

Abstract

Fruits and vegetables were treated after harvest with dips or sprays of nanomolar concentrations of 1-triacontanol (TRIA) and 9- β -L(+) adenosine to determine the effect of these growth substances on the brix, total acidity, and the brix to acid ratio. 9- β -L(+) adenosine is the second messenger elicited by TRIA.

Both chemicals decreased the acidity and the sugar/acid ratio of tomatoes. Both chemicals increased the brix of strawberries in one test, but high concentrations of 9- β -L(+) adenosine decreased the brix in a second test. In one of two tests with carrots, TRIA increased the brix. Sweet cherries responded to both chemicals. TRIA increased the brix of 'Idared' apples and decreased the acidity of 'Mutsu' apples.

The stage of maturity at treatment, chemical concentration applied and length of storage influenced the response of the crop to TRIA and 9- β -L(+) adenosine. Several species showed no post-harvest response to treatment.