

### Abstract:

A preliminary model for Kalanchoe development and growth is presented. It considers fresh mass and developmental stage of individual main axis phytomers, side shoots and generative parts per (main and side shoot) axis in relation to light and temperature. Rates of change of state variable values are determined by growth, development and biomass partitioning according to relative sink strength of individual organs. Activation of lateral buds, leading to the formation of side shoots, is described as depending on source / sink and stage of development. Potential growth of generative organs was made proportional to the average mass per phytomer in each (main and side shoot) axis. The model could be calibrated to produce reasonably good fits of simulation results to data collected in an early season cultivation trial involving differential light and temperature treatments. The results are discussed in terms of target-driven production management, and of possible regulatory mechanisms available to the plant to co-ordinate growth and development.