



Dr. Vilas A Tonapi

Director – IIMR (Indian Institute of Millets Research)

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Current responsibilities:

- Administration and Research management as Director, IIMR
- Coordinating AICSIP trials and nurseries as Project Coordinator, AICRP on Sorghum
- Strategic issues for seed industry: Research, production and quality control
- Crop and seed ecology, seed systems and IPR issues

Recent major contributions:

- Planning, development and management of crop improvement programs and strategies (both conventional and biotechnology led) for food and nutritional security of self and cross-pollinated crops for dry and irrigated ecosystems.
- Seed production (breeder to certified) of varieties, composites, hybrids and their parents
- Developmental initiatives in seed Technology, seed quality assurance, new seed policy and development of sustainable Community seed systems.
- Seed industry development, Protection of Plant varieties, Farmer's Rihts & IPR management
- Farmer participatory seed production, DUS Testing, and seed quality control
- National and international capacity building initiatives in plant breeding and seed production practices
- Research on physiological, biochemical and molecular basis of seed vigour/longevity
- Prevalence and spread of sorghum ergot in India and south east Asia; for the first time techniques for the production and inoculation, iterative germination of secondary conidia of sorghum ergot (*Claviceps Africana*)

Recent awards and recognitions :

- 2016: ICAR-IISR award for significant contributions in Seed Science & Technology and NSP (Crops)
- 2016: Legume Research Editorial Award
- 2014: ICAR award for Centre of Excellence in Seed Production
- 2011: Two awards- One as best DUS centre and one for capacity building in PPV&FR
- 2009: Seeds men Association medal and Award for service to seed industry
- 2008: Consultancy to FAO, Rome, on seed systems for under developed world
- 2006 & 2007: Best Scientist award of Directorate of Sorghum Research, Hyderabad
- 2000-02: J.N.TATA Endowment award, GRDC, Australia & USDA scholarships for PDF
- 1988: R.V. Swaminathan Gold Medal for highest GPA & Best Thesis Award in Seed Tech. at TNAU

- 1985-88: Indian Council of Agricultural Research Senior Research Fellowship
- 1983-85: Indian Council of Agricultural Research Junior Research Fellowship
- 1977-85: National Merit Scholarship, Government of India
- 1974-77: District Merit Scholarship, Government of Karnataka

Current collaborative activities:

- State Agricultural Universities
- ICRISAT, Hyderabad
- IICT, Hyderabad and BARC, Mumbai
- CFTRI, Mysore and NIN, Hyderabad
- ACIAR, Australia
- Sugar and Ethanol Industry
- National Institute of Nutrition and Defence Food Research Laboratory
- Seed Industry and NGOs

Relevant experiences:

- 2011-12: International visit to seven US universities to study crop improvement programmes, seed systems, biotechnology and IPR management
- 2002-03: International sorghum ergot collection mission in Myanmar, Thailand, Vietnam, Cambodia, Laos, Mexico, Australia and Africa
- 2001-02: Visiting Scientist, ICRISAT, Patancheru, India;
- 2001-2016: IPR protection,
- 2000-02: Post-Doc at University of Queensland, Australia and CRC for Tropical Plant Pathology, Brisbane, Australia
- 1997: Rotary International group study exchange programme to United States of America, Mexico, Malaysia and Singapore

Other interests and commitments:

- Developing community seed systems and improving quality of farmer saved seeds
- Teaching post graduate students in seed technology
- Assignments in seed research, IPR and Plant variety Protection, licensing & commercialization

Recent most significant publications:

International:

- Chapke,R.R. and Tonapi, V.A. 2019. Effectiveness of training on improved sorghum production technologies, value-addition and sweet sorghum perspectives. *Journal of Agricultural, Forestry and Fisheries* 8(2):36-44. DOI 10.11648/j.aff20190802.12 (ISSN:2328-563X(Print); ISSN: 2328-5648 (online)).
- Aruna, C., Ratnavathi, C.V., Suguna, M., Ranga, B., Praveen Kumar, P., Annapurna, A. Bahadure, D.M. and Tonapi, V.A. 2019. Genetic variability and GxE interactions for total polyphenol content and anti-oxidant activity in white and red sorghums (*Sorghum bicolor* (L.) Moench). *Plant Breeding* DOI:10.1111/pbr.12756 (JrnID: P089; IF: 7.39).

- Chapke, R.R. and Tonapi, V.A. 2018. Adoption and socio-economic benefits of improved post-rainy sorghum production technology. *Agricultural Research Journal (Springer)*: 1-9, DOI 10.1007/s40003-018-0359-x.
- Praveen, M., Uttam, A.G., Tonapi, V.A. and Madhusudhana, R. 2018. Fine mapping of Rf2, a major locus controlling pollen fertility restoration in sorghum A1 cytoplasm, encodes a PPR gene and its validation through expression analysis. *Plant Breeding* 137(2) :148-161 (JrnID: P086; IF: 7.34).
- Das, I.K., Rakshit, S., Sharma, K.K., Chattannavar, S.N., Gholve, V.M., Jayalaksmi, S.K., Tonapi, V.A. 2018. Development of a charcoal rot rating index for multilocation trials of sorghum. *Crop Protection* 108: 102–109. (JrnID: C147; IF: 7.83).

National:

- Das, I.K., Sunil Kumar, Kannababu, N. and Vilas A. Tonapi 2019. Pokkahboeng resistance in popular rabi sorghum cultivars and effects of the disease on leaf chlorophyll. *Indian Phytopathology* DOI 10.1007/s42360-019-00146-5 (JrnID: I104; IF: 5.90).
- Ganapathy, K.N., Dayakar Rao, SujayRakshit, VishalaDevender, VenkateshaSollepuraChinnegowda, Tonapi, V.A. 2019. Variation in Nutritional and shelf life parameters among rabi sorghum cultivars and effect of processing on these parameters. *Agricultural Research* 8(4) 513-522 (JrnID: A090; IF: 5.90).
- Padmaja, P.G., Shwetha, B.L., Kalaisekar, A., Elangovan, M. and Vilas A Tonapi 2019. Effect of sorghum grain quality on progeny emergence of *Sitophilus oryzae* L. (Coleoptera: Curculionidae). *Indian Journal of Entomology* 81(2):261-265 (JrnID: I054; IF: 5.89).
- Padmaja, P.G., Shwetha, B.L., Kalaisekar, A. and Vilas A Tonapi 2019. Effect of host plant on growth, tissue proteins and gut enzymes of pink borer *Sesamia inferens* in millets. *Indian Journal of Entomology* 81(2):280-285(JrnID: I054; IF: 5.89).
- Jain, S.K., Elangovan, M. Patel, P.R., Tyagi, R.K. Sushil Pandey and Vilas A Tonapi. 2019. Characterization of sorghum (*Sorghum bicolor* (L.) Moench) germplasm under CRP-Agro Biodiversity. *Indian Journal of Plant Genetic Resources* 32(1):107-109. DOI 10.5958/0976-1926.2019.00014.7 (JrnID: I082; IF: 5.12).

Books

- Kannababu, N., Venkatesh Bhat, B., Prabhakar, Raghavendra Rao, K.V. and Vilas A Tonapi. 2018. *Millets: Maintenance Breeding for Seed Quality Assurance*. pp 228. ISBN 81-89335-71-5.
- Subbarayudu, B., Madhavi, M., Ravi Kumar, S., Shyam Prasad, G., Sudhakar, R. and Vilas A.Tonapi 2018. *Chirudhanyalanu Aasinchu Keetakalu, Tegullu Vati Sasyarakshnamariyusaguloni Melukavalu : Millets : Insects, Diseases and production Technologies*. Indian Institute of Millets Research, Rajendranagar, Hyderabad. pp 75. ISBN-89335-75-8.
- Bhat, B.V., Arunachalam, A., Kumar, D., Tonapi, V.A. and Mohapatra, T. 2019. *Millets in the Indian Himalaya*. ICAR-Indian Institute of Millet Research, Rajendranagar, Hyderabad 88 pages. ISBN 81-89335-89-8.
- Bhat, B.V., Ratnavathi, C.V., Rao, B.D., Chapke, R., Swarna, R., Padmaja, P.G., Prasad, G.S., Das, I.K., Aruna, C., Venkateswarlu, R., Kannababu, N., Sooganna, Rao, S.S., Singode, A., Talwar, H.S., Babu, K.S., Tonapi, V.A. 2019. *Manual on good Agricultural Practices in millets*. Published by: ICAR-Indian Institute of Millets Research, Rajendranagar, Hyderabad. 53 pages. ISBN No. 81-89335-88-X
- Talwar, H.S., Kannababu, N., Bhat, B.V., and Tonapi, V.A. 2019. *Climate Resilience in Millets*. 232 pages. ICAR-Indian Institute of Millets Research, Hyderabad, India. ISBN 81-89335-85-5.

Other professional activities

- Member, Indian Society of Seed Technology, New Delhi
- Member, Indian Society of Plant Physiology
- Member, Indian society of Oilseeds Research, Hyderabad
- Member, Society for Millet Research, Hyderabad
- Treasurer, Society for Millets Research
- President, UAS-AGRICOs Association