

# Review of: "Changes of starch and sucrose content and related gene expression during the growth and development of Lanzhou lily bulb"

Lu Luo

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This is a thoroughLu designed research on lily bulbs in the squaring stage, flowering stage, half withering stage and withering stage. and they found that the plant height, fresh weight of mother and daughter bulbs continued to increase during the whole growth period and fresh weight of stem and leaf began to decrease in the half withering stage. The content of starch, sucrose and total soluble sugar in the lily mother bulb accumulated mostly in the flowering, withering and half withering stages, respectively. Starch, sucrose and total soluble sugar accumulated in the daughter bulb with the highest concentration during the withering stage. In the transcription level, sucrose synthase (*SuSy1*) and sucrose invertase (*INV2*) expressed the highest in squaring stage, and the expression was significantly higher in the mother bulb than in the daughter bulb. In flowering stage, the expression levels of soluble starch synthase (*SSS1*), starch-branching enzyme (*SBE*) and adenosine diphosphate-glucose pyrophosphorylase (*AGP1*) genes were higher in the mother bulb than in the daughter bulb. Altogether, our results indicate that starch and sucrose are important for the bulb growth and development of Lanzhou lily. Additionally, functional experiments are recommended to add to testify the result.