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Journal List

Journal/  
Society Search

GO

News



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## Japanese journal of crop science

The Crop Science Society of Japan [Info](#) [Link](#)[TOP](#) > [Journal List](#) > [Available Issues](#) > [Table of Contents](#) > [Abstract](#)

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#### Growth Characteristics and Effect of Nitrogen and Potassium Topdressing on Thickening Growth of Bulbs in Spring-Planted Edible Lily (*Lilium leichtlinii* var. *maximowiczii* Baker)

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#### Abstract:

The growth characteristics of spring-planted edible lilies, grown in pots and fields, were investigated. The effect of nitrogen and potassium topdressing on the thickening growth of the bulbs was also examined. The growth period of the edible lily could be divided into the following four stages. In the first stage, from planting to sprouting, the foliage grew using the materials stored in the bulb. In the second stage, from leaves expanding to flower bud appearing, the foliage vigorously developed and started to transfer photosynthetic products from the above ground parts to the subterranean parts. The third stage was from flower bud expanding to middle August, which would be flowering time unless being disbudded. In this stage, the leaf area and dry weight of the tops continued to increase, and the old bulb increased dry weight most vigorously among the subterranean organs. In the fourth stage, from middle August to harvesting, the growth of the foliage almost stopped, and the new bulb mainly showed the increase of dry weight. By a nitrogen and potassium topdressing after the flower bud appeared, the root growth became more active, and the nutrient absorption and the dry matter production continued until the latter growth stage. Therefore, the topdressing resulted in the continuous growth of bulbs during the fourth stage, and consequently increased the yield.

#### Keywords:

Bulbs, Edible lily, Growth characteristics, Nitrogen, Potassium, Spring-planting, Topdressing

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