

Biodata of the Scientist

Division/Section: CROP PRODUCTION

A. Personal information

1. Name(With Title): Dr. V.Ramesh

1.a. Qualification: Ph.D

2. Designation: Senior Scientist

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6. Countries visited: -

B. Professional information

1. Area of specialization: Soil Science-Soil physics, soil water conservation

2. Area of interest: Carbon sequestration, Soil water and nutrient use efficiency, Soil quality, Hill agriculture

3. Number of institute projects completed(Add list): 08

4. Number of Institute projects being handled(Add list): 02

5. Number of externally funded projects completed(Add list): 05

6. Number of externally funded projects being handled(Add list): -

7. Number of students guided for a) Ph.D - b) M.Phil - c) M.Sc -

8. Number of students being guided for a) Ph.D -b) M.Phil-) M.Sc -

8.a. information about the students under your guidance

Name of the student	Course undergoing (Ph.D/M.Phil/M.Sc)	Title of the project/Thesis	E-mail address

9. Information on guide ship Nil

Guide ship for Ph.D/ M.Phil/ M.Sc	University	Subject

10. Number of Research papers(Add list): 17

11. Number of Books/Book chapters(Add list): 13

12. Number of Technical Bulletins(Add list): -

13. Consultancies offered(Add list and give a brief description): Nil

14. Technologies developed(Add list and give a brief description): 01

15. Patents/Copyrights obtained (Add list and give a brief description): Nil

16. Any other information: -

BOOKS (8)

M.S.Palaniswami, James George, **V.Ramesh** and S.S.Veena. 2010. All India Coordinated Research Project on Tuber Crops. Annual Report 2009-10, 135 pages.

M.S. Palaniswami and **V. Ramesh**. 2009. All India Coordinated Research Project on Tuber Crops, Annual Report 2008-2009, 176 Pages.

V. Ramesh, SP Wani, TJ Rego, KL Sharma, T Bhattacharyya, KL Sahrawat, KV Padmaja, D Gangadhar Rao, B Venkateswarlu, M Vanaja, MC Manna, K Srinivas and V Maruthi. 2007. Chemical Characterization of Selected Benchmark Spots for C Sequestration in the Semi-Arid Tropics, India. Global Theme on Agroecosystems Report no. 32. pp 1-98.

T. Bhattacharyya, P.Chandran, S.K.Ray, C. Mandal, D.K.Pal, M.V. Venugopalan, S.L.Durge, P.Srivastava, P.N.Dubey, G.K. Kamble, R.P. Sharma, S.P. Wani, T.J. Rego, **V.Ramesh** and M.C. Manna. 2006. Morphological properties of Red and Black soils of selected Benchmark Spots in Semi-Arid Tropics of India. Global Theme on Agroecosystems Report no. 21. pp 1-94.

T. Bhattacharyya, P.Chandran, S.K.Ray, C. Mandal, D.K.Pal, M.V. Venugopalan, S.L.Durge, P.Srivastava, P.N.Dubey, G.K. Kamble, R.P. Sharma, S.P. Wani, T.J. Rego, **V.Ramesh** and M.C. Manna. 2006. Estimation of Carbon Stocks in Red and Black Soils of

Selected Benchmark Spots in Semi-Arid Tropics of India. Global Theme on Agroecosystems Report no. 28. pp 1-80.

MC Manna, SP Wani, TJ Rego, KL Sahrawat, Tapas Bhattacharya, **V Ramesh**, KK Bandyopadhyay, TR Rupa, Piara Singh, P Pathak and KV Padmaja. 2008. Influence of different land use management on soil biological properties and other C fractions under semi-arid Benchmark soils of India. Global Theme on Agroecosystems Report No. 41. 60p.

KL Sharma, K Srinivas, UK Mandal, YS Ramakrishna, KPR Vittal, B Venkateswarlu, **V Ramesh** and J Kusuma Grace. 2004. Strategies and approaches to improve and assess soil quality. NATP report. Central Research Institute for Dryland Agriculture, Hyderabad, India. P. 98.

PK Mishra, BRM Rao, M Osman, SS Thamappa, SK Subramoniam and **V Ramesh**. 2004. Prioritization, Planning and Development of a micro-watershed in Drought Prone Area Using Remote Sensing & GIS, CRIDA, Hyderabad. India. P.63

BOOK CHAPTERS (5)

V.Ramesh. 2012. Sustainable management of tuber crops with reference to hill cassava production systems. *In Course Document. Model Training Course on Sustainable Management Strategies of Tuber Crops Based Cropping System*. Chapter 11.Pp.128-132.

V.Ramesh. 2008. Soils of Kerala, Tamil Nadu, Karnataka: their characteristics, nutrient requirement of various crops. In Efficient Use of Soil, Plant and Water Testing Laboratory. 17-22, March, 2008. Central Tuber Crops Research Institute, Trivandrum, India. P. 101-109

V.Ramesh. 2008. Soil Conservation in Tuber Crops and Cropping Systems. In, Integrated Production and Processing Management for Tropical Tuber Crops. Model Training Program. 16-22, October, 2008. Central Tuber Crops Research Institute, Trivandrum, India. P. 81-85

V.Ravi, James George and **V.Ramesh**. 2008. Storage of planting materials of tropical tuber crops. In, M.Nedunchezhiyan (ed.)Advance techniques in quality planting material production and commercial cultivation of tropical tuber crops. Central Tuber Crops Research Institute, Trivandrum, India. P. 81-85

SS Balloli and **V Ramesh**. 2005. Soil and crop management strategies to mitigate agricultural drought impacts. In: K.D. Sharma and K.S. Ramasastry (eds). Drought Management . Allied Publishers Pvt. Ltd. p: 216-227

Completed Institute Research Projects (8) (PI-4; Co-PI-4)
Integrated soil and water conservation strategies for hill cassava production systems(PI) (Duration 2012-13)
Integrating soil quality and conservation measures for sloping lands in hill cassava production systems (PI) (Duration 2007-2012)
Fly ash for improving soil health in dryland Alfisols (PI) (Duration- 2001-05)
Improving soil water and nutrient use efficiency in dryland Alfisols using zeolites amendments (PI upto October 2006) (Duration- 2005-06)
Spectral characteristic of rainfed kharif sorghum (Co-PI) (Duration 2001-05)
Development of field kit for estimating labile carbon to assess the soil quality under different land use (Co-PI) (Duration- 2004-07)
Low till farming strategies and integrated plant nutrient supply for rainfed semi-arid tropics (Co-PI) (Duration- 1999- 2008)
Integrating the multi nutrient extracts into existing soil test interpretation (Co-PI) (Duration- 2003-05)
Completed Externally Funded Research Projects (NATP) (5) (PI-2; CCPI-1; Co-CCPI- 2)
Assessment of soil carbon sequestration potential of hill cassava production system: Relationship among soil properties and glomalin (PI) (Duration- 2010-13)
Evaluating Fly Ash Zeolites for Soil water and Nutrient Use Efficiency of sweet potato (<i>Ipomoea batatas</i> L.) (PI) (Duration- 2010-13)
Identifying systems for carbon sequestration and increased productivity in Semi Arid Tropical Environments of India (CCPI) (Duration- 2000-04)
Prioritization, planning and development of a micro-watershed in drought prone area using remote sensing and GIS (Co-CCPI) (Duration- 2000-04)
Assessment and improvement of soil quality and resilience for rainfed production system (Co-CCPI) (Duration- 2000-04)

Institute Research Projects being handled (2) (PI-1; Co-PI-1)
Integrated soil and water conservation strategies for hill cassava production systems(PI) (Duration 2013-15)
Long term effect of manures and fertilizers in an acid ultisol growing cassava (Co-PI) (Duration 2013-14)

Sl. No	Authors/Year	Title	Journal/Publications
1	V. Ramesh , B.Venkateswarlu, K.L. Sharma and S.P.Wani. 2012.	"Soil Carbon Dioxide Emissions from Sorghum-Sunflower Rotation in rainfed Semi Arid tropical Alfisols: Effects of Fertilization rate and Legume Biomass".	Communications in Soil Science and Plant Analysis. USA. 43:14:1915-1929.
2	K.L. Sharma, J. Kusuma Grace, K. Srinivas, Y.S. Ramakrishna, G.R.Korwar, G. Maruthisankar, Uttam Kumar Mandal, V.Ramesh , Hima Bindu, M. Madhavi and Pravin N. Gajbhiye,. 2009.	Influence of tillage and nutrient sources on yield sustainability and soil quality under sorghum-mung bean system in rainfed semi-arid tropics	Communications in Soil Science and Plant Analysis. USA. 40:15:2579-2602.
3	V.Ramesh , G. R. Korwar, Uttam Kumar Mandal, J.V.N.S.Prasad, K. L. Sharma, Y.S.Ramakrishna and K. Venkanna. 2008.	Influence of fly ash mixtures on early tree growth and physicochemical properties of soil in semi-arid tropical Alfisols. 2008.	Agroforestry Systems. Netherlands. 73(1): 13-22.
4	V. Ramesh , G. R. Korwar, Uttam Kumar Mandal, K. L. Sharma, and K. Venkanna. 2007.	Optimizing Fly-Ash Dose for Better Tree Growth and Nutrient Supply in an Agroforestry System in Semi-arid Tropical India.	Communications in Soil Science and Plant Analysis. USA. 38: 2747–2766.
5	K.L. Sharma, J. Kusuma Grace, Uttam Kumar Mandal, Pravin N. Gajbhiye, K. Srinivas, G.R. Korwar, V. Hima Bindu, V.Ramesh , Kausalya Ramachandran and S.K.	Evaluation of long-term soil management practices using key indicators and soil quality indices in a semi-arid tropical	Australian Journal of Soil Research. Australia. 46: 368-377.

	Yadav. 2008.	Alfisol.	
6	Uttam Kumar Mandal , U.S. Victor, N.N. Srivastava, K.L. Sharma, V. Ramesh , M. Vanaja, G.R. Korwar, Y.S. Ramakrishna. 2007.	Estimating yield of sorghum using root zone water balance model and spectral characteristics of crop in a dryland Alfisol.	Agricultural water management. Netherlands. 87: 315-327.
7	K.L. Sharma, Uttam Kumar Mandal, K. Srinivas, K.P.R. Vittal, Biswapati Mandal, J. Kusuma Grace and V. Ramesh . 2005.	Long-term soil management effects on crop yields and soil quality in a dryland Alfisol.	Soil and Tillage Research. Netherlands. 83: 246–259
8	U.K.Mandal, S.K.Yadav, K.L.Sharma, V.Ramesh and K.Venkanna. 2011.	Estimating permanganate-oxidizable active carbon as quick indicator for assessing soil quality under different land-use systems of rainfed Alfisols.	Indian Journal of Agricultural Sciences. 81 (10): 927-31
9	V. Ramesh , K.K. Bandyopadhyay, K.L.Sharma, Tapas Bhattacharya and S.P.Wani. 2010.	Land use and soil management effects on infiltration and model parameters in semi arid tropical Alfisols	Annals of Arid Zone. 49(1):1-8.
10	V. Ramesh, K.K. Bandyopadhyay and K.L.Sharma. 2008.	Evaluation of Infiltration Models under Different Land Use and Management Systems in Semi Arid Tropical Vertisols.	Journal of Indian Society of Soil Science. 56(2): 154-160.
11	V. Ramesh, K. Susan John, and C.S. Ravindran and S.Edison. 2007.	Agrotechniques and plant nutrition of tannia (Xanthosoma sp.): an overview.	Journal of Root Crops, 33: 1-11.
12	Ch.Srinivasarao, V.Ramesh, G. R. Korwar, K.D.Sharma, K. Venkanna	Physico-chemical characterization of soils of Hayatnagar	Indian Journal of Dryland Agricultural Research and

	and P.N.Gajbhiye. 2007.	Research Farm-Phase III.	Development. 22(1): 109-113.
13	S.S.Balloli, K.L.Sharma, Kausalya Ramachandran, V.Ramesh, B.Venkateswarlu and Y.S.Ramakrishna. 2007.	Impact of land use practices on soil fertility status of dryland Alfisols.	Indian Journal of Dryland Agricultural Research and Development. 22(2): 163-166.
14	T. Bhattacharyya, P.Chandran, S.K.Ray, D.K.Pal, M.V. Venugopalan, C. Mandal, S.P. Wani, M.C. Manna and V. Ramesh. 2007a.	Carbon sequestration in red and black soils of semiarid tropical part of India: I. Influence of morphological properties.	Agropedology 17(1): 1-15.
15	T. Bhattacharyya, P.Chandran, S.K.Ray, D.K.Pal, M.V. Venugopalan, C. Mandal, , S.P. Wani, M.C. Manna and V. Ramesh. 2007b.	Carbon sequestration in red and black soils of semiarid tropical part of India: II. Influence of physical and chemical properties	Agropedology 17(1): 16-25.
16	T. Bhattacharyya, P.Chandran, S.K.Ray, D.K.Pal, M.V. Venugopalan, C. Mandal, , S.P. Wani, M.C. Manna and V. Ramesh. 2007c.	Carbon sequestration in red and black soils III. Identifying systems through carbon stock and bulk density of shrink-swell soils under rainfed conditions.	Agropedology 17(1): 26-33.
17	U.K. Mandal, V. Ramesh, K.L. Sharma, Kausalya Ramachandran and U.S. Victor. 2005.	Tension infiltration for estimating pore distribution of Alfisols under different land management.	Journal of the Indian Society of Soil Science, 53(3), 296-301.

Technologies developed

Developed technology for production of agricultural grade synthetic zeolite mixtures for improving soil water and nutrient use efficiency of tuber crops. Zeolites, synthesised from fly ash has twin benefits i.e. ideal texture (especially favourable for root and tuber crops) and high cation exchange capacity, both are essential for adequate retention and nutrient delivery for crop growth and yield benefits. Preliminary studies indicated its positive effect on soil properties, plant uptake of nutrients especially NPK and tuber yield in sweet potato.