

# Variety Trials of Cos or Romaine Lettuce in San Diego

Variety trials with cos or romaine-type lettuce indicate that quicker-maturing varieties will soon be available to San Diego County growers. The breeding line 60,375 was found to mature well ahead of the standard variety, Parris Island. Total yields were similar, and the new variety also has attractive dark-green leaves of good quality and size for an attractive pack.

**C**os or romaine lettuce production is gradually shifting from the Los Angeles basin to San Diego County because of crowding by subdivisions, and the smog problem. This factor and the increasing demand for this popular ingredient in tossed salads resulted in trials for more productive and early-maturing varieties conducted on two San Diego County ranches.

The most widely grown variety of cos at present is Parris Island. While this variety has the much desired dark-green leaves and some tolerance to lettuce mosaic virus, other characteristics are not as desirable. For example, the heads are

likely to be small and do not cap readily. It matures slowly, and the quality is poor because the leaves are less tender than other varieties.

Three recently developed breeding lines were compared with the commercial varieties, Parris Island and Dark Green. Replicated plots were set up in three different trials, at the Segawa ranch in the fall and spring, 1961; and at the Cozza ranch in the winter, 1961-62. Two lines, 60,375 and 60,387 were from an original cross between Parris Island and a selection from a dark, green cos-type imported from Turkey (P.I. 167,150). A downy mildew resistant line (1047), developed jointly by the Texas Agricultural Experiment Station and the U. S. Department of Agriculture, was also used in the tests. The 1047 line is a selection in the fifth generation from an original cross of P.I. 167,150 with a good horticultural cos-type synthesized from crosses involving Dark Green, Giant Summer and Grand Rapids.

The data reported in Tables 1 and 2 shows that in the 1961-62 winter trial on the Cozza ranch, and the spring trial on the Segawa ranch, there was a significant difference among varieties in the number of crates per acre from the first pick—and the percentage of the crop harvested from the first pick. In the Cozza trial there was also a significant difference in the percentage of heads harvested during the second pick. In the fall trial on the Segawa ranch, there were no significant differences among any of the 12 measurements recorded. The general trend of yields, however, was similar to the other two trials.

In the Cozza trial, Dark Green and 60,375 produced the highest early yield, but were not significantly different from each other. Dark Green was not included



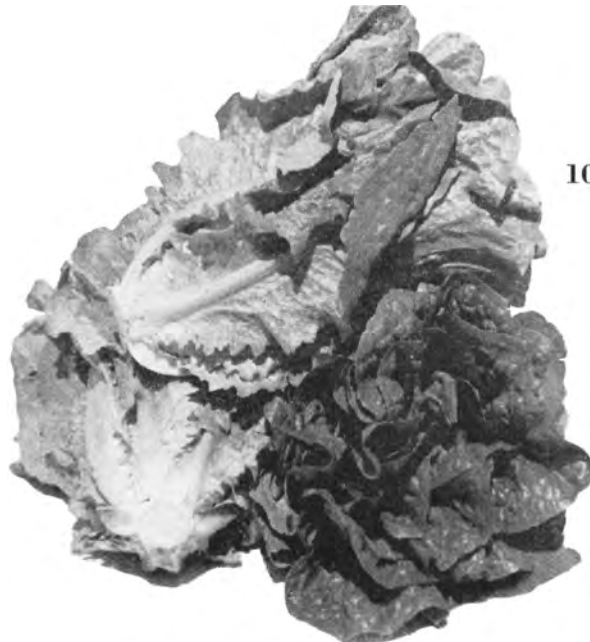
60387

Cos lettuce—breeding lines 60387; and 60375; mature, marketable heads.



60375

# o County



1047

Cos—breeding line 1047 and Parris Island; mature, marketable heads.

PARRIS ISLAND



TABLE 1. COS OR ROMAINE LETTUCE VARIETY TRIALS—COZZA RANCH—WINTER 1961-62—PLOTS PICKED AT SEVEN-DAY INTERVALS

	Dark green	#60375	#60387	Parris Is.	#1047
Crates per acre					
1st pick* ..	367.6	352.0	190.4	242.8	76.0
2nd pick† ..	228.0	256.2	292.8	350.6	322.4
3rd pick† ..	250.8	198.8	239.0	186.6	293.8
Total† ..	846.4	807.0	722.2	780.0	692.2
Percentage of crop					
1st pick* ..	43.66	42.92	29.25	29.87	11.09
2nd pick* ..	27.14	31.17	41.80	44.95	48.92
3rd pick† ..	29.20	25.91	28.95	25.18	39.99
Total harvested†	96.2	91.8	80.2	90.0	89.4

\* For tables 1 and 2 where there is a significant difference among means, those treatments with a common underline are not significantly different.

† Indicates no significant differences.

TABLE 2. COS OR ROMAINE LETTUCE VARIETY TRIALS—SEGAWA RANCH—SPRING 1962—PLOTS PICKED AT SEVEN-DAY INTERVALS

	#60375	#1047	Parris Is.	#60387
Crates per acre				
1st pick* ...	440.25	361.25	212.50	119.00
2nd pick† ..	461.25	468.75	439.25	420.00
3rd pick† ..	195.25	227.75	345.00	357.00
Total† ...	1096.75	1057.75	996.75	896.00
Percentage of crop				
1st pick* ...	40.35	34.45	21.78	13.08
2nd pick† ..	42.22	44.42	44.02	47.68
3rd pick† ..	17.50	21.12	34.25	39.22
Total harvested†	90.82	88.60	83.62	82.28

breeding line 60,375 in planning their planting program. The breeding line, 1047, appears to be too erratic for consideration; although in seasons when downy mildew is a problem, it might possibly be more satisfactory than other varieties in the test.

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in the other two trials. This is a high-yielding variety of excellent quality, but it is not used extensively, primarily because it is very susceptible to damage by lettuce mosaic virus. In the Cozza trials 60,375 produced the highest early yield and the highest total yields.

The downy mildew resistant line, 1047, reacted differently in each trial. In the Cozza trial it was significantly lower than other varieties in early yield. In the 1961 fall trial at the Segawa ranch it was not significantly different from other varieties. In the spring trial at Segawa ranch, 1047 was significantly higher than Parris Island and 60,387, and lower than 60,375, but not significantly so. The other line, 60,387, was comparable to Parris Island; in no category was it significantly different from this variety. The individual head weight was extremely uniform among the varieties and breeding lines tested. There were no significant differences among them.

Test conclusions indicate that when seed becomes available, San Diego County growers should consider using

Cos lettuce trial plots (spring), Geo. Segawa ranch, Mission Valley, San Diego County.

