



## Comparative study on mechanical system of rice intensification (MSRI) and system of rice intensification (SRI) with different fertilizer rates in Aus season

Samsul Huda Soyeb<sup>1\*</sup>, Md. Tanjil Anwary<sup>1</sup>, Abdullah Al Mamun<sup>1</sup>

<sup>1</sup>Rural Development Academy (RDA), Bogura, Bangladesh.

### ARTICLE INFO

#### Keywords:

MSRI

SRI

Tricho-compost

Yield

Aus rice

Received: 22 May, 2023

Revised: 10 June, 2023

Accepted: 14 June, 2023

#### \*Corresponding Email:

samsulhuda191@gmail.com

### ABSTRACT

A field experiment was conducted at the Rural Development Academy (RDA), Bogura, Bangladesh's research field during the Aus season. This experiment was set up to evaluate two planting methods, system of rice intensification (SRI) planting method and mechanical transplantation in system of rice intensification (MSRI) planting method, against three rice (*Oryza sativa*) varieties named BRRI dhan 48, BINA dhan 19, and BRRI dhan 98, with the application of two types of fertilizer, traditional fertilizer dose and recommended fertilizer, by the Soil Resource Development Institute (SRDI). The experiment was laid out in a randomized block design with three replications. MSRI had the highest yield parameters, including plant height, effective tiller, panicle length, grain per panicle, 1000 grain weight, and crop yield. Two additional treatments were experimented with for tricho-compost application along with recommended fertilizers against BRRI dhan 48 and BINA dhan 19. It was observed that the best results come from using tricho-compost along with the recommended fertilizer in the MSRI transplantation method for the production of rice.

**How to Cite:** Soyeb, S. H., Anwary, M. T., & Mamun, A. A. (2023). Comparative study on mechanical system of rice intensification (MSRI) and system of rice intensification (SRI) with different fertilizer rates in Aus season. *Bangladesh Rural Development Studies*, 26(1), 01-12.

### Introduction

Bangladesh is an agriculture dominated country, with 70% of the territory being agricultural land (World Bank, 2014). Rice is a major staple food crop in Bangladesh. Bangladesh is the world's fourth largest per capita rice consumer and producer (FAO, 2015). Rice is the dominant crop in the country, and it covers three-fourths of all cropland area and contributes 70% of calories consumed (Majumder et al., 2016). There are three major cropping seasons in Bangladesh, namely Aus, Aman, and Boro. Aus is typically

planted in March–April and harvested in June–July, which corresponds with the hot summer season (March–May). Aus rice occupies only about 11.15% of the total cropped area, where modern varieties cover only 10.23% and local varieties cover 0.92% (BBS, 2021). Only 8.73% of total production comes in Aus season and currently the total area and production of Aus rice are 3.22 million acres and 3.33 million MT (BBS, 2021). The Aus rice area and production has been decreasing continuously compared to Boro, which is the dominant rice crop in