

**SCIENTIFIC EXPERIMENTATION OF  
HOMOEOPATHIC PLANT NUTRIENTS AND  
PLANT PROTECTORS**



**MID TERM PROGRESS REPORT**

**2009-10**

**Department of Soil Science and Agricultural chemistry.**

**College of Agriculture**

**Orissa University of Agriculture and Technology**

**Bhubaneswar-751003,Orissa**

Evaluation report on "Scientific experimentation of SASYA SYAMALA Homoeo plant nutrient on grain yield and important biometric characters of Rice crop during Kharif 2009"

1. Title of the Project : Effect of homoeopathic nutrient "SASYA SYAMALA" on grain yield of Rice.
2. Name of the investigator : 1. Dr. D. Jena (Professor & PI), Department of soil science and agricultural chemistry.  
2. Dr. G. H. Santra (Professor & Co-PI), Department of soil science and agricultural chemistry.
3. Objectives : To study the effect of homoeo nutrient "SASYA SYAMALA" on grain yield and important biometric characters on Rice.
4. Location : Bhubaneswar
5. Year : Kharif 2009.
6. Conducted by : Department of Soil Science & Agricultural Chemistry, Orissa University of Agriculture Technology, Bhubaneswar-751003
7. Sponsored by : Master Agro Products.
8. Product tested : Sasya Syamala.
9. Soil Climate : The soil is sandy-loamy soil. The clay content in the soil ranges from 17-20% with pH 5.8 and EC 0.13 ds/m.  
The climate prevailing in the region are subtropical humid with high humidity in warm monsoon.
10. Season : Kharif-2009.
11. Variety : RICE – SWARNA, MTU7029.
12. Duration : 150 days.
13. Date of sowing : 20-07-2009.
14. Date of transplantation : 18—8-2009.
15. Date of Harvest : 16-12-09.

  
22.1.2010

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16. Plot size : Gross : 6mx5m= 30 m<sup>2</sup>  
Net : 23.8 m<sup>2</sup>
17. Replications : 5
18. Design : R. B. D.
19. Spacing : 20cmx15cm.
20. Recommended Fertilizers : Fertilizer-N-80kg, P<sub>2</sub>O<sub>5</sub>-40kg, K<sub>2</sub>O-40kg/ha  
Rice received full dose of P & K and 25% Nitrogen at transplanting. Rest 50&25% Nitrogen was applied through urea at tillering & P.I. stage
21. Homeo Nutrients : Sasya Syamala @ 30ml/lt  
(i) 1 at transplanting.  
(ii) 1A at 15 days after transplanting  
(iii) 2 at 30 days after transplanting  
(iv) 3 at 60 days after transplanting
22. Treatments : T1- No manure-(control)  
T2- Recommended dose of fertilizers (RDF)  
T3- Homoeo Nutrients- applied @ 30ml/lt at 4 stages as follows-  
1 at transplanting  
1A at 15 Days after transplanting  
2 at 30 Days after transplanting  
3 at 60 Days after transplanting.
- T4- 50% RDF+ Homoeo nutrients – in 3 Stages i.e.  
1 at transplanting  
2 at 30 days after transplanting  
3 at 60 days after transplanting


  
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**Effect of Homoeo Nutrient SASYA SYAMALA  
and R.D.F (Chemical Fertilizer) on Rice yield.**

Treatment No.	Treatment	Mean Plant Height (cm)	Mean Panicle Length (cm)	No. of Effective Tillers Per hill (no)	Bio Mass Yield (T/ha)	Grain yield (T/ha)
T1	Control	94.88	20.12	7.00	5.98	2.12
T2	R.D.F.	100.91	22.08	8.40	6.99	4.44
T3	Homoeo nutrient (4 applications)	97.44	22.88	8.16	6.47	4.25
T4	50%RDF + Homoeo nutrient (3 applications)	103.56	22.36	9.32	6.96	4.68
	CD (P=0.05)	2.3	0.37	0.54	0.39	0.20

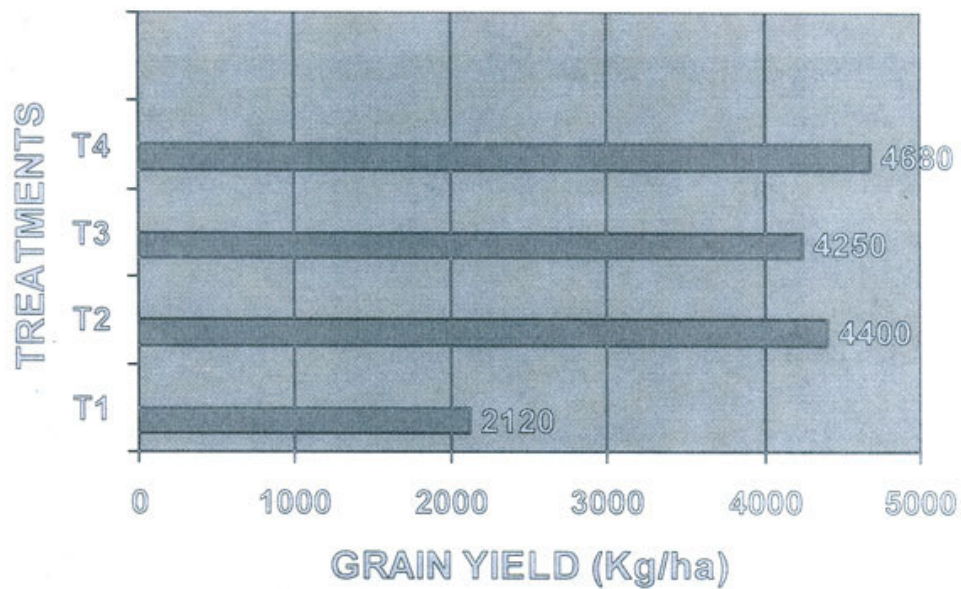
  
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# EFFECT OF HOMOEEO NUTRIENT SASYA SYAMALA ON GRAIN YIELD



## RESULTS

- Plant height :** The homoeo treatment (T3) increased the plant height significantly over no manure or control (T1) but is less than R.D.F (T2).
- Mean Panicle length :** The homoeo treatment (T3) increased the panicle length significantly over no manure (control) T1 as well as R.D.F T2
- No. of effective tillers/Hill :** The homoeo treatment (T3) increased the no. of effective tillers per hil significantly over no manure(control) T1 and is AT PAR with RDF(T2)

  
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Bio-Mass or straw yield/ha : The bio-mass production with homoeo treatment (T1) is significantly higher than control or no manure. However it is lesser than R.D.F (T2).

Grain yield

: The homoeo treatment T3 had increased significantly the grain yield over control or no manure (T1) and is AT PAR with R.D.F (T2).

#### TREATMENT 4

The homoeo nutrient combined with 50% of R.D.F (T4) had increased significantly over control ( no manure) (T1) in all the datas viz. I) Plant height, ii) Panicle length , iii) No.of effective tillers,iv) Bio-mass production (straw yield) , v) Grain yield. It (T4) also increased significantly over R.D.F (T2) the I) Plant height, ii) No.of effective tillers, iii) Grain yield. It (T4) however is AT PAR with It (T2) in case of i) Panicle length, ii) Bio-mass production (straw yield).

#### Conclusion :

The homoeo treatment (Sasya Syamala) (T3) was effective in increasing significantly in all cases of I) Plant height, ii) Panicle length , iii) No.of effective tillers,iv) Bio-mass production (straw yield) , v) Grain yield over control (No manure) (T1). It was also effective in increasing panicle length over the R.D.F (T2) and it was AT PAR with R.D.F (T2) in all other cases i.e. I)plant height, ii) No.of effective tillers/hill iii) bio-mass production (straw yield) and iv) Grain yield.

It can thus be concluded that Sasya Syamala is effective.



Signature of PI

**PRINCIPAL INVESTIGATOR**  
Homeonutrients Project.



Signature of PROFESSOR  
DEPT. OF SOP, SOI & AGRIL. CHEM.  
D.U.A.T., BHUBANESWAR.

**SCIENTIFIC EXPERIMENTATION OF  
HOMOEOPATHIC PLANT NUTRIENTS AND  
PLANT PROTECTORS**

**ANNUAL PROGRESS REPORT  
2010-11**



**DEPARTMENT OF SOIL SCIENCE AND AGRICULTURAL CHEMISTRY  
COLLEGE OF AGRICULTURE  
ORISSA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY  
BHUBANESWAR-751 003**

**Evaluation report on scientific experimentation of "APARAMURTHA"  
Homeo plant nutrient on seed yield and important biometric characters of  
black gram during 2009.**

1. Title of the project : Effect of homeo nutrient "APARAMURTHA" on seed Yield of Black gram during 2009.
2. Name of the investigator:
  1. Dr. D. Jena (professor and P.I), Department of soil science and Agricultural Chemistry.
  2. Dr G.H. Santra (professor and Co-PI), Department of soil science and Agriculture Chemistry.
3. **Obejective** : To study the effect of homeonutrient "APARAMURTHA" on seed yield and important biometric characters of black gram.
4. Location : Phulbani
5. Year : Kharif 2009.
6. Conducted by : Department of soil science and agriculture chemistry Orissa University of Agriculture and Technology, Bhubaneswar-751003.
7. Sponsored by : Master Agro Products.
8. Product tested : Aparamurtha.
9. Soil climate : The soil is sandy loam. The pH and EC is 5.5 and 0.25 ds/m. Organic carbon 0.28%. The climate prevailing in the region are subtropical.
10. Season : Kharif.
11. Crop & variety : Black gram T-9
12. Duration : 85days.
13. Date of sowing : 13.08.2009.
14. Date of harvesting : 06.11.2009.
15. Plot site : 5m x 3m.
16. Replication : 5
17. Design : R.B.D.
18. Spacing : 30cm.
19. Recommended fertilizers: Fertilizer N-20kg, P<sub>2</sub>O<sub>5</sub>-40kg, K<sub>2</sub>O-20Kg, All fertilizers applied at the time of sowing.
- NUTRIENTS : Homeonutrients spray at 20DAS and flowering.
- TREATMENTS :
  - T<sub>1</sub> - Control.
  - T<sub>2</sub> - Recommended dose of fertilizers.
  - T<sub>3</sub> - Homeonutrients spray twice at 20DAS and flowering.
  - T<sub>4</sub> - 50% RDF and Homeonutrients at 20 DAS. (Once)

  
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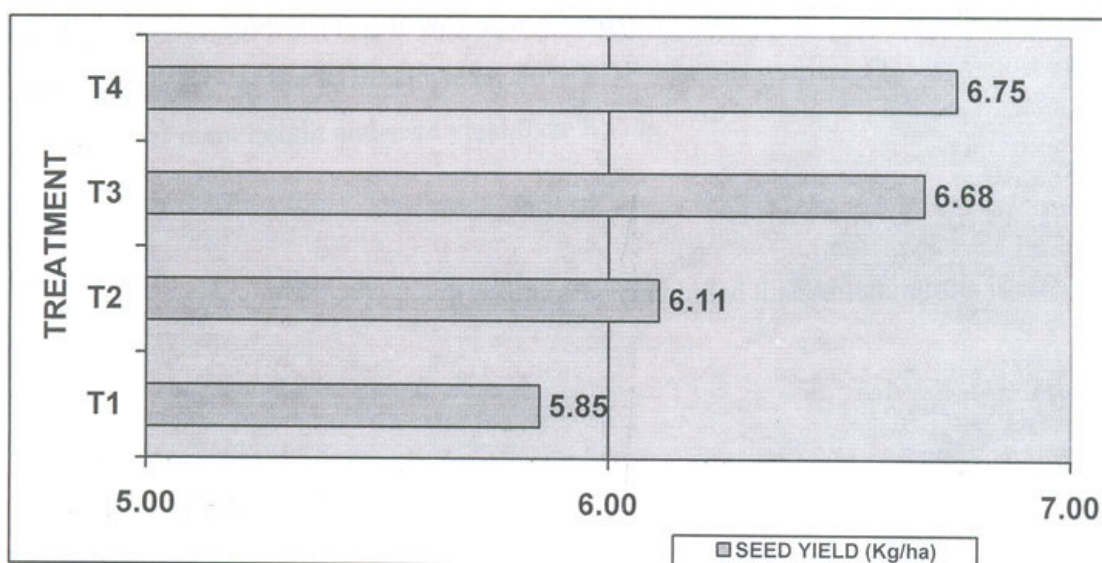
**Evaluation report on scientific experimentation of "APARAMURTHA"  
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black gram during 2009.**

1. Title of the project : Effect of homeo nutrient "APARAMURTHA" on seed Yield of Black gram during 2009.
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  4. Location : Phulbani
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  6. Conducted by : Department of soil science and agriculture chemistry Orissa University of Agriculture and Technology. Bhubaneswar-751003.
  7. Sponsored by : Master Agro Products.
  8. Product tested : Aparamurtha.
  9. Soil climate : The soil is sandy loam. The pH and EC is 5.5 and 0.25 ds/m. Organic carbon 0.28%.The climate prevailing in the region are subtropical.
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  12. Duration : 85days.
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  16. Replication : 5
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- NUTRIENTS : Homeonutrients spray at 20DAS and flowering.
- TREATMENTS :
  - T<sub>1</sub> - Control.
  - T<sub>2</sub> - Recommended dose of fertilizers.
  - T<sub>3</sub> - Homeonutrients spray twice at 20DAS and flowering.
  - T<sub>4</sub> - 50% RDF and Homeonutrients at 20 DAS. (Once)

**Table Effect of Homeonutrient (APARAMURTHA) and chemical fertilizer on yield and yield attributing characters of black gram.**

Treatment	plant Height (cm)	branches/ plant	Pods / plant	dry-plant biomass (Q/ha)	seed yield. ( Q/ha)
T <sub>1</sub> Control	54.24	5.44	24.64	15.83	5.85
T <sub>2</sub> RDF	55.40	5.68	25.60	19.60	6.11
T <sub>3</sub> Homeonutrient(Twice).	52.36	5.76	27.24	16.82	6.68.
T <sub>4</sub> 50% of RDF+ Homeonutrient(Once).	60.52	5.20	26.44	17.88	6.75.
CV (%)	7.13	12.59	7.59	7.26	12.25.
C.D.(P=0.05)	2.44	0.43	1.22	0.78	0.48.

EFFECT OF HOMEONUTRIENT APARAMURTHA ON SEED YEILD



RESULTS

- Branch/plant : The homeonutrinets (T<sub>3</sub>) increased the branch per plant over no manure or control (T<sub>1</sub>).
- Pods/plant : The homeonutrients (T<sub>3</sub>) increased the pods per plant significantly over no manure or control (T<sub>1</sub>) as well as RDF.
- Plant height : The homeonutrients (T<sub>3</sub>) decreased the plant height over no manure or control (T<sub>1</sub>) but nonsignificantly.

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CO-PRINCIPAL INVESTIGATOR  
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- Dry-plant biomass : Dry biomass was highest in treatment (T<sub>2</sub>) received recommended fertilizer dose.
- Seed yield : The homeonutrient (T<sub>3</sub>) has increased significantly the seed yield over control (T<sub>1</sub>) and as well as RDF (T<sub>2</sub>) and at par with 50% RDF + homeonutrient (once) treatment.

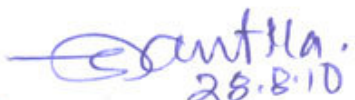
The homeonutrient combined with 50% RDF (T<sub>4</sub>) had increased significantly over control (T<sub>1</sub>) in plant height, dryplant biomass and seed yield. At also increased significantly over RDF (T<sub>2</sub>) the plant height and seed yield, however the treatment T<sub>2</sub> is at par with T<sub>3</sub> in respect of all characters.

## CONCLUSION

The homeonutrient Aparamurtha (T<sub>3</sub>) was effective in increasing significantly in all cases (i) -plant height, (ii)-branches /plant (iii)-pods/ plant, (iv)-dry-plant biomass and seed yield over control (T<sub>1</sub>). It was also effective in increasing branches/plant, pods/plant and seed yield over the RDF. However 50% RDF + homeonutrient (T<sub>4</sub>) was most effective in respect of plant height and seed yield over R.D.F.

It can thus be concluded that Amaramurtha is effective.

Signature of P.I.

  
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Signature of CO-PI.  
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**Evaluation report on scientific experimentation of CHAITRARATHAM AND CHAITRARAKHINI, Homeo plant nutrient on fruit yield and important yield attributing character of mango**

1. Title of the project : Effect of homeonutrient "CHAITRARATHAM" and CHAITRARAKHINI on fruit yield of mango.
  2. Objective : To study the effect of homeonutrient "CHAITRARATHAM AND CHAITRARAKHINI" on fruit yield and important yield attributing character of mango.
  3. Location : Dhenkanal.
  4. Year : Rabi 2009.
  5. Conducted by : Department of soil science and agriculture chemistry  
Orissa University of Agriculture and Technology.  
Bhubaneswar-751003
  6. Sponsored by : Master Agro Products
  7. Product tested : Chaitraratham and chaitrarakhini.
  8. Soil and climate : The soil is sandy loam. The pH of the soil is 5.4, Organic carbon 0.45%. The soils are medium in available N, P, K. The climate prevailing in the region are hot and humid (Subtropical).
  9. Season : Rabi 2009.
  10. Crop and Variety : Mango, amrapalli.
  11. Duration : 155 days.
  12. Age of plant : 5 years.
  13. Date of flowering. : January 2010
  14. Date of harvesting. : June 2010.
  15. Planting distance : 7.5 meter plant to plant.
  16. Replication : 5
  17. Design : C R D
  18. Recommended fertilizer: N-250gm, P<sub>2</sub>O<sub>5</sub>-150gm, and K<sub>2</sub>O- 200gm/plant, applied that amount once in July and other in October.
- NUTRIENTS : 1. Applied homeonutrient chaitraratham 10ml in 10 liter of water per tree/application. 2 such application per annum, Once in July and others in October. Applied as soil application and preferably in a ring which should be one meter away from trunk.
2. Applied homeonutrient chaitra rakhini 30ml in 10litres of water and spray on the flower before blossoming.
- TREATMENT : T<sub>1</sub> = Control  
T<sub>2</sub> = Recommended dose of fertilizer.


  
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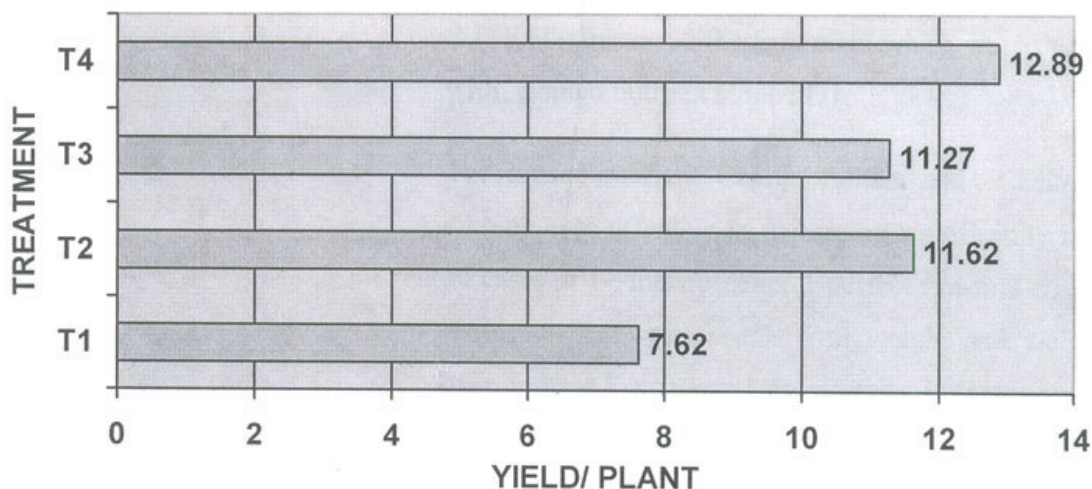
T<sub>3</sub> = Homeonutrient application chaitraratham two times and chaitra rakhini at the time of flowering.

T<sub>4</sub> = 50% R.D.F. plus homeo nutrients Chaitra Ratham, one time and chaitra rakhini at the Time of flowering.

TABLE : Performance of mango cv Amrapalli due to application of homeonutrients "Chaitraratham and Chaitrarakhini" and chemical fertilizers.

Treatment	NO .OF inflorescence per plant	% Of perfect flower	FRUIT set/plant	FRUIT Retained per plant	Avg. Fruit wt(g)	YIELD Per Plant(kg).
Control (T1)	22.0	53.62	80.80	56.0	135.4	7.62
R.D.F(T2)	26.8	63.8	274.00	67.6	172.4	11.62.
Homeonutrient (T3)	27.4	61.8	272.00	67.4	167.2	11.27
50% of RDF + Homeonutrient.	35.2	68.0	247.80	64.0	12.89	201.4
CD (P=0.05)	6.74	7.57	18.28	7.15.	4.82	1.42.

#### EFFECT OF HOMEO NUTRIENTS "CHAITRARATHAM AND CHAITRARAKHINI" ON FRUIT YIELD



#### RESULTS


Inflorescence /plant : The homeo nutrient (T3) increased the inflorescence per plant significantly over control (T1).

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- Perfect flower : The homeo nutrient (T<sub>3</sub>) increased the percentage of perfect flower significantly over no manure (T<sub>1</sub>) but less than R.D.F. (T<sub>2</sub>). Perfect flower increased significantly in the case of the treatment which was received half dose of R.D.F. and homeo nutrient in components to all other treatment.
- Fruit retained per plant : The recommended dose of fertilizer (T<sub>2</sub>) increased the fruit retained significantly over control and it is at par with T<sub>2</sub> and T<sub>4</sub> treatment.
- Average fruit weight : The treatment (T<sub>4</sub>) received half dose of R.D.F and homeo nutrient increased the average fruit weight. Fruit weight significantly over all other treatments. The treatment T<sub>2</sub> and T<sub>3</sub> increased fruit weight significantly over control (T<sub>1</sub>), but treatment T<sub>2</sub> was better in composition to homeo nutrient (T<sub>3</sub>).
- Fruit yield : The treatment T<sub>3</sub> received half dose of R.D.F and homeo nutrient increased fruit yield significantly over control (T<sub>1</sub>). The treatment received R.D.F.(T<sub>2</sub>) increased the fruit yield which was at par with homeo nutrient alone (T<sub>3</sub>).
- Conclusion : The homeo nutrient Chaitra ratham and Chaitra rakhini was effective in increasing significantly in all cases of 1- inflorescence,2-perfect flower,3-fruit settings,4-fruit retained,5- fruit weight and yield over control(T<sub>1</sub>). It was also effective in increasing fruit retained and inflorescence over R.D.F.(T<sub>2</sub>) and at par with R.D.F. in all other cases.

It can thus be concluded that Chaitra ratham and Chaitra rakhini is effective.

Signature of P.I.

  
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Signature of Co-P.I.  
CO-PRINCIPAL INVESTIGATOR  
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**Evaluation report on Scientific experimentation of "GANGADHAR" homeo plant nutrient on yield and important yield attributing characters of Coconut.**

1. Title of the project : Effect of homeopathic nutrient "GANGADHAR" on yield of coconut.
2. Name of the investigator :
  1. Dr. D. Jena (Professor and P.I)  
Department of soil science and Agril. Chemistry.
  2. Dr. G.H.Santra (Professor and CO-P.I).  
Department of soil -science and Agril.Chemistry.
3. Obejectives : To study the effect of homeo nutrient"GANGADHAR" on yield and important yield attributing characters on Coconut.
4. Location : GOPE, PURI.
5. Year : 2009-2010.
6. Conducted by : Department of soil science and agril.-chemistry, Orissa University of agriculture and technology, bhubaneswar-751003.
7. Sponsored by : Master Agro Products.
8. Product tested : Gangadhar
9. Soil and climate : Sub tropical, silty clay loam O.C.-0.5%,pH-5.6 Available NPK-82.9, 12.0 and112.2kg/ha
10. Variety : Sakhigopal (local)
11. Date of flowering : June, 2009.
12. Date of harvesting : April, 2010.
13. Replication : 5
14. Design : CRD.
15. Spacing : 7.5 meter.
16. Recommended fertilizers: N-250gm, P<sub>2</sub>O<sub>5</sub>-160gm, K<sub>2</sub>O-600gm per tree, two time in a year, applied the month of July and others in November or offset of monsoon. Nutrients : 10 ml Gangadhar in 10 liters of water per tree per application . Applied once in the end of June and other in November. Add 10ml of tincture to 10 liters of water

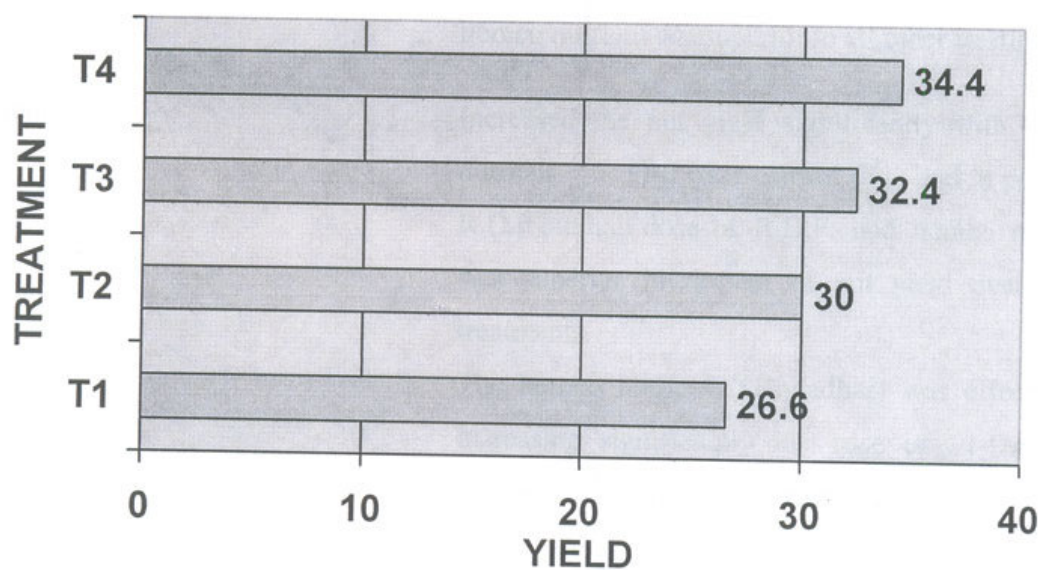
and apply as soil application. Preferably in a ring which should be 2 meter away from trunk.

Treatment : T1 - No manure (control)  
 T2 - Recommended dose of fertilizer (RDF)  
 T3 - Homeo nutrients applied 10ml per 10 litre of water.  
 T4 - 50% RDF Plus homeonutrients.

**Table- Effect of Homeo nutrients GANGADHAR and R.D.F (Chemical fertilizer) on coconut yield.**

Treatment leaves. Plant.	Girth in(m)	No. Of leaves	Average length of leaves(m)	No.of Inflorescences	No.of female Flower/ inflorescence.	Yield/plant (NO).
control(T1)	1.16	21.8	2.87	4.6	20.2	26.6.
RDF(T2)	1.14	23.6	3.16	5.0	26.6	30.0.
Homeonu- trients(T3).	1.18	23.4	3.03	4.6	27.4	32.4
50% of RDF Plus Nutrients.	1.24	26.6	3.35	5.2	33.2	34.4.
C D(0.05)		6.87	0.263.	1.28	5.86	4.94

**Effect of Homeo nutrient GANGADHAR on coconut yield.**



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 Homeonutrients Project.

## RESULTS

- Girth : The homeo nutrient (T<sub>3</sub>) increased plant girth over control and R.D.F but less than half dose of R.D.F plus homeo- nutrients.
- No. of leaves : No. of leaves increased in homeo nutrient treatment (T<sub>3</sub>) over control and at per with R.D.F but less than half dose of R.D.F plus homeo nutrients.
- Length of leaves : The homeo nutrient (T<sub>3</sub>) increased length of leaves over control and at per with R.D.F, but increased significantly with half dose of R.D.F. and homeo nutrient (T<sub>4</sub>) over control (T<sub>1</sub>).
- Inflorescence/plant : There was no effect of homeo nutrient on increased no. of inflorescence. All the treatment was at per with no. of inflorescence.
- Female flower/inflorescence : The homeo nutrient increased the no. of female flower per inflorescence significantly over control (T<sub>1</sub>) but at per with R.D.F. half dose of R.D.F. and homeo nutrient was superior to all other treatment.
- Yield : Increased the nut yield significantly with homeo nutrient (T<sub>3</sub>) over control (T<sub>1</sub>) and at per with R.D.F but half dose of R.D.F. and homeo nutrient was superior in respect of nut yield over other treatments.
- Conclusion: The homeo nutrient (Gangadhar) was effective in increasing significantly in case of 1-length of leaves, 2-no. of inflorescence per plant, 3-no. of female flower per plant and nut yield per plant. Half dose of R.D.F and homeo nutrient was also effective in increasing, in all cases over R.D.F.

  
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 CO-PRINCIPAL INVESTIGATOR  
 Homeonutrients Project.



It can thus be concluded that Gangadhar is effective.

Signature of P.I.

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Signature of Co-P.I.

CO-PRINCIPAL INVESTIGATOR  
Homeonutrients Project.

**Protocol for Scientific experimentation of performance of Homeo Nutrient  
"Chaitra-Ratham" on mango crop**

- 1) Name of the product: Chaitra-Ratham
- 2) No. of Application : 3
  - 1) Chaitra-Ratham-2 times
  - 2) Chitra-Rakshini-1 time
- 3) Period: One year
- 4) Time of application
  - a) Soil application of Chaitra-Ratham-in June-July
  - b) Soil application of Chaitra-Ratham in October
  - c) Foliar application of Chaitra Rakshini in December-January
- 5) Design: CRD
- 6) Plot size: 10 trees per treatment
- 7) No. of treatments:
  - 1) No Fertilizers or manures
  - 2) Chemical fertilizers (Recommended doses)
  - 3) Homeo nutrient both soil and foliar application
- 8) No. of replications: 3
- 9) Observations recorded
  - 1) Fruit set
  - 2) Number of fruits/tree
  - 3) Weight of the fruits
  - 4) Yield (Kgs/tree)
  - 5) Fruit set

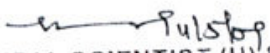
**RESULTS**


S.No	Treatments	Fruit set	No. of fruits/tree	Weight (g) of the fruits	Yield (kgs)/tree
1	No manures/Fertilizers	7.40	300.86	301.63	83.04
2	Chemical fertilizers	9.32	340.63	355.53	121.51
3	Homeo nutrient	13.49	291.63	319.97	104.97
	SEm	1.93	23.54	6.39	4.89
	CD	NS	NS	25.11	19.21

\*Each data point is the average of 3 trees (standard plot size)

\*Chemical fertilizers were applied as per the recommended doses.

There is no significant differences among the treatments with respect to fruit set and number of fruits per tree. This indicates that the fruit set and number of fruits per tree in homeo treated trees is at par / comparable with the trees with chemical fertilization. However, maximum fruit weight (355 g) was observed in trees treated with chemical fertilizers followed trees treated with homeo nutrient (319 g). The same patter was reflected in yield (kgs/tree). The yield with application of homeo nutrient was higher (104 kgs/tree) than the trees without fertilizer application (83 kgs/tree). However, maximum yield was obtained in the trees treated with chemical fertilization.

  
PRINCIPAL SCIENTIST (H) & HEAD  
FRUIT RESEARCH STATION  
Sangareddy, Dist. Medak (A.P.)

  
SENIOR SCIENTIST (HORT)  
& AICRP (CTF) Incharge  
Fruit Research Station  
Sangareddy, Medak Dist

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Grams : AGRIVARSITY  
FAX : 091-040-24017453  
E-mail : [dr\\_angrau@yahoo.co.in](mailto:dr_angrau@yahoo.co.in)

## ACHARYA N.G. RANGA AGRICULTURAL UNIVERSITY

ADMINISTRATIVE OFFICE  
Rajendranagar, Hyderabad – 500 030

Lr.No.21879 / Res.II(3 )/2007

Dated: 19-05-2009

From  
Dr. G.Lakshmi Kantha Reddy,  
Director of Research

To  
M/s.Maitreya,  
MIG 95, Opp. Z.P. Colony,  
Srikakulam – 532001  
A.P.

Sir

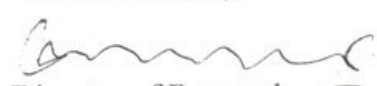
SUB: ANGRAU - Paid up trial on "Testing of Homeo formulation  
"Chaitraradham" on mango during the year 2007-08 at FRS,  
Sangareddy - Final Report – Reg.

REF: Your Lr.No.Nil, dated: 08-10-2007.

\*\*\*

A report on the Paid up trial on "Testing of Homeo formulation  
"Chaitraradham" on mango conducted at Fruit Research Station, Sangareddy during  
the year 2007-08 is herewith enclosed for favour of information.

Yours faithfully

  
for Director of Research

20  
19/5  
19/10

19/5



**Protocol for Scientific experimentation of performance of Homeo Nutrient  
"Chaitra-Ratham" on mango crop**

- 1) Name of the product: Chaitra-Ratham
- 2) No. of Application : 3
  - 1) Chaitra-Ratham-2 times
  - 2) Chitra-Rakshini-1 time
- 3) Period: One year
- 4) Time of application
  - a) Soil application of Chaitra-Ratham-in June-July
  - b) Soil application of Chaitra-Ratham in October
  - c) Foliar application of Chaitra Rakshini in December-January
- 5) Design: CRD
- 6) Plot size: 10 trees per treatment
- 7) No. of treatments:
  - 1) No Fertilizers or manures
  - 2) Chemical fertilizers (Recommended doses)
  - 3) Homeo nutrient both soil and foliar application
- 8) No. of replications: 3
- 9) Observations recorded
  - 1) Fruit set
  - 2) Number of fruits/tree
  - 3) Weight of the fruits
  - 4) Yield (Kgs/tree)
  - 5) Fruit set


**RESULTS**


S.No	Treatments	Fruit set	No. of fruits/tree	Weight (g) of the fruits	Yield (kgs)/tree
1	No manures/Fertilizers	7.40	300.86	301.63	83.04
2	Chemical fertilizers	9.32	340.63	355.53	121.51
3	Homeo nutrient	13.49	291.63	319.97	104.97
	SEm	1.93	23.54	6.39	4.89
	CD	NS	NS	25.11	19.21

\*Each data point is the average of 3 trees (standard plot size)

\*Chemical fertilizers were applied as per the recommended doses.

There is no significant differences among the treatments with respect to fruit set and number of fruits per tree. This indicates that the fruit set and number of fruits per tree in homeo treated trees is at par / comparable with the trees with chemical fertilization. However, maximum fruit weight (355 g) was observed in trees treated with chemical fertilizers followed trees treated with homeo nutrient (319 g). The same patter was reflected in yield (kgs/tree). The yield with application of homeo nutrient was higher (104 kgs/tree) than the trees without fertilizer application (83 kgs/tree). However, maximum yield was obtained in the trees treated with chemical fertilization.

  
PRINCIPAL SCIENTIST (H) & HEAD  
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SENIOR SCIENTIST (HORT)  
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[raghavapr@yahoo.com](mailto:raghavapr@yahoo.com)

## ACHARYA N.G. RANGA AGRICULTURAL UNIVERSITY

ADMINISTRATIVE OFFICE  
Rajendranagar, Hyderabad – 500 030

Lr.No.21877/Res.IV(3)/2006

Dated: 23-06-2007

From  
Dr. P. Raghava Reddy  
DIRECTOR OF RESEARCH

To  
M/s. Master Agro Products,  
MIG – 62, 02P colony,  
Srikakulam – 532 001,  
Andhra Pradesh.

Sir

Sub:- ANGRAU – Evaluation of Aparamrutham (Organic Plant nutrient) on rice-fallow black gram – Final test report – Furnished.

Ref:- Lr.No. D4/Paid up trial/Aparamrutham/2006-07; dt. 31.5.2007 from Principal Scientist (Pulses)/i/c, RARS, Lam, Guntur.

\*\*\*

Please find enclosed the final test report on "evaluation of Aparamrutham (Organic Plant nutrient) on rice-fallow black gram" conducting during Rabi, 2006-07 at Regional Agricultural Research Station, Lam, Guntur for taking necessary action.

Yours faithfully

*P. Raghava Reddy*  
for DIRECTOR OF RESEARCH

*23/6/07*

## EVALUATION OF APARAMRUTHAM IN RICE- FALLOW BLACKGRAM

1. **Title of the experiment** : Evaluation of Aparamrutham ( organic plant nutrient) in rice- fallow blackgram
2. **Name and address of the sponsorer**: M/s Master Agro Products  
MIG -62, O2P Colony,  
Srikakulam- 532 001  
Andhra Pradesh.
3. **Objective** : To evaluate the effect of Aparamrutham (organic plant nutrient) on growth and yield of rice-fallow blackgram.
4. **Product tested** : Aparamrutham (organic plant-nutrient)
5. **Name and address of the institute where tested**: Regl. Agril. Research Station  
Lam farm, Guntur – 522 034
6. **Experimental details** :

Season :	Rabi, 2006-07
Design :	RBD
Replications :	4
Spacing :	30 cm x 10 cm
Plot size :	8 mt x 2.5 mt
Treatments :	6
Test variety :	LBG 709
Date of sowing :	09.12.06
Date of harvesting :	07.03.2007
NO. of sprays given :	2 ( on 09.01.07 and 23.01.07)
Spray fluid used :	500 lts/ha
Location :	ARS, <sup>CHANTASALA</sup> Garikapadu. (Rice-fallow blackgram)

A. Sankar Narani Reddy  
31/5/07  
Scientist (Agron)



A trial was laid out at Agril. Research Station, Ghantasala on rice-fallow blackgram (Variety LBG 709) during Rabi, 2006-07 to evaluate the effect of Aparamrutham (organic plant nutrient) on growth and yield of blackgram.

The treatments were imposed at 30 DAS (Vegetative stage) followed by 44 DAS (Flowering stage).

**Result:** In all the treatments there is no significant difference in plant height, main branches and side branches. But, there is a significant difference in number of pods per plant among the treatments which was reflected in yield also.

Among all the treatments, 5% Panchagavya spray had given highest significant yield (755 Kgs/ha). Spraying of 3% Aparamrutham had given yield of 617.5 Kgs/ha which is statistically not significant. However, there is 26.6 per cent yield increase was recorded with 5% panchagavya spray and 10.3 per cent with 3% Aparamrutham spray when compared to control.

**Conclusion:** Foliar spray of 5% panchagavya at 30 and 45 DAS had given highest yield followed by foliar spray of 3% Aparamrutham in rice-fallow blackgram.

A. dubbas Namal Nudaly  
21/5/07.

Scientist (Agro)

Effect of homeo-medicine (Aparamrutham) on the yield and yield attributes of rice-fallow blackgram

Treatments	Plant height (Cm)	Main Branches (No)	Side Branches (No)	Pods per plant	Yield (Kgs/ha)	100 seed weight (gm)	% increase over control
T 1 -control	38.85	2.2	7.35	11.55	553.75	5.5	
T 2- 2% Urea spray	40.25	2.4	7.95	15.35	586.25	5.75	5.5
T 3-2% DAP spray	40.2	2.35	7.45	14.2	570	5.7	2.8
T 4- 1% KNO <sub>3</sub> spray	40.45	2.4	8.2	16	595	5.85	6.9
T 5- 5 % Panchagavya spray	42.85	2.7	8.8	18.45	755	6.0	26.6
T 6- 3% Aparamrutham spray	41.5	2.55	8.4	17.25	617.5	6.0	10.3
SEm	1.66	0.25	0.644	0.28	30.8	0.150	
CD	NS	NS	NS	0.83	93.05	NS	
CV	8.2	16.8	16.4	3.6	10.1	5.2	

A. Dubey Namio *(Signature)*  
 Scientist (Agro)

## **Paid up Trial on Homeo Product Madhurima**

A Paid up trial on homeo product 'Madhurima' was carried out to study the response of sugarcane under irrigated conditions (plant and ratoon crops) during the period from 2007 to 2009 at Regional Agricultural Research Station, Anakapalle.

### **Response of Sugarcane to homeo nutrient Madhurima**

#### **Plant Crop:**

The experiment was laid out in a randomized block design with three treatments viz., no manure (T<sub>1</sub>) 100 % recommended NPK (T<sub>2</sub>) and homeo product Madhurima (T<sub>3</sub>) and 7 replications. Experimental site was a sandy loam, neutral in reaction (PH 7.19), medium in organic carbon (0.62%), low in available nitrogen (244.7 KgN/ha), available phosphorous (20.9 Kg P<sub>2</sub>O<sub>5</sub> / ha) and available Potassium (116.2 Kg K<sub>2</sub>O /ha).

An early maturing sugarcane variety Sarada (93 A 145) was planted on 6<sup>th</sup> February 2007 duly adopting recommended spacing and seed rate. In 100% recommended NPK treatment, phosphorous (100 Kg P<sub>2</sub>O<sub>5</sub> / ha) and potassium (120 Kg K<sub>2</sub>O /ha) were applied basally at the time of planting through inorganic fertilizers in the form of Super phosphate and muriate of potash respectively. Nitrogen was applied @ 112 Kg/ha in the form of urea in two equal splits at 45 and 90 days after planting. In the treatment with homeo product (T<sub>3</sub>), the Madhurima liquid was applied as per the protocol furnished by the firm. Remaining package of practices were followed as per recommendation to North Coastal Zone. Successful crop was raised and the crop was harvested at peak maturity during 30<sup>th</sup> January and 1<sup>st</sup> February 2008.

The data on germination of setts at 35 DAP, tiller population at 120 DAP, Plant height and shoot population at 270 DAP, no. of internodes, length and girth of millable canes, millable stalk population, sucrose content in cane juice, cane yield at harvest were recorded, data were analyzed statistically and furnished in table 1 and 2. Based on corrected brix, Pol values and cane yield, commercial cane sugar percentage, sugar yields were computed and presented in table 2.

Sailent results of the experiment are detailed below:

#### **Growth Parameters:**

**Germination %:** Germination of setts did not differ significantly due to fertilizer treatments and it ranged from 48.7 to 51.2 %.

#### **Tiller Population at 120 days after planting:**

Application of recommended NPK through inorganic fertilizers registered significantly higher tiller population (1,15,000 tillers/ha) than homeo product application (93,750 tillers/ha) or absolute control (93,250 tillers/ha), at the end of formative phase i.e 120 days after planting (DAP).



### **Plant height at 270 DAP:**

Growth of the crop measured in terms of plant height at the end of grand growth phase i.e., 270 DAP was not influenced by fertilizers significantly. However, relatively more plant height was noticed with 100 % recommended NPK (284.0 cm) and homeo product Madhurima (282.0 cm) over absolute control (277.0 cm).

### **Shoot Population at 270 DAP:**

Shoot population recorded at the end of grand growth phase was significantly influenced by fertilizers (table 1). Application of 100 % recommended NPK through inorganic form produced significantly higher no. of shoots (74,500/ha) than homeo product application (69,750/ha). Homeo product application had relatively higher no. of shoots over absolute control (64,250/ha) at 270 DAP.

### **YIELD ATTRIBUTES:**

#### **No. of internodes/ millable cane at harvest:**

No. of internodes recorded per each millable cane did not vary significantly with fertilizer treatments and it ranged from 26.7 to 27.9

#### **Girth of millable cane:**

Girth of millable cane differed significantly with fertilizers. Application of recommended NPK through inorganic fertilizer (2.52) or application of homeo product Madhurima (2.50 cm) recorded more or less equal cane girth and both were significantly superior over absolute control (2.25cm).

#### **Length of millable cane:**

Millable cane length was significantly influenced by fertilizers but the difference among treatments did not differ significantly. Application of homeo product Madhurima (248 cm) or 100 % recommended NPK (248 cm) recorded higher millable cane length than absolute control (237.6 cm).

#### **No. of millable canes / ha:**

Fertilizers had significant influence on millable cane population at harvest. Significantly higher millable cane population was recorded with 100 % recommended NPK through inorganic fertilizer (62,174/ha). Homeo product application increased the millable cane population marginally (55044/ha) over no manure (53,418/ha).

#### **Juice sucrose (%):**

Sucrose content in cane juice was unaffected by the fertilizer treatments and the sucrose percentage varied from 19.08 to 19.42 %.

#### **Commercial Cane Sugar %:**

Similar to sucrose content the Commercial cane sugar % was also unaltered due to fertilizer treatments. The CCS % ranged from 13.83 to 14.08 %.

### **Cane Yield (t/ha):**

Cane yield was significantly influenced by fertilizer treatments. Fertilizer application at 100 % recommended dose through inorganic form registered significantly higher cane yield (86.0 tons/ha) than homeo product Madhurima (74.9 t/ha) but the homeo product application recorded significantly higher yield than absolute control (68.6 t/ha) or no manure application. Cane yield increased to an extent of 25.0 and 15.0 % with 100 % recommended NPK and homeo product application respectively over no manure fertilizer application (Absolute control).

### **Sugar Yield t/ha:**

Sugar yields were computed by using CCS % and Cane yield. Sugar yields followed similar trend as that of Cane yield. Higher Sugar yield (10.51 t/ha) was recorded with 100 % recommended NPK or homeo product application (9.03 t/ha) over absolute control (8.25 t/ha).

### **Influence of fertilizer treatments on pest incidence:**

Effect of homeo product on incidence of major pests especially early shoot borer and internode borer was also studied as per the protocol communicated by the university. Incidence of early shoot borer during formative phase and intensity of internode borer during grand growth phase were recorded by Entomologist of Regional Agricultural Research Station, Anakapalle and the data were analyzed statistically and presented in table 3.

### **Early shoot borer:**

Cumulative incidence of early shoot borer during 2007-08 was less than the threshold level (15 %) However, incidence differed significantly among the treatments. Maximum incidence of ESB (8.15 %) was noticed in no manure application. ESB incidence was lowest in homeo product treatment (4.53 %) and it was on par with 100 % recommended NPK (6.1 %) but significantly lower over absolute control (8.15 %).

### **Intensity of internode borer:**

Intensity of internode borer was also less than threshold level during the period of experimentation. Significantly lower internode borer damage was observed in homeo product applied treatment (2.97 %) than absolute control (8.98 % ) as well as 100 % recommended NPK applied treatment (4.27 %).

### **Ratoon Crop:**

After harvest of plant crop in February, 2008 trash was removed and ratooning operations were performed and fertilizers were applied as per treatments to study the response of ratoon crop to homeo product Madhurima. In 100 % recommended NPK plot 224 Kg N , 100Kg P<sub>2</sub> O<sub>5</sub>, 120 Kg K<sub>2</sub>O/ha were applied as per recommendation to North Coastal Zone. Entire dose of phosphorous and potassium along with 50 % nitrogen were applied immediately after ratooning in the form of urea, super phosphate and muriate of potash respectively. Remaining 50 % nitrogen was applied at 45 days after ratooning.



The data on tiller population at 90 days after ratooning, millable cane population, can yield, Juice sucrose at harvest were recorded, statistically analyzed and results are furnished in table 3.

**Quality Parameters :**

Representative Cane samples from different treatments were drawn and juice was extracted , settled and brix values were recorded . Later the juice samples were filtered after adding ~~had~~ as clarificant. The filtered juices were filled in Polari table and Pol readings were recorded with help of Polari Scope. Sucrose percentage in cane juice of treatmental plots was computed based on brix and Pol. Values and data are furnished in table 2. CCS % was calculated using Corr. brix and Pol. values (table 2).

**Influence of fertilizer treatments on growth, yield and quality of sugarcane ratoon:**

Tiller Population: Tiller population recorded at 90 days after rationing was significantly superior with 100% recommended NPK (83.628/ha) over no manure (68602/ha) or madhurima application ( 72.760/ha).

**No. of millable canes / ha at harvest:**

Application of NPK at 100% recommended dose registered significantly higher no. of millable canes / ha at harvest (70,690 / ha). Allication of madhurima (55,200 / ha) or absolute control (53,540 / ha) registered more or less similar millable can population at harvest.

**Sucrose:**

Sucrose contant in cane juice at harvest did not differ significantly with different fertilizer treatments and ranged from 17.7 to 18.6.

CCS %: The computed commercial cane sugar % also did not vary significantly with fertilizer treatments.

**Cane yield:**

Ratoon can yield obtained from different fertilizer treatment plots differed siginificantly. Application of fertilizers at 100% recommended NPK recorded significantly higher cane yield (73.0 t/ha) than madhurima application (62.0 t/ha) or no manure application. Cane yield improved to an extent of 24.1 % and 5% 100% recommended NPK and Madhurima application respectively over no manure application.

Sugar yield: Sugar yield followed similar trend as that of cane yield. Highest sugar yield was recorded with 100% recommended NPK (9.6 t/ha) over madhurima (8.6 t/ha) or no manure application (7.7%).



- 5 -

**2007 - 2008 (Plant Crop)**

Response of sugarcane to homeo product 'Madhurima' under irrigated conditions.

Table 1: Growth parameters of sugarcane plant crop as influenced by fertilizer treatments

Treatment	Germination %	Tiller population at 120 DAP	Plant height at 270 DAP	Stalk population at 270 DAP	Incidence of ESB %	Intensity of Internode Borer.
No manure (T1)	48.7	93,250	277.0	64.250	8.15	8.98
100% NPK T2	51.2	1,15,000	284.00	74.500	6.10	4.27
Madhurima	49.9	93.750	282.00	69.750	4.53	2.97
SEm ±	1.8	3125	3.12	2,300	0.52	0.40
CD 0.05	NS	9,925	NS	NS	1.62	1.22
C.V/ %					22.4	19.4

**2007 - 2008 (Plant Crop)**

Response of sugarcane to homeo product 'Madhurima'

Table 2: Yield attributes & Yield of Sugarcane plant crop as influenced by fertilizer treatments

Treatment	No. of internodes	Girth of millable cane (cm)	Length of millable cane (cm)	No. of millable canes / ha	Sucrose %	CCS %	Cane yield (t/ah)	Sugar yield (t/ha)
No manure	26.7	2.25	237.6	58418	19.42	14.08	68.6	8.25
100 % NPK	27.9	2.52	241.7	72174	19.08	13.83	86.0	10.51
Madhurima	27.0	2.50	248.0	65044	19.22	13.91	74.9	9.03
	0.46	0.05	3.6	2052	0.14	0.11	1.45	
	NS	0.15	11.0	6297	NS	NS	4.46	

- 6 -

2008-09 (Ratoon crop)

Table 3: Yield attributes & yield of sugarcane ratoon as influenced by fertilizer treatments.

Treatment	Tiller population at 90 DAP	NMC / ha at harvest	Sucrose	CCS %	Cane yield	Sugar yield
No manure	68602	53540	17.9	13.10	59.00	7.7
100 % NPK	83628	70690	18.6	13.14	73.00	9.6
Madhurima	72760	55200	17.71	13.80	62.00	8.6
SEm $\pm$	3133	2334	0.16	0.12	2.1	
CD 0.05	8145	6536	NS	NS	602	

Paid-up Trial

**EVALUATION OF SASYA SYAMALA (Homoeo plant nutrient)**

on Physiological and Productive efficiency of Rice Crop.



FUNDED BY

**M/S Master Agro Products.,**  
MIG-62, OZP Colony,  
Srikakulam-532001,  
Andhra Pradesh (India)

TESTING CENTRE

**DEPARTMENT OF PLANT PHYSIOLOGY**  
**A.P. Rice Research Institute & R.A.R.S.,**  
**MARUTERU – 534 122**  
West Godavari District (A.P)

SCIENTIST INCHARGE OF THE PROJECT

S. SIVARAMA PRASAD  
SCIENTIST (Plant Physiology) (S.G)  
A.P.R.R.I., RARS., MARUTERU.



Technical report on “**EVALUATION OF SASYA SYAMALA (Homoeo plant nutrient) - on Physiological and Productive efficiency of Rice Crop.**” during Rabi, 2006-07 and Kharif, 2007

1. **Title of the project** : EVALUATION OF SASYA SYAMALA (Homoeo plant nutrient) - on Physiological and Productive efficiency of Rice Crop.
2. **Name of The Investigator** : 1. Dr. S. Sivarama Prasad,  
Scientist (Plant Physiology), APRRI, Maruteru
3. **Objectives** : To find out the effect SASYA SYAMALA on Physiological and Productive efficiency of Rice Crop.
4. **Year of commencement** : Rabi, 2006-07
5. **Conducted by** : A. P. Rice Research Institute & R.A.R.S.,  
**Acharya N.G. Ranga Agricultural University**  
Maruteru-534 122, West Godavari district, AP
6. **Location** : The study center was located in Krishna- Godavari zone of Coastal AP. The research center is situated at 16.38<sup>0</sup> N latitude, 81.44<sup>0</sup> E longitude with 5 MSL altitude
7. **Sponsored by** : M/S Master Agro Products.,  
MIG-62, OZP Colony,  
Srikakulam-532001  
Andhra Pradesh (India)
8. **PRODUCTS TESTED** : Homoeo plant nutrient - SASYA SYAMALA

9. **Climate and soils :**

The climate conditions prevails in the region are typical subtropical humid to sub humid climate which are characterized by fairly hot summer, mild cold winter and more humid and warm monsoon. The average annual rainfall for the tract is ranging from 900-1300 mm. The rainfall distribution is fairly good with 60% rainfall will be received during June- September, 28% between October to December and 11% between January to May. The soils of the center are Black clay having poor drainage and good water holding capacity. The clay content in the soil ranges from 48-50%, with montmorillonite and illite type of clay minerals. The soil cracks vertically up to a depth of 40-80 cm in hot summer. The soil was ill drained having pH 6.5 and EC 3.4 ds/m. The salt content is very low.

  
22/3/08

(S. SIVARAMA PRASAD)  
S. Sivarama Prasad  
Scientist (Pl. Physiology) (S.8.) (S-6)  
A. P. RICE RESEARCH INSTITUTE  
MARUTERU - 534 122


10. **DETAILS OF THE EXPERIMENT :**

**RABI, 2006-07 :**

Season : Rabi, 2006-07  
Variety : Cotton Dora Sannalu (MTU-1010)  
Duration : 120 days  
  
Date of sowing : 16-12-2006  
Date of transplanting : 10-01-2007  
Date of harvest : 07-04-2007  
  
Spacing : 15 x 15 cm  
  
Plot size : Gross plot : 18.2 m<sup>2</sup>  
Net Plot : 12.9 m<sup>2</sup>  
  
Recommended NPK : 120 kg N, 60 kg P<sub>2</sub>O<sub>5</sub> and 40 kg K<sub>2</sub>O per hectare  
  
Design : Randomised Block Design  
  
Replications : Four (4)

**KHARIF, 2007 :**

Season : Kharif, 2007  
Variety : MTU 1061 (Indra)  
Duration : 150 days  
  
Date of sowing : 02-07-2007  
Date of transplanting : 31-07-2007  
Date of harvest : 28-11-2007  
  
Spacing : 20 x 15 cm  
  
Plot size : Gross plot : 18.0 m<sup>2</sup>  
Net Plot : 12.5 m<sup>2</sup>  
  
Recommended NPK : 60 kg N, 40 kg P<sub>2</sub>O<sub>5</sub> and 40 kg K<sub>2</sub>O per hectare  
  
Design : Randomised Block Design  
  
Replications : Four (4)

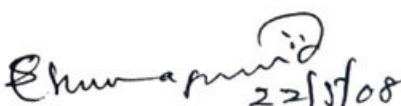
  
S. Siva Rama Prasad,  
Scientist (Pl. Physiology) (S.R.)  
A. P. RICE RESEARCH INSTITUTE  
MARUTERU - 534 122

**Treatments:** FIVE (5) are common for both Rabi and Kharif seasons as per the protocol.

T. NO	Treatment	TREATMENTS & TIME OF APPLICTION
T 1	No Manure or Fertilizers	Control
T 2	Recommended chemical fertilizers	<b>Rabi, 2006-07 :</b> 120 kg N, 60 kg P <sub>2</sub> O <sub>5</sub> and 40 kg K <sub>2</sub> O per hectare  <b>Kharif, 2007 :</b> 60 kg N, 40 kg P <sub>2</sub> O <sub>5</sub> and 40 kg K <sub>2</sub> O per hectare – Nitrogen applied in 3 split doses at Transplanting, 15 DAT and Panicle initiation stage
T 3	Homoeo nutrient SASYA SYAMALA @ 2 ml per lt.	Applied at four stages as basal spraying- 1. Transplanting 2. 15 DAT 3. 25 DAT 4. 50 DAT
T 4	Homoeo nutrient SASYA SYAMALA @ 3 ml per lt.	
T 5	Homoeo nutrient SASYA SYAMALA @ 4 ml per lt.	

**Data to be collected :**

1. Plant height
2. Tiller Number.
3. Leaf Area Index
4. Biomass production
5. Chlorophyll content – utilizing Chlorophyll meter
6. Tiller to Panicle conversion %
7. Panicle number / m<sup>2</sup>
8. 1000 grain weight
9. Spikelet number/panicle
10. Filled grain number/panicle
11. Spikelet sterility %
12. Grain yield kg.ha<sup>-1</sup>

  
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## 11. METHODOLOGY :

The field experiments were laid out in a Randomized Block Design during **Rabi, 2006-07 and Kharif, 2007 seasons**. Normal agronomic practices were followed. The data on Physiological parameters like plant height, tiller number, LAI, and biomass production were recorded at 50 % flowering stage as per Laboratory manual for physiological studies of rice of IRRI. The grain yield, yield components were recorded at harvest stage. The data was subjected to statistical scrutiny and presented in tables 1 & 2.

### **Cultural practices**

The experiment was received uniform plant protection and cultural management practices through out the period of crop growth. The entire dose of P & K was applied as basal and N was given in three equal splits at basal, at maximum tillering and PI stages. The schedule sprayings of SASYA SYAMALA treatments were given as per the protocol given above.

## 12. RESULTS :

### **Rabi, 2006-07 :**

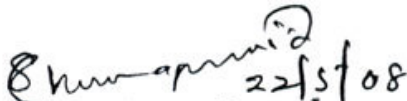
The SASYA SYAMALA treatments were evaluated in rice crop (variety MTU 1010) for their physiological traits and productive efficiency during Rabi, 2006-07 season and the results were presented in tables 1 and 2. Data on the physiological attributes at flowering stage were presented in table -1, while the data on productivity and other related parameters were presented in table - 2.

**Plant Height (cm) :** Sasya Syamala treatments have increased Plant height significantly over the T-1 (no manure or fertilizer) plots and are on par with T-2 where RCF (recommended chemical fertilizers) were applied. (Table - 1)

**Tiller Number & Panicle Number :** Sasya Syamala treatments T-4 & T-5 have increased the Tillers and Panicles significantly over the T-1 (no manure or fertilizer) plots and are on par with T-2 where RCF were applied. (Table - 1)

**Chlorophyll meter readings :** Sasya Syamala treatments T-4 & T-5 have increased Chlorophyll significantly over the T-1 (no manure or fertilizer) (18.9) plots and are on par with T-2 (22.6) where RCF were applied. (Table - 1)

**Leaf Area Index (LAI) :** Sasya Syamala treatments T-4 (5.54) & T-5 (5.62) have increased LAI significantly over the T-1 (no manure or fertilizer) (4.78) plots and are on par with T-2 where RCF were applied. (Table - 1)

  
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**Biomass Production (g.m<sup>2</sup>)** : Sasya Syamala treatments T-4 (1095) & T-5 (1112 g.m<sup>2</sup>) have increased Biomass significantly over the T-1 (no manure or fertilizer) (926 g.m<sup>2</sup>) plots and are on par with T-2 where RCF were applied. (Table - 1)

**Spikelet Number and Filled grain number per Panicle**: Sasya Syamala treatments T-4 & T-5 have increased the Spikelet Number and Filled grain number per Panicle significantly over the T-1 (no manure or fertilizer) plots and are on par with T-2 where RCF were applied. (Table - 2)

**Spikelet Sterility** : Sasya Syamala treatments have not showed any significant decrease in Spikelet sterility over the T-1 (no manure or fertilizer) plots and are on par with T-2 where RCF were applied. (Table - 2)

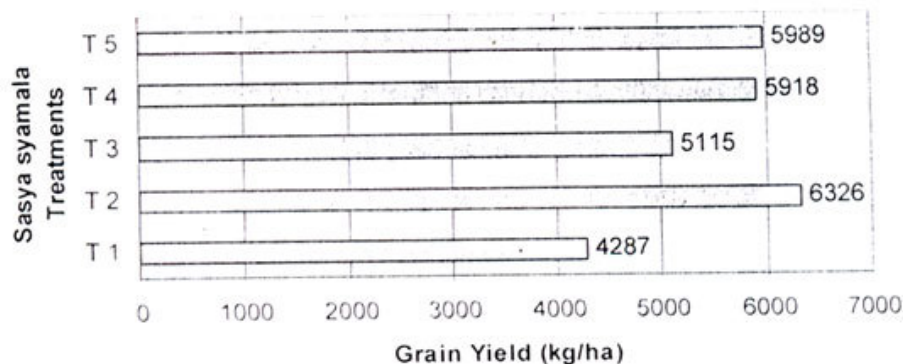
**Tiller to Panicle conversion (%)** : Sasya Syamala treatments have not showed any significant increase in Tiller to Panicle conversion over the T-1 (no manure or fertilizer) plots and are on par with T-2 where RCF were applied. (Table - 2)

**1000 Grain Weight (g)** : Sasya Syamala treatments T-4 & T-5 have increased 1000 grain weight significantly over the T-1 (no manure or fertilizer) plots and are on par with T-2 where RCF were applied. (Table - 2)

**Grain Yield (kg.ha<sup>-1</sup>)** :

Sasya Syamala treatments T-4 (5918 kg.ha<sup>-1</sup>) & T-5 (5989 kg.ha<sup>-1</sup>) have increased Grain yield significantly over the T-1 (4287 kg.ha<sup>-1</sup>) (no manure or fertilizer) plots and T-3 (5115 kg.ha<sup>-1</sup>) and are on par with T-2 (6326 kg.ha<sup>-1</sup>) where RCF were applied. (Table - 2)

### EFFECT OF SASYA SYAMALA ON GRAIN YIELD (Rabi, 2006-07)



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Table No. : 1 EFFECT OF "SASYA SYAMALA" - Homoeo nutrient On Physiological Efficiency Of Rice Crop (RABI, 2006-07)

TREATMENTS		Plant Hight (cm)	Tiller number per m <sup>2</sup>	Panicle Number per m <sup>2</sup>	Chlorophyll Meter readings	Leaf Area Index at fl.	Biomass Production (g/sq.m) at Fl.
T 1	No Manure or Fertilizers	91	410	371	18.9	4.78	926
T 2	Recommended chemical fertilizers	97	484	455	22.6	5.84	1194
T 3	Spraying of SASYA SYAMALA @ 2 ml per lt. (At 0, 15, 25 & 50 DAT)	94	432	401	19.7	5.19	986
T 4	Spraying of SASYA SYAMALA @ 3 ml per lt. (At 0, 15, 25 & 50 DAT)	95	466	442	21.4	5.54	1095
T 5	Spraying of SASYA SYAMALA @ 4 ml per lt. (At 0, 15, 25 & 50 DAT)	96	470	440	21.8	5.62	1112
MEAN		95	452	422	20.9	5.39	1063
C.V (%)		2.12	7.04	6.73	7.58	6.45	6.59
C.D at 5 %		3	48	43	2.3	0.52	106

  
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Table No. :2 EFFECT OF "SASYA SYAMALA" - Homoeo nutrient On Productive Efficiency Of Rice Crop (RABI, 2006-07)

TREATMENTS		Spikelet Number per Panicle	Filled Grain Number per Panicle	Spikelet Sterility (%)	Tiller to Panicle conversion (%)	1000 grain weight (gm)	Grain yield (kg.ha <sup>-1</sup> )
T 1	No Manure or Fertilizers	137	118	14.6	90.5	25.4	4287
T 2	Recommended chemical fertilizers	168	142	14.3	94.0	26.5	6326
T 3	Spraying of SASYA SYAMALA @ 2 ml per lt. (At 0, 15, 25 & 50 DAT)	146	125	14.4	92.8	25.9	5115
T 4	Spraying of SASYA SYAMALA @ 3 ml per lt. (At 0, 15, 25 & 50 DAT)	162	141	13.6	94.8	26.2	5918
T 5	Spraying of SASYA SYAMALA @ 4 ml per lt. (At 0, 15, 25 & 50 DAT)	160	138	13.8	93.6	26.3	5989
MEAN		155	133	14.1	93.2	26.1	5527
C.V (%)		7.23	7.09	6.85	6.77	1.85	7.33
C.D at 5 %		17	14	N.S	N.S	0.7	680

  
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**Kharif, 2007 :**

The SASYA SYAMALA treatments were evaluated in rice crop (variety MTU. 1061) for their physiological traits and productive efficiency during Kharif, 2007 season and the results were presented in tables 3 and 4. Data on the physiological attributes at flowering stage were presented in table -1, while the data on productivity and other related parameters were presented in table - 2.

**Plant Height (cm) :** Sasya Syamala treatments and the RCF (recommended chemical fertilizers) have not increased the Plant height and are on par with T-1 (no manure or fertilizer) plots. (Table - 3)

**Tiller Number & Panicle Number :** Sasya Syamala treatments T-4 & T-5 have increased the Tillers and Panicles significantly over the T-1 (no manure or fertilizer) plots and are on par with T-2 where RCF were applied. (Table - 3)

**Chlorophyll meter readings :** Sasya Syamala treatments T-4 & T-5 have increased Chlorophyll significantly over the T-1 (no manure or fertilizer) (19.8) plots and are on par with T-2 (22.7) where RCF were applied. (Table - 3)

**Leaf Area Index (LAI) :** Sasya Syamala treatments T-4 (8.01) & T-5 (7.98) have increased LAI significantly over the T-1 (no manure or fertilizer) (6.99) plots and are on par with T-2 where RCF were applied. (Table - 3)

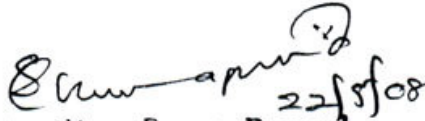
**Biomass Production (g.m<sup>2</sup>) :** Sasya Syamala treatments T-4 (1274) & T-5 (1267 g.m<sup>2</sup>) have increased Biomass significantly over the T-1 (no manure or fertilizer) (1130 g.m<sup>2</sup>) plots and are on par with T-2 where RCF were applied. (Table - 3)

**Spikelet Number & Filled grain number per Panicle:** Sasya Syamala treatments T-4 & T-5 have increased the Spikelets and Filled grain per Panicle and are on par with T-1 (no manure or fertilizer) plots and it is increased significantly in T-2 plots where RCF were applied. (Table - 4)

**Spikelet Sterility :** Sasya Syamala treatments have not showed any significant decrease in Spikelet sterility over the T-1 (no manure or fertilizer) plots and are on par with T-2 where RCF were applied. (Table - 4)

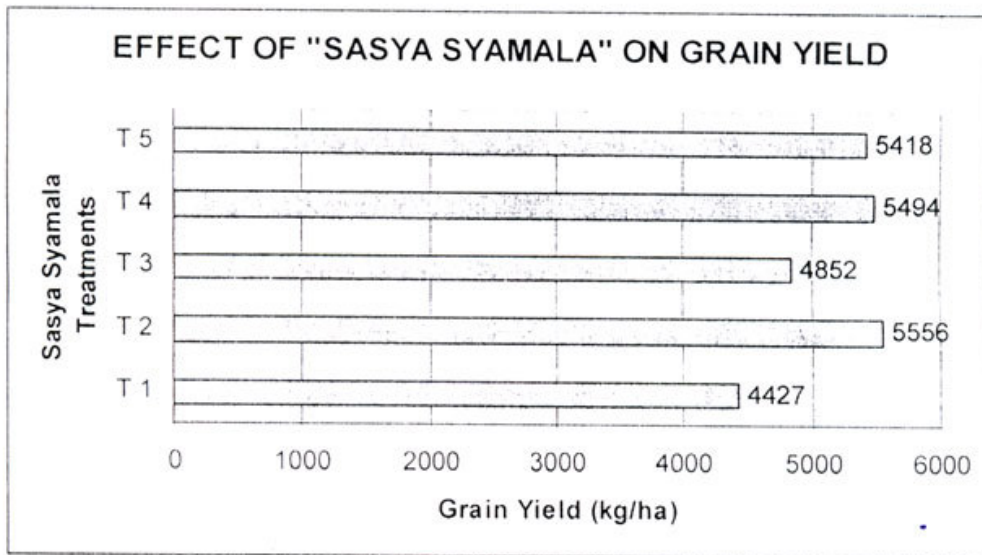
**Tiller to Panicle conversion (%) :** Sasya Syamala treatments have not showed any significant increase in Tiller to Panicle conversion over the T-1 (no manure or fertilizer) plots and are on par with T-2 where RCF were applied. (Table - 4)

**1000 Grain Weight (g.) :** 1000 Grain weight did not differ among the treatments.

  
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**Grain Yield (kg.ha<sup>-1</sup>)** : Sasya Syamala treatments T-4 (5494 kg.ha<sup>-1</sup>) & T-5 (5418 kg.ha<sup>-1</sup>) have increased Grain yield significantly over the T-1 (4427 kg.ha<sup>-1</sup>) (no manure or fertilizer) plots and T-3 (4852 kg.ha<sup>-1</sup>) and are on par with T-2 (5556 kg.ha<sup>-1</sup>) where RCF were applied. (Table – 4)



### 13. CONCLUSIONS :

The Sasya Syamala – a Homoeo plant nutrient was evaluated for its Physiological and productive efficiency on Rice crop during Rabi, 2006-07 and Kharif, 2007 at APRRI., and RARS., Maruteru, Acharya N.G.Ranga Agricultural University, and the following conclusions were given :

1. In both the seasons there was a significant increase in Grain yield in two Sasya Syamala treatments T 4 (SASYA SYAMALA @ 3 ml per lt.) and T 5 (SASYA SYAMALA @ 4 ml per lt.) over the T-1 (no manure or fertilizer) and T-3 (SASYA SYAMALA @ 2 ml per lt.) and are on par with T-2 where RCF (recommended chemical fertilizers) were applied. (Table – 2 & 4)
2. The main contributing factors for this increase in productivity by these Sasya Syamala treatments (T 4 & T 5) are due the increased Physiological efficiency (Tiller number, Leaf area index, Biomass production and Chlorophyll content) and Productive efficiency (Panicle number, Spikelet number and filled grain number).
3. Since the Sasya Syamala treatments T 4 (Sasya Syamala @ 3 ml per lt.) and T 5 (Sasya Syamala @ 4 ml per lt.) on par with each other. Hence, the T 4 i.e., Sasya Syamala @ 3 ml per liter can be preferred.

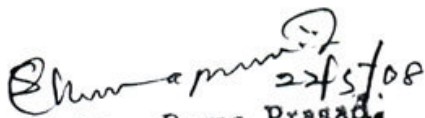
  
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Table No. : 3 EFFECT OF "SASYA SYAMALA" - Homoeo nutrient On Physiological Efficiency Of Rice Crop (KHARIF, 2007)

TREATMENTS		Plant Height (cm)	Tiller number per m <sup>2</sup>	Panicle Number per m <sup>2</sup>	Chlorophyll Meter readings	Leaf Area Index at fl.	Biomass Production (g/sq.m) at Fl.
T 1	No Manure or Fertilizers	120	298	264	19.8	6.99	1130
T 2	Recommended chemical fertilizers	124	338	310	22.7	8.26	1300
T 3	Spraying of SASYA SYAMALA @ 2 ml per lt. (At 0, 15, 25 & 50 DAT)	121	309	275	21.1	7.41	1209
T 4	Spraying of SASYA SYAMALA @ 3 ml per lt. (At 0, 15, 25 & 50 DAT)	123	332	306	22.1	8.01	1274
T 5	Spraying of SASYA SYAMALA @ 4 ml per lt. (At 0, 15, 25 & 50 DAT)	123	327	299.2	22.4	7.98	1267
MEAN		122	321	291	21.62	7.73	1236
C.V (%)		2.28	7.45	6.76	7.41	6.82	7.02
C.D at 5 %		N.S	36	30	2.4	0.79	131

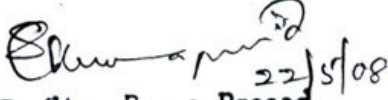
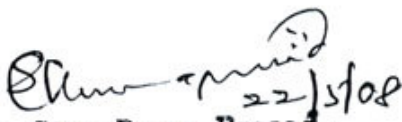
  
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Table No. : 4 EFFECT OF "SASYA SYAMALA" - Homoeo nutrient On Productive Efficiency Of Rice Crop (KHARIF, 2007)

TREATMENTS		Spikelet Number per Panicle	Filled Grain Number per Panicle	Spikelet Sterility (%)	Tiller to Panicle conversion (%)	1000 grain weight (gm)	Grain yield (kg.ha <sup>-1</sup> )
T 1	No Manure or Fertilizers	179	155	13.2	88.6	19.3	4427
T 2	Recommended chemical fertilizers	202	178	12.0	91.8	19.5	5556
T 3	Spraying of SASYA SYAMALA @ 2 ml per lt. (At 0, 15, 25 & 50 DAT)	186	162	12.7	89.0	19.4	4852
T 4	Spraying of SASYA SYAMALA @ 3 ml per lt. (At 0, 15, 25 & 50 DAT)	196	172	12.2	92.1	19.6	5494
T 5	Spraying of SASYA SYAMALA @ 4 ml per lt. (At 0, 15, 25 & 50 DAT)	194	170	12.4	91.5	19.5	5418
MEAN		191	167	12.5	90.6	20	5149
C.V (%)		7.38	6.87	7.08	6.55	1.84	7.14
C.D at 5 %		21	17	N.S	N.S	N.S	554

  
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