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## **Evaluation of Growth and Yield When Harvesting Italian Ryegrass Transplanted After Cultivation of Paddy Rice**

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### **[Abstract]**

Seed production of Italian ryegrass has a problem of lodging during ripening and a decrease in quality due to difficulty in drying seeds during harvest. Therefore, in order to produce high-quality Italian ryegrass in paddy fields, it was carried out to reduce the density and solve the lodging problem through transplanting.

In this experiment, *Lolium multiflorum* cv. Kowinearly was transplanted in autumn from a paddy field in Sindong-ri, Gwansan-eup, Jangheung-gun, Jeollanam-do. var. Kowinearly was made into a bed at 90 g/box and stacked in boxes. It was transplanted on October 27th after 2 days of germination at 30°C and 15 days of seedling and greening. When transplanting, they were transplanted at intervals of 30×14cm. The existing cultivation method, drill seedling, was sowed at a level of 50 kg/ha, and both transplanting and drilling were carried out at a nitrogen fertilization rate of 45 kg/ha.

The number of ears during transplant cultivation was 1,016/m<sup>2</sup> and the drilling tended to be higher at 2,278/m<sup>2</sup>, but this was probably due to the difference in seeding amount. The seed number of an ear tended to be 56% higher in transplantation, which had a significant impact on yield. The seed yield was 2,096 kg/ha in transplantation, which was 21% higher than that of drilling. When looking at the relationship with weed occurrence, there were areas where all the weeds, such as amul foxtail, occurred due to the low density. Even in the same transplanting area, the seed yield was about 1,000kg/ha less in the area where the weeds were abundant. It seems that weed management is important in paddy cultivation. Therefore, it seems necessary to develop an exclusive herbicide for Italian ryegrass cultivation.

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