

Abstract

Customer needs of a different flower are increasing over time worldwide. Many bulbous plants including ranunculus fit the category of a different flower because they are not known. Ranunculus (*Ranunculus asiaticus* L.), commonly known as Persian Buttercup or Asiatic Crowfoot, is a bulbous plant native of the cool Mediterranean basin region. The growth of GA 3 and shade - treated ranunculus cutflower in relation to light intensity (LI) and temperature under tropical high altitude conditions is not documented. An experiment was conducted to determine these relationships. The fixed factors were four GA 3 levels (0, 100, 500, 1500 mg/L) and three shade levels (0%, 40% and 80% shade). The experiment was set up in split plots arranged in randomised complete block design, replicated three times and repeated once. Tuberos roots were soaked in the respective GA 3 solutions for 10 minutes followed by planting under the shaded plots. Data were recorded from sprouting through tuberous root formation stages. The relationship of sprouting was negative quadratic with LI, positive linear with soil temperature (ST) in season 1 (cool), and negative linear with ST in season 2 (warm). The relationship of time to flower formation with LI was negative linear in season 1 and positive linear in season 2. The relationships of flower stem length with LI and air temperature (AT) were negative linear. The relationships of flower buds per stem, flower stem diameter, flower head diameter and tuberous root fresh weight with either LI or AT were negative quadratic. Therefore, shade modifies both LI and temperature that then interact in influencing growth of GA 3 -treated ranunculus. About 40000 lux LI and moderate seasonal temperature, both prevailing under 40% shade are ideal for best growth of ranunculus. Shade should be applied as follows: 0%, 40% and 80% in cool, warm and hot seasons, respectively.