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Effect of Chitin Application on Growth and Yield of Rice

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Abstract:

Field experiments were carried out in 1994, 1995, and 1996 to study the effects of chitin on the growth and yield of rice. The results of experiments in 1994 and 1996 showed that chitin as a basal dressing increased the grain weight, and no difference was noted in the grain weight between chitin 500 gm⁻² applied plot and the fertilizer plot. In 1995, since rice leaves in the chitin 500 gm⁻² applied plot and the fertilizer plot were infested by *Cnapharocrosis medinalis* GUENEE, no difference in grain weight was noted between all chitin-applied plots and the fertilizer plot. Positive correlations were observed between the number of spikelets per m² and the grain weight. The percentage of ripened grains was about 90% in the nonfertilizer and all chitin-applied plots, whereas the fertilizer plot was low. This result may be considered as follows. In the fertilizer plot, LAI at the whole growth stage was high, and light extinction coefficient(K)was increased after heading time. As a result, CGR was decreased. On the other hand, the maximum LAI in the chitin 500 gm⁻² plot was about 4.5, light extinction coefficient after heading time was low, and CGR was high. As in the results, grain weight in the chitin 500 gm⁻² plot was at the same level as the fertilizer plot.

Keywords:

Chitin, Dry matter production, Grain production, Growth analysis, Rice

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