

Abstract:

The effects of low concentration ethephon (10, 50, and 200mg/L) applied 25 days before the fruit harvest and high concentration ethephon (267, 500, and 1000mg/L) and low concentration GA (10 and 30mg/L) applied 2 days and 4 days before the harvest on abscission of the fruit and leaves of blackcurrant cv. 'Ben Lomond' were studied. The results indicated that the amount of fruit fall rate reached 98% with the application of ethephon at 267mg/L or 267mg/L + GA 10 or 30 mg/L 2days before the fruit harvest, and the amounts of early fruit and leaf fall were very low. However, the amount of fruit fall was very high in 500mg/L and 1000mg/L treatments and the higher early fruit and leaf fall were also obtained. The results also indicated that the application of low concentration GA could reduce the negative effects of the ethephon application and would not influence the rate of fruit fall. Compared with artificial harvesting, the ethephon chemical harvest could increase work efficiency 5 times and decrease the cost by 62%. The amount of fruit fall was very low (below 60%) and no unexpected effects of the chemical were found with the application of ethephon once or twice 25 days before fruit harvest.