PROJECT REPORT

2020

Effect of RCM-HARIT SANJIVANI on growth and yield of wheat

SPONSORED BY:

M/S Vyenkatesh Agrotrade Pvt. Ltd., D-13, Silver Heights, Opp. Hotel Sandeep, Gurudvara Road, Mumbai Naka, Nasik - 422009

CONDUCTED BY:

DEPARTMENT OF PLANT BREEDING & GENETICS

COLLEGE OF AGRICULTURE JNKVV, JABALPUR

PROJECT DETAILS:

1	**Name of the Sponsorer and sponsoring agency**	M/S Vyenkatesh Agrotrade Pvt. Ltd., D-13, Silver Heights, Opp. Hotel Sandeep, Gurudvara Road, Mumbai Naka, Nasik - 422009
2	**Name of the Scientist involved in Project**	Dr. A.K Jha, Scientist Department of Agronomy, College of Agriculture, JNKVV, Jabalpur
3	**Product code**	RCM-HARIT SANJIVANI
4	**Title of the project**	Effect of RCM-HARIT SANJIVANI on growth and yield of wheat
6	**Location of Experiment**	Experimental Farm, College of Agriculture, Jabalpur
7	**Design**	Randomized Block Design
8	**Plot size**	3m x 4m
9	**Spacing**	15 x 10 cm
10	**Crop variety**	JW 3382
11	**Replication**	Three
12	**Date of sowing**	20/11/2020
15	**Soil type and weather conditions**	loamy sand to clay loam
16	**Application technique**	Knapsack sprayer fitted with flat fan nozzle
17	**RDF (NPK)**	120 kg N,60kg $P_2O$and 40 kg K_2O/ha
18	**Date of Harvesting**	04/04/2021

Objectives:

- To see the Effect of RCM-HARIT SANJIVANI on growth and yield of wheat

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B) Treatment details : Application of RCM-Harit-sanjivani (grams per acre)

Treatments		Stage (II) (soil application after transplanting)	Stage (II) (foliar spray at 30 DAT)	Stage (II) (foliar spray at 45 DAT)	Stage (II) (foliar spray at 60 DAT)
T1	(No application)	0	0	0	0
T2	Soil and foliar application of RCM-Harit-Sanjivani (grams per acre)	150	75	125	150
T3	Soil and foliar application of RCM	200	100	150	200
T4	Soil and foliar application of RCM	250	125	175	250
T5	Soil and foliar application of RCM	300	150	200	300
T6	Soil and foliar application of RCM	350	200	250	350

- **Note : -** Uniform dose of 120 kg N: through Urea 60kg P_2O_5 through SSP and 40kg K_2O through MOP per ha^{-1} was given to all the treatments.

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RESULTS

The data presented in Table 1 revealed that all the characters were influenced significantly by the given treatments. The highest height of plant at time of harvest (103.43 cm) was recorded in the treatment T5.The highest number of ears /m^2 was recorded in T5 as compared to T1 and T2.The highest grains/earhead and test weight were recorded in the treatment T5 as compared to T1 and T3 and at par to T4 and T6.The highest number of grains yield as well biomass was recorded in T5 application of RCM-HARIT SANJIVANI 300:150:200:300g $acre^{-1}$ over all the treatment except treatment T4 application RCM-HARIT SANJIVANI 250:125:175:250g $acre^{-1}$ which are at par.

CONCLUSION

The study conducted at JNKVV on wheat variety JW 3382 during *Rabi,* 2020-2021 revealed that significant grain yield was noticed with the treatment T5 application of RCM-HARIT SANJIVANI 300:150:200:300g $acre^{-1}$ (54.34q ha^{-1}) over all the treatment except treatment T4 application RCM-HARIT SANJIVANI 250:125:175:250g $acre^{-1}$ (51.56 q ha^{-1}) which are at par.

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Table 1: Effect of RCM-HARIT SANJIVANI on growth, yield of wheat

Treatment	Plant Height (cm)	No. of Earhead /sq.m.	No. of Grains/ Earhead	1000 Grains Weight (g)	Yield (q/ha)	Biomass (q/ha)
T1	90.28	376.87	40.18	35.55	40.56	76.89
T2	92.44	382.56	41.11	38.28	42.34	78.66
T3	95.44	388.98	42.76	40.56	44.56	84.67
T4	101.44	395.98	44.28	42.28	51.56	88.96
T5	103.43	408.00	45.53	46.78	54.34	94.67
T6	98.28	398.99	43.18	40.78	49.89	85.99
S.E.m±	0.45	1.78	0.66	0.02	1.15	1.16
C.D at 5%	1.67	3.89	1.18	0.06	3.45	3.48

Table 2: Effect of RCM-HARIT SANJIVANI on on soil fertility parameters after harvest

Treatments	Soil parameters				Available nutrient in soil (kg/ha)		
		pH	EC (dsm^{-1})	OC (%)	N	P	K
	T_1	7.72	0.47	0.50	268.6	18.2	368.1
	T_2	7.76	0.48	0.50	260.3	16.2	367.3
	T_3	7.75	0.46	0.51	270.1	18.8	371.6
	T_4	7.72	0.48	0.51	272.3	18.6	374.8
	T_5	7.63	0.47	0.54	272.6	19.4	377.4
	T_6	7.74	0.48	0.53	270.8	18.6	374.6
	Initial	7.64	0.46	0.53	272.1	18.4	372.8

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Experimental Plot Photos

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Certificate

This is to certify that tha product testing trail entitled Effect of RCM-HARIT SANJIVANI on growth and yield of wheat funded by M/S Vyenkatesh Agrotrade Pvt. Ltd., D-13, Silver Heights, Opp. Hotel Sandeep, Gurudvara Road, Mumbai Naka, Nasik – 422009 was conducted during rabi 2020-21 at the AICRP on Wheat and Barley, Department of Plant Breeding & Genetics, College of Agriculture, Jabalpur under my supervision.

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