

## ROSE PRODUCTION

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Three major experiments on roses are underway at Cornell at the present time. A comparison of surface watering, injection, and constant water level is now in the fourth year. Previous experiments have shown no differences in production, provided the same moisture content of the soil was maintained. This experiment shows that surface watering gave slightly more production than either injection or constant water level. Surface watered plots were watered each day to maintain a high moisture content in the soil, similar to that obtained by the other two methods. It is difficult, if not impossible, to surface water so frequently by common methods. The average production of flowers per plant per year was 33 for constant water level, 37 for injection, and 39 for surface watering.

Another major experiment is on concentration of calcium and potassium. The best concentration for calcium appears to be between 100-150 ppm (Spurway), and for potassium between 20-40 ppm (Spurway). Marked symptoms of potash deficiency occurred near the end of the first year on the plots with the lowest potassium concentration (5 ppm - Spurway). The symptoms of this deficiency are considerably different from those ordinarily attributed to lack of potassium.

The third major project, which was started a year ago, is on methods of cutting. The data so far shows that cutting to the first three leaflet leaf gave poor production. Cutting to the second five leaflet leaf alternately with a knuckle-cut gave poor production in the winter but high production in spring and fall. Cutting to one five leaflet leaf gave lower production than cutting to two five leaflet leaves. Of the above methods, cutting to two five leaflet leaves shows best production during the winter months. This work is being continued and supplemented by other suggestions on cutting arrived at following this year's work.