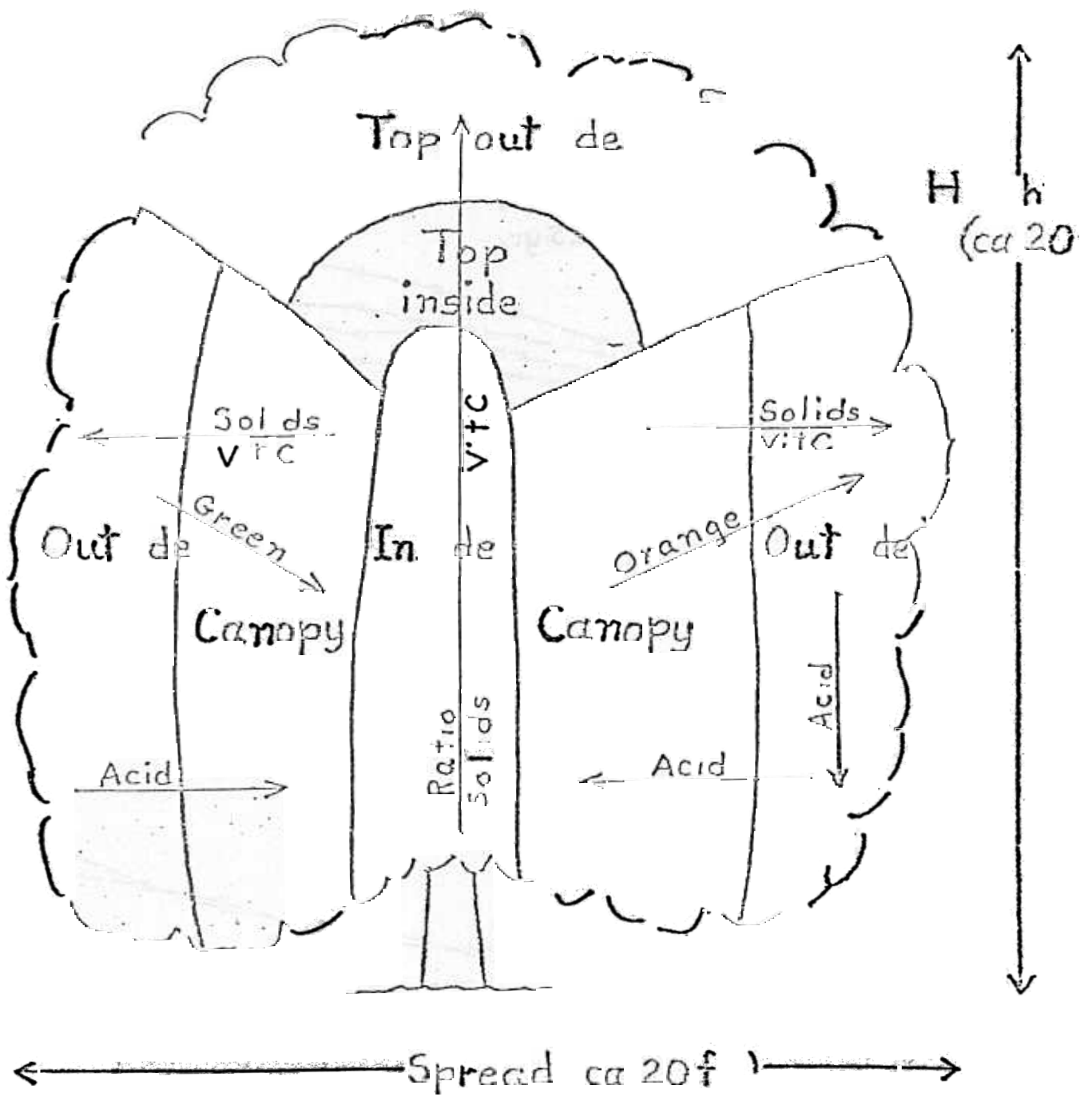


Figure 13c. Comparison of solids-acid ratios of lead arsenate sprayed (1 lb per 100 gal) and unsprayed 'Marsh' and 'Duncan' grapefruit on rough lemon (RL) and sour orange (SO) stocks at 27 locations. (Values are averages for 1939-40 through 1942-43 seasons. Sample dates are - about 4 days.) (Harding FSHS 78. 1945.)



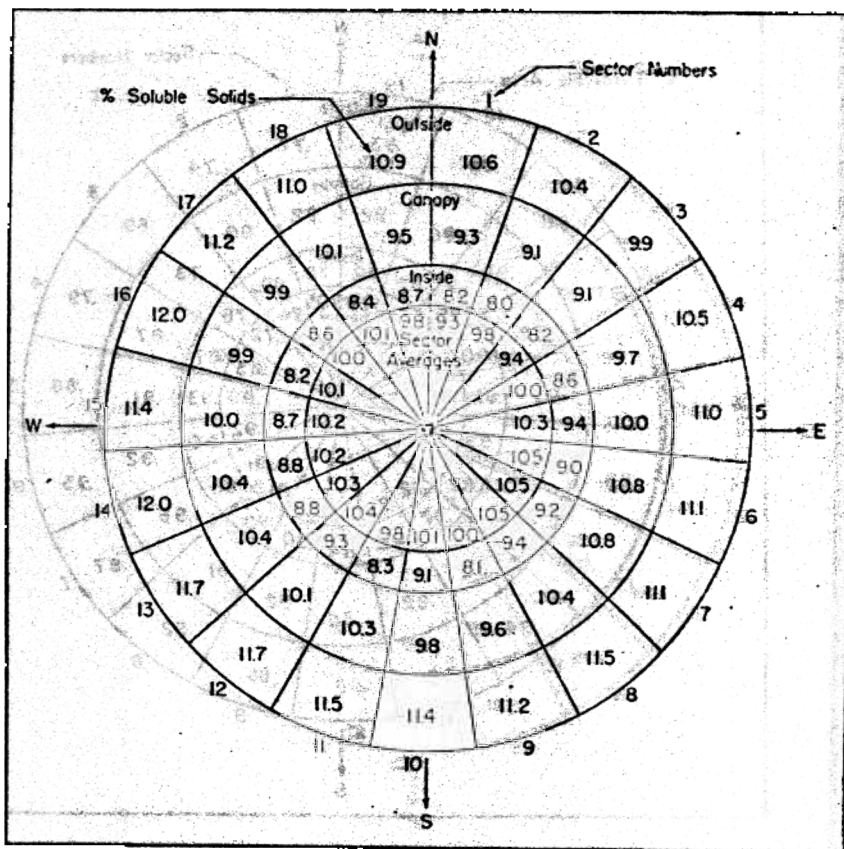


Figure 15. Effect of direction of exposure and shading on total soluble solids (%) of 'Valencia' oranges (Sites and Reitz, 1949a).

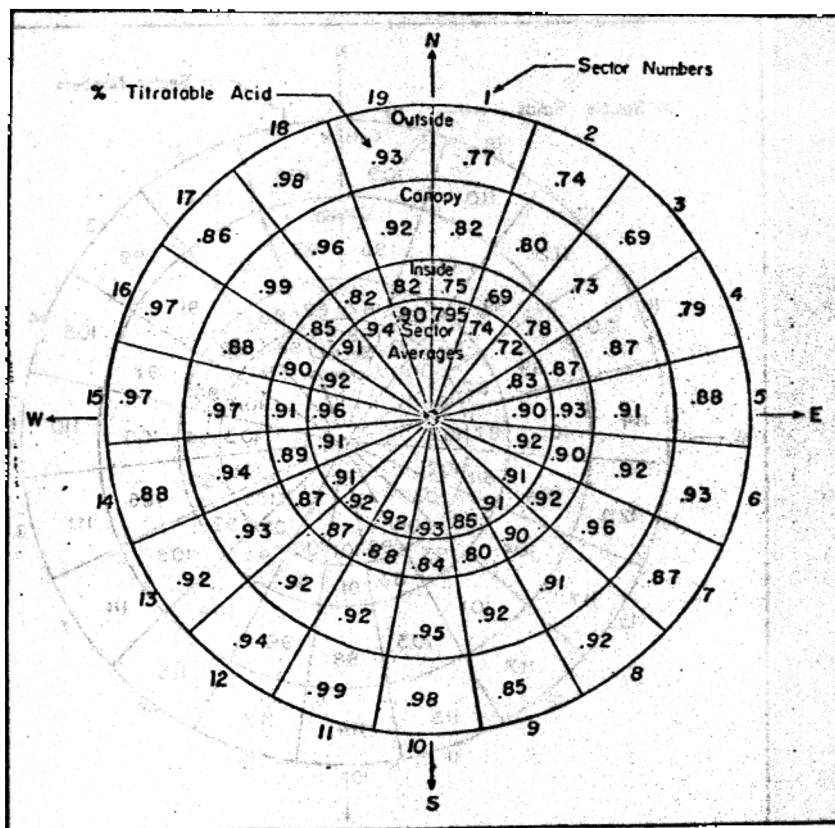


Figure 16. Effect of direction of exposure and shading on titratable acid (%) of 'Valencia' orange (Sites and Reitz, 1949b).

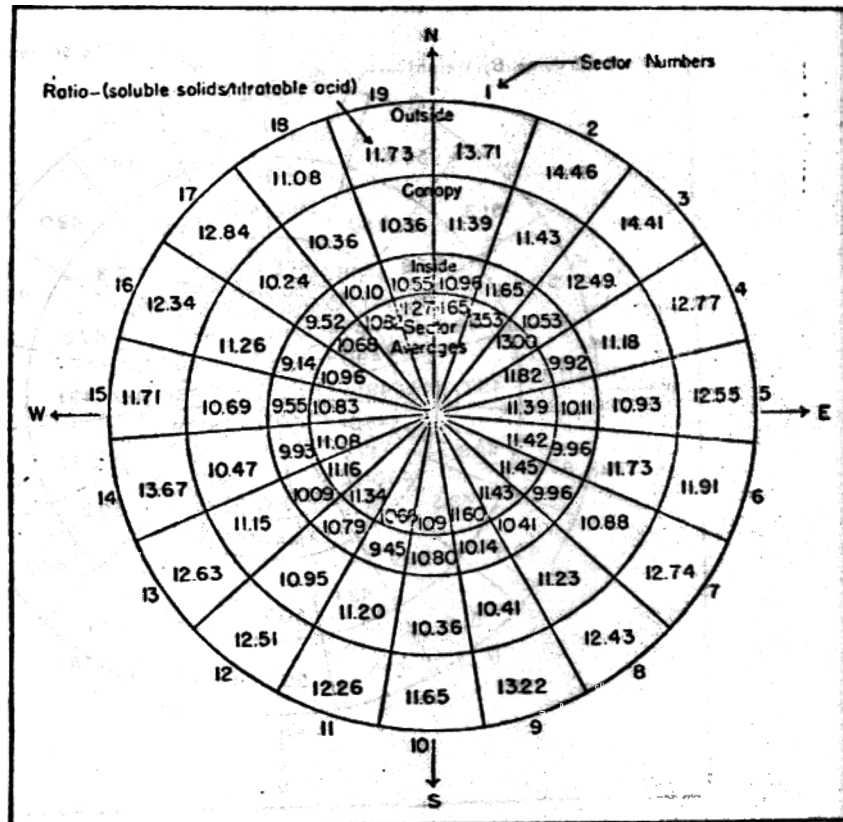


Figure 17. Effect of direction of exposure and shading on total soluble solids: titratable acid ratio of 'Valencia' oranges (Sites and Reitz, 1949b).

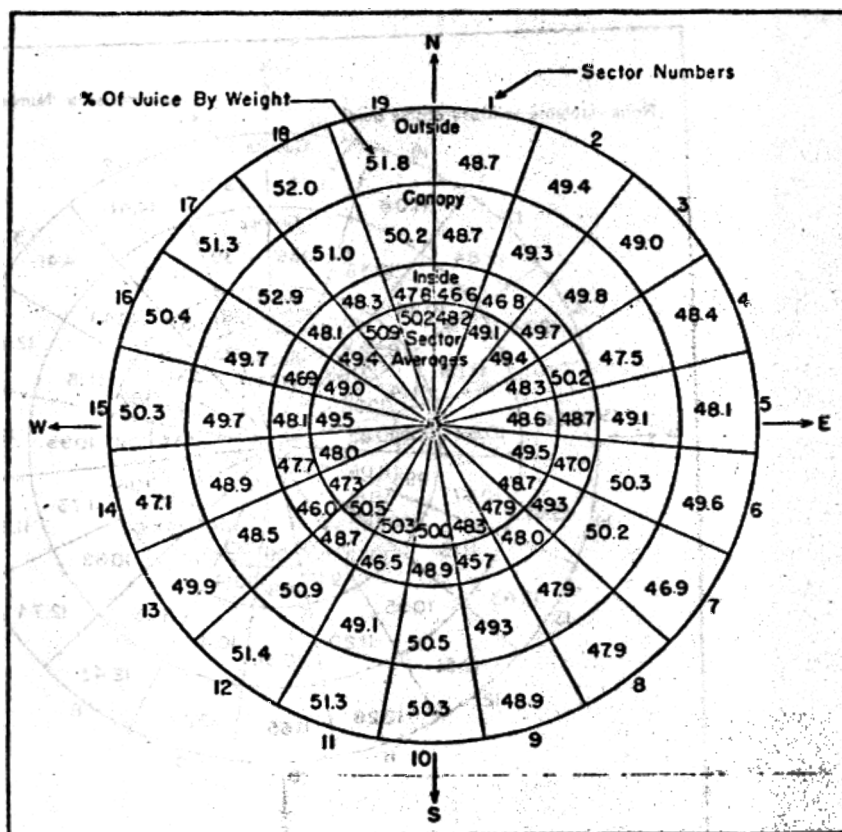


Figure 18. Effect of direction of exposure and shading on juice content (% by weight) of 'Valencia' oranges (Sites and Reitz, 1950).

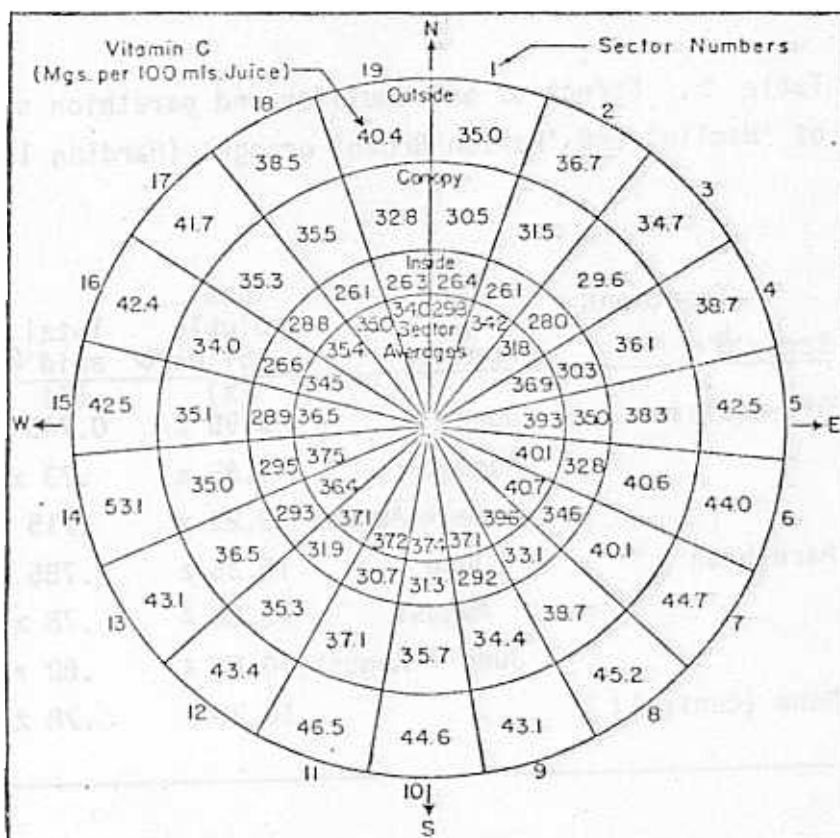


Figure 19. Effect of direction of exposure and shading on vitamin C (mg per 100 ml juice) of 'Valencia' oranges (Sites and Reitz, 1950).

Table 9. Effect of oil-emulsion and parathion sprays on composition of 'Hamlin' and 'Parson Brown' oranges (Harding 1953)^a

Treatment Spray [↓]	Applied	Total soluble solids [Ⓢ] (%)	Total acid [Ⓢ] (%)	Solids- acid ratio	Juice per fruit [Ⓢ] (%)
Oil-emulsion	June	9.95 x	0.745 x	13.4	56.5 z
	August	9.65 x	.73 x	13.2	56.5 z
	June + August	9.25 x	.715 x	12.9	56 z
Parathion	June	10.35 z	.785 z	13.2	56 z
	August	10.30 z	.78 z	13.3	55.5 y
	June + August	10.55 z	.80 z	13.2	55 x
None (control)		10.20 z	.78 z	13.1	56 z

^a Values are means of 48 sets of measurements, 40 of 'Hamlin', 8 of 'Parson Brown', from 4 sampling dates, 6 locations and 1949-50 and 1950-51 seasons. x different from z at .01 level and y different from z at .05 level (Calculated on basis of LSD)

^b 1.25% cream-type (90%) oil or 2 lb 15% WP parathion plus 5 lb wettable sulfur per 100 gal. applied as thorough coverage.

^c Values rounded to nearest 0.05, 0.005 or 0.5, respectively.

Table 10. Total soluble solids, total acid, solids-acid ratio and juice content of 'Valencia' oranges in 5 light classes (Sites and Reitz, 1949, 1950)^z.

Constituent	Light Class				
	Outside	Canopy	Inside	Top Outside	Top Inside
Total soluble solids (%)	(500)	(580)	(321)	(250)	(137)
Average	11.08	10.01	8.70	11.21	9.93
Minimum	8.40	5.90	6.00	9.50	8.50
Maximum	13.40	12.50	11.75	13.50	12.00
Total acid (%)	(509)	(582)	(323)	(254)	(135)
Average	0.882	0.911	0.858	0.877	0.859
Minimum	0.50	0.54	0.58	0.59	0.57
Maximum	1.37	1.39	1.25	1.28	1.25
Solids:acid ratio	(509)	(582)	(323)	(254)	(135)
Average	12.56	10.99	10.14	12.78	11.56
Minimum	8.54	4.80	5.71	9.69	8.92
Maximum	21.00	16.50	14.17	18.47	16.41
Juice content (% by weight)	(510)	(579)	(323)	(254)	(135)
Average	49.60	49.60	47.70	49.31	48.68
Minimum	36.7	35.8	32.7	43.5	41.1
Maximum	65.8	59.9	65.1	55.2	55.2

^zValues in parentheses are number of fruit sampled; total number of fruits were 1788, 1803, 1803, 1801 for total soluble solids, total acid, solids:acid ratio and juice content, respectively. Correlations of all light classes with total soluble solids and ascorbic acid, inside fruit with titratable acid, and outside fruit with juice content were highly significant (0.01) and of canopy and all fruit, significant (0.05), as determined with Student's "t" test.

Table 11. Effects of spot-picking on average total soluble solids (Modified from Sites and Reitz, 1949a).

<u>Section of tree picked^a</u> (light class)	<u>Proportion of total crop</u> (%)	<u>Average total soluble solids</u> (%)
	100.0	10.24
T0, TI, O, C	82.	10.57
O + C + I	92.3	10.26
O + I + TI	67.6	10.34
O + C	74.4	10.64
O	41.9	11.12
O + TI + C - 2 ft	79.9	10.60
O + TI + C - 4 ft	77.3	10.64
T0 + O + TI + C - 6 ft	73.9	10.69
T0 + TI + C - 6 ft + O - 2 ft	73.6	10.70
T0 + TI + C - 6 ft + O - 4 ft	73.3	10.70
T0 + TI + C - 6 ft + O - 6 ft	70.4	10.73

^a Abbreviations: T0 = top outside, O = outside, I = inside, TI = top inside, C = canopy, C - 2ft = canopy less lower 2 ft, O - 2 ft outside less lower 2 ft, etc.

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