

Carnations Can Be Grown Wet IF the Soil Is Adequately Supplied With Air

By Jorge Caparas and W. D. Holley

Red Sim Carnations were grown from September, 1954 to May, 1955 at Lark moisture tensions of zero and 30 without measurable differences in yield, quality or average keeping time of the cut flowers.

With the development of Greco, Braun and other sprinkler-type watering systems, it is possible to water carnations frequently with little or no extra cost. Any irrigation system that depends upon capillarity for lateral movement of the water works best on moist soil. To ascertain the tolerance of carnations for wet soil, plots were planted with rooted cuttings on September 16, 1954. Two plots were water-

ed daily with a plastic hose sprinkler. The other two plots were watered with the same sprinkler arrangement when the soil moisture tension reached 30 on Lark tensiometers (approximately 9 inches of mercury). Previous to planting the soil was treated with krillium to insure good soil structure and therefore an everpresent supply of oxygen in the soil.

The accompanying table presents the yield and grade of flowers produced from these moisture plots from March to May. The small differences are not great enough to be significant when analyzed statistically.

Yield and grade of Red Sim carnations grown at two moisture tensions.

Moisture tension	Split and Standard			Total	Quality index
	Short	Standard	Fancy		
Zero	17	159	214	390	4.46
Lark 30	18	168	183	369	4.41

Cut Flower Keeping

Repeated tests throughout the duration of the crop showed the average keeping life of the cut flowers to be almost identical.

Implications

Carnations are highly tolerant to wet soils IF there is adequate soil air for the plant roots. From previous studies we know that daily watering on a packed soil will cause chlorosis and thin plants within a short time. On the other hand, sprinkler-types of irrigation do not pack the soil, hence much better aeration is possible when these are used. If a crop can be started in a soil with loose structure, frequent sprinkler irrigations on moist soil will give the optimum distribution

of water. The first signs that too much water is being applied to any soil will be slight yellowing of the plants. Should this occur, reduce the frequency of watering slightly to allow better aeration between irrigations.

Your editor,
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