

Temperature Preceding Cutting Affects Rose Color

From 1950 to 1952 Roger Farmer studied the effects of light intensity on Better Times roses. In connection with these studies, he kept temperature records and correlated the mean day temperatures with the average color of roses cut each day. He found that average day temperatures for at least 3 days previous to cutting affect rose color. The correlations which he found between rose color and the various temperatures follow:

- 0.4356 for the temperature of the day the flower was cut,
- 0.4457 for the temperature 1 day previous to cutting,
- 0.4195 for the temperature 2 days previous to cutting, and
- 0.3333 for the temperature 3 days previous to cutting.

These correlations show that the higher the temperature, the less intense was the color. There is a pronounced periodic effect of previous tempera-

tures on rose color, with a tendency toward decreasing effect as time elapses after a given temperature has prevailed.

Note: A perfect correlation would have been either $+1.0$ or -1.0 . However, since no single factor is involved in biological processes, we never get perfect correlations. The closer we approach 1.0 the better we can pin a given effect to one factor. Many factors enter into the processes of color formation and destruction and temperature is only one of these. An estimate of the percentage of influence being exerted by the temperature one day previous to cutting may be obtained by squaring the correlation coefficient for that temperature (-0.4457). Of all the factors effecting rose color, the mean temperature one day previous to cutting is producing an average of approximately 20 per cent of this effect.

Your editor,

W. D. Holley