

## عنوان مقاله:

Evaluation of some changes in biochemical parameters of Iranian lily (*Lilium ledebourii* var. *Kelardasht Salehi*) bulbs during a growth and development cycle

## محل انتشار:

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## خلاصه مقاله:

Understanding the relationships between biochemical contents and morpho-phenological aspects of a plant during life cycle would be helpful for doing precise agricultural practices through its cultivation. In the present study, various biochemical parameters were evaluated in relation to bulb storage, shoot growth and florogenesis in Iranian lily (*Lilium ledebourii* var. *Kelardasht Salehi*). Ten plants from each sampling were examined at intervals of 10 days throughout an annual life cycle. Results showed that starch hydrolysis commenced in the late stage of storage and reached the maximum level at flower initiation time. It was concomitant with the increase of amylase activity, indicating that the change of starch content in the bulbs is regulated by amylase. The accumulation of soluble carbohydrates in the bulbs during shoot growth and stem elongation period (from 50 days after planting to the next 50 days) did not result from starch hydrolysis. A great deal of starch accumulation occurred mainly just during ten days before shoot withering. Sodium dodecyl sulfate polyacrylamide gel electrophoresis (SDS-PAGE) showed that the protein bands during bulb storage were different from those after planting. Moreover, it also revealed that a certain protein was expressed in bulb at anthesis stage. Our results recommend that the protection of aerial organs until complete withering seems to be necessary for higher energy reservation in the bulbs of *L. ledebourii*.

## کلمات کلیدی:

.Amylase, Bulb dormancy, Carbohydrate, Florogenesis, Iranian lily, SDS-PAGE

## لینک ثابت مقاله در پایگاه سیویلیکا:

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