PERFORMANCE EVALUATION OF A PADDY SEEDER ATTACHMENT IN GEAR TRANSMISSION POWER TILLER FOR WET RICE PRODUCTION

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ABSTRACT

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This study was conducted for the purpose of determining the field performance of the paddy seeder attachment in the gear power transmission tiller, evaluating the seeding rate, and gathering relevant data on the attachment paddy seeder. Furthermore, nine (9) plots with two hundred fifty square meters (250 m2) each were prepared at the Philippine Rice Institute (PhilRice), where a series of field tests were conducted for paddy seeder attachment. Three configuration settings of the drum sawder—low, medium, and high—were evaluated for their performance. The data were analyzed using ANOVA in a single factorial experimental design with three replications. The field performance test parameters included operating speed, fuel consumption, actual field capacity, theoretical field capacity, and field efficiency.

Laboratory testss of the dispersion uniformity in both longitudinal and transverse directions resulted in no significant differences in the observed values of 46 average seed planted in 1 meter length per drum seeder and 18.80, 17.80, and 17.20 average spacing of seed.This study was conducted for the purpose of determining the field performance of the paddy seeder attachment in the gear power transmission tiller, evaluating the seeding rate, and gathering relevant data on the attachment paddy seeder.Furthermore, nine (9) plots

with two hundred fifty square meters (250 m2) each were prepared at the Philippine Rice Institute (PhilRice), where a series of field tests were conducted for paddy seeder attachment. Three configuration settings of the drum sawder—low, medium, and high—were evaluated for their performance. The data were analyzed using ANOVA in a single factorial experimental design with three replications. The field performance test parameters included operating speed, fuel consumption, actual field capacity, theoretical field capacity, and field efficiency. On the other hand, the field test of the machine resulted in 19.76 kg/ha for the low configuration setting, 36.50 kg/ha in the medium configuration setting, and 56.86 kg/ha in the high configuration setting, which are affected by the three configuration settings of low, medium, and high, respectively.

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