

## EFFECTS OF DIFFERENT RE-TRANSPLANTING DATES AND SEEDLING NUMBERS PER HILL ON YIELD AND NUTRIENT CONTENT OF LATE AMAN RICE BINASAIL

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### Extended Summary

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The present work was conducted at the farm of Sher-e-Bangla Agricultural University, Dhaka-1207 during the period from August to December, 2011 to find out the effect of different number of seedlings hill<sup>-1</sup> on the growth, yield and N, P, K nutrients content of transplanted and re-transplanted Aman rice cv. BINA sail. The experiment consisted of three different number of seedlings hill<sup>-1</sup> (S<sub>1</sub>- 3 seedlings hill<sup>-1</sup>, S<sub>2</sub>- 4 seedlings hill<sup>-1</sup>, S<sub>3</sub>- 5 seedlings hill<sup>-1</sup>) and 4 transplanting and re-transplanting dates (T<sub>1</sub> = 15 September, T<sub>2</sub> = 22 September, T<sub>3</sub> = 29 September and T<sub>4</sub> = 06 October). The two factorials experiment was laid out in a RCBD design with three replications.

The effect of different number of seedlings hill<sup>-1</sup> showed non-significant variation in case of growth and yield parameters at different transplanted and re-transplanted dates of Aman rice cv. BINA sail.

The effect of different planting dates on growth & yield parameters and N, P, K nutrients content in shoot of late T. Aman rice BINA sail varied significantly in all parameters except total tillers hill<sup>-1</sup> and spikelets panicle<sup>-1</sup>. The highest plant height, panicle length, spikelet and filled grain number panicle<sup>-1</sup> were found in T<sub>1</sub> (transplanted on 15 September) and T<sub>2</sub> (re-transplanted on 22 September). The highest number of total tillers and effective tillers hill<sup>-1</sup> were found in T<sub>2</sub> (re-transplanted on 22 September). The 1000-grain weight and grain yield were observed in T<sub>1</sub> (transplanted on 15 September). On the other hand, the last re-transplanted on 06 October *i.e.* T<sub>4</sub> showed the lowest results in all cases except non-effective tillers hill<sup>-1</sup> and unfilled grains panicle<sup>-1</sup> where the highest results were recorded in T<sub>4</sub> (re-transplanted on 0 October) and the lowest values were found in T<sub>1</sub>. For N, P and K contents in shoots of BINA-sail significantly differed due to the effect of different planting dates where the highest results were recorded in T<sub>1</sub> followed by T<sub>2</sub> & T<sub>3</sub>; and the lowest results obtain from T<sub>4</sub>.

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Plant height, number of effective and non-effective tillers hill<sup>-1</sup>, panicle length, filled and unfilled grains panicle<sup>-1</sup> differed significantly due to the interaction effect of seedlings number hill<sup>-1</sup> and planting dates of Late Aman cultivar BINA sail. The tallest plant was obtained from S<sub>3</sub>T<sub>1</sub> (5 seedlings hill<sup>-1</sup> and transplanted

on 15 September) which was statistically similar with S<sub>2</sub>T<sub>1</sub>, S<sub>1</sub>T<sub>1</sub>, S<sub>2</sub>T<sub>2</sub>, S<sub>3</sub>T<sub>2</sub> and S<sub>1</sub>T<sub>2</sub>. On the other hand, S<sub>1</sub>T<sub>4</sub> (3 seedlings hill<sup>-1</sup> and re-transplanted on 06 October) produced the shortest one. The highest effective tillers number hill<sup>-1</sup>, panicle length and filled grain panicle<sup>-1</sup> were found in S<sub>2</sub>T<sub>2</sub>, S<sub>1</sub>T<sub>1</sub> and S<sub>1</sub>T<sub>2</sub>. On the other hand, S<sub>1</sub>T<sub>4</sub> and S<sub>3</sub>T<sub>4</sub> gave the lowest effective tillers number hill<sup>-1</sup> and panicle length respectively. The highest number of non-effective tillers hill<sup>-1</sup> and unfilled grain panicle<sup>-1</sup> were found in 4 and 5 seedlings hill<sup>-1</sup> and re-transplanted on 06 October). The 1000-grain weight and grain yield were found the highest in S<sub>2</sub>T<sub>1</sub> and S<sub>1</sub>T<sub>1</sub>. On the other hand, S<sub>1</sub>T<sub>4</sub> showed the lowest result which was statistically similar with S<sub>2</sub>T<sub>4</sub> and S<sub>3</sub>T<sub>4</sub> in case of 1000-grain weight and grain yield. N, P and K contents in straw decreased with later dates of transplantation in case of all three different numbers of seedlings hill<sup>-1</sup> treatments. It appeared from the above results that different planting dates have significant effect on growth, yield and nutrient (N, P, K) contents of T. Aman rice BINA sail. The 4 seedlings hill<sup>-1</sup> was more efficient compare to 3 and 5 seedlings hill<sup>-1</sup> except vegetative growth. With delay in transplanting the yield of BINA sail reduced but still it was possible to get some sort of economic return by escaping the late flood.