IN COOPERATION WITH COLORADO STATE UNIVERSITY
Doris Fleischer, Executive Secretary
Bulletin 111 655 Broadway, Denver, Colorado April & May 1959

Continual Pruning of Roses

by W. D. Holley

The producer of greenhouse roses has recently been at a disadvantage in that most cultural improvements which increase yield have been pretty well exploited. Until 1950 rose growers were able to keep up with rising production costs by increasing yields through the use of better insecticides, fertilization practices, and better general cultural practices. Within the past five years carnation yields have continued to increase, especially since greenhouse cooling and disease free planting stock have exerted their influence. On the other hand, rose yields have remained stable during this period of rapidly rising costs.

Simple arithmetic helps us with a solution to part of this problem. If we can cut roses 52 weeks a year instead of the customary 46 or 47, we should be able to produce more roses on the same number of plants. Beginning in early 1958 a system of continual pruning was designed and started on four benches of roses of the varieties Red Delight, Pink Delight, Gorgeous and Better Times. These plants have been cut steadily since the summer of 1957 and are producing good quality roses at this time.

The Method Described

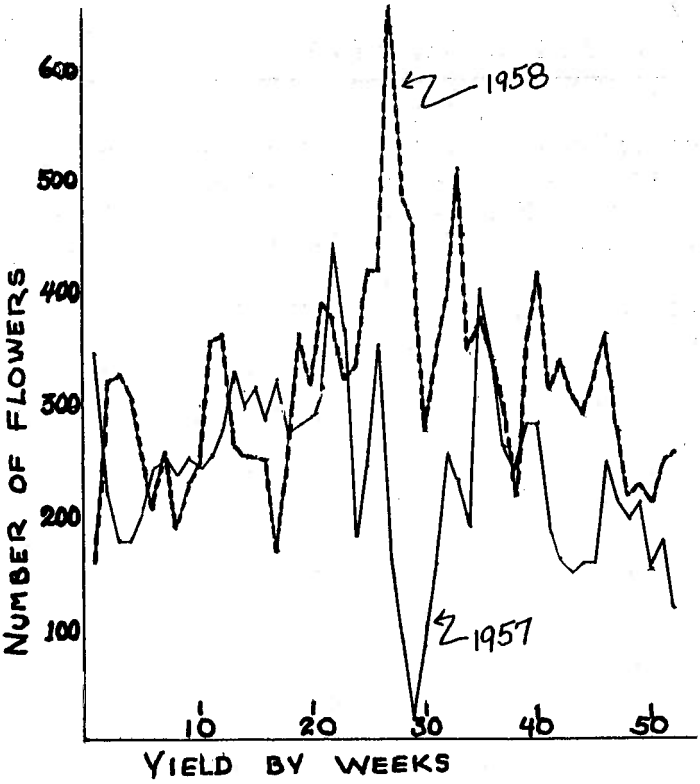
Two limitations are used as an aid in deciding when to cut a cane down to a lower level. Cane diameter is the most important of these and is based on the observation made by all experienced rose growers that as a cane grows older, each succeeding branch is smaller in diameter. When a cane has decreased in diameter to a certain minimum, it is cut back to heavier wood to start growth anew. The second limitation and a lesser one, is height. When a large cane gets so tall the cutter reaches it with difficulty, it is cut back to a better working level.

That small canes produce short-stemmed roses was brought out clearly in a recent paper by Harry Kohl (1). He found that one could expect almost a 10-centimeter increase in stem length for each millimeter increase in mother cane diameter. Flower size did not correlate with mother cane diameter, but was attributed to numerous cultural factors. In other words, as the cane diameter decreases it produces shorter and shorter roses. Whether we cut large flowers depends upon temperature, light, fertility, water, etc.

Our continual pruning method is based on how we cut the flowers. All wood on rose bushes is separated into thin (around 1/8 inch in diameter) and good (canes 3/16 inch and up). If wood is good, we cut just above the 2nd 5-leaflet eye year around, unless the rose is high on the plant. If high, cut just above the first 5-leaflet (October to February), or to the knuckle (March to September).

If wood is thin and the position of the rose is lateral, the rose is cut off at its origin or juncture with the mother cane. On thin wood in a terminal position, cut back to good wood, which may be fairly low in the plant. Blind wood is treated as thin wood.

In general, canes which produce thin wood are cut back to a lower level and the breaks from these are soft-pinched once before cutting flowers again. Large canes are often cut back to the top wire support only, and are not soft-pinched before taking the next flower.



Variety	1957 Yield in fls/ sq ft	1957 Mean stem length	1958 Yield in fls/sq ft.	1958 Mean stem length
Pink Delight	23.7	18.0	27.2	18.6
Red Delight	21.3	15.2	32.8	16.2
Better Times	24.6	14.6	34.9	14.7
Gorgeous	28.0	16.8	36.2	16.9

Yields Compared

During the calendar year 1957 four benches, each containing 125 square feet and a different variety, were pruned by the customary gradual cut-back system in May and June. The same plants were pruned continually during 1958. Total yields for the two years are plotted by calendar weeks in the accompanying chart. The number of roses cut from the four benches was essentially the same each year until mid-June. Throughout the summer, fall and early winter yield from the continually pruned plants was much greater, an increase of approximately 30 per cent for the year. Average stem length for all the roses cut was as good or better in 1958 (see table).

Discussion

Continual pruning opens the possibility of increasing rose yields from June to the first of the year, but eliminates the normal reduction in yield accomplished in June and July by pruning. Although these summer and fall roses are among the finest we can grow in Colorado, markets would be required for them. June planting of budded or grafted stock with the aid of mist cooling could be used for reducing the supply of summer roses and help to more evenly distribute the yearly production curve. The soft pinching of heavier canes (1/4" diameter and larger) on August 8 and September 15 is useful in starting a cycle to flower for November 1, Christmas, and Valentines Day.

(1) Literature cited - Kohl, Harry. Some factors influencing flower weight and stem length. Calif. State Florists' Assn. Mag. VIII:8, March 1959.