

Research Center , Ranchi

Personal Details



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Research Interest

Soil Fertility and Nutrient management, Carbon sequestration

Research Highlights

1. Isolation and evaluation of phosphate solubilizing fungi: Three potential strains of PSF were identified and evaluated in acid soils of Jharkhand.
2. Standardization of fertilizer dose and optimum electrical conductivity for growing Cymbidium hybrid
3. Slow release fertilizer: Slow release fertilizer has been prepared and is suitable for booster dose to Cymbidium hybrid
4. Production technology of Cymbidium hybrids under protected condition
5. Evaluated suitable extractant of Zinc in a rice soil.
6. Demonstration and standardization of plastic lined Doba technology for establishment of new orchard in Eastern plateau and hill region
7. Micronutrient management in vegetable and fruit crops
8. Developed methodology for Leachate collection of growing media of Cymbidium hybrid for regular monitoring of nutrition level.

Memberships / Fellowships

Membership:

- Ø Life member of Journal of the Indian Society of Soil Science
- Ø Life member of Indian Society of Ornamental Horticulture.
- Ø Life member of Indian Science News Association.

Technology Developed

1. Doba technology for horticulture establishment
2. Isolation of 3 potential phosphate solubilizing fungi in the acid soils of Jharkhand
3. Formulations of Boron for different vegetable crops
4. Remediation of Cadmium contaminated soil
5. Pour-thru leachate collection for Cymbidium hybrid
6. Slow release fertilizer for booster dose to Cymbidium hybrid
7. Fertilizer scheduling in different orchids
8. Standardization of growing media for Cymbidium hybrid
9. Standardization of Phytotoxic effect of Ni and Pb on sesame.
10. Identified suitable Zn-extractant in low land rice soils.

Publication Details

Published 41 Research papers (13 International and 28 National), 03 technical bulletins, 04 number of popular articles, 01 number of Extension folder

Research article (20 Best article)

1. Naik, S. K., Maurya, S., Kumar, R., Sadhna, K., Gagrai, S., Das, B., Kumar, S. and Bhatt, B. P. 2013. Inorganic phosphate solubilization by phosphate solubilising fungi isolated from acidic soils. African Journal of Microbiology

- Research, 7 (34): 4310-4316.
2. Naik, S. K., Pandit, T. K., Patra, P. K. and Das, D. K. (2013). Effects of Graded Levels of Cadmium on Spinach and Cabbage Grown in an Inceptisol. *Communications in Soil Science and Plant Analysis*, 44:10, 1629-1642.
 3. Naik, S. K., Barman, D. and Pathak, N. 2013. Response of graded levels of calcium and magnesium on growth and flowering of Cymbidium hybrid 'Mint Ice Glacier'. *African Journal of Agricultural Research*, 8 (17): 1767-1778.
 4. Naik, S. K., Barman, D., Rampal, Medhi, R. P. 2013. Evaluation of electrical conductivity of the fertilizer solution on growth and flowering of a Cymbidium hybrid. *South African Journal of Plant and Soil*, 30 (1): 33-39.
 5. Pandit, T. K., Naik, S. K., Patra, P. K. and Das, D. K. 2012. Influence of lime and organic matter on the mobility of cadmium in cadmium-contaminated soil in relation to nutrition of spinach. *Soil and Sediment Contamination: An International Journal*, 21(4): 419-433.
 6. Naik, S. K. and Das, D. K. 2010. Evaluation of various zinc extractants in low land rice soil under the influence of zinc sulphate and chelated zinc. *Communications in Soil Science and Plant Analysis*, 41: 122-134.
 7. Naik, S. K., Sasmal S., Sur, P., Pandit, T., Mandal, M and Das, D. K. 2010. Mobility of lead and nickel in soil in relation to nutrition of sesame. *Archives of Agronomy and Soil Science*, 56 (2):223-236.
 8. Bose, N., Naik, S. K. and Das, D. K. 2009. Evaluation of nitrosulf and elemental sulphur on growth and yield of rapeseed (*Brassica campestris* L.) in India. *Archives of Agronomy and Soil Science*, 55: 79-90.
 9. Naik, S. K. and Das, D. K. 2008. Relative performance of chelated zinc and zinc sulphate for lowland rice (*Oryza sativa* L.). *Nutrient Cycling in Agroecosystems*, 81 (3): 219-227.
 10. Naik, S. K. and Das, D. K. 2007. Effect of Lime, Humic Acid and Moisture Regime on the Availability of Zinc in Alfisol. *The Scientific World Journal*, 7:1198-1206.
 11. Naik, S. K. and Das, D. K. 2007. Effect of split application of zinc on yield of rice (*Oryza sativa* L.) in an inceptisol. *Archives of Agronomy and Soil Science*, 53 (3): 305-313.
 12. Das, D. K., Bashetti, P., Naik, S. K. and Sur, P. 2007. Effect of lead on the transformation of Urea-N in fly-ash contaminated soils under different moisture regimes. *The Scientific World Journal*, 7:949-958.
 13. Naik, S. K., Maurya, S., Kumar, R., Das, B. and Kumar, S. 2013. Evaluation of rhizospheric fungi from acid soils of Jharkhand on phosphate solubilization. *The Bioscan*, 8 (3): 875-880.
 14. Jyoti, K., Naik, S. K., Mandal, M. and Das, D. K. (2012). Performance of different sources of sulphur on yield and quality of rapeseed. *Journal of the Indian Society of Soil Science*, 60 (3): 218-224.
 15. NAIK S K, DEVADAS R, USHABHARATHI T, BARMAN D and MEDHI R P. 2011. Changes in nutrient content and iron deficiency in growing media of Cymbidium hybrid 'Pine Clash Moon Venus'. *Indian Journal of Agricultural Sciences*, 81(8):764-766
 16. Naik S.K., Barman D., Medhi R.P. 2010. Response of Cymbidium Pine Clash Moon Venus to major nutrient at vegetative growth stage. *Journal of Ornamental Horticulture*, 13:182-188.
 17. Naik, S. K., Das, D. K., Cherian, A., Pandit, T. K. and Mandal, M. 2010. Influence of Arsenic and Phosphorus on the Mobilization of Arsenate and Arsenite in an Alfisol and Inceptisol. *Journal of the Indian Society of Soil Science*, 58:331-335.
 18. Naik, S. K., Usha Bharathi, T., Barman, D., Devadas, R., Rampal, and Medhi, R. P. 2009. Status of mineral nutrition of orchid-a review. *Journal of Ornamental Horticulture*, 12 (1):1-14.
 19. Barman, D., Rajni, K., Naik, S. K. and Upadhyaya, R. C. 2008. Production of Soulhunt-6 by manipulating cultural practices under partially modified greenhouse. *Indian Journal of Horticulture*, 65 (1): 69-72
 20. Naik, S. K. and Das, D. K. 2007. Evaluation of source, rate and time of application of zinc for rice (*Oryza sativa*). *The Indian Journal of Agricultural Sciences*, 77 (11): 776-778.