## ABSTRACT

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| **Title of the Thesis** | : | Evaluation of Basmati rice (*Oryza sativa* L.) varieties at different dates of transplanting under intermediate hill zone of Jammu |
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| **Name of University** | : | Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu. |

**ABSTRACT**

An experiment entitled, **"Evaluation of Basmati rice (*Oryza sativa* L.) varieties at different dates of transplanting under intermediate hill zone of Jammu"** was conducted during the *kharif* season of 2021 at Qazi Mohra, KVK, Poonch, Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu. The soil of the experimental site was clay loam in texture, slightly alkaline in reaction, medium in organic carbon, available nitrogen, phosphorus and potassium. The experiment consisted 3 dates of transplanting as factor A namely 31st May (**T1**), 10th June (**T2**) and 20th June (**T3**) 5 basmati rice varieties as factor B *viz*., Jammu basmati 118 (**V1**), Jammu basmati 123 (**V2**), Jammu basmati 138 (**V3**), Ranbir basmati (**V4)** and Chandak basmati (**V5**) which was arranged in factorial randomized block design with three replications. The recommended dose of fertilizer for basmati rice i.e., 30 kg N, 20 kg P2O5 and 10 kg K2O/hathrough Urea, DAP and MOP were applied to the crop. Irrigation was applied at regular intervals in rice crop as per need.

The experimental results revealed that among the different dates of transplanting, 10th June transplanted crop recorded significantly higher growth, yield attributes, yield, nutrient uptake, quality parameters, net returns and B: C ratio in comparison to crop transplanted on 31st May and 20th June, respectively. Among the different varieties, Jammu basmati-123 recorded significantly higher growth parameters *viz.,* plant height, no. of tillers/m2 and leaf area index, straw yield, total potassium uptake, Kernel length and length breadth ratio than other varieties in comparison. Whereas, Chandak basmati recorded significantly highest dry matter accumulation, yield attributes *viz.,* number of effective tillers/m2, grains/panicle and 1000-grain weight, total nitrogen and phosphorus uptake, quality parameters *viz.* kernel breadth, crude protein content and amylose content than other varieties in comparison.

Hence, on the basis of one year research study, it can be concluded that Chandak basmati (local) variety transplanting on 10th June may be recommended for realization of maximum crop yield and B: C ratio.

**Keywords:** Dates of transplanting, Varieties, Basmati rice, Crude protein, Amylose, Crop yield, B: C ratio.

**Signature of Major Advisor Signature of the Student**