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NATIONAL & INTERNATIONAL BIO-EFFICACY TRIALS OF PRATHISTA ORGANIC FERTILIZERS



PRATHISTA INDUSTRIES LIMITED

AN ISO 9001, 14001 & OHSAS 18001 CERTIFIED COMPANY

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RESEARCH DATA OF ALL PRATHISTA ORGANIC PRODUCTS





INNOVATIVE ECO-FRIENDLY SOIL APPLICATION PLANT NUTRIENTS FOR SUSTAINABLE QUALITY & QUANTITY BASED PRODUCTIVITY IN SUGARCANE

Regional Agricultural Research station, Acharya N. G. Ranga Agricultural University, Anakapalle, Andhra Pradesh, DURATION OF THE STUDY, 2008-09 and 2009-10

OBJECTIVE : To study the Bio efficacy of Prathista organic manures compared to other sources of Nutrients.

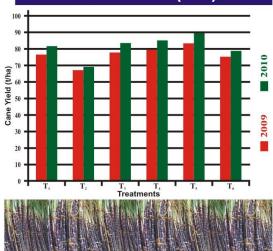
TREATMENT DETAILS

| T ₁ | Recommended Dose of Fertilizers (N : P : K - 112 : 100 : 120 Kg / ha) |
|---------------------------------|--|
| T ₂ Farmers Practice | |
| Т, | Suryamin + Biophos + Biopotash each 75 kg / ha as basal and sprayings of organic NPK 45 DAP, Megacal 60 DAP and Biopotash 90 DAP each @ 625 ml / ha |
| T, | Suryamin + Biophos + Biopotash each 75 kg / ha as basal and sprayings of organic NPK 30 DAP & 60 DAP, Megacal 60 DAP and Biopotash 90 DAP each @ 625 ml / ha |
| T, | Suryamin + Biophos + Biopotash each @ 112.5 kg / ha as basal and sprayings of organic NPK @ 625 ml / ha at 45, 60 and 90 DAP. |
| T ₆ | Biophos + Biopotash each @ 75 kg / ha as basal and sprayings of organic NPK at 45 & 60 DAP and Biopotash at 90 DAP @ 625 ml / ha |

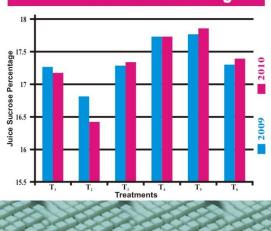
RESULTS

- Organic carbon content of soil was highest in T₅ in both the seasons (0.63% & 0.67%) compared to RDF (0.55 & 0.56%)
- Highest number of millable canes / ha was also found in T₅ (83, 540 & 87, 970).
- Highest percentage of juice sucrose (17.81 & 17.90%),
 CCS % (12.33 & 12.71%) and purity (88.55 & 88%)
 was found in T₅
- The treatment T₅ recorded highest cane yield (80.5 & 86.5 t/ha) compared to RDF (78.5 t/ha & 83.4 t/ha). Similarly Sugar Yield was also highest in T₅ (9.78 and 10.83 t/ha), compared to RDF (9.32 & 9.88 t/ha).

CANE YIELD (t/ha)



Juice Sucrose Percentage







BIO-EFFICACY STUDIES ON PRATHISTA SOLUBLE ORGANIC FERTILIZERS THROUGH FERTIGATION IN SUGARCANE

Dr. K.V. Naga Madhuri and others, Agricultural Research Station, Acharya N. G. Ranga Agricultural University, Perumallapalle, Tirupathi, A.P.

OBJECTIVE : To study the Bio Efficacy of Prathista Soluble Organic Fertilizers through fertigation over the application of chemical Fertilizers in Sugarcane

TREATMENT DETAILS

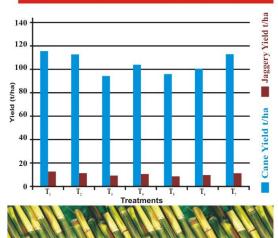
| | MEATIMENT DETAILS |
|-----------------------|---|
| T ₁ | 100% RDF though fertigation using available inorganic Chemical Fertilizers |
| T ₂ | 100% Prathista Organic Fertilizers through Fertigation |
| T ₃ | 100% N through FYM |
| T ₄ | 25% RDF through Chemical Fertilizers + 75% Prathista Organic Fertilizers through fertigation |
| T, | 100% P through Prathista Bio-Phos and N&K through inorganic fertilizers |
| T ₆ | 100% K through Bio-Potash and N&P through inorganic fertilizers |
| T, | 50% RDF through Chemical Fertilizers + 50% through Prathista Organic Fertilizers through fertigation |

DECIII TC

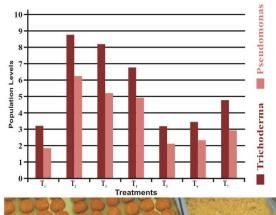
Use of 100% Prathista Organic soluble Bio-Fertilizers (T₂) through fertigation in Sugarcane resulted in

- More No. of millable canes and Higher cane yield (117.85 t/ha) compared to RDF 112.97 t/ha
- Higher jaggery yield 11.3 t/ha compared to RDF (10.9 t/ha)
- Higher sucrose % (20.18) compared to RDF (19.78)
- Higher C:B ratio 1.98 compared to RDF (1.6)
- Higher population levels of Trichoderma (8.8 x 10° CFU/g) compared to RDF (3.2 x 10° CFU/g)
- Higher population levels of P. flourescens (6.3 x 10⁶ CFU/g) compared to RDF (1.9 x 10⁹ CFU/g)

Sugarcane yield & Jaggery yield (t/ha)



Population levels of Beneficial Micro Organisms







Field Evaluation of Megacal & New Suryamin in Banana & Pumpkin

Dr. Herbert Talwana,

Dept. of Crop Science, Makerere University, Kampala, Uganda

RESULTS

Products Tested: Megacal & New Suryamin

Banana

| di di | | | |
|-----------------|--|--|--|
| PARAMETER | CONTROL | Megacal + New suryamin (3ml/ltr of water) | |
| Bunch Size | ◆ 10 clusters ◆ 70 cm tall ◆ 128 cm circumference ◆ Bunch weight 53 kg | 9 clusters 81 cm tall 148 cm circumference Bunch weight 65 kg | |
| Finger size | ◆ 22 fingers ◆ Average length 23.6cm ◆ Average diameter 4.01cm | ◆ 20 fingers ◆ Average length 26.7 cm ◆ Average diameter 4.22 cm | |
| Cooking quality | • Ready within 40 minutes | ♦ Ready within 47 minutes | |
| Taste | ♦ Whitish color resembling FHIA ♦ Tastes normal | More attractive pale yellow color Tasted better than unsprayed bunch. | |

Pumpkin

- Spraying of Megacal & New Suryamin resulted in increased plant foliage growth and also the runner shoots with darker leaves.
- Similarly the treated plots resulted in early flowering about 30 days after spray as compared to 45 days in case of control.
- This also has resulted in reduced flower abortion and subsequently early fruiting.
- Spraying of Megacal & New Suryamin resulted in uniform and fully matured pumpkin fruits weighing between 10 - 15 kg as compared to 6 - 7 kg in the control plots.
- Prathista Organic inputs does not contain plant disease causing Pathogens.













Effect of Prathista Organic Products (Aishwarya & Megacal) on Soil Microbial Population & yield of Wheat (Triticum aestivum)

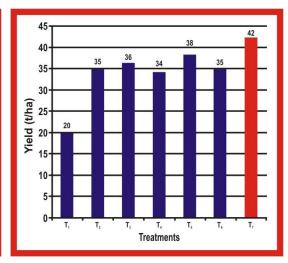
Dr. Rajeeva, DEPARTMENT OF MICROBIOLOGY, Dr Ram Manhor Lohia Avadh University, Faizabad, (U.P.) India.

Objective: To Evaluate the Prathista Organic Products efficacy on beneficial soil microbial population and yield of wheat.



| TREATMENTS | | |
|-----------------------|--|--|
| T ₁ | Control | |
| T ₂ | Green Manure @ 20 q/ha | |
| T ₃ | Compost @ 20 q/ha | |
| T ₄ | FYM @ 20 q/ha | |
| T ₅ | Aishwarya Organic Manure @ 125 Kg/ha | |
| T ₆ | Megacal Granules 25 Kg/ha | |
| T , | Aishwarya @ 125 Kgs + Megacal Granules @ 25 Kg/ha | |

- Population of Azotobacter, Bacillus and Trichoderma increased significantly in Aishwarya + Megacal treated soil (T₇) compared to control and other Treatments.
- Maximum Grain yield was recorded in T₇ (42 q/ha) followed by T₅ (38 q/ha) and minimum yield was recorded under control T₁ (20 q/ha)







Field testing of Prathista Organic Products in Cotton

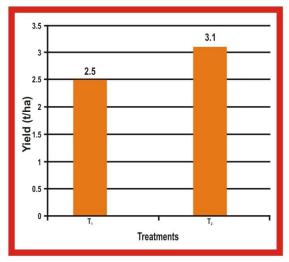
(Gossypium herbaceum)

Study Conducted by Participatory Rural Development Initiatives Society (PRDIS), Warangal, Hyderabad — India



| TREATMENTS | |
|---|--|
| T ₁ - Control | Regular farmer practice |
| T ₂ - Prathista Protocol Package | Suryamin (granules): 12.5 Kg/ha (basal) Megacal (granular): 25 Kg/ha (basal New Suryamin – Cotton Spl : 0.3%(2 sprays,30 & 60 DAS) Megacal (liquid): 0.3% (2 sprays, 60 & 90 DAS) Bio - Phos (liquid): 0.2% (2 sprays, 30 & 45 DAS) Bio - Potash (liquid): 0.3% (2 sprays, 30 & 60 DAS) |

- Percentage increase in Yield over control is 24 (Yield in T₁ - 2.5 t/ha and in T₂ - 3.1 t/ha)
- Fertilizer Saving Cost over Farmer practice: Rs. 888/- / ha
- Net Profit increase over Farmers practice: Rs. 13968/- / ha







Field testing of Prathista Organic Products in Soyabean

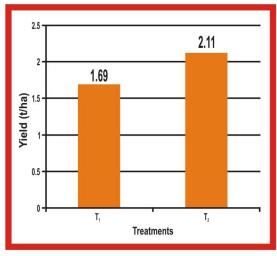
(Glycine max)

Study Conducted by Participatory Rural Development Initiatives Society (PRDIS), Hyderabad — India



| TREATMENTS | |
|---|--|
| T ₁ - Control | Regular farmer practice |
| T ₂ - Prathista Protocol Package | Bio - Phos (granule) : 10 Kgs/ha (at sowing) Megacal (granules) : 10 Kgs/ha (at sowing) Bio - Phos (liquid) : 0.3% (25 DAS) New Suryamin : 0.3% (30 DAS) Bio - Potash (liquid) : 0.3% (45 DAS) |

- Yield
 - T₁ Control 1.69 t/ha
 - T₂ Treated 2.11 t/ha
- Percentage increase in Yield over Control: 24.48
- Fertilizer Saving Cost Over Farmer practice: Rs. 465/- / ha
- Net Profit increase over Farmer practice : Rs. 8745/- / ha







Field testing of Prathista Organic Products in Rice

(Oryza sativa)

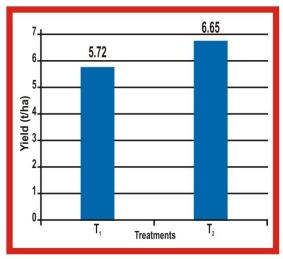
Study Conducted by Participatory Rural Development Initiatives Society

(PRDIS), Hyderabad - India



| TREATMENTS | |
|----------------------------|---|
| T ₁ - Control | Regular farmer practice |
| T ₂ - Prathista | Suryamin(G) : 12.5 Kg/ha (Basal) |
| Protocol Package | Bio - Potash (G) : 25 Kg/ha (Basal) |
| . womage | Bio - Zinc (G) : 5 Kg/ha (Basal) |
| | Bio - Potash(L) : 0.3% (Panicle initiation stage) |
| | Bio - Zinc (L) : 0.3% (25 & 45 DAT) |

- Yield
 - T₁ Control 5.72 t/ha
 - T2 Treated 6.65 t/ha
- Percentage Yield increase over Control : 16.15
- Fertilizer Saving Cost over farmer practice : Rs. 852/- / ha
- Net Profit increase over Farmer practice : Rs. 8672/- / ha







Field testing of Prathista Organic Products in Sweet Sorghum

(Sorghum bicolor)

Study Conducted by Participatory Rural Development Initiatives Society (PRDIS), Hyderabad — India



| TREATMENTS | |
|---|--|
| T₁- Control | Regular farmer practice |
| T ₂ - Prathista Protocol Package | Suryamin (G): 12.5 Kg/hectare (Basal) Bio - Phos (G): 25 Kg/hectare (Basal) Bio - Potash (G): 25 Kg/hectare (Basal) Bio - Zinc (G): 5 Kg (Basal) Organic - NPK (L): 625ml/hectare (Panicle initiation stage) Bio - Zinc (L): 625ml/hectare (25 & 45 DAT) |

- T₁- Grain yield (1.35 t/ha) and stalk yield (31 t/ha)
- T₂- Grain yield (1 t/ha) and stalk yield (39 t/ha)
- Percentage of stalk yield increase over Control 29
- Fertilizer Saving Cost over Farmers practice : Rs. 268/- / ha
- Net Profit increase over Farmer practice : Rs. 8680/- / ha

