

OA-02

Effect of Seeding Method on Rice Yield in Mekong Delta

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[Introduction]

The Mekong Delta's rice cultivation area of 4,276.0ha is 5.5 times larger than Korea's rice cultivation area of 777.9ha. However, the paddy yield per unit area is 5.62t/ha, which is 77.7% of Korea's 7.23t/ha. It is assumed that the reasons are low quality seeds, low cultivation techniques and poor cultivation management rather than the climate or soil.

Therefore, this study was conducted to determine appropriate sowing methods for improving rice cultivation technology in Mekong Delta. The experiment was performed during dry season, November 2018 ~ April 2019 at Cuu Long Delta Rice Research Institute.

[Materials and Methods]

A short growth duration rice variety OM5451 was used with three sowing methods: broadcasting, drilling and dibbling sowing. The amount of rice seeds was 80, 70 and 60kg/ha, respectively. The area of each plot is 40m² and total area of experiment is 360m². Rice seeding by drilling and dibbling was done by the simple sowing machine made by CLRRI.

The experimental design was randomly completed block design (RCBD) with three replications. Data were recorded on yield and yield components along with growing and developing parameters.

[Results and Discussion]

Experiment revealed that there was significant variation among sowing methods for flowering days, 1000GW and actual grain yield while other parameters differed non-significantly. The latest flowering day was recorded in case of dibbling seeding compared to the control broadcasting resulting in delayed maturity of rice.

Plant height was recorded nonsignificant in all sowing method during experimentation. Plant height tended to be taller when rice was sown by dibbling sowing as compared to when it was sown by broadcasting or seeding in lines.

The present study also indicated that similar theoretical yield was attained under the three sowing methods in spite of the fact that 1000GW of drilling sowing treatment was significantly higher than others. The actual yield showed the significant higher of drilling sowing as compared with dibbling sowing but not significant as compared with broadcasting method.

[Acknowledgement]

I would like to thank the Cuu Long Delta Rice Research Institute for supporting of the land and manpower etc. for this study. It is expected that if rice sowing is changed from broadcasting to drilling based on the results of the study, it will contribute to the increase of rice yield in Mekong Delta.

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