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**Effect of methyl jasmonate on sugarbeet yield and storage properties.**

Methyl jasmonate is an endogenous plant hormone that induces plant defense mechanisms against environmental stresses and pathogens. Applied exogenously, methyl jasmonate provides protection against a wide array of pathogens and environmental stresses in a variety of crop plants and plant products. Beneficial effects of exogenous methyl jasmonate treatment, in the absence of stress, have also been documented, including increased tuber weight of potatoes, enhanced sugar content of raspberries, and reduced shoot growth and sugar losses in stored radishes. To determine whether methyl jasmonate application has any beneficial effects on production or storage properties for the sugarbeet crop, field studies in which methyl jasmonate was applied to the crop at different stages of development were conducted in 2014, 2015, and 2016. Methyl jasmonate was applied at concentrations of 0.01 or 10 µM as a single treatment in June, July or August. Plots additionally received a 0 or 9 oz acre$^{-1}$ Headline™ treatment, applied approximately 30 days before harvest, to allow interactions between methyl jasmonate and Headline, a fungicide with purported hormone-like properties, to be evaluated. At harvest, root yield, sucrose content, recoverable sugar per ton, recoverable sugar per acre, and sucrose loss to molasses were determined. Storage properties including respiration rate, sucrose loss in storage, recoverable sugar loss in storage, and invert sugar accumulation were also determined using roots stored at 5 °C and 95% relative humidity for up 90 days.