

Sugarcane Variety Census: Florida 1994 ¹

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The annual variety census reports for the Florida sugar cane industry were started by L. P. Hebert in 1964. In this report of the 1994-95 harvest season, mill managers and independent growers displayed exemplary cooperation in supplying the requested data. As a result of this cooperation, much useful information is contained in this census.

The census reflects Florida sugar cane growers' variety preferences. In addition, the census reports comparative usage of the successive and fallow planting systems. The sugar cane crop is categorized as plant cane, first ratoon, second ratoon, third ratoon, and fourth ratoon and older. Also, the census estimates percentages of muck and sand soils used for sugar cane.

Growers reported 448,298 acres of sugar cane grown for sugar and seed for the 1994-95 crop. This record-high figure represents an increase of 6,217 acres compared to the 1993-94 season (Glaz, 1994). This increase in the 1994-95 crop compares to the 1985-94 average annual increase of 9,562 acres.

Of the total 1994-95 acreage, 32.4 percent was plant cane and 67.6 percent was ratoon cane. The percentage of the crop in plant cane has risen from its 1992 level of 29.3 percent (Coale and Glaz, 1992) and last year's level of 30.5 percent of the crop (Glaz, 1994). Of this year's acreage, 29.3 percent was first ratoon, 21.8 percent was second ratoon, 8.6 percent was third ratoon, and 7.3 percent was fourth ratoon or older. These compared with 1993-94 percentages of 29.2, 21.6, 11.0, and 7.7, respectively (Glaz, 1994).

For the 1994-95 harvest season, Florida growers planned to harvest 39 varieties of sugar cane. As shown in Table 1, 14 principal varieties covered at least one percent of the total cane area. Each variety in the group labeled as "all others" represented less than one percent of the total acreage. The United States Sugar Corporation of Clewiston, Florida, developed the varieties identified by a "CL" prefix. A cooperative program, based at Canal Point, Florida, of the United States Department of Agriculture's Agricultural Research Service, the Institute of Food and Agricultural Sciences of the University of

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Florida, and the Florida Sugar Cane League, Inc. developed the varieties identified by a "CP" prefix.

Of the 25 varieties grouped as "all others," six were grown as ratoon cane only. The absence of plant cane for a variety indicates that its commercial use will soon stop.

The most widely grown variety in Florida this year was CP 72-2086, with 15.5 percent of the total cane area (Table 1). This is the first year that CP 72-2086 has been the most extensively grown variety in Florida. After its release in the fall of 1981, the use of CP 72-2086 increased slowly until 1987. Since 1987, hectareage of CP 72-2086 has grown steadily (Table 2). Last year, it comprised 13.6 percent of the total acreage (Glaz, 1994).

CL 61-620, last year's most popular variety, dropped in ranking to the second most widely grown variety this year (Table 1). However, it increased in popularity this year to 15.0 percent of the area from 14.8 percent last year (Table 2). The largest upward movement in ranking occurred for CP 80-1827, which ranked sixth last year (Glaz, 1994). This year, CP 80-1827 ranked third, and increased in percentage area from 8.3 percent last year to 13.1 percent (Table 2). CP 80-1827 comprised 18.5 percent of the plant cane, more than any other variety (Table 1). CP 80-1827 also had greater net increases in plant-cane and ratoon acreages than any other variety (Table 3).

This year's fourth-place variety, CP 70-1133, dropped from third place last year. It dropped 2.3 percentage points from 12.2 to 9.9 percent of the total cane acreage (Table 3). This was the third consecutive year that CP 70-1133 has dropped in percent acreage, after its modest increase in popularity from 1989 to 1991 (Table 2).

CP 73-1547 ranked fifth last year and this year. Although it remained at the same position both years, its total use increased by 1.1 percent this year, but its use in plant cane declined by 0.8 percent (Table 3). CP 72-1210 declined from fourth place last year to sixth place this year. The most widely grown variety from 1985 to 1991-92, CP 72-1210 declined substantially in acreage for the sixth consecutive year (Table 2), probably due in part to its susceptibility to sugarcane rust.

Only 358 acres separated CP 78-2114 in seventh place from CP 80-1743 in eighth place. After rising rapidly from 1988 to 1992, CP 78-2114 is now declining slowly in use (Table 2). CP 80-1743, on the other hand, expanded rapidly in 1994, having the second greatest net change in percentage of plant cane (Table 3).

With 3.6 percent of the total acreage, CL 73-239 was the ninth most widely grown variety (Table 1). It registered a decline of 4.5 percent of the total acreage compared to last year (Table 2). Last year it comprised 1.8 percent of the total plant-cane acreage, and this year it dropped to just 0.3 percent (Table 3). This drop in acreage may be due to the susceptibility of CP 73-239 to sugarcane rust.

This year's tenth most widely grown variety was CL 69-886 (Table 1). It moved up from eleventh place last year, but its use remained at 2 percent of the area both years (Table 3). The eleventh most widely grown variety, CL 59-1052, dropped two positions from its 1993 ninth-place ranking. After four consecutive years with 2.9 percent of the total acreage, CL 59-1052 dropped 1 percentage point this year (Table 2). CP 81-1254 was the twelfth most widely grown variety this year (Table 1). It increased in percentage acreage from 1.0 last year to 1.3 percent this year. However, its decline of 0.6 percent of the plant-cane acreage indicates that this variety is not gaining in popularity (Table 3).

The final two principal varieties were CL 72-321 and CP 78-1628. CL 72-321 showed an extremely rapid increase in acreage from 1993 to 1994. Its increase in plant-cane acreage from 0.3 percent in 1993 to 1.7 percent in 1994 (Table 3) suggests that growers planted almost all available stalks of CL 72-321. CP 78-1628 became a principal variety for the first time this year. It has been increasing in use steadily since 1991 (Table 2).

Of the 150,450 plant-cane acres, 130,246 acres (86.6 percent) were reported as planted in either the fallow or successive planting system (Table 4). Growers did not specify whether they planted the remaining 20,204 acres on fallow or successive land. Of the 130,246 acres for which information was available, 36.5 percent were fallow planted and 63.5 percent were successively planted (Table 4). Fallow

and successive estimates were 32.3 and 67.6 percent, respectively, in the 1993 census (Glaz, 1994). This is the second consecutive year that percentage fallow acreage has increased.

Table 4 contains the actual fallow and successive plant-cane acreages of the principal varieties and their corresponding percentages. Growers showed definite variety preferences depending upon whether their fields were fallow or successively planted. Growers showed more of a tendency to plant CL 61-620, CP 70-1133, CP 72-1210, and CL 72-321 on fallow rather than successive land. CP 80-1827 and CL 69-886 were more popular in successive rather than fallow plant-cane acreage. These variety preferences were similar to those of last year (Glaz, 1994)

In their census reports, growers labeled 354,183 of the total 464,353 acres reported (76.3 percent) as either a muck or a sand soil. Soil type was not specified for the remaining 110,164 acres. Of these 354,183 acres, 88.9 percent were reported as muck soils and 11.1 percent were reported as sand soils (Table 5). This year's percentage for muck soils increased from last year's 86.8 percent, and conversely, the percentage of sand soils decreased by 2.1 percent from last year (Glaz, 1994). As with fallow and successive planting, growers have variety preferences according to soil. More than 96 percent of the acreages of CP 72-2086, CL 61-620, CP 80-1827, CP 78-2114, CP 80-1743, CL 73-239, CL 69-886, CL 59-1052, CP 81-1254, and CL 72-321 were on muck soils. CP 80-1827, CP 70-1133, CP 72-1210, CP 73-1547, and CP 78-1628 together comprised 84.1 percent of the specified sand acreage.

From 1985 through 1990, the three most popular varieties comprised the majority of the total Florida sugar cane acreage (Table 6). The most extreme example of lack of variety diversification was in 1987 when the three most widely grown varieties accounted for 79.0 percent of the total acreage. This year, the three most widely grown varieties accounted for 43.6 percent of the total Florida acreage. After two consecutive years of decreasing, this percentage increased from 40.6 percent last year.

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Table 1. Percentage of the 1994 Florida sugarcane acreage planted to the principal varieties.

Variety	Total Cane Grown	Plant Cane	First Ratoon Cane	Second Ratoon Cane	Third Ratoon Cane	Fourth Ratoon Cane & Older
CP 72-2086	15.5	17.6	20.6	13.5	4.8	3.7
CL 61-620	15.0	12.0	14.3	18.3	19.4	15.1
CP 80-1827	13.1	18.5	12.5	11.1	8.5	2.1
CP 70-1133	9.9	7.1	8.2	11.6	14.1	17.9
CP 73-1547	9.8	9.8	10.4	9.6	8.4	6.4
CP 72-1210	6.1	2.1	5.8	6.9	11.4	15.9
CP 78-2114	5.2	5.1	7.8	5.5	0.5	0.1
CP 80-1743	5.2	8.5	7.8	5.5	0.5	0.1
CL 73-239	3.6	0.3	1.7	5.6	10.1	11.2
CL 69-886	2.0	1.9	0.2	0.7	4.6	10.3
CL 59-1052	1.9	0.4	2.8	1.9	3.2	3.1
CP 81-1254	1.3	1.7	2.0	0.3	0.1	0.0
CL 72-321	1.2	2.0	1.1	0.4	0.7	1.2
CP 78-1628	1.0	1.5	0.8	0.6	0.7	0.0
All Others	9.2	11.5	4.0	8.5	13.0	12.9

Table 2. Annual percentage of acreage from 1985 through 1994 for present principal sugarcane varieties in Florida.

Variety	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
CP 72-2086	0.0	0.9	1.1	2.1	4.5	6.4	10.7	13.6	13.6	15.5
CL 61-620	6.7	6.4	6.8	7.8	9.8	11.2	12.6	14.8	14.8	15.0
CP 80-1827	0.0	0.0	0.0	0.0	0.4	1.6	3.2	5.7	8.3	13.1
CP 70-1133	24.0	15.0	11.2	10.9	12.3	13.5	14.0	13.1	12.2	9.9
CP 73-1547	1.5	1.8	2.2	2.8	4.2	5.0	5.8	5.5	8.7	9.8
CP 72-1210	35.4	53.9	61.0	56.8	44.1	31.8	20.5	13.7	9.7	6.1
CP 78-2114	0.0	0.0	0.2	0.8	2.5	4.3	5.6	6.1	6.1	5.2
CP 80-1743	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.2	2.7	5.2
CL 73-239	0.0	0.1	0.7	2.3	4.7	8.1	10.7	10.8	8.1	3.6
CL 69-886	0.2	0.2	0.4	0.8	1.6	2.4	2.5	2.5	2.0	2.0
CL 59-1052	7.7	6.3	4.8	3.5	3.0	2.9	2.9	2.9	2.9	1.9
CP 81-1254	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.0	1.3
CL 72-321	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.4	0.6	1.2
CP 78-1628	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.7	1.0

Table 3. Comparison of percentages of 1993 and 1994 acreage for principal sugarcane varieties.

Variety	Combined Plant and Ratoon Cane			Plant Cane Only			Ratoon Cane Only		
	1993	1994	Net Change	1993	1994	Net Change	1993	1994	Net Change
CP 72-2086	13.6	15.5	+1.9	18.7	17.6	-1.1	11.3	14.3	+3.0
CL 61-620	14.8	15.0	+0.2	13.7	12.0	-1.7	15.3	16.2	+0.9
CP 80-1827	8.3	13.1	+4.8	12.8	18.5	+5.7	6.3	10.4	+4.1

Table 3. Comparison of percentages of 1993 and 1994 acreage for principal sugarcane varieties.

Variety	Combined Plant and Ratoon Cane			Plant Cane Only			Ratoon Cane Only		
	1993	1994	Net Change	1993	1994	Net Change	1993	1994	Net Change
CP 70-1133	12.2	9.9	-2.3	8.8	7.1	-1.7	13.7	11.1	-2.6
CP 73-1547	8.7	9.8	+1.1	10.6	9.8	-0.8	7.8	9.6	+1.8
CP 72-1210	9.7	6.1	-3.6	6.0	2.1	-3.9	11.3	7.9	-3.4
CP 78-2114	6.1	5.2	-0.9	7.9	5.1	-2.8	5.4	5.2	-0.2
CP 80-1743	2.7	5.2	+2.5	5.1	8.5	+3.4	1.6	3.5	+1.9
CL 73-239	8.1	3.6	-4.5	1.8	0.3	-1.5	10.9	5.1	-5.8
CL 69-886	2.0	2.0	0.0	0.2	1.9	+1.7	2.7	2.0	-0.7
CL 59-1052	2.9	1.9	-1.0	2.7	0.4	-2.3	2.9	2.6	-0.3
CP 81-1254	1.0	1.3	+0.3	2.3	1.7	-0.6	0.4	1.1	+0.7
CL 72-321	0.2	1.2	+1.0	0.3	2.0	+1.7	0.2	1.0	+0.8
CP 78-1628	0.7	1.0	+0.3	1.1	1.5	+0.4	0.6	0.8	+0.2

Table 4. Actual and percentage acreage of each principal variety in fallow and successive planting systems.

Variety	Hectares		Percent	
	Fallow	Successive	Fallow	Successive
CP 72-2086	7,874	14,976	16.6	18.1
CL 61-620	7,109	7,487	15.0	9.0
CP 80-1827	5,814	16,569	12.2	20.0
CP 70-1133	4,169	4,550	8.8	5.5
CP 73-1547	5,493	8,334	11.6	10.1
CP 72-1210	1,946	469	4.1	0.6
CP 78-2114	2,734	4,824	5.8	5.8
CP 80-1743	4,157	7,012	8.7	8.5
CL 73-239	215	148	0.5	0.2
CL 69-886	109	2,339	0.2	2.8
CL 59-1052	22	519	0.0	0.6
CP 81-1254	857	877	1.8	1.1
CL 72-321	1,998	1,010	4.2	1.2
CP 78-1628	946	946	2.0	1.1
All others	4,076	12,666	8.6	15.3
Total	47,520	82,725	100.0	100.0

Table 5. Actual and percentage acreage of each principal variety grown on muck and sand soils.

Variety	Acreage Specified (%) ¹	Muck Acres Sand	Sand Acres	Muck (%)	Sand %
CP 72-2086	86.5	60,844	625	19.3	1.6
CL 61-620	66.9	46,105	47	14.6	0.1
CP 80-1827	90.5	52,759	1,709	16.8	4.4
CP 70-1133	70.6	17,493	14,677	5.6	37.4
CP 73-1547	96.9	34,743	8,917	11.0	22.7

Table 5. Actual and percentage acreage of each principal variety grown on muck and sand soils.

Variety	Acreage Specified (%) ¹	Muck Acres Sand	Sand Acres	Muck (%)	Sand %
CP 72-1210	84.3	17,423	6,195	5.5	15.8
CP 78-2114	98.9	23,663	121	7.5	0.3
CP 80-1743	99.4	23,458	106	7.4	0.3
CL 73-239	61.2	9,922	215	3.1	0.5
CL 69-886	36.4	3,243	20	1.0	0.1
CL 59-1052	24.2	2,102	15	0.7	0.0
CP 81-1254	92.8	5,362	119	1.7	0.3
CL 72-321	47.9	2,673	0	0.8	0.0
CP 78-1628	81.0	2,342	1,494	0.7	3.8
All others	37.7	12,839	4,955	4.1	12.6
Total	76.3	314,969	39,214	100.0	100.0

¹ Percent of acreage of each principal variety for which muck or sand soil type was specified.

Table 6. Percentage of the total sugarcane acreage of the three most widely grown varieties in Florida since 1985.

Year	Percent	Varieties by Rank		
		First	Second	Third
1985	67.1	CP 72-1210	CP 70-1133	CL 59-1052
1986	75.3	CP 72-1210	CP 70-1133	CL 61-620
1987	79.0	CP 72-1210	CP 70-1133	CL 61-620
1988	75.5	CP 72-1210	CP 70-1133	CL 61-620
1989	66.2	CP 72-1210	CP 70-1133	CL 61-620
1990	56.5	CP 72-1210	CP 70-1133	CL 61-620
1991	47.1	CP 72-1210	CP 70-1133	CL 61-620
1992	42.1	CL 61-620	CP 72-1210	CP 72-2086
1993	40.6	CL 61-620	CP 72-2086	CP 70-1133
1994	43.6	CP 72-2086	CL 61-620	CP 80-1827