Food Supply Changes During the Day

Cuttings of Crowley's Pink Sim were taken each 2 hours from 8am to 6 pm on several different dates during the early part of 1953. Fig. 2 shows a typical food gain and loss picture for 2 consecutive days, with the average light intensity for those and the previous day. Percentages shown on the graph are average for 3 determinations. The food supply in cuttings increased on both days until 4 pm or later. The nightly decrease was greater following May 27 than following May 28. All three days were partly cloudy with heavy clouds after 2 pm on May 27 and after 4 pm on May 28. On both these days and in many other trials the maximum light intensity preceded the maximum food accumulation by several hours. The loss of food at night was always greater following a cloudy afternoon than following a clear one.

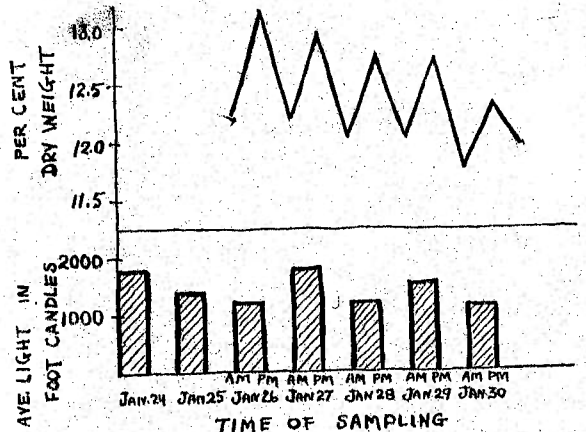

Fig.1. Dry weight percentages of White Sim carnation cuttings taken twice daily from January 26 to January 31, 1953.

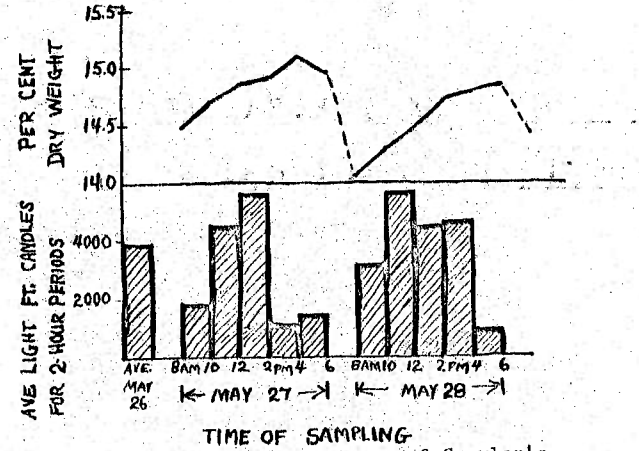

Fig.2. The dry weight percentages of Crowley's Pink Sim carnation cuttings taken every two hours during May 27 and 28, 1953.