

a) Researchers' Identity

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b) Executive summary

In order to select suitable mustard variety(s) for the Barind Soil, a variety trial of mustard was conducted at RDA demonstration farm. Four mustard varieties (Sampad, Daulat, Tori-7 and SS75) were tested. The variety Daulat surpassed all the other varieties in producing yield and yield parameters such as, number of plants per square meter, number of siliqua per plant, number of seeds per siliqua and per hectare yield. However, 1000 seed weight was found to be the highest in SS-75 and oil production was more in Tori-7. The lowest quantity of oil was extracted from Sampad. The varieties did not differ statistically in stover production. Tori-7 was found to be the earliest followed by SS-75. The varieties Daulat and Tori-7 were noted to be high yielders and promising for this area of the Barind Tract.

Mustard is the most popular oil crop in Bangladesh. It is popular particularly because of its pungency odor. Keeping quality of mustard grains as well as the oil is better than that of the other oil crops of Bangladesh (Harun, 1992). Mustard contains 40-44% oil and oil cake contains 40% protein.

Farmers in Barind area are now practicing mustard succeeding to Batraj; T. Aman crop is a poor yielder and short duration. Early growth of Batraj leaves some residual soil moisture in high land. Likewise BR-11, which is a major crop of medium high land of plane Barind area, also leaves some residual moisture in the soil.

Rain fed Barind Agriculture is extremely difficult which can be minimized by adapting different operations in time. The importance of timely operation i.e., sowing, weeding, top dressing, seeding depth and placement of fertilizer are remarkably essential in developing cultivation (Musa, 1992).

In Barind condition, timely sowing with the available moisture can make a significant difference in crop stand and productivity of less water requiring Rabi crops. Timely sowing is a crucial factor not only in view of moisture availability for crop stand, establishment and growth, but has a long range effect on productivity (Shahidullah, 1992). A variety trial of mustard was conducted in rain fed Barind soil to examine the performance of different mustard varieties using residual moisture.

Four varieties of mustard were placed in a yield trial. The varieties resulted significant differences in the entire yield contributing characters except stove yield. Days to maturity and oil content were not statistically analyzed. The variety Daulat needed maximum number of days for maturity and Tori-7 needed the minimum number of days. Plant height was highest in Sampad and plant population was the highest in Daulat. Number of siliqua/plant and number of seeds/siliqua were the highest in Daulat and Tori-7. 1000 seed weight was higher in SS-75 and Sampad. Yield was higher in Daulat and Tori-7. Oil content was more in Tori-7 and SS-75.

d) Recommendation

Among the four varieties of mustard, Sampad and SS-75 should be sown in October when moisture availability is sufficient otherwise plant population would be less due to moisture stress. Even at late sowing (last week of November) and less moisture content, Daulat and Tori-7 could yield substantial amount of seed. For this reason, after Aman harvest Daulat and Tori-7 could be sown using residual moisture in Barind area.