Abstract

Calandiva$^{®}$ is an ornamental species which has been outstanding in the pot flower market due to its beauty and colorful inflorescences. The objective of this study was to verify a mathematical procedure which allows the description of leaf growth and number of leaves of the Calandiva$^{®}$ associated with the growing degree day (GDD) accumulation. Two experiments were performed with *Kalanchoe blossfeldiana* cultivars 'Bisset' (Calandiva$^{®}$ Pink) and 'Latin Lover Rio' (Calandiva$^{®}$ Orange). Cuttings were planted and cultivated in a plastic pot (11 cm). The experimental design used was randomized blocks with 4 replicates. Each useful plot was consisted of 3 plants, totalizing 12 plants per evaluation. At each fifteen days period, during 105 days, the leaf area was determined in both experiments. Two models which describe the relation between the leaf growth and the accumulation of GDD in Calandiva$^{®}$ were developed. For the development of these models, cultivating data of the Bisset cultivar were used and the validation was performed using the Latin Lover Rio cultivar. These mathematical models were validated and are likely to be used in Calandiva$^{®}$ to correlate leaf area and number of leaves with growing degree day. The model for the number of leaves and leaf area for Calandiva$^{®}$ shows an RMSE (Root Mean Squared Error) of 0.87 leaves and 281.35 cm^{2}, respectively.