	.
HO95-985	CP88-769	244	20	66	2	51	.	.	.	.
HO95-985	L88-063	111	0	14	0	20	.	.	.	.
HO95-985	L95-461	343	33	75	8	81	.	.	.	.
HO95-988	LCP82-089	244	0	14	0	20	.	.	.	.
HOC85-845	SELF	221	0	14	0	20	.	.	.	.
HOC85-845	US78-020	250	10	39	0	20	.	.	.	.
HOC88-739	HO94-850	97	24	98	4	94	.	.	.	.
HOC88-739	L94-428	108	0	14	0	20	.	.	.	.
HOC88-739	LCP81-010	194	20	78	3	67	.	.	.	.
HOC88-739	LCP85-384	105	18	94	5	96	.	.	.	.
HOC89-846	L96-044	106	0	14	0	20	.	.	.	.
HOC90-923	LHO83-153	465	15	36	5	63	.	.	.	.
HOC90-941	HOC92-618	239	0	14	0	20	.	.	.	.
HOC90-941	HOC93-750	938	80	69	29	87	.	.	.	.
HOC90-941	SELF	421	51	84	4	61	.	.	.	.
HOC91-542	CP91-559	483	40	67	15	88	.	.	.	.
HOC92-618	HOC93-775	485	36	58	4	51	.	.	.	.
HOC92-618	US95-1001	240	0	14	0	20	.	.	.	.
HOC92-624	CP79-318	110	17	91	0	20	.	.	.	.
HOC92-624	CP84-772	1348	11	29	3	42	.	.	.	.
HOC92-624	HOC85-845	361	39	80	7	76	.	.	.	.
HOC92-624	HOC92-618	250	27	80	4	68	.	.	.	.
HOC92-624	L94-428	808	115	90	7	58	.	.	.	.
HOC92-624	LCP81-010	493	34	55	6	65	.	.	.	.
HOC92-624	LCP85-384	245	25	77	2	51	.	.	.	.
HOC92-624	LCP85-384	1944	238	85	54	85	.	.	.	.
HOC92-624	LCP85-384	256	33	87	5	77	.	.	.	.
HOC92-624	US95-1001	341	0	14	0	20	.	.	.	.

Table 6. Continue.

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
HOCP92-631	LHO83-153	503	0	14	0	20	.	.	.	.
HOCP92-648	L90-191	106	14	88	2	74	.	.	.	.
HOCP92-648	L91-255	706	53	60	1	40	.	.	.	.
HOCP92-648	L94-428	230	14	48	2	58	.	.	.	.
HOCP92-648	LCP81-010	232	47	95	9	93	.	.	.	.
HOCP92-648	LCP87-472	493	28	46	4	49	.	.	.	.
HOCP92-648	US90-018	106	0	14	0	20	.	.	.	.
HOCP92-654	HOCP93-752	453	0	14	0	20	.	.	.	.
HOCP93-744	CP77-407	221	0	14	0	20	.	.	.	.
HOCP93-744	HOCP85-845	869	0	14	0	20	.	.	.	.
HOCP93-746	HOCP85-845	1206	111	73	27	80	.	.	.	.
HOCP93-746	L94-426	240	13	44	2	52	.	.	.	.
HOCP93-746	LCP82-089	228	15	53	6	83	.	.	.	.
HOCP93-746	LHO83-153	243	0	14	0	20	.	.	.	.
HOCP93-746	US95-1014	234	23	76	4	71	.	.	.	.
HOCP93-750	HOCP90-941	249	0	14	0	20	.	.	.	.
HOCP93-775	SELF	250	24	74	10	93	.	.	.	.
HOCP93-775	US93-016	245	0	14	0	20	.	.	.	.
HOCP94-806	L91-255	684	0	14	0	20	.	.	.	.
HOCP94-806	L94-428	393	0	14	0	20	.	.	.	.
HOCP95-950	LCP82-089	461	0	14	0	20	.	.	.	.
HOCP96-569	HOCP93-775	487	30	50	6	66	.	.	.	.
L88-063	HOCP92-618	223	0	14	0	20	.	.	.	.
L88-063	L91-255	472	45	74	17	90	.	.	.	.
L88-072	HOCP85-845	1655	75	41	13	48	.	.	.	.
L88-072	L96-044	240	0	14	0	20	.	.	.	.
L89-113	LHO83-153	236	17	56	2	55	.	.	.	.
L89-136	HOCP85-845	237	29	85	2	53	.	.	.	.
L90-191	LCP82-089	476	27	46	5	62	.	.	.	.
L91-255	HOCP85-845	103	17	93	2	76	.	.	.	.
L91-281	CP87-626	251	22	71	5	77	.	.	.	.
L91-281	LCP81-010	96	26	98	9	99	.	.	.	.
L91-281	LCP84-222	107	15	90	4	91	.	.	.	.
L91-288	HOCP92-618	247	0	14	0	20	.	.	.	.
L92-321	HOCP85-845	234	0	14	0	20	.	.	.	.

Table 6. Continue.

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
L93-363	HOCP85-845	243	20	66	5	78	.	.	.	.
L94-424	LCP85-384	1473	96	52	28	75	.	.	.	.
L94-426	CP84-772	400	97	97	14	90	.	.	.	.
L94-426	L95-477	106	9	69	5	95	.	.	.	.
L94-428	L93-365	109	8	57	3	84	.	.	.	.
L94-428	LCP87-472	108	2	33	1	60	.	.	.	.
L94-432	L91-255	211	19	72	7	89	.	.	.	.
L94-432	LCP81-010	481	19	39	3	47	.	.	.	.
L94-432	LCP86-454	105	23	96	7	98	.	.	.	.
L95-495	CP79-318	232	0	14	0	20	.	.	.	.
L95-495	CP85-830	90	0	14	0	20	.	.	.	.
L95-495	HO95-988	232	20	70	2	56	.	.	.	.
L95-495	HOCP85-845	216	0	14	0	20	.	.	.	.
L96-013	HOCP85-845	243	26	79	4	70	.	.	.	.
L96-024	LCP82-089	465	24	43	10	79	.	.	.	.
L96-044	LCP81-010	104	10	75	0	20	.	.	.	.
L96-048	LCP87-472	242	15	50	1	44	.	.	.	.
L96-051	CP85-830	212	35	93	12	97	.	.	.	.
L96-060	L95-477	611	0	14	0	20	.	.	.	.
L96-060	L96-044	703	0	14	0	20	.	.	.	.
L96-060	LCP82-089	712	0	14	0	20	.	.	.	.
L96-071	LCP82-089	685	51	58	13	75	.	.	.	.
LCP81-010	HOCP85-845	1691	47	35	0	20	.	.	.	.
LCP81-010	HOCP85-845	1405	0	14	0	20	.	.	.	.
LCP81-010	L88-072	456	27	47	2	47	.	.	.	.
LCP81-010	L89-136	110	12	81	2	72	.	.	.	.
LCP81-010	L91-281	1403	51	37	12	56	.	.	.	.
LCP81-010	L94-432	1431	51	37	2	40	.	.	.	.
LCP81-010	L95-477	1064	132	86	25	82	.	.	.	.
LCP81-010	L96-044	105	104	99	8	98	.	.	.	.
LCP81-010	LCP82-089	734	42	46	3	44	.	.	.	.
LCP81-010	LCP85-384	106	9	69	0	20	.	.	.	.
LCP81-010	LCP85-384	1057	57	44	24	81	.	.	.	.
LCP81-010	LCP87-472	893	11	31	0	20	.	.	.	.
LCP81-010	US78-020	914	9	30	2	42	.	.	.	.

Table 6. Continue.

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
LCP82-089	HOCP94-806	679	0	14	0	20	.	.	.	.
LCP82-089	LCP87-472	321	6	33	1	43	.	.	.	.
LCP85-313	HOCP85-845	237	9	38	0	20	.	.	.	.
LCP85-313	HOCP85-845	387	35	72	11	85	.	.	.	.
LCP85-313	HOCP85-845	234	45	95	9	92	.	.	.	.
LCP85-313	L88-072	112	7	51	2	72	.	.	.	.
LCP85-313	LCP82-089	728	39	44	5	48	.	.	.	.
LCP85-313	LCP85-336	105	20	94	1	61	.	.	.	.
LCP85-336	L96-024	109	0	14	0	20	.	.	.	.
LCP85-336	LCP85-384	842	97	82	27	89	.	.	.	.
LCP85-384	HOCP85-845	349	42	83	15	95	.	.	.	.
LCP85-384	US95-1075	461	28	48	4	58	.	.	.	.
LCP86-429	HOCP92-618	109	9	67	2	73	.	.	.	.
LCP86-429	L88-072	436	0	14	0	20	.	.	.	.
LCP86-429	L91-255	940	71	61	13	67	.	.	.	.
LCP86-429	L94-428	484	0	14	0	20	.	.	.	.
LCP86-429	L95-477	227	37	92	7	87	.	.	.	.
LCP86-429	LCP85-336	1167	56	43	2	41	.	.	.	.
LCP86-429	LCP85-384	446	59	88	12	83	.	.	.	.
LCP86-429	LCP87-472	236	16	54	2	55	.	.	.	.
RSB90-22	US95-1014	453	11	34	0	20	.	.	.	.
US78-020	HOCP85-845	240	18	60	1	45	.	.	.	.
US79-010	HOCP94-806	234	32	89	4	71	.	.	.	.
US80-004	LCP84-222	94	7	58	0	20	.	.	.	.
US80-004	LCP87-472	95	15	91	1	62	.	.	.	.
US80-004	US78-020	196	0	14	0	20	.	.	.	.
US90-021	HO94-850	239	19	64	1	45	.	.	.	.
US90-025	US90-020	103	7	54	1	62	.	.	.	.
US90-027	97P2	187	19	77	7	91	.	.	.	.
US90-027	L95-477	230	0	14	0	20	.	.	.	.
US90-20	HOCP92-678	236	0	14	0	20	.	.	.	.
US90-25	US92-11	241	2	29	0	20	.	.	.	.
US92-11	CP88-757	232	0	14	0	20	.	.	.	.
US93-16	HOCP93-750	464	49	79	11	82	.	.	.	.
US95-1036	RSB90-24	248	0	14	0	20	.	.	.	.

Table 6. Continue.

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
US96-1	HO93-769	245	29	83	4	68	.	.	.	.
US96-1	SELF	242	0	14	0	20	.	.	.	.
US96-2	HOCP93-775	484	14	35	0	20	.	.	.	.
US96-2	LCP86-454	360	25	55	1	43	.	.	.	.
US96-2	LHO83-153	250	4	31	0	20	.	.	.	.
US96-6	HO94-851	219	0	14	0	20	.	.	.	.
US96-6	SELF	246	0	14	0	20	.	.	.	.
<u>1998 Crossing Series</u>										
CP65-357	98P1	234	20	76	.	.	.	.	.	.
CP78-357	HOCP92-624	448	43	84	.	.	.	.	.	.
CP78-357	HOCP96-561	351	24	64	.	.	.	.	.	.
CP79-318	98P3	85	9	86	.	.	.	.	.	.
CP79-318	HOCP85-845	461	7	25	.	.	.	.	.	.
CP79-318	HOCP89-846	207	14	64	.	.	.	.	.	.
CP79-318	HOCP94-836	351	5	24	.	.	.	.	.	.
CP79-318	HOCP95-947	79	0	11	.	.	.	.	.	.
CP79-318	L95-495	593	44	68	.	.	.	.	.	.
CP79-318	LCP82-089	187	16	77	.	.	.	.	.	.
CP79-318	LCP82-089	242	36	96	.	.	.	.	.	.
CP79-318	LCP85-384	251	34	95	.	.	.	.	.	.
CP79-348	US96-006	657	25	41	.	.	.	.	.	.
CP82-550	L96-045	62	0	11	.	.	.	.	.	.
CP83-644	CP79-318	211	9	44	.	.	.	.	.	.
CP83-644	HO94-856	231	0	11	.	.	.	.	.	.
CP83-644	HOCP85-845	964	27	32	.	.	.	.	.	.
CP83-644	HOCP92-624	245	29	90	.	.	.	.	.	.
CP83-644	HOCP95-947	237	0	11	.	.	.	.	.	.
CP83-644	HOCP96-538	246	29	90	.	.	.	.	.	.
CP83-644	L89-113	93	0	11	.	.	.	.	.	.
CP83-644	L95-477	1616	107	62	.	.	.	.	.	.
CP83-644	L95-495	540	0	11	.	.	.	.	.	.
CP83-644	L96-044	225	0	11	.	.	.	.	.	.
CP83-644	LCP81-010	1306	51	42	.	.	.	.	.	.
CP83-644	LCP81-010	232	7	34	.	.	.	.	.	.

Table 6. Continue.

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
CP83-644	LCP82-089	1328	80	56	.	.	.	.	.	.
CP83-644	US80-004	101	8	72	.	.	.	.	.	.
CP85-803	L89-113	221	21	83	.	.	.	.	.	.
HO95-985	HOC85-845	250	28	88	.	.	.	.	.	.
HO95-985	HOC85-845	397	7	26	.	.	.	.	.	.
HO95-985	L96-040	227	37	98	.	.	.	.	.	.
HO95-985	LCP81-010	452	9	28	.	.	.	.	.	.
HO95-985	LCP81-010	340	21	57	.	.	.	.	.	.
HO95-985	LCP82-089	238	12	48	.	.	.	.	.	.
HO95-985	LCP85-384	106	12	88	.	.	.	.	.	.
HO95-988	HOC85-845	250	6	30	.	.	.	.	.	.
HO95-988	L89-113	230	17	68	.	.	.	.	.	.
HO95-988	L94-426	105	14	94	.	.	.	.	.	.
HO95-988	L95-495	109	7	59	.	.	.	.	.	.
HO96-566	HOC92-624	240	22	82	.	.	.	.	.	.
HO96-566	HOC96-538	394	48	92	.	.	.	.	.	.
HOC92-618	LCP81-010	689	0	11	.	.	.	.	.	.
HOC92-624	HO96-565	91	3	36	.	.	.	.	.	.
HOC92-624	HOC85-845	249	20	73	.	.	.	.	.	.
HOC92-624	HOC85-845	944	71	69	.	.	.	.	.	.
HOC92-624	HOC96-509	103	10	85	.	.	.	.	.	.
HOC92-624	L89-113	427	32	69	.	.	.	.	.	.
HOC92-624	L96-040	241	35	96	.	.	.	.	.	.
HOC92-624	L96-045	643	22	38	.	.	.	.	.	.
HOC92-624	L96-045	240	19	72	.	.	.	.	.	.
HOC92-624	L97-121	220	17	71	.	.	.	.	.	.
HOC92-624	LCP85-384	344	24	65	.	.	.	.	.	.
HOC92-624	LCP85-384	1146	69	56	.	.	.	.	.	.
HOC92-648	L96-040	234	15	59	.	.	.	.	.	.
HOC92-648	L97-121	1179	16	24	.	.	.	.	.	.
HOC92-648	L97-133	242	16	62	.	.	.	.	.	.
HOC92-648	LCP81-010	564	29	49	.	.	.	.	.	.
HOC92-648	LCP82-089	92	7	70	.	.	.	.	.	.
HOC92-654	98P3	621	0	11	.	.	.	.	.	.
HOC92-654	HOC85-845	473	0	11	.	.	.	.	.	.

Table 6. Continue.

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
HOCP92-654	L94-426	1215	0	11	.	.	.	.	.	.
HOCP92-654	L96-083	480	0	11	.	.	.	.	.	.
HOCP94-836	HOCP95-998	1135	0	11	.	.	.	.	.	.
HOCP96-500	L89-113	543	20	39	.	.	.	.	.	.
HOCP96-500	LCP81-010	497	17	38	.	.	.	.	.	.
HOCP96-500	LCP81-010	470	30	59	.	.	.	.	.	.
HOCP96-500	LCP85-384	901	47	50	.	.	.	.	.	.
HOCP96-515	HO96-565	227	14	57	.	.	.	.	.	.
HOCP96-519	HOCP95-998	591	42	66	.	.	.	.	.	.
HOCP96-519	HOCP96-538	333	9	31	.	.	.	.	.	.
HOCP96-522	HOCP95-947	236	9	41	.	.	.	.	.	.
HOCP96-522	LCP82-089	508	24	46	.	.	.	.	.	.
HOCP96-538	CP78-317	226	0	11	.	.	.	.	.	.
HOCP96-538	HOCP85-845	455	0	11	.	.	.	.	.	.
HOCP96-538	HOCP92-624	233	0	11	.	.	.	.	.	.
HOCP96-538	LCP82-089	1074	45	44	.	.	.	.	.	.
HOCP96-546	HOCP85-845	395	19	47	.	.	.	.	.	.
HOCP96-546	L96-044	665	0	11	.	.	.	.	.	.
HOCP96-561	L96-045	85	0	11	.	.	.	.	.	.
L89-113	LCP82-089	713	27	41	.	.	.	.	.	.
L89-163	HOCP94-836	111	6	51	.	.	.	.	.	.
L89-163	HOCP95-947	430	60	95	.	.	.	.	.	.
L89-163	LCP81-010	1296	14	23	.	.	.	.	.	.
L91-255	HOCP96-561	650	0	11	.	.	.	.	.	.
L91-255	L89-113	384	0	11	.	.	.	.	.	.
L91-255	LCP85-384	533	35	62	.	.	.	.	.	.
L94-428	LCP86-454	234	0	11	.	.	.	.	.	.
L95-461	HO94-856	500	52	85	.	.	.	.	.	.
L95-461	HOCP92-624	244	8	36	.	.	.	.	.	.
L95-461	HOCP94-836	247	7	32	.	.	.	.	.	.
L95-495	CP78-2114	93	5	51	.	.	.	.	.	.
L95-495	HO96-565	220	13	55	.	.	.	.	.	.
L95-495	HOCP85-845	374	0	11	.	.	.	.	.	.
L95-495	HOCP96-500	224	0	11	.	.	.	.	.	.
L95-495	L89-113	414	45	87	.	.	.	.	.	.

Table 6. Continue.

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
L95-495	L96-045	196	0	11	.	.	.	.	.	.
L95-495	L96-083	77	10	93	.	.	.	.	.	.
L96-040	L96-044	694	58	75	.	.	.	.	.	.
L96-040	L97-149	229	0	11	.	.	.	.	.	.
L96-040	LCP82-089	567	67	90	.	.	.	.	.	.
L96-040	US96-006	245	22	81	.	.	.	.	.	.
L96-045	HOCP85-845	108	8	68	.	.	.	.	.	.
L96-060	HOCP95-998	227	0	11	.	.	.	.	.	.
L96-060	L95-495	349	6	26	.	.	.	.	.	.
L96-060	LCP82-089	344	14	43	.	.	.	.	.	.
L96-072	HOCP85-845	234	12	49	.	.	.	.	.	.
L96-072	HOCP89-846	100	0	11	.	.	.	.	.	.
L96-072	LCP82-089	392	32	74	.	.	.	.	.	.
L96-078	HOCP95-947	107	9	75	.	.	.	.	.	.
L97-104	L97-146	444	29	60	.	.	.	.	.	.
L97-104	LCP82-089	241	21	79	.	.	.	.	.	.
L97-113	L96-044	97	3	34	.	.	.	.	.	.
L97-113	LCP81-010	244	1	23	.	.	.	.	.	.
L97-121	HOCP92-624	101	17	98	.	.	.	.	.	.
L97-121	HOCP96-561	882	40	45	.	.	.	.	.	.
L97-121	LCP81-010	237	26	87	.	.	.	.	.	.
L97-128	HOCP95-998	235	8	38	.	.	.	.	.	.
L97-128	LCP81-010	899	17	27	.	.	.	.	.	.
L97-146	LCP85-384	219	18	74	.	.	.	.	.	.
L97-149	LCP81-010	225	0	11	.	.	.	.	.	.
LCP81-010	HOCP96-550	235	8	38	.	.	.	.	.	.
LCP81-010	L95-495	225	5	29	.	.	.	.	.	.
LCP81-010	L97-149	343	24	65	.	.	.	.	.	.
LCP81-010	LCP82-089	1194	4	22	.	.	.	.	.	.
LCP82-089	HOCP96-527	427	0	11	.	.	.	.	.	.
LCP82-089	L89-113	746	0	11	.	.	.	.	.	.
LCP82-089	LCP86-454	166	0	11	.	.	.	.	.	.
LCP85-384	CP78-2114	314	23	66	.	.	.	.	.	.
LCP85-384	L96-045	221	28	92	.	.	.	.	.	.
LCP85-384	LCP82-089	1223	192	97	.	.	.	.	.	.

Table 6. Continue.

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
LCP85-384	LCP82-089	237	40	99	.	.	.	.	.	.
LCP85-384	LCP86-454	211	7	36	.	.	.	.	.	.
LCP86-429	L94-428	753	16	28	.	.	.	.	.	.
LCP87-492	CP78-2114	203	26	93	.	.	.	.	.	.
MISC	98P2	231	13	52	.	.	.	.	.	.
MISC	CP78-317	245	21	77	.	.	.	.	.	.
MISC	HOCP85-845	600	35	54	.	.	.	.	.	.
MISC	HOCP92-624	404	35	79	.	.	.	.	.	.
MISC	HOCP96-500	219	19	79	.	.	.	.	.	.
MISC	L89-113	486	25	49	.	.	.	.	.	.
MISC	L89-163	251	23	82	.	.	.	.	.	.
MISC	L94-426	243	23	83	.	.	.	.	.	.
MISC	L95-495	198	8	42	.	.	.	.	.	.
MISC	L96-044	229	13	53	.	.	.	.	.	.
MISC	L96-045	243	29	91	.	.	.	.	.	.
MISC	L97-146	241	14	54	.	.	.	.	.	.
MISC	LCP81-010	101	9	80	.	.	.	.	.	.
MISC	LCP85-384	243	16	62	.	.	.	.	.	.
MISC	LCP86-454	214	5	30	.	.	.	.	.	.
US77-017	HOCP85-845	235	7	34	.	.	.	.	.	.
US77-017	HOCP92-624	247	20	73	.	.	.	.	.	.
US93-015	CP78-2114	228	0	11	.	.	.	.	.	.
US93-015	L96-044	252	0	11	.	.	.	.	.	.
US93-016	CP78-2114	203	12	55	.	.	.	.	.	.
US93-016	L95-495	583	28	47	.	.	.	.	.	.
US93-016	L96-045	247	11	45	.	.	.	.	.	.
US93-016	LCP86-454	38	1	31	.	.	.	.	.	.
US96-006	CP78-2114	234	0	11	.	.	.	.	.	.
US96-006	L97-121	241	0	11	.	.	.	.	.	.
US96-006	L97-155	102	0	11	.	.	.	.	.	.
US96-006	US96-006	206	18	79	.	.	.	.	.	.

Table 7. Plant weight and rank summary statistics from the 1999 crossing series first stubble cross appraisal test at the St. Gabriel Research Station in 2000.

<u>FEMALE</u>	<u>MALE</u>	<u>Plant Weight</u>	
		kg	pcnt'l
HOCP96-546	HOCP85-845	25.1	99
HOCP92-618	LCP81-010	17.9	98
L97-146	LCP85-384	17.0	97
L91-255	L89-113	15.9	96
US96-006	CP78-2114	15.8	95
HO95-985	HOCP94-806	15.9	95
L97-128	LCP81-010	15.4	94
LCP81-010	LCP82-089	15.1	93
HOCP92-654	HOCP85-845	14.9	92
HOCP92-624	HOCP85-845	14.8	90
L96-040	L94-426	14.5	90
LCP85-384	LCP82-089	14.5	89
L97-104	L97-146	14.5	88
LCP85-384	CP78-2114	14.4	87
US77-017	HOCP92-624	14.3	86
HOCP92-648	L97-121	14.0	85
HOCP96-522	HOCP95-947	14.3	85
CP83-644	L89-113	14.0	84
CP83-644	HOCP95-947	13.7	81
L95-495	HOCP85-845	13.6	80
CP83-644	L95-495	13.6	80
HOCP92-624	HOCP85-845	13.5	79

<u>FEMALE</u>	<u>MALE</u>	<u>Plant Weight</u>	
		kg	pcnt'l
L96-040	L96-044	13.4	78
HOCP96-500	L89-113	13.4	77
L97-149	LCP81-010	13.1	76
HOCP96-561	L96-045	13.2	76
HO95-985	LCP81-010	13.1	75
LCP81-010	L97-149	13.1	74
HOCP92-624	L96-045	13.0	73
L97-104	L96-045	13.0	72
L96-040	L96-044	12.9	71
HO95-985	LCP85-384	12.9	71
L96-060	L95-495	12.8	70
US93-016	L95-495	12.8	69
CP83-644	L95-477	12.8	68
CP83-644	HO94-856	12.6	67
L89-163	LCP81-010	12.5	66

CP83-644	HOCP85-845	12.5	66
HOCP96-538	LCP82-089	12.4	65
HOCP92-648	LCP81-010	12.4	64
HO95-988	HOCP85-845	12.3	63
HOCP96-522	LCP82-089	12.3	62
CP83-644	HOCP96-538	12.2	61
HOCP95-931	HOCP92-618	12.3	61

Table 7. Continue

<u>FEMALE</u>	<u>MALE</u>	<u>Plant Weight</u>	
		kg	pcnt'l
L95-495	L96-083	12.2	60
CP79-318	LCP81-010	12.1	59
LCP82-089	L89-113	12.1	58
CP78-357	HOCP92-624	12.0	57
HOCP96-515	HO96-565	12.0	57
CP83-644	LCP81-010	11.9	56
HOCP94-836	HOCP95-998	11.9	55
CP83-644	LCP82-089	11.9	54
HO95-985	LCP81-010	11.8	53
US93-016	L96-045	11.7	52
L96-040	LCP82-089	11.8	52
L89-113	HOCP94-836	11.6	51
L95-495	HO96-565	11.6	50
HO95-985	LCP82-089	11.5	49
HOCP96-546	L96-044	11.4	48
HOCP92-624	LCP85-384	11.4	47
CP79-318	HOCP94-836	11.4	47
CP79-318	L96-040	11.4	46
HOCP92-624	L89-113	11.3	45
L95-495	L89-113	11.2	44
L95-461	HO94-856	11.2	43
HO96-566	HOCP96-538	11.2	42
CP78-357	HOCP96-561	11.2	42
L89-113	LCP82-089	11.2	41
HO95-985	HOCP85-845	11.1	40
L97-128	HOCP95-998	11.1	39
L96-040	US96-006	11.1	38
HOCP96-538	CP78-317	11.1	38
HOCP92-624	LCP85-384	11.1	37
CP79-318	LCP82-089	11.1	36
L95-461	HOCP92-624	11.1	35

CP82-550	L96-045	11.1	34	LCP82-089	HOCP96-527	6.9	3
HO95-985	L96-040	11.0	33	HOCP92-654	98P3	6.7	2
HOCP96-500	LCP85-384	11.0	33	L91-255	HOCP96-561	6.4	1
HOCP92-648	L97-133	11.0	32	HOCP92-654	L96-083	6.4	0
L96-072	LCP82-089	11.0	31				
HOCP96-500	LCP81-010	10.9	30	Commercial Varieties			
HOCP96-500	LCP81-010	10.9	29	CP70-321		14.8	91
L97-113	US96-006	10.8	28	LCP85-384		14.0	83
				HOCP85-845		13.9	82

<u>FEMALE</u>	<u>MALE</u>	<u>Plant Weight</u>	
		kg	pct'l
CP79-318	98P3	10.8	28
L95-461	US80-004	10.6	27
L96-060	HOCP95-998	10.4	26
L97-113	LCP81-010	10.3	25
CP79-318	L95-495	10.3	24
HOCP96-519	HOCP95-998	10.3	23
US96-006	L97-121	10.3	23
LCP81-010	L95-495	10.2	22
US93-015	CP78-2114	10.2	21
L97-121	LCP82-089	10.2	20
HOCP92-624	L96-040	10.2	19
LCP85-384	LCP82-089	10.0	19
L91-255	LCP85-384	10.0	18
L97-121	LCP81-010	10.0	17
HOCP96-519	HOCP96-538	9.9	16
HOCP96-538	HOCP92-624	9.8	15
US93-015	L96-044	9.5	14
L96-078	HOCP95-947	9.7	14
HO96-566	HOCP92-624	9.5	13
L95-461	HOCP94-836	9.5	12
L97-121	L97-146	9.4	11
L95-495	HOCP96-500	9.4	10
L96-040	L97-149	9.3	9
US93-016	LCP86-454	9.3	9
L97-113	LCP85-384	9.0	8
L95-483	LCP82-089	9.0	7
L97-121	HOCP96-561	8.8	6
HOCP96-538	HOCP85-845	8.7	5
L96-072	HOCP85-845	8.4	4
HOCP92-654	L94-426	7.7	4

2000 LOUISIANA NURSERY 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 the Louisiana “L” Sugarcane Variety Development Program. These varieties are planted in replicated nursery tests at different locations.

One objective of the nursery stage is to identify and select varieties that will perform well across the range of environments that a commercial variety will encounter in Louisiana. The nursery tests are normally planted at three locations (Ardoyne, Iberia, and St. Gabriel) during the year of assignment, and three additional and different locations are planted the year after assignment. A test at Newton Farms in Bunkie, a new location planted in 1999, was harvested for the first time in 2000. It should be noted that a light frost occurred before the Bunkie location could be harvested. In 2000 both LSU AgCenter and USDA varieties were planted together in the nursery trials, as in 1999, except at the Stoute location, where only the LSU AgCenter varieties were planted. The locations, soil types, dates of planting, and dates of harvest are listed in Table 1.

The “on station” nursery trials (Ardoyne, Iberia, and St. Gabriel) were planted in single row (6-foot centers), 16-foot-long plots. The “off-station” nurseries (Blake Newton Farm, Danny Stoute, and Westfield) were planted in 20-foot-long plots. The experimental design used 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.

Millable stalk counts were made in August. During the harvest season, 10-stalk samples were harvested by hand and stripped of leaves. Most samples were weighed and milled at the Sucrose Lab in St. Gabriel to obtain a juice sample for analysis. The only exceptions were the samples taken at the Newton location, which were run at the USDA Ardoyne Farm in Chacahoula, La. 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 was estimated as the product of stalk weight and stalk number. Sugar per acre was calculated as the product of sugar per ton and cane yield.

LCP85-384 has been the leading variety in Louisiana since 1998 with about 71% of the sugarcane acreage in 2000. For comparison, LCP85-384 is highlighted in the tables. In contrast to past years, a new statistical method has been adopted for data analysis. To adjust for missing data, the analysis used SAS 8.01 Proc Mixed. Mean separation used least square means probability differences ($P=0.05$) to calculate significant differences. 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.

Results from nursery variety trials harvested in 2000 are presented in Tables 2-16 and summary

results are presented in Tables 17-22. The 1997 Series at the Iberia Station was plowed out and not harvested in 2000. Results from the 1995 Series, third stubble tests are presented only in the summary tables.

References

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

Table 1. 2000 Planting and harvest dates of nursery tests.

		Soil	Planting	Harvest Dates			Varieties	
				1998	1999	2000	No.	No.
1995	Stoute	Cosl	9/26/96	11/6	10/1	9/28	14	1
1995	Westfield	Csl	10/21/96	10/29	10/2	9/28	14	1
1997	Ardoyne	Csl	11/4/97	12/7	11/2	10/1	56	2
1997	Iberia	Bsc	10/30/97	11/16	11/1	-----	56	2
1997	St Gabriel	Csl	10/30/97	11/23	11/1	10/8	56	2
1997	Gonsoulin	Cosl	8/26/98		11/8	9/28	26	2
1997	Stoute	Bsc	8/28/98		11/8	10/2	26	2
1997	Westfield	Sc	8/26/98		11/1	10/2	26	2
1998	Ardoyne	Csl	10/15/98		12/7	11/1	53	2
1998	Iberia	Bsc	10/14/98		12/6	11/1	53	2
1998	St. Gabriel	Sc	10/16/98		11/1	11/1	53	2
1998	Gonsoulin	Cosl	8/13/99			11/3	44	10
1998	Newton	Mosl	8/25/99		11/2		44	10
1998	Stoute	Bsc	8/20/99			11/1	13	2
1998	Westfield	Csl	8/17/99			12/1	44	10
1999	Ardoyne	Csl	10/20/99			11/2	34	16
1999	Iberia	Bsc	10/19/99			11/3	34	16
1999	St. Gabriel	Sc	10/18/99			11/1	34	16
1999	Newton	Mosl	8/24/00				39	
1999	Stoute	Bsc	8/18/00				16	
1999	Westfield	Csl	8/21/00				39	
2000	Ardoyne	Csl	10/12/00				33	
2000	Iberia	Bsc	10/13/00				33	
2000	Newton	Mosl	8/24/00				39	
2000	St. Gabriel	Sc	10/12/00				33	
2000	Stoute	Bsc	8/18/00				16	
2000	Westfield	Csl	8/21/00				39	

† Ardoyne-USDA Ardoyne Farm (Terrebonne), 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), 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.

----- Plowed out

Table 2. 2000 Nursery second-stubble means of the 1997 "L" assignment series in light soil at Ardoyne Farm near 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	14210	57.4	247	2.3	49686
LCP85-384	13943	63.5	219	1.9	65340
HOCP85-845	11055	45.5	239	2.1	43333
L97-128	15301	56.2	272	2.1	52408
L97-137	10080	41.1	246	1.5	53996

Table 3. 2000 Nursery second-stubble means of the 1997 "L" assignment series in light soil at St. Gabriel Research Station near 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	10371	45.5	227	2.3	39249 -
LCP85-384	13267	61.6	215	1.7	73961
HOCP85-845	10071	42.4	235	2.0	42653 -
L97-128	13114	58.8	221	2.1	56946 -
L97-137	16511	74.9	213	1.9	76457

Table 4. 2000 Nursery first-stubble means of the 1997 "L" assignment series in light soil at Ronnie Gonsoulin Farms near 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	9216	48.1	192	2.6 +	36754 -
LCP85-384	8115	46.4	173	1.8	50820
HOCP85-845	8487	44.5	190	2.1	43106
L97-128	14471 +	66.3 +	218	2.6 +	51954
L97-137	12859 +	61.5	207	2.0	61937 +

Table 5. 2000 Nursery first-stubble means of the 1997 "L" assignment series in heavy soil at Danny Stoutes Farm near 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	12184	44.5	274 +	2.3	38569 -

LCP85-384	15781	63.7	248	1.9	68743
HOCP85-845	9537	38.8	246	1.6	48778 -
L97-128	12604	47.1	268 +	2.6	36527 -
L97-137	16971	72.7	235	1.9	75323

Table 6. 2000 Nursery first-stubble means of the 1997 "L" assignment series in heavy soil at Westfield near Paincourtville, 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	14901	50.4	295	2.3 +	44694
LCP85-384	16009	55.5	288	1.8	62164
HOCP85-845	14107	53.9	262	2.3 +	47871
L97-128	20358 +	73.0	279	2.6 +	56492
L97-137	19501 +	75.7 +	259	2.4 +	63979

Table 7. 2000 Nursery first-stubble means of the 1998 "L" assignment series in light soil at Ardoyne Farm near Chacahoula, 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	10910 -	42.2 -	258	2.5	34031 -
LCP85-384	21199	80.0	265	2.1	75776
HOCP85-845	18711	71.4	262	2.7	52181 -
L98-207	21205	81.9	259	2.3	70331
L98-209	18605	72.7	256	2.7	53089 -

Table 8. 2000 Nursery first-stubble means of the 1998 "L" assignment series in heavy soil at Iberia Research Station near 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	13179	52.4	252	2.9	35619 -
LCP85-384	19026	76.6	248	2.5	61483
HOCP85-845	13056	55.0	236	2.8	38569 -
L98-207	16165	66.4	244	2.2	60122
L98-209	17024	72.9	233	2.6	55584

Table 9. 2000 Nursery first-stubble means of the 1998 "L" assignment series in heavy soil at St. Gabriel Research Station near St. Gabriel, La.

Variety	Sugar per Acre	Cane Yield	Sugar per Ton	Stalk Weight	Stalk Number
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	(lbs/A)		(tons/A)		(lbs/ton)		(lbs)		(stalks/A)
CP70-321	11318 -		48.4 -		234		2.4 +		41291 -
LCP85-384	16186		69.0		234		1.7		80541
HOCP85-845	9254 -		45.4 -		204 -		1.9		49005 -
L98-207	15020		64.1		234		1.9		68743 -
L98-209	16869		76.5		221		2.1 +		72600

Table 10. 2000 Nursery plantcane means of the 1998 "HOCP" and "L" assignment series in light soil at Ronnie Gonsoulin Farms near 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	16158	56.6	286	3.1 +	36482
TUCCP77-042	7325	30.3	241	2.5	24321 -
LCP85-384	10412	39.4	264	2.0	40293
HOCP85-845	10601	42.1	254	2.5	33941
L98-207	14164	49.8	282	1.7	56628 +
L98-209	18783 +	67.0 +	280	2.4	56084 +
HOCP98-718	15719	64.5	246	2.5	51546
HOCP98-734	11176	42.6	260	2.1	40475
HOCP98-741	19206 +	79.7 +	242	3.5 +	45375
HOCP98-771	12338	48.0	255	2.7 +	35211
HOCP98-776	11689	41.9	279	2.2	39023
HOCP98-778	8962	33.7	267	2.5	28314
HOCP98-781	9211	37.7	244	2.7 +	28314

Table 11. 2000 Nursery plantcane means of the 1998 "HOCP" and "L" assignment series in light soil at Blake Newton Farms near Bunkie, 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	10263	35.8	285	1.8	40656
TUCCP77-042	9690	35.9	270	2.0	35211
LCP85-384	8650	32.7	264	1.9	35211
HOCP85-845	8494	30.5	279	1.9	31763
L98-207	11454	40.9	280	1.8	45375 +
L98-209	9642	33.8	285	1.9	35937
HOCP98-718	7323	29.3	245	1.3 -	43560 +
HOCP98-734	7916	30.1	263	1.5 -	40656
HOCP98-741	10782	39.5	272	2.0	38841

HOCP98-771	5607 -	20.6 -	272	1.4 -	28859
HOCP98-776	4389 -	16.2 -	272	1.3 -	24140 -
HOCP98-778	9791	33.7	290	1.9	35756
HOCP98-781	9367	34.2	274	2.0	34667

Table 12. 2000 Nursery plantcane means of the 1998 "L" assignment series in heavy soil at Danny Stoutes Farm near 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	9601	33.3 -	289	1.8	37208 -
LCP85-384	10997	41.6	265	1.4	57717
HOCP85-845	9186	34.4	266	2.2	31763 -
L98-207	11265	42.5	266	1.6	55176
L98-209	14557 +	53.7 +	271	2.0	54269

Table 13. 2000 Nursery plantcane means of the 1998 "HOCP" and "L" assignment series in light soil at Westfield near 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	11477	45.0	255	2.2	40656 -
TUCCP77-042	16546	89.6 +	185	3.7 +	49005
LCP85-384	12675	56.9	222	1.9	59532
HOCP85-845	10492	43.9	236	2.2	39749 -
L98-207	16256	70.3	230	1.8	79497 +
L98-209	16278	73.4	221	2.5 +	60077
HOCP98-718	18485	73.6	251	2.5 +	59532
HOCP98-734	15281	68.6	224	2.3	59714
HOCP98-741	18216	75.8	239	3.3 +	45920 -
HOCP98-771	16558	72.1	230	2.7 +	52998
HOCP98-776	17605	68.8	256	2.7 +	51909
HOCP98-778	14728	57.5	256	2.8 +	40656 -
HOCP98-781	15870	68.5	231	3.1 +	44286 -

Table 14. 2000 Nursery plantcane means of the 1999 "L" assignment series in light soil at Ardoyne Farm near 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	15075	60.1	250	3.4 +	35166 -
LCP85-384	14999	63.6	236	2.5	51728
HOCP85-845	9005	42.6	216	2.6	32897 -
L99-213	12784	49.0	261	2.2	44921
L99-214	14190	55.1	259	2.9	38115 -
L99-215	14258	56.9	251	2.6	43560
L99-221	10005	41.2	243	2.2	36754 -
L99-225	15490	59.7	259	2.3	51274
L99-226	14400	62.1	233	3.8 +	32897 -
L99-227	12688	48.4	262	2.5	39023 -
L99-229	15117	61.6	246	3.2 +	38796 -
L99-230	12788	53.3	239	2.3	46963
L99-231	13644	53.9	251	2.7	39703 -
L99-233	12739	49.2	261	2.5	39023 -
L99-234	10167	40.6	251	3.1 +	25864 -
L99-236	14527	59.3	245	2.7	44241
L99-238	13981	57.1	246	2.6	44468
L99-240	14174	56.0	254	2.7	41064
L99-243	10996	41.4	266	2.6	31989 -

Table 15. 2000 Nursery plantcane means of the 1999 "L" assignment series in heavy soil at Iberia Research Station near 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	7109	29.1	243	-	2.0	29267	-
LCP85-384	9695	35.3	274		1.9	36981	
HOCP85-845	6606	27.4	241	-	2.3	24049	-
L99-213	10016	35.7	280		1.7	41064	
L99-214	9284	36.4	256		2.3	31082	
L99-215	7690	31.4	245	-	2.4	26091	-
L99-221	8277	35.6	233	-	1.7	43106	
L99-225	7317	28.4	258		1.7	33804	
L99-226	9323	36.9	253		2.6 +	27906	-
L99-227	8534	33.0	259		2.0	32670	
L99-229	6662	28.7	232	-	2.6 +	22461	-
L99-230	7414	32.3	230	-	2.0	32897	
L99-231	11039	41.1	269		2.6 +	31536	
L99-233	8020	31.4	256		2.1	30628	
L99-234	6703	26.5	256		2.5	21099	-
L99-236	9083	35.0	259		2.1	34485	
L99-238	8948	35.7	251	-	2.0	35619	
L99-240	8419	32.9	255		2.0	32443	
L99-243	7355	29.2	252	-	2.0	28586	-

Table 16. 2000 Nursery plantcane means of the 1999 "L" assignment series in heavy soil at St. Gabriel Research Station near 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	6777	25.5	266	1.9	26771 -
LCP85-384	8580	33.1	262	1.7	38342
HOCP85-845	6339	26.2	242	1.9	28133
L99-213	7497	34.3	218 -	1.5	46056
L99-214	11685	46.8	250	2.3 +	40838
L99-215	9890	41.2	240 -	2.2 +	37661
L99-221	8889	37.0	241 -	1.6	45375
L99-225	7563	29.3	258	1.6	35619
L99-226	7551	31.0	243	1.8	35393
L99-227	6700	27.0	249	1.7	31536
L99-229	9892	40.1	247	2.6 +	31536
L99-230	7653	32.9	232 -	2.0	33578
L99-231	10646	38.8	275	2.2 +	34485
L99-233	10817	42.2	257	2.1	40157
L99-234	10934	42.9	256	2.5 +	34031
L99-236	9118	33.4	273	1.9	35393
L99-238	9641	37.2	260	2.2 +	34031
L99-240	7590	29.9	254	1.9	31082
L99-243	6897	26.9	257	1.9	28133 -

Table 17. 2000 Nursery third stubble means of the 1995 "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)
LCP85-384	8747	45.5	191	1.6	56492
L95-462	11642	57.0	206	2.0	55769

Table 18. 2000 Nursery 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	12291	51.4	237	2.3	44468
LCP85-384	13605	62.6	217	1.8	69651
HOCP85-845	10563	43.9	237	2.0	42993

L97-128	14207	57.5	247	2.1	54677
L97-137	13296	58.0	229	1.7	65227

Table 19. 2000 Nursery first 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	12100	47.7	254	2.4 +	40006 -
LCP85-384	13301	55.2	236	1.8	60576
HOCP85-845	10710	45.7	233	2.0	46585 -
L97-128	15811	62.2	255	2.6 +	48324
L97-137	16444	70.0	234	2.1	67079

Table 20. 2000 Nursery first 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	11803 -	47.7 -	248	2.6 +	36981 -
LCP85-384	18804	75.2	249	2.1	72600
HOCP85-845	13674 -	57.2 -	234	2.5 +	46585 -
L98-207	17463	70.8	246	2.1	66399
L98-209	17499	74.0	236	2.5 +	60424 -

Table 21. 2000 Nursery plantcane 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	11875	42.7	279 +	2.2	38750 -
TUCCP77-042	10916	50.4	234	2.7 +	36414 -
LCP85-384	10684	42.7	254	1.8	48188
HOCP85-845	9693	37.7	259	2.2	34303 -
L98-207	13285	50.9	264	1.7	59169 +
L98-209	14815	57.0	264	2.2	51591
HOCP98-718	13571	54.3	249	2.0	51781
HOCP98-734	11186	45.6	251	1.9	47183
HOCP98-741	15796	63.5	254	2.9 +	43614
HOCP98-771	11229	45.4	254	2.2	39258
HOCP98-776	10956	40.8	271	2.0	38592 -
HOCP98-778	10889	40.1	273	2.3 +	35144 -
HOCP98-781	11211	45.3	252	2.5 +	35991 -

Table 22. 2000 Nursery plantcane means of the 1999 "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	9653	38.2	253	2.4 +	30401 -
LCP85-384	11092	44.0	258	2.0	42350
HOC85-845	7317	32.1	233 -	2.3	28359 -
L99-213	10099	39.7	253	1.8	44014
L99-214	11720	46.1	255	2.5 +	36678
L99-215	10613	43.2	245	2.4	35771
L99-221	9057	37.9	239	1.8	41745
L99-225	10123	39.1	258	1.9	40233
L99-226	10425	43.4	243	2.7 +	32065 -
L99-227	9307	36.1	256	2.1	34409 -
L99-229	10557	43.5	241	2.8 +	30931 -
L99-230	9285	39.5	233 -	2.1	37813
L99-231	11776	44.6	265	2.5 +	35241 -
L99-233	10526	40.9	258	2.2	36603
L99-234	9268	36.7	254	2.7 +	26998 -
L99-236	10909	42.5	259	2.2	38039
L99-238	10857	43.3	252	2.3	38039
L99-240	10061	39.6	254	2.2	34863 -
L99-243	8416	32.5	258	2.2	29569 -

2000 LOUISIANA “HoCP” NURSERY VARIETY TRIALS ^{1/}

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The Louisiana sugarcane breeding programs select varieties that give consistent yields across a range of environmental conditions. By planting varieties in several different regions of the sugarcane industry at an earlier stage of the breeding program, more information on genotype by environment interactions can be gained and superior genotypes (as well as inferior genotypes) can be identified earlier. Thus, decisions on advancement of varieties can be made with more confidence and precision.

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 single-rows, 16 feet long with a 4-foot alley between plots. At least three commercial varieties (including CP 70-321, LHo 83-153, HoCP 85-845, and/or LCP 85-384) are included in each replication as controls. Varieties from the USDA program advanced for further testing in the year following assignment were combined with varieties from the LSU program and replanted in two nurseries on commercial farms. Plot lengths in these two-replication tests were 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 1999 HoCP series were harvested from nursery trials in 2000. The replant of the 1998 HoCP series also included varieties from the 1998 LSU series. The 2000 HoCP assignment series was planted at three locations in 2000. Varieties from the 1999 HoCP series were combined with varieties from the 1999 LSU series and replanted on two commercial farms. Test locations, planting dates, and harvest dates can be found in Table 1. Results from trials harvested in 2000, along with combined analyses where applicable, can be found in Tables 2 to 24.

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

Louisiana parents.

Table 1. 2000 Planting and harvest dates of USDA nursery tests.

Series	Location ^{2/}	Soil Texture ^{3/}	Planting Date	Harvest Dates			Varieties	
				1998	1999	2000	No. Planted	No. Harvested
1996	BSP	Csl	9/15/97	11/19	11/04	10/20	56	3
1996	GKF	Sc	9/22/97	11/20	11/03	10/05	56	3
1997	AFH	Sc	10/24/97	12/1	11/01	10/20	97	2
1997	AFL	Csl	10/23/97	12/1	11/10	10/20	97	2
1997	STG	Csl	11/06/97	12/2	11/05	10/30	97	2
1997	BSP	Csl	9/25/98		11/22	10/20	38	2
1997	GKF	Sc	10/15/98		11/19	10/05	34	2
1997	IRS	Bsc	10/14/98		11/16	10/31	36	2
1998	AFH	Sc	10/07/98		12/06	10/24	85	7
1998	AFL	Csl	10/07/98		12/07	11/15	85	7
1998	STG	Csl	10/23/98		11/23	10/30	71	7
1998	NEW	Mosl	8/25/99			11/21	44	10
1998	RGF	Cosl	8/13/99			11/29	44	10
1998	WES	Csl	8/17/99			12/06	44	10
1999	AFL	Csl	10/20/99			11/27	73	27
1999	STG	Csl	10/21/99			11/28	73	27
1999	IRS	Bsc	10/19/99			11/29	73	27
1999	NEW	Mosl	8/24/00				39	
1999	WES	Csl	8/21/00				39	
2000	AFL	Csl	10/27/00				61	
2000	STG	Csl	10/30/00				62	
2000	IRS	Bsc	10/31/00				62	

^{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, NEW = Newton Farm in Bunkie, RGF = R. Gonsoulin in New Iberia, STG = St. Gabriel Research Station in St. Gabriel, WES = Westfield Plantation in Paincourtville.

^{3/} Bsc = Baldwin silt clay, Cosl = Coteau silt loam, Csl = Commerce silt loam, Mosl = Moreland silty loam,

Sc = Sharkey clay.

Table 2. Means of the 1996 HoCP and Ho series second stubble nursery variety trial on a Commerce silt loam soil at Bon Secour Plantation in St. James, La., in 2000.

Variety	Sugar per Acre (lbs/A)	Cane Yield (tons/A)	Sugar per Ton (lbs/ton)	Stalk Weight (lbs)	Stalk Number (Stalks/A)
CP 70-321	9977	44.0	228	2.0	44014
LCP 85-384	12878	58.4	220	1.7	67382
HoCP 85-845	10442	50.5	208	2.0	50366
HoCP 96-509	11378	51.5	223	1.9	52408
HoCP 96-540	12255	55.3	222	2.0	55584
HoCP 96-561	11257	47.9	234	1.7	56038
MSD _(.05)	N.S.	N.S.	N.S.	N.S.	N.S.

Table 3. Means of the 1996 HoCP and Ho series second -stubble nursery variety trial on a Sharkey clay soil at Godfrey Knight Farms in Thibodaux, La., in 2000.

Variety	Sugar per Acre (lbs/A)	Cane Yield (tons/A)	Sugar per Ton (lbs/ton)	Stalk Weight (lbs)	Stalk Number (stalks/A)
CP 70-321	6685	35.1	192	1.7	41064
LCP 85-384	5822	33.1	176	1.1	62391
HoCP 85-845	3358	19.5	172	1.3	30401
HoCP 96-509	6096	41.5	145	1.2	67382
HoCP 96-540	8891	45.8	193	1.6	57626
HoCP 96-561	7345	33.4	219	1.4	46283
MSD _(.05)	N.S.	N.S.	37	N.S.	17703

Table 4. Combined means of the 1996 HoCP and Ho series second stubble nursery variety trials in 2000.

Variety	Sugar per Acre (lbs/A)	Cane Yield (tons/A)	Sugar per Ton (lbs/ton)	Stalk Weight (lbs)	Stalk Number (stalks/A)
CP 70-321	8331	39.5	210	1.8	42539
LCP 85-384	9350	45.7	198	1.4	64886
HoCP 85-845	6900	35.0	190	1.6	40384
HoCP 96-509	8737	46.5	184	1.6	59895
HoCP 96-540	10573	50.5	208	1.8	56605
HoCP 96-561	9301	40.6	227	1.6	51160
MSD _(.05)	N.S.	N.S.	N.S.	N.S.	N.S.

Table 5. Means of the 1997 HoCP and Ho series second stubble nursery variety trial on a Commerce silt loam soil at Ardoyne Farm in 2000.

Variety	Sugar per Acre (lbs/A)	Cane Yield (tons/A)	Sugar per Ton (lbs/ton)	Stalk Weight (lbs)	Stalk Number (stalks/A)
CP 70-321	10675	43.8	243	2.2	40157
LHo 83-153	12627	55.5	227	2.3	47871
LCP 85-384	13842	56.1	247	1.9	58534
HoCP 85-845	13196	51.5	256	2.1	49232
HoCP 97-606	12418	52.1	238	1.9	56038
HoCP 97-609	13287	51.9	255	2.2	47644
MSD _(.05)	N.S.	N.S.	N.S.	N.S.	N.S.

Table 6. Means of the 1997 HoCP and Ho series second stubble nursery variety trial on a Sharkey clay soil at Ardoyne Farm in 2000.

Variety	Sugar per Acre (lbs/A)	Cane Yield (tons/A)	Sugar per Ton (lbs)	Stalk Weight (lbs)	Stalk Number (stalks/A)
CP 70-321	8264	31.7	262	1.7	35846
LHo 83-153	8031	32.1	249	1.9	34712
LCP 85-384	12329	44.3	279	1.5	58761
HoCP 85-845	10160	39.2	259	1.8	42879
HoCP 97-606	9884	38.7	256	1.5	51274
HoCP 97-609	10193	37.7	272	1.7	43106
MSD _(.05)	N.S.	N.S.	N.S.	N.S.	N.S.

Table 7. Means of the 1997 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 2000.

Variety	Sugar per Acre (lbs/A)	Cane Yield (tons/A)	Sugar per Ton (lbs/ton)	Stalk Weight (lbs)	Stalk Number (stalks/A)
CP 70-321	7706	31.5	245	2.1	30174
LHo 83-153	10887	48.2	229	1.8	52408
LCP 85-384	8877	36.5	246	1.3	56492
HoCP 85-845	7841	32.7	241	1.7	38569
HoCP 97-606	11002	42.7	258	1.6	53996
HoCP 97-609	12519	43.8	286	1.7	50366

MSD _(.05)	N.S.	N.S.	33	0.3	16605
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Table 8. Combined means of the 1997 HoCP and Ho series second stubble nursery variety trials in 2000.

Variety	Sugar per Acre (lbs/A)	Cane Yield (tons/A)	Sugar per Ton (lbs/ton)	Stalk Weight (lbs)	Stalk Number (stalks/A)
CP 70-321	8882	35.7	250	2.0	35393
LHo 83-153	10515	45.3	235	2.0	44997
LCP 85-384	11683	45.6	257	1.6	57929
HoCP 85-845	10399	41.1	252	1.9	43560
HoCP 97-606	11101	44.5	250	1.7	53769
HoCP 97-609	12000	44.5	271	1.9	47039
MSD _(.05)	N.S.	N.S.	20	0.2	8703

Table 9. Means of the 1997 HoCP and Ho series first stubble nursery variety trial on a Commerce silt loam soil at Bon Secour Plantation in St. James, La., in 2000.

Variety	Sugar per acre (lbs/A)	Cane Yield (tons/A)	Sugar per ton (lbs.)	Stalk Weight (lbs)	Stalk Number (stalks/A)
CP 70-321	10309	52.5	196	2.4	44241
LCP 85-384	13554	63.6	212	2.0	62618
HoCP 85-845	8949	44.1	203	2.2	41064
HoCP 97-606	11095	53.8	206	1.9	57853
HoCP 97-609	10138	45.2	224	2.0	45602
MSD _(.05)	N.S.	N.S.	N.S.	N.S.	14943

Table 10. Means of the 1997 HoCP and Ho series first stubble nursery variety trial on a Sharkey clay soil at Godfrey Knight Farms in Thibodaux, La., in 2000.

Variety	Sugar per Acre (lbs/A)	Cane Yield (tons/A)	Sugar per Ton (lbs/ton)	Stalk Weight (lbs)	Stalk Number (stalks/A)
CP 70-321	10434	50.5	207	2.5	40838
LCP 85-384	10436	52.7	192	1.8	59668
HoCP 85-845	7602	38.6	197	1.9	41064
HoCP 97-606	6840	35.1	195	1.5	47417

HoCP 97-609	9725	46.8	208	1.8	51501
MSD _(.05)	N.S.	N.S.	N.S.	0.6	N.S.

Table 11. Means of the 1997 HoCP and Ho series first stubble nursery variety trial on a Baldwin silty clay soil at the Iberia Research Station in Jeanerette, La., in 2000.

Variety	Sugar per Acre (lbs/A)	Cane Yield (tons/A)	Sugar per Ton (lbs/ton)	Stalk Weight (lbs)	Stalk Number (stalks/A)
CP 70-321	12622	46.6	270	2.6	36073
LCP 85-384	15825	57.1	277	2.0	56946
HoCP 85-845	13939	54.1	257	2.6	41745
HoCP 97-606	11181	43.7	256	2.0	44014
HoCP 97-609	15285	56.7	271	2.6	42879
MSD _(.05)	N.S.	N.S.	N.S.	N.S.	9719

Table 12. Combined means of the 1997 HoCP and Ho series first stubble nursery variety trials in 2000.

Variety	Sugar per Acre (lbs/A)	Cane Yield (tons/A)	Sugar per Ton (lbs/ton)	Stalk Weight (lbs)	Stalk Number (stalks/A)
CP 70-321	11122	49.9	224	2.5	40384
LCP 85-384	13272	57.8	227	1.9	59744
HoCP 85-845	10163	45.6	219	2.2	41291
HoCP 97-606	9705	44.2	219	1.8	49761
HoCP 97-609	11716	49.6	234	2.1	46661
MSD _(.05)	N.S.	N.S.	N.S.	0.3	6599

Table 13. Means of the 1998 HoCP and Ho series first stubble nursery variety trial on a Commerce silt loam soil at Ardoyne Farm in 2000.

Variety	Sugar per Acre (lbs/A)	Cane Yield (tons/A)	Sugar per Ton (lbs/ton)	Stalk Weight (lbs)	Stalk Number (stalks/A)
CP 70-321	16405	59.9	274	2.9	42199
LHo 83-153	16003	59.7	268	2.5	48324
LCP 85-384	18444	66.0	280	2.3	56492
HoCP 85-845	12603	47.5	265	2.3	41745
HoCP 98-718	16632	61.8	269	2.7	46056
HoCP 98-734	15423	62.7	246	2.4	51274

HoCP 98-741	18667	69.9	267	3.1	45148
HoCP 98-771	19775	73.0	271	3.2	46283
HoCP 98-776	15179	56.8	267	2.9	38796
HoCP 98-778	16563	60.5	274	2.7	45375
HoCP 98-781	15033	57.8	260	3.0	38115
MSD ₍₀₅₎	N.S.	N.S.	10	N.S.	10633

Table 14. Means of the 1998 HoCP and Ho series first stubble nursery variety trial on a Sharkey clay soil at Ardoyne Farm in 2000.

Variety	Sugar per Acre (lbs/A)	Cane Yield (tons/A)	Sugar per ton (lbs/ton)	Stalk Weight (lbs)	Stalk Number (stalks/A)
CP 70-321	18451	70.1	262	3.3	42879
LHo 83-153	17678	70.8	249	2.5	57173
LCP 85-384	20097	71.2	282	2.5	58534
HoCP 85-845	14691	57.7	254	2.4	47417
HoCP 98-718	12905	52.9	244	2.3	46509
HoCP 98-734	13899	62.0	224	2.5	49232
HoCP 98-741	19025	74.6	255	3.2	46283
HoCP 98-771	14898	59.7	249	2.5	48098
HoCP 98-776	16347	62.9	260	2.5	50593
HoCP 98-778	13877	52.8	263	2.4	44014
HoCP 98-781	13256	54.2	244	2.9	37208
MSD ₍₀₅₎	3758	10.1	26	0.2	8708

Table 15. Means of the 1998 HoCP and Ho series first stubble nursery variety trial on a Commerce silt loam soil at the St. Gabriel Research Station in St. Gabriel, La., in 2000.

Variety	Sugar per Acre (lbs/A)	Cane Yield (tons/A)	Sugar per Ton (lbs/ton)	Stalk Weight (lbs)	Stalk Number (stalks/A)
CP 70-321	10052	36.1	277	2.1	33124
LHo 83-153	12988	51.2	255	2.3	45148
LCP 85-384	14332	56.5	254	2.0	56492
HoCP 85-845	8083	31.8	251	1.8	33804
HoCP 98-718	12950	49.8	260	1.9	52181
HoCP 98-734	12116	50.8	238	1.9	53996
HoCP 98-741	15692	65.3	239	2.7	49232
HoCP 98-771	10926	48.6	223	2.0	49005
HoCP 98-776	10357	40.8	254	1.7	49232

HoCP 98-778	11661	43.0	271	2.2	39930
HoCP 98-781	11045	43.9	252	2.3	38569
MSD _(.05)	N.S.	19.1	31	0.6	11624

Table 16. Combined means of the 1998 HoCP and Ho series first stubble nursery variety trial in 2000.

Variety	Sugar per Acre (lbs/A)	Cane Yield (tons/A)	Sugar per Ton (lbs.)	Stalk Weight (lbs)	Stalk Number (stalks/A)
CP 70-321	14969	55.4	271	2.8	39401
LHo 83-153	15556	60.5	258	2.4	50215
LCP 85-384	17624	64.5	272	2.3	57173
HoCP 85-845	11793	45.7	257	2.2	40989
HoCP 98-718	14162	54.8	258	2.3	48249
HoCP 98-734	13813	58.5	236	2.3	51501
HoCP 98-741	17795	69.9	254	3.0	46888
HoCP 98-771	15200	60.4	248	2.5	47795
HoCP 98-776	13961	53.5	260	2.4	46207
HoCP 98-778	14034	52.1	269	2.4	43106
HoCP 98-781	13111	52.0	252	2.7	37964
MSD _(.05)	2969	10.2	17	0.4	7024

Table 17. Means of the 1998 HoCP and L series plantcane nursery variety trial on a Moreland silt loam soil at Newton Farm in Bunkie, La., in 2000.

Variety	Sugar per Acre (lbs/A.)	Cane Yield (tons/A)	Sugar per Ton (lbs/ton)	Stalk Weight (lbs)	Stalk Number (stalks/A)
CP 70-321	10263	35.8	285	1.8	40656
LCP 85-384	8650	32.7	264	1.9	35211
HoCP 85-845	8494	30.5	279	1.9	31763
L 98-207	11454	40.9	280	1.8	45375
L 98-209	9642	33.8	285	1.9	35937
HoCP 98-718	7323	29.3	245	1.3	43560
HoCP 98-734	7916	30.1	263	1.5	40656

HoCP 98-741	10782	39.5	272	2.0	38841
HoCP 98-771	5607	20.6	272	1.4	28859
HoCP 98-776	4389	16.2	272	1.3	24140
HoCP 98-778	9791	33.7	290	1.9	35756
HoCP 98-781	9367	34.2	274	2.0	34667
TucCP 77-042	9690	35.9	270	2.0	35211
MSD _(.05)	3229	8.6	N.S.	0.3	8106

Table 18. Means of the 1998 HoCP and L series plantcane nursery variety trial on a Coteau silt loam soil at Gonsoulin Farm in New Iberia, La., in 2000.

Variety	Sugar per Acre (lbs/A)	Cane Yield (tons/A)	Sugar per Ton (lbs/ton)	Stalk Weight (lbs)	Stalk Number (stalks/A)
CP 70-321	16158	56.6	286	3.1	36482
LCP 85-384	10412	39.4	264	2.0	40293
HoCP 85-845	10601	42.1	254	2.5	33941
L 98-207	14164	49.8	282	1.7	56628
L 98-209	18783	67.0	280	2.4	56084
HoCP 98-718	15719	64.5	246	2.5	51546
HoCP 98-734	11176	42.6	260	2.1	40475
HoCP 98-741	19206	79.7	242	3.5	45375
HoCP 98-771	12338	48.0	255	2.7	35211
HoCP 98-776	11689	41.9	279	2.2	39023
HoCP 98-778	8962	33.7	267	2.5	28314
HoCP 98-781	9211	37.7	244	2.7	28314
TUCCP 77-042	7325	30.3	241	2.5	24321
MSD _(.05)	N.S.	31.0	N.S.	0.7	15831

Table 19. Means of the 1998 HoCP and L series plantcane nursery variety trial on a Commerce silt loam soil at Westfield Plantation in Paincourtville, La., in 2000.

Variety	Sugar per Acre (lbs/A)	Cane Yield (tons/A)	Sugar per Ton (lbs/ton)	Stalk Weight (lbs)	Stalk Number (stalks/A)
CP 70-321	11477	45.0	255	2.2	40656
LCP 85-384	12675	56.9	222	1.9	59532
HoCP 85-845	10492	43.9	236	2.2	39749

L 98-207	16256	70.3	230	1.8	79497
L 98-209	16278	73.4	221	2.5	60077
HoCP 98-718	18485	73.6	251	2.5	59532
HoCP 98-734	15281	68.6	224	2.3	59714
HoCP 98-741	18216	75.8	239	3.3	45920
HoCP 98-771	16558	72.1	230	2.7	52998
HoCP 98-776	17605	68.8	256	2.7	51909
HoCP 98-778	14728	57.5	256	2.8	40656
HoCP 98-781	15870	68.5	231	3.1	44286
TUCCP 77-042	16546	89.6	185	3.7	49005
MSD _(.05)	N.S.	23.1	N.S.	0.4	13914

Table 20. Combined means of the 1998 HoCP and L series plantcane nursery variety trials in 2000.

Variety	Sugar per Acre (lbs/A)	Cane Yield (tons/A)	Sugar per Ton (lbs/ton)	Stalk Weight (lbs)	Stalk Number (stalks/A)
CP 70-321	12633	45.8	275	2.4	39265
LCP 85-384	10579	43.0	250	1.9	45012
HoCP 85-845	9862	38.8	256	2.2	35151
L 98-207	13958	53.7	264	1.8	60500
L 98-209	14901	58.1	262	2.2	50699
HoCP 98-718	13842	55.8	247	2.1	51546
HoCP 98-734	11457	47.1	249	2.0	46948
HoCP 98-741	16068	65.0	251	2.9	43379
HoCP 98-771	11501	46.9	252	2.3	39023
HoCP 98-776	11228	42.3	269	2.0	38357
HoCP 98-778	11160	41.6	271	2.4	34909
HoCP 98-781	11483	46.8	250	2.6	35756
TUCCP 77-042	11187	51.9	232	2.7	36179
MSD _(.05)	N.S.	N.S.	28	0.7	11323

Table 21. Means of the 1999 HoCP series plantcane nursery variety trial on a Commerce silt loam soil at Ardoyne Farm in 2000.

Variety	Sugar per Acre (lbs/A)	Cane Yield (tons/A)	Sugar per Ton (lbs/ton)	Stalk Weight (lbs)	Stalk Number (stalks/A)
CP 70-321	14666	53.5	274	3.3	32216
LCP 85-384	15658	58.4	267	2.7	42879
HoCP 85-845	11890	45.1	262	2.9	30855
HoCP 99-800	13678	58.7	233	3.2	36754
HoCP 99-804	15089	57.2	264	2.7	42199
HoCP 99-805	11761	51.6	228	2.8	36754
HoCP 99-806	14884	59.5	250	3.0	39930
HoCP 99-808	15153	55.1	276	2.5	44694
HoCP 99-809	16506	59.6	277	4.5	26544
HoCP 99-813	10680	38.6	277	2.5	31309
HoCP 99-814	10250	38.3	267	2.4	31763
HoCP 99-815	14697	54.0	272	2.7	40384
HoCP 99-817	13504	50.8	266	2.4	43106
HoCP 99-821	10116	43.4	233	2.3	37208
HoCP 99-822	10298	45.1	229	2.5	35846
HoCP 99-825	13584	50.5	269	3.2	31536
HoCP 99-829	13584	51.6	264	3.0	34939
HoCP 99-832	12464	49.0	254	2.3	43106
HoCP 99-833	14381	50.3	286	2.6	39249
HoCP 99-837	10174	40.7	250	2.7	30401
HoCP 99-838	13590	50.5	269	2.9	35166
HoCP 99-839	14094	54.9	257	4.0	27452
HoCP 99-854	7770	33.7	231	1.9	36073
HoCP 99-855	10703	47.4	224	2.3	41064
HoCP 99-857	12688	56.3	225	3.0	37434
HoCP 99-859	18205	70.5	258	3.1	45602
HoCP 99-861	14859	55.7	266	2.8	40157
HoCP 99-862	12034	45.2	266	1.8	49232
HoCP 99-866	18589	74.0	251	4.3	34485
HoCP 99-870	13829	56.6	244	2.4	46056
MSD ₍₀₅₎	4720	16.9	18	0.4	9022

Table 22. Means of the 1999 HoCP series plantcane nursery variety trial on a Baldwin silty clay soil at Iberia Research Station in 2000.

Variety	Sugar per Acre (lbs/A)	Cane Yield (tons/A)	Sugar per ton (lbs/ton)	Stalk Weight (lbs)	Stalk Number (stalks/A)
CP 70-321	8693	35.9	242	2.5	28813
LCP 85-384	7920	28.0	282	1.8	31536
HoCP 85-845	6728	28.9	233	2.2	26544
HoCP 99-800	9929	45.9	217	2.6	35393
HoCP 99-804	8837	37.4	237	2.1	36073
HoCP 99-805	9337	42.8	218	2.6	33578
HoCP 99-806	8386	35.8	234	2.7	26544
HoCP 99-808	7919	30.2	262	1.7	35166
HoCP 99-809	10274	37.3	275	3.6	21099
HoCP 99-813	5511	21.1	260	1.8	24049
HoCP 99-814	7794	29.5	264	2.1	27906
HoCP 99-815	9253	35.9	258	2.3	30628
HoCP 99-817	7413	29.8	249	1.8	33124
HoCP 99-821	6454	25.3	256	2.4	21099
HoCP 99-822	4705	21.3	224	2.0	21326
HoCP 99-825	7600	28.0	271	2.4	23595
HoCP 99-829	7450	28.7	260	2.7	21553
HoCP 99-832	5996	22.8	263	1.8	25183
HoCP 99-833	10457	39.2	267	2.2	35619
HoCP 99-837	7496	28.2	266	2.3	24276
HoCP 99-838	7357	29.1	252	2.2	26544
HoCP 99-839	10496	41.2	255	3.6	23141
HoCP 99-854	7688	28.4	269	1.9	29948
HoCP 99-855	7886	34.8	227	2.2	31763
HoCP 99-857	7858	35.7	220	2.8	25637
HoCP 99-859	8795	32.5	270	2.0	33351
HoCP 99-861	9517	37.4	256	2.4	31082
HoCP 99-862	8912	34.2	259	2.2	31536
HoCP 99-866	9338	38.5	243	3.1	24956
HoCP 99-870	7237	29.3	247	2.0	29494
MSD ₍₀₅₎	3098	11.9	18	0.5	9764

Table 23. Means of the 1999 HoCP series plantcane nursery variety trial on a Sharkey clay soil at St. Gabriel Research Station in St. Gabriel, La., in 2000.

Variety	Sugar per Acre (lbs/A)	Cane Yield (tons/A)	Sugar per Ton (lbs/ton)	Stalk Weight (lbs)	Stalk Number (stalks/A)
CP 70-321	13732	54.2	253	3.2	34258
LCP 85-384	15767	58.5	270	2.3	50366
HoCP 85-845	7995	35.8	223	2.4	29948
HoCP 99-800	9391	44.2	213	2.6	34485
HoCP 99-804	13506	53.5	252	2.5	42653
HoCP 99-805	12022	52.8	228	2.7	39476
HoCP 99-806	11682	50.5	231	2.9	34485
HoCP 99-808	15465	57.6	269	2.3	50366
HoCP 99-809	17459	64.3	271	3.8	33578
HoCP 99-813	11554	46.1	251	2.4	38569
HoCP 99-814	9895	39.1	253	2.3	34712
HoCP 99-815	9933	39.5	251	2.3	34712
HoCP 99-817	10776	44.0	245	2.1	41972
HoCP 99-821	11431	46.8	244	2.6	35846
HoCP 99-822	10045	45.2	222	2.4	37661
HoCP 99-825	12206	48.4	252	2.6	37208
HoCP 99-829	12282	49.3	250	3.0	32443
HoCP 99-832	7091	29.9	238	1.8	32897
HoCP 99-833	10175	40.8	250	2.4	33351
HoCP 99-837	8633	32.7	264	2.0	32670
HoCP 99-838	14134	54.6	258	2.8	38796
HoCP 99-839	13229	58.8	225	4.1	28359
HoCP 99-854	8569	36.4	235	2.2	33351
HoCP 99-855	11389	49.8	229	2.8	35166
HoCP 99-857	11897	55.1	215	2.8	39249
HoCP 99-859	10747	41.8	257	2.2	37888
HoCP 99-861	9932	42.0	236	2.5	34031
HoCP 99-862	11985	46.3	258	1.8	52635
HoCP 99-866	12182	49.2	248	3.5	27906
HoCP 99-870	12692	52.2	243	2.3	45375
MSD ₍₀₅₎	3902	15.5	30	0.4	7217

Table 24. Combined means of the 1999 HoCP series plantcane nursery variety trials in 2000.

Variety	Sugar per Acre (lbs/A)	Cane Yield (tons/A)	Sugar per Ton (lbs.)	Stalk Weight (lbs)	Stalk Number (stalks/A)
CP 70-321	12364	47.9	256	3.0	31763
LCP 85-384	13115	48.3	273	2.3	41594
HoCP 85-845	8871	36.6	239	2.5	29116
HoCP 99-800	10999	49.6	221	2.8	35544
HoCP 99-804	12477	49.4	251	2.4	40308
HoCP 99-805	11040	49.1	224	2.7	36603
HoCP 99-806	11651	48.6	238	2.9	33653
HoCP 99-808	12846	47.6	269	2.2	43409
HoCP 99-809	14746	53.8	274	4.0	27074
HoCP 99-813	9248	35.3	263	2.2	31309
HoCP 99-814	9313	35.6	261	2.3	31460
HoCP 99-815	11294	43.1	261	2.4	35241
HoCP 99-817	10565	41.5	253	2.1	39401
HoCP 99-821	9334	38.5	244	2.4	31384
HoCP 99-822	8349	37.2	225	2.3	31611
HoCP 99-825	11130	42.3	264	2.7	30779
HoCP 99-829	11105	43.2	258	2.9	29645
HoCP 99-832	8517	33.9	251	2.0	33729
HoCP 99-833	11671	43.4	268	2.4	36073
HoCP 99-837	8768	33.9	260	2.3	29116
HoCP 99-838	11694	44.7	260	2.6	33502
HoCP 99-839	12606	51.6	246	3.9	26318
HoCP 99-854	8009	32.8	245	2.0	33124
HoCP 99-855	9992	44.0	226	2.4	35998
HoCP 99-857	10814	49.0	220	2.9	34107
HoCP 99-859	12582	48.3	262	2.4	38947
HoCP 99-861	11436	45.0	252	2.5	35090
HoCP 99-862	10977	41.9	261	1.9	44468
HoCP 99-866	13370	53.9	247	3.6	29116
HoCP 99-870	11253	46.0	245	2.2	40308
MSD ₍₀₅₎	2876	10.6	15	0.3	5915

2000 INFIELD VARIETY TRIALS

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The infield variety trials of the Louisiana Sugarcane Variety Development Program have traditionally been planted from the year after permanent variety assignment through the year of introduction to outfield test locations. The Louisiana (L) program plants infield tests only the year after assignment. The Louisiana (HOCP and HO) program plants the year after assignment and the following year. These trials are the first machine-harvested tests in each program. The purpose of these trials is to estimate yields on larger plot sizes than used by earlier stages in the selection program. The infield variety trials are also important for screening experimental clones for suitability to mechanical harvesting.

A combine harvester/weigh wagon system was used to cut and weigh harvested plots in the Louisiana (L) infield variety trials. All but two infield tests at USDA's Ardoyne Farm were also harvested with a combine harvester. The 1994 and 1995 second stubble infield tests at Ardoyne Farms were harvested with a single-row soldier-type harvester and plots were weighed with a tractor-mounted hydraulic weigh rig. The combine harvester/weigh wagon system worked extremely well, with the immediate benefit of the amount of labor required for the collection of the data being reduced. Only two people were needed during the harvesting operation, compared to the old system that required a minimum of four people. Also, 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 2000 sugarcane crop at St. Gabriel experienced a season-long drought throughout the spring. Lack of rainfall and warm weather throughout the summer growing season contributed to slow growth of the crop. Rainfall returned in the late summer/early fall in adequate quantities to initiate a burst of growth prior to maturity. Cool and dry conditions persisted during most of the fall harvest season and all locations were harvested before the first freeze. Rainfall was minimal during the harvest, with the exception of November.

Recommended cultural practices were used at St. Gabriel in 2000. Sencor 4L (2 lb/A) and Atrazine (2 lb/A) were applied to the tests after planting. In early March, 2-4,D (1 qt/A) and Atrazine (2 lb/A) were applied to all plantcane and stubble trials. In mid May, Sencor 4L (2 lb/A) and 2-4,D (1qt/A) were applied as layby applications. Broadcast treatments of Asulox (2 qts/A) were applied once in late April and again in May to control rhizome johnsongrass. Fields were fertilized with 120-0-60 lbs per acre in April.

At St. Gabriel, sugarcane borer (*Diatrea saccharalis* F.) populations were monitored weekly

during June, July, and August and were found to exceed economic thresholds the last week in June of 2000. A helicopter was contracted to apply Karate insecticide at the recommended rate to all sugarcane areas on the station on July 2, 2000. A second treatment with Confirm insecticide was applied with an airplane on August 19, 2000.

At the USDA Ardoyne Farm, recommended culture practices were used in 2000. On February 24, Atrazine 4F (3 lb. a.i./A) and Weedmaster 4EC (1 lb. a.i./A) were applied to stubble infield tests. On March 3, Prowl 3.3EC (2.25 lb. a.i./A) and Direx 80WG (2.64lb. a.i./A) were applied to all infield tests. On April 6, test fields were fertilized at a rate of 100-30-60 lbs per acre. A layby treatment consisting of Atrazine (3 lbs. A.i./A) and Weedmaster (1 qt./A) was applied on June 13. Confirm insecticide was applied by airplane on July 22 for control of sugarcane borers.

Changes made in 2000 include planting a new infield test at Sugarland Acres in Youngsville. Varieties from both the LSU AgCenter and USDA program were combined in infield trials at all locations. During 2000, the 1999 L and HOCP assignment series were planted. An additional infield variety trial (1998 L and HoCP series) was planted on a Sharkey clay at the USDA-ARS Ardoyne Farm near Chacahoula, La. For each assignment series, infield tests are harvested for the three-year crop cycle.

Planting and harvest dates are summarized in Table 1. The experimental design used in the infield trials is a randomized complete block (two replications). Traditional plots are 16 feet long by three rows wide on 6-foot centers. For the trials planted at Blackberry Farms and Sugarland Acres, a plot size of 24 feet long by two rows wide was used. Because these trials are on commercial farms, this cuts down on the number of times the harvester has to stop between plots. Commercial check varieties, CP70-321, HOCP 85-845, and LCP85-384, were included in the tests. The number of varieties planted and harvested as listed in Table 1 excludes these commercial check varieties.

The plot weights for all locations were multiplied by 0.86 to adjust for trash. At the St. Gabriel Research Station, 10-stalk samples, stripped of leaves, were used to estimate stalk weight and obtain a juice sample for analysis. Brix and pol were used to estimate theoretical recoverable sugar (reported as sugar per ton) as calculated by the Winter Carp formula as reported by Gravois and Milligan (1992). Fiber content was assumed to be 12.5%. Sugar per acre was estimated as the product of cane yield and sugar per ton. At the USDA's Ardoyne Farm, 15-stalk samples were used to estimate stalk weight and for juice analysis. A five-stalk sub-sample was also obtained from each plot for fiber analysis.

LCP85-384 has been the leading variety in Louisiana since 1998, with about 71% of the sugarcane acreage in 2000. For comparison, LC85-384 is highlighted in the tables. In contrast to past years, a new statistical method has been adopted for data analysis. To adjust for missing data, the 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.

Results from the 2000 infield trials are presented in Tables 2 through 9.

References:

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

Table 1. 2000 Planting and harvest dates of infield tests.

Series	Location†	Soil Texture‡	Planting Date	Harvest Dates			Varieties	
				1998	1999	2000	No. Planted	No. Harvested*
1997	St. Gabriel	Sc	8/25/98		11/15	10/16	43	2
1994	Ardoyne	Sc	9/4/97	11/23	11/1	10/17	12	1
1995	Ardoyne	Csl	9/3/97	12/7	11/9	10/17	27	2
1996	Ardoyne	Csl	8/28/97	11/27	11/15	10/23	56	3
1995	Ardoyne	Sc	8/31/98		11/18	**	8	0
1996	Ardoyne	Csl	8/27/98		11/29	11/14	38	4
1997	Ardoyne	Csl	10/3/98		11/30	11/22	39	2
1997	Ardoyne	Csl	8/20/99			11/22	12	4
1998***	Ardoyne	Sc	10/2/00				10	
1998	Blackberry	Csl	8/24/99			11/30	65	19
1999	Blackberry	Csl	8/17/00				39	
1999	Sugarland	Cosl	8/23/00				39	

† Ardoyne-Ardoyne Farm (Terrebonne), Blackberry- Blackberry Farms (St. James), St. Gabriel-St. Gabriel Research Station (Iberville), Sugarland - Sugarland Acres (Lafayette).

‡ Csl-Commerce silt loam, Cosl-Coteau silt loam, Sc-Sharkey clay

* Number harvested does not include varieties used for "check" plots.

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

*** 1998 Series at Ardoyne Farms includes carryover varieties from previous years.

Table 2. 2000 Infield second stubble means of the 1994 "HOCP" and "L" assignment series in heavy soil at Ardoyne Farm near Chacahoula, 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	6314	30.5	207	2.4 +	25341	11.7
LCP85-384	9772	37.9	258	1.9	41391	12.9
HOCP85-845	9747	42.7	228	2.1	41412	12.6
L94-428	5188	22.2	230	2.4 +	17910 -	12.6

Table 3. 2000 Infield second stubble means of the 1995 "HOCP" and "L" assignment series in light soil at Ardoyne Farm near Chacahoula, La..

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	11196	43.5	257	2.6	33937	14.3
LCP85-384	11038	42.9	257	2.3	37655	11.9
HOCP85-845	11356	46.4	245	2.1	43383 +	14.3
L95-462	11725	44.4	264	2.4	37175	14.0
HO95-988	10668	43.8	244	2.4	37130	13.2

Table 4. 2000 Infield second stubble means of the 1996 "HOCP" assignment series in light soil at Ardoyne Farm near Chacahoula, La.

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	10681	42.4 +	252	2.3	37502	12.1
LCP85-384	8166	33.7	243	2.0	33251	13.3
HOCP85-845	12353	46.5 +	265	1.9	50453	13.6
HOCP96-509	9992	36.9	271	2.2	34081	13.5
HOCP96-540	11573	46.1 +	251	2.1	44642	12.9
HOCP96-561	10027	36.3	275	1.9	37959	12.7

Table 5. 2000 Infield first stubble means of the 1996 "HOCP" and "L" assignment series in light soil at Ardoyne Farm near Chacahoula, La.

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	7721	28.0	276	2.7	20617	14.3
LCP85-384	10546	37.9	278	2.0	38594	14.5
HOCP85-845	8891	33.0	269	2.2	30578	16.0
L96-092	8135	32.8	248 -	2.3	28436	16.9
HOCP96-509	8458	30.9	274	2.6	23336	15.0
HOCP96-540	12504	46.6	269	2.4	38711	14.5
HOCP96-561	9007	32.6	278	2.4	27718	14.2

Table 6. 2000 Infield first stubble means of the 1997 "HOCP" assignment series in light soil at Ardoyne Farm near Chacahoula LA.

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	8729	33.6	259	2.8 +	24222	11.7
LCP85-384	10432	39.3	266	2.2	35233	11.8
HOCP85-845	8355	33.0	253	2.2	30376	12.9
HOCP97-606	9731	38.9	250	2.1	38223	12.5
HOCP97-609	6944	26.7	263	1.9	28175	12.1

Table 7. 2000 Infield first stubble means of the 1997 "L" assignment series in heavy soil at St. Gabriel Research Station near St. Gabriel LA.

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	4613 -	24.6 -	187	2.1 +	23722 -	-----
LCP85-384	8276	41.6	198	1.6	50843	-----
HOCP85-845	5402 -	31.1 -	174	1.8	33766 -	-----
L97-128	7897	35.6	221	2.2 +	31770 -	-----
L97-137	6219 -	33.8 -	185	1.7	39891 -	-----

Table 8. 2000 Infield plantcane means of the 1997 "HOCP" and "L" assignment series in light soil at Ardoyne Farm near Chacahoula LA.

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	12259	44.0	279	3.4	25761	11.1
LCP85-384	9052	33.3	272	2.3	29562	10.9
HOCP85-845	10403	38.7	269	2.5	31404	12.4
L97-128	12240	43.4	282	2.7	32284	11.3
L97-137	10848	40.2	270	2.6	31729	11.6
HOCP97-606	11677	45.4	257	2.5	36262	11.3
HOCP97-609	11243	40.0	281	2.5	31661	12.4

Table 9. 2000 Infield plantcane means of the 1995-1998 "HOCP" and "L" assignment series in light soil at Blackberry Farms near 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	8307 -	33.6 -	247	2.0	34757 -	10.4
TUCCP77-042	10349	46.1	225 -	2.6 +	35833 -	11.0
LCP85-384	11359	43.1	264	1.7	49914	10.1
HOCP85-845	10136	39.5	257	2.7 +	29432 -	11.9 +
L95-462	9638	37.2	259	2.5 +	30331 -	11.2 +
L96-092	9707	39.0	249	2.8 +	28311 -	12.3 +
HOCP96-509	9799	40.8	240 -	2.8 +	29384 -	11.0
HOCP96-540	11016	42.3	260	2.7 +	30928 -	10.7
HOCP96-561	11663	40.6	287 +	2.2 +	36706 -	11.7 +
L97-128	13057	51.8 +	253	2.9 +	35476 -	11.7 +
L97-137	9326 -	37.9	246	1.7	44524	9.9
HOCP97-606	10957	42.3	260	2.0	41926	10.5
HOCP97-609	12012	46.9	256	2.3 +	41122	10.4
L98-207	11503	44.8	257	1.4	62585 +	11.8 +
L98-209	10698	43.5	246	2.1	41354	11.1 +
HOCP98-718	11590	47.0	246	2.1	46039	10.1
HOCP98-734	9260 -	37.2	249	2.0	37394 -	10.6
HOCP98-741	12792	50.4	254	3.0 +	33285 -	11.0
HOCP98-771	11102	45.4	245 -	2.5 +	36245 -	10.4
HOCP98-776	10453	40.1	261	2.4 +	33834 -	11.6 +
HOCP98-778	9806	36.5	269	2.7 +	27375 -	11.3 +
HOCP98-781	11014	44.6	247	3.1 +	29202 -	12.8 +

2000 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 up to 11 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 2000 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 keep up to date with industry practices, most locations were harvested with a combine harvester. The use of the combine or whole stalk soldier harvester was decided upon in cooperation with the participating farmer. Plots harvested were three rows wide (six foot rows) and 32 feet long with a 5-foot alley between plots. Two tests that were harvested with a combine in 2000 were two-row plots 50 feet long with 5-foot alleys which were planted to aid with a combine harvesting system. Test plots harvested by combine were weighed with an electronic weigh wagon with load cells mounted in the axle and hitch. Test plots harvested by whole stalk soldier harvester were separated by hand and weighed with a tractor-mounted hydraulic weigh rig. 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 combine-harvested tests, whereas samples were pulled from the heap row for the whole stalk harvested tests. The samples were weighed, milled, and the juice analyzed for Brix and pol. Theoretical recoverable sugar per ton of cane is reported.

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.

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 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 out the inconsistent performances.

LCP85-384 has been the leading variety in Louisiana since 1998 with about 71% of the sugarcane acreage in 2000. For comparison, LCP85-384 is highlighted in the tables. In contrast to past years a new statistical method has been adopted for data analysis. To adjust for missing data, the 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.

Ten experimental varieties were introduced to the outfield locations for seed increase in 2000 (Table 1). Seven experimental and four commercial varieties were planted at nine outfield locations. Twenty-nine tests were harvested in 2000 including nine plantcane, eight first stubble, seven second stubble, four third stubble, and one fourth-stubble (Table 2). In 2000, Northside West was converted from an outfield location to an observation nursery.

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 2000 at Bon Secour plantation (Table 27). Combined analysis of 1999 through 2000 plantcane crops (Table 28) is included to aid in the evaluation of experimental varieties L94-462 and HO95-988. Combined analysis of 1996 through 2000 plantcane crops (Table 29), 1997 through 2000 first stubble crops (Tables 30), 1998 through 2000 second stubble crops (Tables 31), and 1997 through 2000 third stubble crops (Tables 32) are included to aid in the evaluation of the commercial varieties.

Varieties HO95-988, L96-92, and HOCP96-561 were dropped in 2000, and variety L94-428 was dropped in 1999. These varieties were harvested in 2000 to collect data for breeding purposes. The most advanced experimental variety, L95-462, was in plantcane and first stubble tests in 2000. Based on current data and observations, L95-462 is classified as resistant to smut and mosaic and moderately resistant to leaf scald and the sugarcane borer and has harvested well in outfield tests.

Table 1. 2000 Commercial and experimental varieties planted in the outfield.

Commercial Varieties	Experimental Varieties			Experimental Varieties Introduced to the Outfield		
CP70-321	L95-462	L97-128	HOCP97-606	L98-207	HOCP98-741	HOCP98-778
LCP85-384	HOCP96-509	L97-137	HOCP97-609	L98-209	HOCP98-771	HOCP98-781
HOCP85-845	HOCP96-540			HOCP98-718	HOCP98-776	TUC CP77-42
HOCP91-555				HOCP98-734		

Table 2. Harvest and planting dates for all outfield locations harvested in 2000.

Location	Parish	2000 Plant Date	Plantcane		First stubble		Second		Third stubble	
			2000 Harvest Date	1999 Plant Date	2000 Harvest Date	1998 Plant Date	2000 Harvest Date	1997 Plant Date	2000 Harvest Date	1996 Plant Date
Allain	St. Mary	09/27	12/27	09/14	10/30	10/01	10/31	09/12	**	**
Alma	Pointe Coupee	08/30	**	**	**	**	**	**	**	**
Bon Secour†	St. James	08/24	12/13	09/13	**	09/25	10/20	09/15	**	**
Georgia	Lafourche	09/19	12/22	08/24	12/22	10/21	11/02	09/25	11/02	10/24
Glenwood	Assumption	08/23	12/01	08/26	11/03	09/22	10/25	09/09	10/25	09/18
Lanaux	St. John	09/06	12/09	09/15	12/08	10/06	10/26	09/18	10/26	10/01
Levert-St.John	St. Martin	09/01	12/05	08/18	10/30	09/29	10/30	09/05	**	**
Magnolia	Terrebonne	10/04	10/24	08/23	10/23	10/02	**	09/23	10/23	10/16
R.Hebert	Iberia	09/05	11/29	08/25	11/29	09/24	10/18	09/16	**	09/20
Northside West	Jefferson Davis	08/22‡	12/21	08/27	12/20	09/01	**	**	**	**

† Bon Secour 4th stubble test harvested on 10/20.

‡ Observation nursery planted at Northside West in 2000.

** No test harvested at this location.

Table3. Plantcane sugar per acre for four commercial and six experimental varieties at nine outfield locations in 2000.

Variety	Heavy		Light								Mean
	Allains	Magnolia	Bon Secour	Georgia	Glenwood	Lanaux	R. Hebert	St. John	Northside		
	(lbs/A)										
CP70-321	3110 -	7897	9762	9837	7716 -	8724	9531	3588	4301	7163	
LCP85-384	7675	7114	8657	8751	10499	9063	8477	4651	4062	7661	
HOCP85-845	4311 -	7467	7900	8771	9705	6756 -	8536	4020	3359	6766 -	
HOCP91-555	6776 -	8448	7793	9797	10860	7898	10627 +	4682	3974	7873	
L95-462	6907	7701	6972 -	9752	10822	7862	9657	4279	3939	7543	
HO95-988	5647 -	7273	8658	10472 +	13518 +	9673	8846	5625	4065	8197	
L96-092	5747 -	8041	9247	9819	10428	9702	9279	5134	3802	7911	
HOCP96-509	4694 -	7585	7099 -	9506	11006	7712	10308 +	4076	3462	7272	
HOCP96-540	5938 -	9587	8978	11548 +	13140 +	10592	11756 +	5397	4350	9032 +	
HOCP96-561	5705 -	6527	7796	8410	9049	8922	9277	4986	4106	7198	

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

†† Varieties HO95-988, L96-92 and HOCP 96-561 were dropped but were harvested to collect data for breeding purposes.

Table 4. Plantcane cane yield for four commercial and six experimental varieties at nine outfield locations in 2000.

Variety	Heavy		Light								Mean
	Allains	Magnolia	Bon Secour	Georgia	Glenwood	Lanaux	R. Hebert	St. John	Northside		
	(tons/A)										
CP70-321	14.7 -	28.6	36.0	36.5 +	31.6 -	36.0	38.7 +	13.9	15.0	27.9	
LCP85-384	30.1	29.4	31.4	31.6	37.4	35.1	30.5	17.0	13.9	28.5	
HOCP85-845	19.8 -	28.6	34.9	34.2	38.6	33.3	37.1 +	17.1	13.4	28.6	
HOCP91-555	29.0	34.3 +	32.5	36.0 +	40.3	31.7	40.3 +	18.4	14.2	30.7	
L95-462	28.9	30.6	29.4	35.9 +	40.3	34.3	38.0 +	17.9	14.8	30.0	
HO95-988	23.1 -	28.4	35.1	36.6 +	48.7 +	37.7	35.7 +	21.0	14.7	31.2	
L96-092	28.4	32.4	39.3 +	37.5 +	43.9 +	45.6 +	41.5 +	22.7 +	15.1	34.0 +	
HOCP96-509	21.1 -	28.2	29.9	36.4 +	42.8	34.3	40.4 +	17.2	12.5	29.2	

HOCP96-540	25.7 -	34.3 +	36.5 +	41.1 +	48.6 +	44.2 +	45.9 +	20.6	15.1	34.7 +
HOCP96-561	24.7 -	25.9	28.5	30.5	35.1	34.3	33.1	18.1	13.7	27.1

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

†† Varieties HO95-988, L96-92 and HOCP 96-561 were dropped but were harvested to collect data for breeding purposes.

Table 5. Plantcane sugar per ton for four commercial and six experimental varieties at nine outfield locations in 2000.

Variety	Heavy		Light								Mean
	Allains	Magnolia	Bon Secour	Georgia	Glenwood	Lanaux	R. Hebert	St. John	Northside		
	(lbs/ton)										
CP70-321	212 -	276	271	268	244 -	240 -	246 -	258	286	256 -	
LCP85-384	255	241	275	277	280	259	277	273	291	270	
HOCP85-845	221 -	261	226 -	257	252 -	203 -	230 -	236 -	249 -	237 -	
HOCP91-555	233	245	243 -	272	270	249	264	255 -	278 -	256 -	
L95-462	240	252	238 -	271	268	229 -	254	237 -	266 -	251 -	
HO95-988	244	255	246 -	286	278	257	248 -	266	278 -	262	
L96-092	202 -	248	235 -	262	238 -	213 -	224 -	226 -	251 -	233 -	
HOCP96-509	223 -	269	236 -	261	257	225 -	255	237 -	276 -	249 -	
HOCP96-540	233	278	247 -	281	271	240 -	256	262	289	262	
HOCP96-561	231	251	274	276	259	260	281	276	299	267	

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

†† Varieties HO95-988, L96-92, and HOCP 96-561 were dropped but were harvested to collect data for breeding purposes.

Table 6. Plantcane stalk weight for four commercial and six experimental varieties at nine outfield locations in 2000.

Variety	Heavy		Light								Mean
	Allains	Magnolia	Bon Secour	Georgia	Glenwood	Lanaux	R. Hebert	St. John	Northside		
	(lbs)										
CP70-321	1.6	2.8 +	2.9	3.1 +	2.7	3.1	3.2 +	1.5	1.6	2.5 +	
LCP85-384	2.0	1.9	2.3	2.0	2.4	2.4	1.8	1.4	1.3	1.9	
HOCP85-845	2.3	2.5 +	2.6	2.6 +	3.0 +	2.8	3.2 +	1.6	1.8	2.5 +	
HOCP91-555	2.2	2.0	2.2	2.0	2.5	2.6	2.5 +	1.4	1.3	2.1	
L95-462	2.9 +	2.4	2.6	2.5 +	3.0 +	2.9	2.7 +	1.6	1.9	2.5 +	
HO95-988	2.1	2.1	2.6	2.6 +	2.9 +	2.7	2.8 +	1.7	1.6	2.3 +	
L96-092	2.5 +	2.2	2.9	2.7 +	3.2 +	3.1	3.5 +	1.8	1.8	2.6 +	
HOCP96-509	2.7 +	2.3	2.6	2.8 +	3.3 +	2.9	3.2 +	1.7	1.6	2.6 +	

HOCP96-540	2.9 +	2.1	2.6	2.8 +	3.3 +	3.0	2.8 +	1.7	1.6	2.5 +
HOCP96-561	2.1	1.7	2.3	2.2	2.4	2.6	2.4	1.3	1.5	2.0

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

†† Varieties HO95-988, L96-92, and HOCP 96-561 were dropped but were harvested to collect data for breeding purposes.

Table 7. Plantcane stalk number for four commercial and six experimental varieties at nine outfield locations in 2000.

Variety	Heavy		Light								Mean
	Allains	Magnolia	Bon Secour	Georgia	Glenwood	Lanaux	R. Hebert	St. John	Northside		
	(stalks/A)										
CP70-321	18030 -	20863 -	25111	23806 -	23480	23608	23961 -	17867 -	19067	21755 -	
LCP85-384	30879	31047	28101	31552	31256	29226	34311	25950	22616	29438	
HOCP85-845	17769 -	22674 -	27649	26693 -	25897	24003	23778 -	20874	15208	22764 -	
HOCP91-555	26267 -	33922	29901	35796	32262	24512	33118	25439	21816	29226	
L95-462	20160 -	26422	22322	28186	27521	24100	28225 -	22369	16426	23970 -	
HO95-988	22310 -	26686	27140	28167	33302	28455	25851 -	25445	19088	26272 -	
L96-092	22748 -	30021	27108	28016	27384	29389	23712 -	26097	16759	25693 -	
HOCP96-509	15858 -	24145	22876	26117 -	25860	23659	25344 -	20659 -	15391	22212 -	
HOCP96-540	17688 -	33179	28181	29956	29889	30283	32267	23754	19188	27154 -	
HOCP96-561	23699 -	30992	24853	27442	30167	26538	28707 -	27702	18572	26519 -	

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

†† Varieties HO95-988, L96-92, and HOCP 96-561 were dropped but were harvested to collect data for breeding purposes.

Table 8. First stubble sugar per acre for four commercial and three experimental varieties at eight outfield locations in 2000.

Variety	Heavy		Light						Mean
	Allains	Magnolia	Georgia	Glenwood	Lanaux	R. Hebert	St. John	Northside	
	(lbs/A)								
CP70-321	6031 -	6251 -	8505 -	9839	9279	9522	5635	3687 -	7343
LCP85-384	7792	7825	9725	9483	10476	9719	6221	4581	8228
HOCP85-845	5425 -	8705	8608	10274	9188	7213 -	4919 -	3572 -	7238 -

HOCP91-555	6365 -	9016	8533 -	7875 -	8229 -	7370	5805	4962	7269 -
L94-428	7466	7490	9071	10860	13080 +	11310	8491 +	5232 +	9125
L95-462	7164	-----	9661	9930	9122	10323	5094 -	3931 -	7860
HO95-988	7905	7578	10322	10356	11845	10974	7553 +	4824	8920

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

†† Varieties L94-428 and HO95-988 were dropped but were harvested to collect data for breeding purposes.

Table 9. First stubble cane yield for four commercial and three experimental varieties at eight outfield locations in 2000.

Variety	Heavy		Light						Mean
	Allains	Magnolia	Georgia	Glenwood	Lanaux	R. Hebert	St. John	Northside	
	(tons/A)								
CP70-321	25.3 -	21.4 -	31.8	36.1	40.9	36.7	21.4 -	12.8 -	28.3
LCP85-384	31.6	26.3	35.4	35.4	40.7	36.8	26.3	15.6	31.0
HOCP85-845	24.1 -	29.2	33.6	37.7	38.7	28.4 -	21.6 -	13.1 -	28.3
HOCP91-555	25.4 -	29.0	31.3	28.8 -	32.8 -	27.2 -	23.7	17.1	26.9 -
L94-428	28.6	25.5	35.6	41.3 +	49.6 +	39.5	32.0 +	17.8 +	33.7
L95-462	29.9	-----	35.2	37.5	40.0	39.1	22.5 -	14.8	30.8
HO95-988	32.3	26.7	35.5	38.6	45.2	38.6	28.2	16.2	32.7

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

†† Varieties L94-428 and HO95-988 were dropped but were harvested to collect data for breeding purposes.

Table 10. First stubble sugar per ton for four commercial and three experimental varieties at eight outfield locations in 2000.

Variety	Heavy		Light						Mean
	Allains	Magnolia	Georgia	Glenwood	Lanaux	R. Hebert	St. John	Northside	
	(lbs/ton)								
CP70-321	239	292	268	273	227 -	259	264	289	264
LCP85-384	247	297	274	268	257	264	236	294	267
HOCP85-845	224	298	256	272	238	254	228	272 -	255 -
HOCP91-555	251	311	273	273	251	270	245	290	271
L94-428	260	294	255	262	264	286	266	294	273
L95-462	239	-----	275	264	228 -	263	226	265 -	255 -
HO95-988	245	284	291	269	262	284	268 +	298	275

† Significant differences, higher or lower, from LCP85-384 are indicated next to the value by a plus(+) or minus(-), respectively.
†† Varieties L94-428 and HO95-988 were dropped but were harvested to collect data for breeding purposes.

Table 11. First stubble stalk weight for four commercial and three experimental varieties at eight outfield locations in 2000.

Variety	Heavy		Light						Mean
	Allains	Magnolia	Georgia	Glenwood	Lanaux	R. Hebert	St. John	Northside	
	(lbs)								
CP70-321	2.1	2.5 +	2.8 +	2.6	3.1 +	2.5	1.7	1.7 +	2.4 +
LCP85-384	2.1	1.8	2.1	2.1	2.0	1.9	1.5	1.2	1.8
HOCP85-845	2.1	2.1	2.4	2.0	2.6 +	2.4	1.7	1.6 +	2.1 +
HOCP91-555	1.6	1.9	2.0	2.0	2.1	1.7	1.4	1.5	1.8
L94-428	2.1	2.4 +	2.8 +	2.3	3.2 +	2.8 +	2.2 +	2.1 +	2.5 +
L95-462	2.0	----	2.6 +	2.3	2.9 +	2.5 +	1.7	1.7 +	2.2 +
HO95-988	1.9	2.1	2.7 +	2.1	2.5	2.3	1.7	1.5	2.1 +

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

†† Varieties L94-428 and HO95-988 were dropped but were harvested to collect data for breeding purposes.

Table 12. First stubble stalk number for four commercial and three experimental varieties at eight outfield locations in 2000.

Variety	Heavy		Light						Mean
	Allains	Magnolia	Georgia	Glenwood	Lanaux	R. Hebert	St. John	Northside	
	(stalks/A)								
CP70-321	23901	17509 -	22484 -	27526	26067 -	30945	25527 -	14825 -	23598 -
LCP85-384	30556	29984	33371	34514	40732	38107	36040	25275	33572
HOCP85-845	23540	28434	28173 -	38843	29633 -	24102	25718 -	16827 -	26909 -
HOCP91-555	33136	30207	31408	29982	32120 -	32039	35274	22354	30815
L94-428	26702	21492 -	25796 -	38181	31772 -	28335	29837 -	17617 -	27466 -
L95-462	30530	-----	26834 -	33041	27684 -	31510	26844 -	17561 -	27271 -
HO95-988	34365	25814	25936 -	37004	37016	33899	33880	21080	31124

† Significant differences, higher or lower, from LCP85-384 are indicated next to the value by a plus(+) or minus(-), respectively.
†† Varieties L94-428 and HO95-988 were dropped but were harvested to collect data for breeding purposes.

Table 13. Second stubble sugar per acre for four commercial and one experimental varieties at seven outfield locations in 2000.

Variety	Heavy		Light					Mean	
	Allains		Bon Secour	Georgia	Glenwood	Lanaux	R. Hebert		St. John
	(lbs/A)		(lbs/A)	(lbs/A)	(lbs/A)	(lbs/A)	(lbs/A)	(lbs/A)	(lbs/A)
CP70-321	4794 -		6680	8773	7314	7897	6835	6742	7005
LCP85-384	6560		8383	8565	7573	7960	7396	7578	7716
HOCP85-845	4702 -		7875	8905	7546	8387	6026	4724 -	6881
HOCP91-555	5221 -		-----	8395	7010	7450	8319	7236	7319
L94-428	6096		8223	7460	8589 +	10265 +	8819	8154	8229

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

Table 14. Second stubble cane yield for four commercial and one experimental varieties at seven outfield locations in 2000.

Variety	Heavy		Light					Mean	
	Allains		Bon Secour	Georgia	Glenwood	Lanaux	R. Hebert		St. John
	(tons/A)		(tons/A)	(tons/A)	(tons/A)	(tons/A)	(tons/A)	(tons/A)	(tons/A)
CP70-321	22.0 -		28.6	31.0	30.3	31.3	30.1	23.5	28.1
LCP85-384	28.3		34.9	30.7	29.9	30.5	34.1	26.2	30.7
HOCP85-845	21.5 -		33.3	33.4	30.9	34.5 +	28.2	20.4 -	28.9
HOCP91-555	21.9 -		-----	28.4	27.1	28.6	32.3	26.5	28.0
L94-428	24.8 -		36.6	29.1	33.5	36.7 +	33.5	28.1	31.7

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

Table 15. Second stubble sugar per ton for four commercial and one experimental varieties at seven outfield locations in 2000.

Variety	Heavy		Light					Mean	
	Allains		Bon Secour	Georgia	Glenwood	Lanaux	R. Hebert		St. John
	(lbs/ton)		(lbs/ton)	(lbs/ton)	(lbs/ton)	(lbs/ton)	(lbs/ton)	(lbs/ton)	(lbs/ton)
CP70-321	218		233	283	242	253	224	285	248
LCP85-384	232		240	279	253	262	217	290	253
HOCP85-845	217		237	267	245	243 -	214	231 -	236 -
HOCP91-555	239		-----	295	259	260	257 +	273	262

L94-428 246 225 256 257 280 + 265 + 290 260

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

Table 16. Second stubble stalk weight for four commercial and one experimental varieties at seven outfield locations in 2000.

Variety	Heavy		Light					Mean
	Allains	Bon Secour	Georgia	Glenwood	Lanaux	R. Hebert	St. John	
	(lbs)							
CP70-321	1.9	2.2 +	2.5	2.4 +	2.6 +	2.5 +	1.9 +	2.3 +
LCP85-384	1.6	1.4	1.9	1.8	1.7	2.1	1.2	1.7
HOCP85-845	1.6	2.3 +	2.3	2.0	2.0 +	2.1	1.6 +	2.0 +
HOCP91-555	1.4	----	2.0	1.7	1.7	1.8 -	1.4	1.7
L94-428	2.2 +	2.2 +	2.4	2.3 +	2.4 +	2.9 +	2.0 +	2.3 +

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

Table 17. Second stubble stalk number for four commercial and one experimental varieties at seven outfield locations in 2000.

Variety	Heavy		Light					Mean
	Allains	Bon Secour	Georgia	Glenwood	Lanaux	R. Hebert	St. John	
	(stalks/A)							
CP70-321	23185 -	25363 -	25011	25041 -	24345 -	24176 -	25293 -	24631 -
LCP85-384	35916	49059	33323	33859	36659	32211	42603	37661
HOCP85-845	26610 -	29015 -	29087	30764	34283	26357 -	26000 -	28874 -
HOCP91-555	31671	-----	28587	32423	33565	36341	37907	33878
L94-428	22830 -	33431 -	23911	29742	30697 -	23406 -	28300 -	27474 -

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

Table 18. Third stubble sugar per acre for eight commercial varieties at four outfield locations in 2000.

Variety	Heavy		Light			Mean
	Magnolia		Georgia	Glenwood	Lanaux	
	(lbs/A)					
CP70-321	4823	-	6841	7365	7994	6756
CP72-370	5182	-	7694	6303	6676	6464
CP79-318	6206		8079	6812	7525	7156
LCP82-089	5803		8042	7054	7170	7017
LHO83-153	3637	-	5589	6286	7317	5707
LCP85-384	6557		7306	7805	9351	7755
HOCP85-845	6100		9116	8847	9524	8397
HOCP91-555	5018	-	9277	8773	8759	7957

† 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 eight commercial varieties at four outfield locations in 2000.

Variety	Heavy		Light			Mean
	Magnolia		Georgia	Glenwood	Lanaux	
	(tons/A)					
CP70-321	18.8	-	25.3	28.9	32.0	26.3
CP72-370	20.3	-	29.3	26.0	26.9	25.6
CP79-318	23.7		29.0	32.9	34.2	30.0
LCP82-089	21.7		28.0	31.7	29.6	27.8
LHO83-153	14.9	-	21.6	28.1	31.2	24.0
LCP85-384	23.8		26.2	33.0	37.5	30.1
HOCP85-845	25.6		34.9	36.1	38.8	33.9
HOCP91-555	18.8	-	32.1	32.4	33.3	29.2

† 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 eight commercial varieties at four outfield locations in 2000.

Variety	Heavy		Light			Mean
	Magnolia		Georgia	Glenwood	Lanaux	
	(lbs/ton)					
CP70-321	254	-	270	254	250	257
CP72-370	255		264	243	248	252
CP79-318	262		278	207	219	242
LCP82-089	267		287	222	242	254
LHO83-153	243	-	258	224	234	240
LCP85-384	276		279	235	249	260
HOCP85-845	238	-	262	245	246	248
HOCP91-555	267		289	271	264	272

† 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 eight commercial varieties at four outfield locations in 2000.

Variety	Heavy		Light			Mean
	Magnolia		Georgia	Glenwood	Lanaux	
	(lbs)					
CP70-321	2.2 +		2.5 +	2.5 +	2.4 +	2.4 +
CP72-370	1.8		2.3 +	2.3 +	2.3 +	2.2 +
CP79-318	2.0 +		2.5 +	2.3 +	2.4 +	2.3 +
LCP82-089	1.7		2.2	2.0	1.9 +	2.0 +
LHO83-153	1.3 -		2.0	1.8	2.0 +	1.8
LCP85-384	1.6		1.7	1.8	1.6	1.7
HOCP85-845	2.0 +		2.2 +	2.1	2.4 +	2.2 +
HOCP91-555	1.5		2.1	1.6	1.8	1.8

† 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 eight commercial varieties at four outfield locations in 2000.

Variety	Heavy		Light			Mean
	Magnolia		Georgia	Glenwood	Lanaux	
	(stalks/A)					
CP70-321	17136 -		20044 -	23424 -	26636 -	21810 -
CP72-370	22503 -		25928	22385 -	23232 -	23512 -
CP79-318	23859		23523 -	28628 -	28664 -	26169 -
LCP82-089	25374		26523	32026	30685 -	28652 -
LHO83-153	22862 -		21482 -	31771	31516 -	26908 -
LCP85-384	29308		30578	37752	47230	36217
HOCP85-845	25432		31248	34217	32022 -	30730 -
HOCP91-555	24759		31660	40404	37377 -	33550

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

Table 23. 2000 plantcane means from nine outfield locations: Allains, Bon Secour, Georgia, Glenwood, Lanaux, Magnolia, R. Hebert, St. John, and Northside 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	7163	27.9	256 -	2.5 +	21755 -
LCP85-384	7661	28.5	270	1.9	29438
HOCP85-845	6766 -	28.6	237 -	2.5 +	22764 -
HOCP91-555	7873	30.7	256 -	2.1	29226
L95-462	7543	30.0	251 -	2.5 +	23970 -
HO95-988	8197	31.2	262	2.3 +	26272 -
L96-092	7911	34.0 +	233 -	2.6 +	25693 -
HOCP96-509	7272	29.2	249 -	2.6 +	22212 -

HOCP96-540	9032 +	34.7 +	262	2.5 +	27154 -
HOCP96-561	7198	27.1	267	2.0	26519 -

Table 24. 2000 first stubble means from eight outfield locations: Allains, Georgia, Glenwood, LanauX, Magnolia, R. Hebert, St. John, and Northside 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	7343	28.3	264	2.4 +	23598 -
LCP85-384	8228	31.0	267	1.8	33572
HOCP85-845	7238 -	28.3	255 -	2.1 +	26909 -
HOCP91-555	7269 -	26.9 -	271	1.8	30815
L94-428	9125	33.7	273	2.5 +	27466 -
L95-462	7860	30.8	255 -	2.2 +	27271 -
HO95-988	8920	32.7	275	2.1 +	31124

Table 25. 2000 second stubble means from seven outfield locations: Allains, Bon Secour, Georgia, Glenwood, LanauX, 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	7005	28.1	248	2.3 +	24631 -
LCP85-384	7716	30.7	253	1.7	37661
HOCP85-845	6881	28.9	236 -	2.0 +	28874 -
HOCP91-555	7319	28.0	262	1.7	33878
L94-428	8229	31.7	260	2.3 +	27474 -

Table 26. 2000 third stubble means from four outfield locations: Georgia, Glenwood, LanauX, and Magnolia 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	6756	26.3 -	257	2.4 +	21810 -
CP72-370	6464 -	25.6 -	252	2.2 +	23512 -
CP79-318	7156	30.0	242 -	2.3 +	26169 -
LCP82-089	7017	27.8	254	2.0 +	28652 -
LHO83-153	5707 -	24.0 -	240 -	1.8	26908 -
LCP85-384	7755	30.1	260	1.7	36217
HOCP85-845	8397	33.9 +	248	2.2 +	30730 -
HOCP91-555	7957	29.2	272	1.8	33550

Table 27. 2000 fourth stubble means from Bon Secour.

Variety	Sugar per Acre	Cane Yield	Sugar per Ton	Stalk Weight	Stalk Number
	(lbs/A)	(tons/A)	(lbs/ton)	(lbs)	(stalks/A)
CP65-357	6128 -	26.9	227	1.9 +	28090 -
CP70-321	4712 -	19.6 -	240	2.2 +	17594 -
CP72-370	4126 -	18.0 -	230	1.7 +	21187 -

LCP82-089	6073 -	25.8 -	235	1.9 +	26839 -
LHO83-153	5000 -	21.7 -	229	1.4 -	31244 -
LCP85-384	7643	31.6	241	1.6	40200
HOCP85-845	7488	33.3	224	2.0 +	33890 -

Table 28. Combined plantcane means across outfield locations from 1999 to 2000.

Variety	Sugar per Acre	Cane Yield	Sugar per Ton	Stalk Weight	Stalk Number
	(lbs/A)	(tons/A)	(lbs/ton)	(lbs)	(stalks/A)
CP70-321	7800 -	29.2	266 -	2.7 +	21854 -
LCP85-384	8501	30.9	275	2.1	29174
HOCP85-845	7590 -	30.7	246 -	2.6 +	23633 -
HOCP91-555	8077	30.4	265 -	2.2	27721
L95-462	8549	32.7	260 -	2.6 +	25207 -
HO95-988	8879	32.6	271	2.5 +	26063 -

Table 29. Combined plantcane means across outfield locations from 1996 to 2000.

Variety	Sugar per Acre	Cane Yield	Sugar per Ton	Stalk Weight	Stalk Number
	(lbs/A)	(tons/A)	(lbs/ton)	(lbs)	(stalks/A)
CP70-321	7907 -	30.0 -	264 -	2.8 +	21768 -
LCP85-384	8929	33.1	270	2.3	28953
HOCP85-845	7877 -	32.2	244 -	2.6 +	24569 -
HOCP91-555	8443 -	31.8	265 -	2.3	27565 -

Table 30. Combined first stubble means across outfield locations from 1997 to 2000.

Variety	Sugar per Acre	Cane Yield	Sugar per Ton	Stalk Weight	Stalk Number
	(lbs/A)	(tons/A)	(lbs/ton)	(lbs)	(stalks/A)
CP70-321	7919 -	29.3 -	272	2.5 +	23366 -
LCP85-384	9250	33.8	274	2.0	34123
HOCP85-845	8213 -	31.7 -	258 -	2.3 +	27629 -
HOCP91-555	8644 -	31.3 -	276	2.0	31711 -

Table 31. Combined second stubble means across outfield locations from 1998 to 2000.

Variety	Sugar per Acre	Cane Yield	Sugar per Ton	Stalk Weight	Stalk Number
	(lbs/A)	(tons/A)	(lbs/ton)	(lbs)	(stalks/A)
CP70-321	7195 -	27.8 -	259 -	2.3 +	24064 -
LCP85-384	8564	32.1	267	1.7	38126
HOCP85-845	7990 -	31.2	254 -	2.1 +	30151 -
HOCP91-555	7761 -	28.3 -	273 +	1.7	34654 -

Table 32. Combined third stubble means across outfield locations from 1999 to 2000.

Variety	Sugar per Acre	Cane Yield	Sugar per Ton	Stalk Weight	Stalk Number
	(lbs/A)	(tons/A)	(lbs/ton)	(lbs)	(stalks/A)
CP70-321	6625 -	25.3 -	262	2.4 +	21426 -
LCP85-384	7878	29.7	267	1.7	35795

HOCP85-845	8548	33.3 +	256	2.2 +	29983 -
HOCP91-555	8040	29.2	275	1.8	33391

THE 2000 LOUISIANA SUGARCANE VARIETY SURVEY

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During June and July of 2000 a sugarcane variety survey was conducted by county agents in the 24 parishes currently producing sugarcane in Louisiana to determine the varietal makeup and distribution across the sugarcane belt in the state. The information presented in this report was summarized from those individual parish surveys.

Extension agents in each sugarcane-producing parish collected acreage figures by variety and crop year from growers in their parishes. Some information was also collected from the local Farm Service Agency office when the agents had difficulty in obtaining all the needed information from the growers. Since this information was collected during the growing season and included input from many persons, acreages may differ from the final total crop acreage figures collected at harvest.

Acreages for each parish, regional totals, and the statewide total are shown in Table 1. Figure 1 shows the parishes in which sugarcane is grown in the state. The statewide total of acreage reported in the survey is 489,306 acres although the certified acreage reported by Farm Service Agency was 495,737 acres. It is important to note that the total acreage of 489,306 is not the “official” total sugarcane acreage in Louisiana; however, it does represent approximately 98.7% of the total certified acreage. Regional totals were 215,650 acres for the Teche Region, 169,124 acres for the River-Bayou Lafourche Region, and 104,532 acres for the Northern Region in 2000.

The portion of the total statewide acreage made up by each variety and the portion of the total for each crop year contributed by each variety are shown in Table 2. The leading variety for 2000 was LCP 85-384, with 71% of the total acreage. The second leading variety was CP 70-321, with 13% of the acreage. LCP 85-384 has been the leading variety since 1998 when it occupied 43% of the state's acreage (Table 7). Other varieties making important acreage contributions included: HoCP 85-845 at 8%, and CP 72-370, LCP 82-89, and LHo 83-153 at 2% each (Table 2). All other varieties in the survey occupied less than 1% of the total acreage. There was an increase in the acreage of only one variety, LCP 85-384, during 2000 (Table 7). LCP 85-384 is the first variety to reach more than 70% of the total acreage since CP 65-357, released in 1973, did it in the early 1980s. LCP 85-384 is a high yielding, excellent stubbling variety. The variety produces a large number of small stalks and exceeds most other varieties in the yield of sugar per acre.

In recent years there has been a tendency to keep older stubble because of better stubbling varieties and relatively milder winters in both 1998 and 1999. Whereas a normal crop cycle extended for only three years, a plant-cane and two stubble crops, many growers are now keeping third and older

stubble, extending their crop cycle to four or five years. In 2000, 17.5% or more than 85,000 acres was third or older stubble (Table 2). Table 3 shows the distribution of plant and stubble crops by region. The percentage of the crop made up by plantcane, first stubble, second stubble and third and older stubble was about the same across the regions with the exception of the Northern Region, where there was more third and older stubble than second stubble cane.

Varietal makeup by crop year for the Teche, River-Bayou Lafourche, and Northern regions is shown in Tables 4, 5, and 6, respectively. LCP 85-384 is the major variety for all three regions with 73, 66 and 76% of the total acreage found in the Teche, River-Bayou Lafourche, and Northern regions, respectively. CP 70-321 is the second leading variety in the Teche and Northern regions while HoCP 85-845 is the second leading variety in the River-Bayou Lafourche Region. No other variety is found on more than 3% of the total area in any of the regions.

Sugarcane variety trends over the last five years are shown in Table 7. Only one variety, LCP 85-384, increased in 2000 from the previous year. All other varieties either decreased or remained the same as reported from the previous year. CP 70-321 declined the most at 7 percentage points while LCP 82-89 declined 3%. HoCP 85-845 remained the same from the previous year. All other varieties are grown on only limited acreages. It is anticipated that LCP 85-384 will continue to gain in popularity for the near future while the remaining varieties will continue to decrease in total acreage with the possible exception of HoCP 91-555. HoCP 91-555 was only released for commercial planting in 1999. At present, there are only approximately 1,400 acres of this variety grown in the state. Many growers have planted only a small seed plot since its release and will decide on possible expansion in the summer of 2001. HoCP 91-555 is a high yielding, good stubbling variety. It is mostly erect in growth habit and suited to both soldier and combine harvesting. On the other hand, LCP 85-384 frequently lodges and is brittle and difficult to harvest when lodged, being better suited for combine harvesting.

ACKNOWLEDGMENTS

We acknowledge the assistance of the county agents for soliciting the sugarcane variety information published in this survey. We also want to thank the sugarcane producers who took the time to respond to the survey from their agents.

Table 1. Estimated total sugarcane acres by parish and region, 2000¹.

Teche Region		River-Bayou Lafourche Region		Northern Region	
Parish	Acres	Parish	Acres	Parish	Acres
Acadia	3,322	Ascension	15,301	Avoyelles	22,408
Calcasieu	6,132	Assumption	42,004	East Baton Rouge	556
Iberia	65,002	Iberville	35,580	Evangeline	2,078
Jeff Davis	8,025	Lafourche	32,684	Pointe Coupee	25,479
Lafayette	15,870	St. Charles	2,210	Rapides	13,558
St. Martin	36,929	St. James	25,289	St. Landry	24,319
St. Mary	45,871	St. John	5,580	West Baton Rouge	16,134
Vermilion	34,499	Terrebonne	10,476		
TOTAL	215,650	TOTAL	169,124	TOTAL	104,532
Total-All Regions: 489,306 acres					

¹Based on 2000 variety survey information from county agents.

Figure 1. Louisiana sugarcane growing parishes

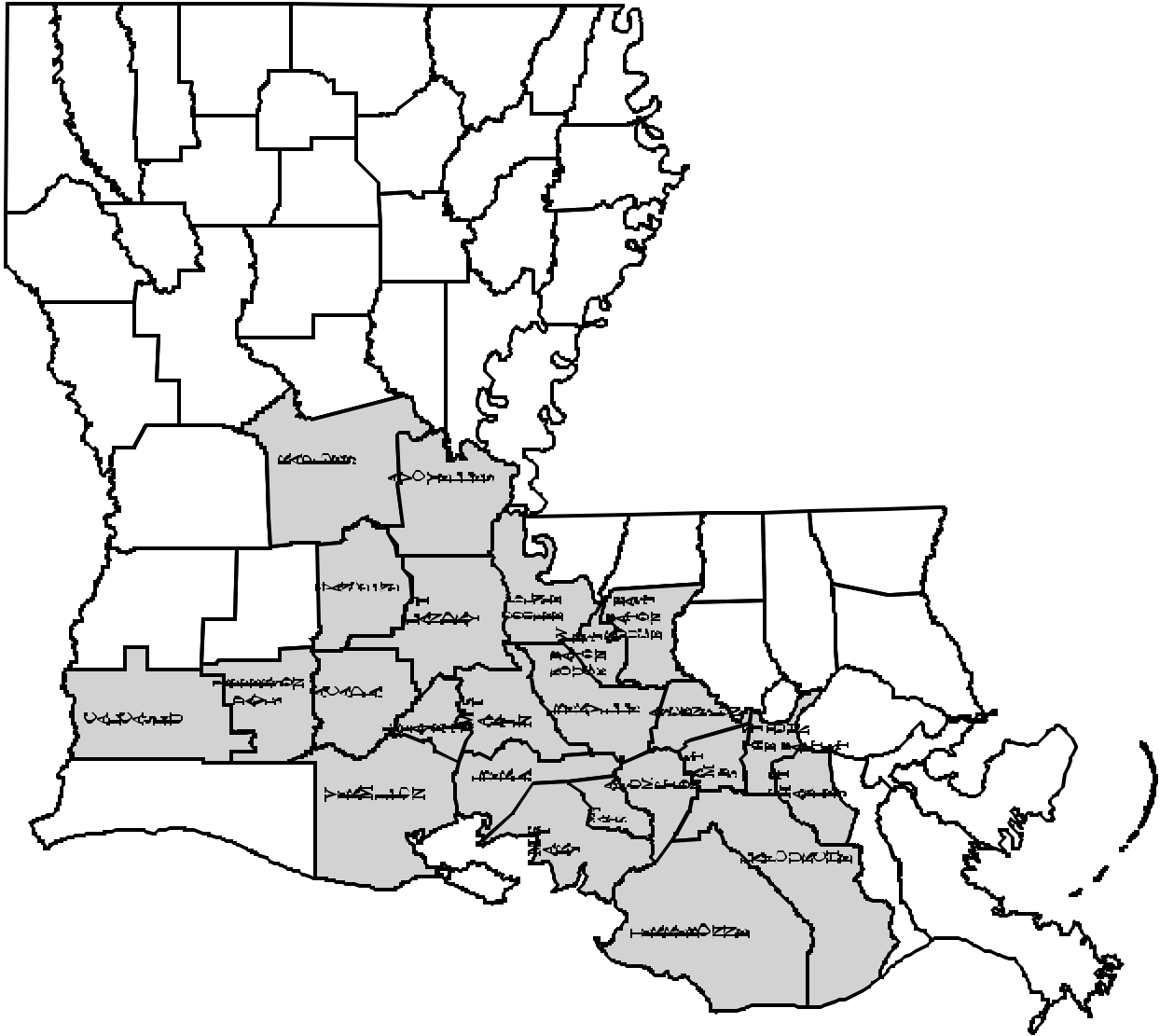


Table 2. Estimated statewide sugarcane acreage percentage by variety and crop year, 2000¹.

Variety	Plant Cane	1 st Stubble	2 nd Stubble	3 rd Stubble And Older	Total
-----%-----					
CP 65-357	<1	<1	1	2	1
CP 70-321	6	10	19	27	13
CP 72-370	1	2	2	2	2
CP 74-383	<1	<1	<1	1	<1
CP 79-318	<1	<1	<1	<1	<1
LCP 82-89	<1	1	4	3	2
LHo 83-153	1	1	2	2	2
LCP 85-384	82	76	63	56	71
HoCP 85-845	7	8	9	6	8
LCP 86-454	<1	<1	<1	<1	<1
HoCP 91-555	<1	<1	<1	<1	<1
Others	<1	<1	<1	<1	<1
Total Acres	136,027	144,345	123,305	85,629	489,306
Percent Total Crop (%)	27.8	29.5	25.2	17.5	

¹Based on 2000 variety survey information from county agents.

Table 3. Estimated sugarcane distribution by region and crop year, 2000¹.

Crop Year	Teche	River Bayou Lafourche	Northern	State Total
Plantcane				
Acres	57,363	49,046	29,687	136,027
%	26.6	29.0	28.4	27.8
1 st Stubble				
Acres	64,695	50,568	28,746	144,345
%	30.0	29.9	27.5	29.5
2 nd Stubble				
Acres	57,579	44,987	19,861	123,305
%	26.7	26.6	19.0	25.2
3 rd Stubble and Older				
Acres	36,013	24,523	26,238	85,629
%	16.7	14.5	25.1	17.5
Total Acres	215,650	169,124	104,532	489,306

¹Based on 2000 variety survey information from county agents.

Table 4. Estimated Teche region acreage percentage by variety and crop year, 2000¹.

Variety	Plant Cane	1 st Stubble	2 nd Stubble	3 rd Stubble And Older	Total
CP 65-357	<1	<1	<1	<1	<1
CP 70-321	9	15	26	27	17
CP 72-370	1	1	2	1	1
CP 74-383	0	0	0	<1	<1
CP 79-318	<1	<1	1	<1	<1
LCP 82-89	1	1	2	2	2
LHo 83-153	<1	1	1	1	1
LCP 85-384	84	76	62	65	73
HoCP 85-845	4	5	5	3	4
LCP 86-454	<1	<1	<1	<1	<1
HoCP 91-555	1	<1	<1	0	<1
Others	<1	<1	<1	<1	<1

¹Based on 2000 variety survey information from county agents.

Table 5. Estimated River-Bayou Lafourche region sugarcane acreage percentage by variety and crop year, 2000¹.

Variety	Plant Cane	1 st Stubble	2 nd Stubble	3 rd Stubble And Older	Total
CP 65-357	1	1	2	2	1
CP 70-321	3	6	9	17	8
CP 72-370	2	3	3	2	3
CP 74-383	<1	<1	<1	1	<1
CP 79-318	<1	<1	<1	1	<1
LCP 82-89	1	2	6	6	3
LHo 83-153	2	3	4	4	3
LCP 85-384	74	69	60	55	66
HoCP 85-845	14	15	15	11	14
LCP 86-454	1	1	1	1	1
HoCP 91-555	1	<1	<1	<1	<1
Others	<1	<1	<1	<1	<1

¹Based on 2000 variety survey information from county agents.

Table 6. Estimated Northern region sugarcane acreage percentage by variety and crop year, 2000¹.

Variety	Plant Cane	1 st Stubble	2 nd Stubble	3 rd Stubble And Older	Total
CP 65-357	<1	<1	1	5	2
CP 70-321	3	4	19	38	15
CP 72-370	<1	1	1	3	1
CP 74-383	0	<1	1	2	1
CP 79-318	<1	<1	0	2	<1
LCP 82-89	<1	1	2	1	1
LHo 83-153	<1	<1	<1	<1	<1
LCP 85-384	94	91	72	43	76
HoCP 85-845	1	3	5	6	3
LCP 86-454	0	<1	<1	0	<1
HoCP 91-555	<1	0	0	0	<1
Others	<1	<1	0	<1	<1

¹Based on 2000 variety survey information from county agents.

Table 7. Louisiana sugarcane variety trends 1996-2000¹.

Variety	% of state total acreage by year					1 yr. Change
	1996	1997	1998	1999	2000	
CP 65-357	10	6	3	1	1	0
CP 70-321	40	35	29	20	13	-7
CP 72-370	9	7	5	3	2	-1
CP 74-383	3	2	1	<1	<1	0
CP 79-318	3	3	2	1	<1	-1
LCP 82-89	16	10	7	5	2	-3
LHo 83-153	4	4	3	3	2	-1
LCP 85-384	13	29	43	58	71	+13
HoCP85-845	2	4	6	8	8	0
LCP 86-454	<1	<1	1	1	<1	0
HoCP 91-555	<1	<1	<1	<1	<1	0
Others	<1	<1	1	<1	<1	0

¹Based on annual variety survey reports from county agents in sugarcane-producing parishes, 1996-2000.

SUCROSE LABORATORY AT ST. GABRIEL

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Sugar Research Station

More than 2,600 samples were processed at the St. Gabriel Sucrose Laboratory during the 2000 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 as easily. The ABC Clarifier active ingredients tend to break down quicker; therefore, it requires more product to clarify the same amount of raw juice. The juice was extracted via a three-roller mill for most of the samples (2592). Fiber analysis was done on 30 samples via chip/press extraction. 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 2000 harvest season.

Project Area	Leader	Number of Samples
Agronomy	Allen Arceneaux	487
	Magdi Selim	18
Entomology	Eugene Reagan	20
Iberia Research Station	William Hallmark	863
	Howard Viator	24
Plant Pathology and Crop Physiology	Jeffrey Hoy	104
	James Griffin	94
Sugar Research Station	Line Trials	525
	Infield	10
	Increase	144
	Nursery	233
	Nursery (fiber)	30
	Tissue Culture	54
	Kenneth Gravois	16
TOTAL		2622

LAES SUGARCANE TISSUE CULTURE LABORATORY

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During the 2000-2001 production season, more than 30,000 plantlets were regenerated in the Louisiana Agricultural Experiment Station tissue culture laboratory. A total of 26,932 plantlets were turned over to Thermo Trilogy Corp., 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	2,592
LCP 85-384	15,012
HoCP 85-845	2,952
HoCP 91-555	6,322
LCP 95-462	414
TOTAL	26,932

TISSUE CULTURE METHOD EFFECTS ON SUGARCANE YIELD COMPONENTS

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The vegetative propagation of sugarcane is conducive to the spread of systemic diseases such as ratoon stunting disease (RSD). This important disease in Louisiana is now controlled largely by planting commercial seed-cane initially produced in a lab through tissue culture. To determine whether tissue culture affects yield or its components, three varieties, CP 70-321, LCP 85-384, and HoCP 85-845, were compared in three successive crops initially planted with stalks from three sources: Kleentek® plants derived from callus (undifferentiated cells) produced from the leaf roll above the apical meristem, Kleentek plants directly regenerated from an apical meristem, and original plants from conventional bud propagation. Stalks of plants derived from both tissue culture methods were typical of Kleentek seed-cane farmers would purchase for planting that had been rogued for phenotypic variants (off-types) and increased by bud propagation. Differences in yield components among the two tissue culture methods and bud propagated cane occurred only in CP 70-321 (Table 1). Stalk diameter and stalk weight were lower and stalk population was higher for plants derived from leaf roll callus compared to bud propagated cane. However, yield components were similar for plants derived from an apical meristem and bud propagation. Individual plant off-types were not observed in cane produced by either tissue culture method. In summary, variety and tissue culture method affected persistent, uniform variation in plant growth habit resulting from tissue culture that changed some yield components. However, apical meristem culture was suitable for production of seed-cane, because sugarcane derived by meristem culture of all three varieties did not differ significantly from the original germplasm for any measured trait (Table 1).

The experiment was conducted over three successive growing seasons at three locations, the Sugar Research Station, the Iberia Research Station, and the Ardoyne Farm of the USDA-ARS-SRRC Sugarcane Research Unit. Three replications of each variety and plant source were planted in single-row plots, 15 feet in length. Plots were visually surveyed for individual plant off-types each year during May, August, and at harvest. Yield components, including stalk population, weight, diameter and length, sucrose content, cane tonnage, and sugar per acre, were collected at the conclusion of each growing season.

In the past, farmers in Louisiana have sometimes noted that tissue-culture-derived plants had smaller stalk diameter and stalk weight and higher stalk population. One of the varieties this change was observed in was CP 70-321. These changes were confirmed in CP 70-321 derived from a leaf-roll explant source in this study. Previous experience and observations suggested that culture from the apical meristem would reduce the magnitude in difference in these traits compared to culture from leaf-roll callus. This study supports these observations. Smaller stalk diameter and stalk weight were observed for plants of CP 70-321 from a leaf-roll callus source but not for plants from an apical meristem. It also should be noted for the CP 70-321 leaf-roll callus culture source that final yield, as measured by cane and sucrose yield, was not affected by this tissue culture practice because stalk weight and population are compensatory yield components in sugarcane. Apical meristem culture-derived plants were not significantly different from never-cultured cane in stalk diameter and stalk weight for all three varieties.

The study results indicate that sugarcane varieties can be grown with seed-cane from apical meristem tissue culture (the method currently used to produce Kleentek seed-cane) without any change in growth and yield characteristics. The implication of this finding is that healthy seed-cane programs needed for disease management can be shifted from a traditional heat treatment program to one using tissue culture derived seed-cane without affecting the yield characteristics of varieties developed by the breeding program.

Table 1. Sugar yield and its components as affected by variety and plant source averaged across three crop-years, 1998 through 2000.

Variety	Plant source	Sugar yield ¹	Cane yield	Sucrose content	Stalk population	Stalk weight	Stalk diameter	Stalk length
		lbs./A	tons/A	lbs./ton	1000/A	lbs.	inches	feet
CP 70-321	Never cultured	14370 a	58.7 a	244.8 a	42.3 b	2.8 a	0.94 a	8.3 a
	Meristem	12941 a	53.3 a	242.8 a	43.3 ab	2.4 ab	0.91 a	8.2 a
	Leaf roll	12823 a	54.8 a	234.0 a	49.3 a	2.2 b	0.84 b	8.2 a
LCP 85-384	Never cultured	14351 a	59.3 a	242.0 a	54.6 a	2.2 a	0.85 a	8.4 a
	Meristem	15384 a	61.0 a	252.2 a	55.5 a	2.2 a	0.84 a	8.2 a
	Leaf roll	13847 a	57.6 a	240.4 a	57.9 a	2.1 a	0.82 a	8.3 a
HoCP 85-845	Never cultured	11751 a	49.5 a	237.4 a	42.7 a	2.3 a	0.89 a	8.2 a
	Meristem	11326 a	49.5 a	228.8 a	43.0 a	2.3 a	0.88 a	8.2 a
	Leaf roll	11498 a	51.1 a	225.0 a	44.5 a	2.2 a	0.88 a	8.1 a

¹ Yield component values within a column and variety followed by the same letter were not significantly different at P = 0.05.