UNIVERSITY OF AGRICULTURAL SCIENCES, DHARWAD

Chemical Testing Trial Report
on

EVALUATION OF GMX GREEN PRO MAX ON MAIZE , *KHARIF,* 2015-16

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M/s. Ritika Research Labs Pvt. Ltd., Mumbai

ALL INDIA COORDINATED SORGHUM IMPROVEMENT PROJECT, Main Agricultural Research Station,
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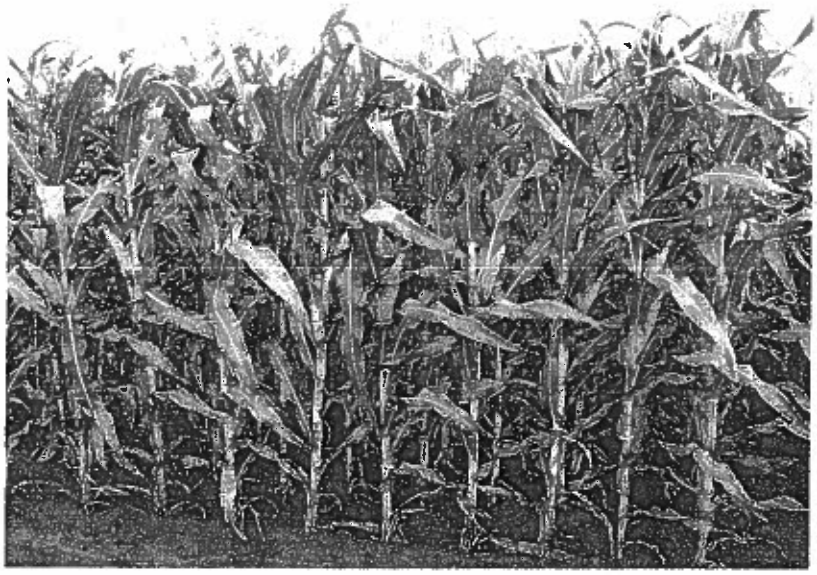

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1	Company's letter No.	-
2	Director of Research letter No.	DR/T-3/Ritika/138/2015-16 dtd 25-06-2015
3	Name and address of the sponserer	M/s Ritika Research Labs Pvt. Ltd., 509, Balarama, BandraKurla Complex, Bandra East, **MUMBAI-400 051.**
4	Scientist involved in testing the product	Dr. V. S. KUBSAD Professor (Agronomy) & Head All India Coordinated Sorghum Improvement Project, MARS, University of Agricultural Sciences, DHARWAD-580005. Karnataka
5	1) Name of the experiment 2) Objectives	Evaluation of GMX Green Pro Max on Maize 1. To evaluate the effect of GMX Green Pro Max on physiological development of Maize crop. 2. To evaluate yield potential of maize crop treated with GMX Green Pro Max under field conditions.
6	Location Year of conduct	Main Agricultural Research Station, UAS, Dharwad Kharif, 2015-16
7	Crop	Hybrid maize (NK-6240)
8	New/Continued	New
9	Soil type	Deep black soil
10	Irrigated/Rainfed	Protective Irrigation
11	*Experimental Details*	
A	Experimental design	Randomized Block Design
B	Replications	Three

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C	Treatments	Nine
D	Hybrid	NK-6240
E	Spacing	60 x 20 cm
F	Plot size	5.4m X 4.0m
G	Date of Sowing	03-07-2015
H	Date of harvest	21-10-2015
I	Spray solution used	750 l/ha
J	Date of spray	1st Spray at 21 DAS : 24-07-2015 2nd Spray at 45 DAS : 18-08-2015

Meteorological observations during crop period:

Months	Actual. Rainfall (mm)	Temperature (°C)		Relative humidity (%)
		Max.	Min.	
April	13.4 (1)	35.0	20.3	75.5
May	129.4 (7)	34.6	21.8	83.2
June	160.2 (11)	28.7	21.2	91.2
July	42.4 (5)	28.7	20.9	91.2
August	34.4 (5)	28.6	20.5	90.9
September	22.4 (3)	29.9	20.5	93.1
October	179.8 (5)	31.2	19.5	80.1

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Treatments details :

Treatment No	Treatments
T_1	Recommended package of practice (RPP)
T_2	RPP+ Foilar application of GMX Green Pro Max @ 2ml/l water at 21 DAS
T_3	RPP+ Foilar application of GMX Green Pro Max @ 2ml/l water at 45 DAS
T_4	RPP+ Foilar application of GMX Green Pro Max @ 2ml/l water at 21 and 45 DAS
T_5	RPP + Seed treatment with GMX Green Pro Max @ 500 ml/10 kg seeds
T_6	RPP + Seed treatment with GMX Green Pro Max @ 500 ml/10 kg seeds + Foilar application of GMX Green Pro Max @ 2ml/l water at 21 and 45 DAS
T_7	RPP + Seed treatment with GMX Green Pro Max @ 500 ml/10 kg seeds + Foilar application of GMX Green Pro Max @ 2ml/l water at 21 and 45 DAS – 20% RDF
T_8	RPP + Seed treatment with GMX Green Pro Max @ 500 ml/10 kg seeds + Foilar application of GMX Green Pro Max @ 2ml/l water at 21 DAS
T_9	RPP + Seed treatment with GMX Green Pro Max @ 500 ml/10 kg seeds + Foilar application of GMX Green Pro Max @ 2ml/l water at 45 DAS

12. Observations recorded:

1. Plant height (cm) :

Five plants were selected randomly from each plot and the height was measured from the base of fully opened top leaf to the ground surface. Then average height of five plants was expressed **in cm.**

2. No. of kernels/row :

Five cobs were selected randomly from each plot. First the no. of kernel rows per cob were counted followed by the no. of kernels per row were recorded. Then average no. of kernels per row was calculated.

3. No. of kernel rows/cob :

Five cobs were selected randomly from each plot. Then the no. of kernel rows per cob were counted and the average value of five cobs was recorded.

4. Cob weight (g) :

Five cobs were selected randomly from each plot and their weight was recorded. Then average cob weight was expressed in grams.

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General view of the experiment

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5. Kernel weight/cob (g) :

Five cobs were selected randomly from each plot, the kernels were separated and their weight was recorded. Then average kernel weight /cob was expressed in grams.

6. 100 kernel weight:

Hundred seeds were counted manually from the five samples drawn randomly from each plot. The average of 100 seed weight was expressed in grams.

7. Shelling percentage (%) :

Five cobs were selected randomly from each plot and the weight was recorded. Then the kernels were separated and weighed. The mean shelling percentage (%) was worked out as follows.

$$\text{Shelling percentage} = \frac{\text{Kernel weight}}{\text{Weight of cob}} \times 100$$

8. Grain yield (q/ha) :

The grain yield per hectare was calculated by using the grain yield obtained from the net plot area and expressed in q/ha.

9. Fodder yield (t/ha) :

The fodder yield per hectare was calculated by using the fodder weight obtained from the net plot area and expressed in t/ha.

13. Experimental Results : Table-1 enclosed

14. Conclusion :

The treatment with RPP + Seed treatment with GMX Green Pro Max @ 500 ml/10 kg seeds + Foliar application of GMX Green Pro Max @ 2ml/l water at 45 DAS (T9) recorded significantly higher grain yield of 127.5q/ha as compared to other treatments except the treatment with recommended package of practice (12.5 q/ha) with which it was at par. While the fodder yield was not significantly affected by different treatments (Table-1). The higher grain yield in T9 was mainly attributed to higher 100-kernel weight (32.4 g), cob weight (207.8 g) and kernel weight/cob (161.9 g). The other growth and yield components viz., plant height, number of kernels/row, number of rows/cob and shelling percentage were not significantly influenced by different treatments (Table-1).

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15. Specific remarks on tested product by the Scientist :

There is no significant yield advantage with plant growth regulator GMX Green Pro Max both as foliar spray and as seed treatment as compared to recommended package of practice in maize.

16. If the testing of chemical / Product not conducted, reasons for not conducting : Nil

17. Signature of Scientist with seal :

(V.S. KUBSAD)
Professor and Head
All India Co-ordinated Sorghum Improvement Project,
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18. Remarks of the Head of the Department of Agronomy:

Forwarded to PR. UAS Dharwad with a remarks that no significant yield advantage with plant growth regulator GMX Green Pro Max both as seed as well as foliar application as compared to RPP's maize

Dr. B. BASAVARAJAPPA
M.SC.(AGRI). PGD. NRM. Ph.D. F.I.B.R. F.H.A.S. F.N.A.B.S
PROFESSOR AND UNIVERSITY HEAD
DEPARTMENT OF AGRONOMY, COLLEGE OF AGRICULTURE
UNIVERSITY OF AGRICULTURAL SCIENCES, DHARWAD

Table-1. Yield and yield components of hybrid maize as influenced by plant growth regulator (GMX Green Pro Max)

Treatment No		Plant height (cm)	Grain yield (q/ha)	Fodder yield (t/ha)	No. of kernels/ row	No. of rows/cob	100-kernel wt (g)	Cob weight (g)	Kernel weight/ cob (g)	Shelling percentage (%)
T_1	Recommended package of practice (RPP)	209.0	123.5	10.8	28.6	15.4	32.3	205.3	161.1	17.8
T_2	RPP+ Foilar application of GMX Green Pro Max @ 2ml/l water at 21 DAS	207.7	115.4	10.4	28.2	15.1	31.3	202.4	158.3	78.2
T_3	RPP+ Foilar application of GMX Green Pro Max @ 2ml/l water at 45 DAS	206.8	114.6	10.3	28.1	15.1	30.9	194.5	152.5	78.5
T_4	RPP+ Foilar application of GMX Green Pro Max @ 2ml/l water at 21 and 45 DAS	203.8	108.1	9.9	27.9	14.0	30.2	177.8	139.4	78.4
T_5	RPP + Seed treatment with GMX Green Pro Max @ 500 ml/10 kg seeds	205.8	112.4	10.2	27.5	14.2	30.8	187.1	145.2	77.6
T_6	RPP + Seed treatment with GMX Green Pro Max 500 ml/10 kg seeds + Foilar application of GMX Green Pro Max @ 2ml/l water at 21 and 45 DAS	203.1	100.7	9.8	27.2	14.0	29.5	177.7	138.8	78.2
T_7	RPP + Seed treatment with GMX Green Pro Max 500 ml/10 kg seeds + Foilar application of GMX Green Pro Max @ 2ml/l water at 21 and 45 DAS – 20% RDF	205.0	109.0	10.8	27.5	14.7	30.2	185.5	144.7	78.0
T_8	RPP + Seed treatment with GMX Green Pro Max 500 ml/10 kg seeds + Foilar application of GMX Green Pro Max @ 2ml/l water at 21 DAS	206.0	114.9	10.2	28.0	14.9	30.5	190.2	149.7	78.8
T_9	RPP + Seed treatment with GMX Green Pro Max 500 ml/10 kg seeds + Foilar application of GMX Green Pro Max @ 2ml/l water at 45 DAS	212.2	127.5	10.8	28.7	15.6	32.4	207.8	161.9	78.0
	S.Em+	2.2	2.1	0.3	0.9	0.5	0.5	2.6	1.2	1.4
	CD (5%)	NS	6.3	NS	NS	NS	1.5	7.8	3.6	NS
	CV (%)	7.8	8.2	7.4	5.7	5.9	5.7	6.6	6.1	6.1

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