

Mid-Winter Pinch of Blind Shoots in Rose

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The percentage of blind shoots per plant increases during mid-winter, and a primary factor behind this is reduced available light. Evidence suggests that winter light intensities reduce food production to a level insufficient to support all shoots. Practice among many growers is to remove blind stems because they shade flowering buds on the productive canes. Is there any means to force some of the stronger, larger blind stems back into production? Rather than

removing the blind shoots, should they be pinched to promote salable flowers in the future?

Once blind shoots mature, they often force continued growth from their tops. If one bud grows, it may return a good flower. Commonly, two or more buds grow and produce short stems of poor quality that cannot be sold. When making timing pinches during December to February, Holley (1) found that by allowing the stem to stay on the plant until almost petal drop before making the pinch, yields of Forever Yours roses increased by 17% during the following

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from the larger canes (Table 2). By pinching the larger stems, better returns may be expected. One must compare the yields from pinching all blind stems to those from pinching only the larger ones, and consider the additional labor required to pinch all smaller canes. In terms of dollar comparison, pinching only those larger blind stems and saving labor costs by not pinching the small ones might be better.

When Should Pinching Be Done?

When P_1 was made, shading from the rest of the plant canopy on these pinches was relatively heavy. However, harvesting flowers removed this shading within 10 days, allowing maximum light to strike the eyes and newly growing shoots on the blind stems of this test. When shoots are an inch or so long, flower initiation occurs. When most of these new P_1 shoots were at that stage, the returning shoots from the flowering stems were still not high enough to significantly reduce light intensities to those returning from the P_1 pinches. If reduced light is an indirect cause of abortion of floral primordia, shoots in the development state of P_1 should have shown maximum potential for flower return.

When P_2 was made, maximum light was present, i.e., no shading from other stems. However, at about the time initiation was to occur on most all of the returning P_2 shoots, shading was somewhat greater than the P_1 shoots had at the same stage of development. This was because a number of the returning shoots on the flowering stems adjacent to the P_2 shoots had begun to elongate to about half or more of their mature full length.

However, no light readings were taken to compare the degree of exposure of the test shoots to light energy at the time of their floral initiation. Even

though the decrease from about 68% return from P_1 to 60% from P_2 was not significant at the 5% level, the trend suggests the decrease might be attributed in part to the additional shading the P_2 shoots had during their early development. If this is correct, the pinching of blind shoots should be timed so that when the newly developing return shoots initiate floral primordia, maximum light energy is present. Time from P_1 pinches was 48.0 days, and for P_2 , 49.3 days.

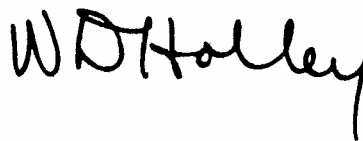
Summary And Conclusions

This work was done in a relatively high mid-winter light intensities climate. The results may not be the same in areas where solar radiation is lower at this time of year. Overall returns from pinching blind stems with diameters greater than .14 inch were about 65%. In all probability, pinching stems with smaller diameters would not prove economical. Evidence indicates timing these hard pinches so that when floral initiation of the returning shoots occurs, maximum light energy is available. This would be from 7 to 14 days prior to harvesting adjacent flowers surrounding these pinches. Also, regardless of the light intensities available to the returning shoots, no significant differences exist in the time from pinch to cut.

Literature Cited

1. Holley, W.D. 1973. "Pruning and development of roses." *Colo. Flower Growers Assn. Bull.* 273.

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