

Effect of application of “Grinophyll” on Growth and Yield of Rice (2nd Year)

Objective: To confirm the best dose of liquid formulation to enhance the growth & yield of rice crop.



Introduction: Rice, *Oryza sativa*, is the staff of life for the population in Asia, particularly in South and Southeast Asia where more than 90 per cent of rice is produced and consumed. Rice is grown in more than 100 countries spread across six continents and in a wide range of environments. Rice is the backbone of livelihood for millions of rural households and plays vital role in the country’s food security, so the term “rice is life” is most appropriate in Indian context. About 90 % of the rice in the world is grown in Asia, with China and India as the lead producers. India occupies an important position both in area and production of rice. By the adoption of improved production technologies such as high-yielding varieties/hybrids, expansion of irrigation potential, and use of chemical fertilizer, supply of rice in the country has kept pace with the increase in demand. Demand for rice is expected to further increase in future as population is continuously increasing, so production of rice also needs to be increased. There is a need to further increase rice productivity because land area under rice cultivation is declining.

Experimental Details:

Crop	: Rice
Variety	: Dandi, Gurjari, Jaya, GAR-13
Experiment Layout	: RBD
No. of Replications	: Two
Spacing	: 20 cm x 15 cm
Plot size	: 3.30 m X 3 m
Date of TP	: 20/07/2022

Treatment details:

	Variety
V1	Dandi
V2	Gurjari
V3	Jaya
V4	GAR-13

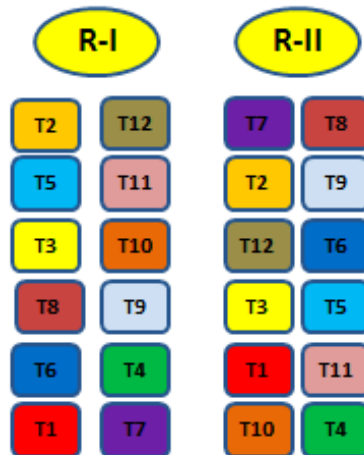
	Grinophyll dose
F1	Control
F2	4ml/15lit water
F3	6ml/15lit water

Methodology:

The experiment was conducted at ASPEE, Agricultural Research and Development Foundation Farm, Village- Nare, Tauka- Wada, District- Palghar in *kharif* season during 2022 in Randomized Block Design (RBD) with 2 replications. The plot size was 19.5 m x 14.5 m. Four varieties comprising 3 levels of Grinophyll were tested in crop production. Gross plot size and net plot size were 3.30 X 2.85 m and 3.15 X 2.80 m; respectively. Planting was done on 20 July 2022 at spacing 20 X 15 cm.

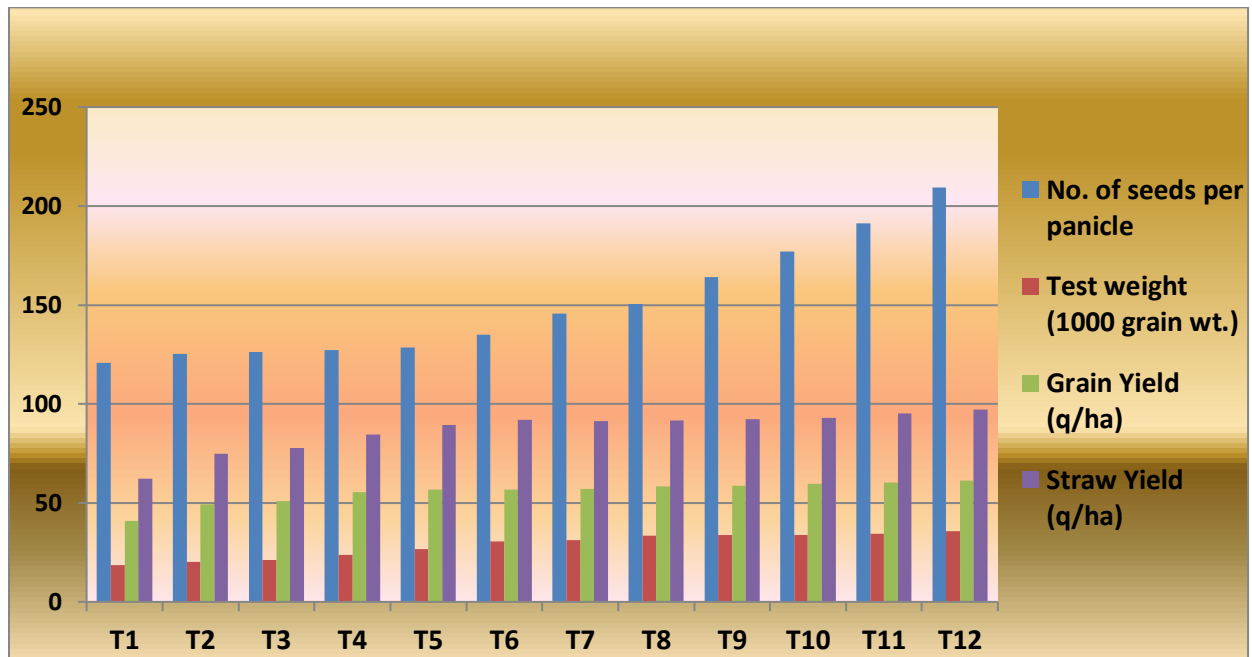
There were 12 treatment combinations comprising viz., V1F1, V2F1, V3F1, V4F1, V1F2, V2F2, V3F2, V4F2, V1F3, V2F3, V3F3 and V4F3 were indicates Dandi, Gurjari, Jaya and GAR-13 varieties; respectively. F1, F2 and F3 were indicates 0 ml, 4 ml and 6 ml Grinophyll per 15 liters of water applied; respectively.

Layout:



Results:

The 2nd year of study also showed that the highest number of seeds per panicle (209.4), test weight (35.6 g), grain yield (61.2 q/ha) and straw yield (97.1 q/ha) in rice variety GAR-3 with application of Grinophyll @ 6 ml / 15 liters of water.



Conclusion:

The data clearly revealed that, the yield obtained with treatment Grinophyll @ 6 ml / 15 liters of water in rice variety "GAR 13" was significantly higher than all other treatments and also for growth parameters.