

Yield and Yield Attributes of Rice as Affected by the Application of Three Selected Post Emergence Herbicides and Age of Seedling in Jega, Sudan Savana Nigeria

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Abstract : Two field trials were conducted to study the performance of transplanted rice under the influence of weed management practice and the age of seedlings at the teaching and research farm of Kebbi State University of Science and Technology Aliero located at Jega, during 2020/2021 and 2021/2022 dry seasons. Treatments consisted of three seedlings age (10, 17, and 24 days old) and weed management practice (comprising of three selected post-emergence herbicides, namely: (i) Bracer (0.025, 0.027, 0.030, and 0.032kg a.i.ha-1), (ii) Bracerplus at 0.021, 0.023, 0.025, and 0.027kg a.i.ha-1, and (iii) Nomineegold (0.020, 0.030, 0.040 and 0.050 kg a.i.ha-1, (iv) Farmers' practice (hoe weeding at 4 and 8 weeks after transplanting) and (v) weedy check. The treatments were laid out in a randomized complete block design (RCBD) in a split-plot arrangement with three replications. Results showed that the application of Bracerplus at 0.021 produced highest grain yield (4,448.85 kg/ha-1) and highest panicle weight (2.99g), while application of Bracer at 0.025 produced the highest 1000 grains weight (26.17), the application of Nomineegold produced the highest total number of grains per panicle (111.72), the younger (10-day-old) seedlings recorded higher grain yield over other seedlings (3488.25 kg/ha-1). In conclusion, the highest grain yield 4,448.85kg ha-1 was 57.15% higher than the farmers' practice (weeding at 4 & 8 weeks after planting). Seedlings transplanted at 10-day old recorded the highest grain yield of 3,488.25kg ha-1 it was 21.43% higher than 24-day-old seedlings and 15.87% higher than 17-day-old seedlings. It is recommended that the application of Bracerplus at 0.021kg a.i. ha-1 should be used for higher grain yield, and seedlings at 10- days old should be used for transplanting from the nursery.

Keywords : bracerplus, nomineegold, rice, split-plot-arrangement, transplanted rice, yield components

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