GROWTH CONTROL OF LEAFY VEGETABLES WITH S-ABSCISIC ACID (S-ABA) FOR IMPROVED QUALITY AND HARVEST MANAGEMENT

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Consumption and therefore production of leafy green vegetables and salad mixes have been increasingly popular. Grower price of leafy vegetables, e.g., spinach, for fresh consumption is primarily determined by leaf size. Higher commercial value is associated with smaller leaf size (<3 inches), known as baby leaf. Larger leaf size is of reduced commercial value and prone to mechanical injury. Optimum harvest time is very narrow in leafy vegetables due to their fast growth (23-38 day production cycle). Warm/hot growing temperatures that is characteristic of the major growing areas of the US (i.e., CA, AZ) often speeds up maturity to faster than planned. There is a strong need to hold leaf size for several days to keep value (i.e., in baby leaf stage) and time harvest. Recently, S-ABA has been proven to effectively control leaf growth and keep leaf size of spinach at high commercial value level for 3-5 days, without side effects. There is an excellent crop safety with other leafy green vegetables with spray applications of S-ABA up to 2,000 ppm concentration (e.g., red leaf lettuce, baby green Romaine, Lolla rosa, mizuna, tango, beet tops, Swiss chard, parsley). This study gives a report on the potentials of S-ABA use in leafy green vegetables from a series of field trials conducted under commercial production conditions. Under the trade name ConTego™ SL, S-ABA has recently received federal registration, and may become an important tool for leafy green vegetable producers to control leaf size, time harvest and ultimately improve grower profitability.