Biodata of the Scientist

Division/Section: Division of Crop Protection

A.Personal information

1. Name (With Title): Dr. H. Kesava Kumar

1. a. Qualification: B.Sc., M.Sc. & Ph.D.

2. Designation: Senior Scientist (Nematology)

3. Address (Personal): House No. 4/120-5, Valluvar Salai, Gnanam Nagar, Thammathukonam, Nagercoil 629 004

4. Phone Numbers:

(a)Residence- 04652 261622 (b) Intercom- 0471 2598551 (223) (c) Mobile- +91 7398897724

5. Email: kesava.kumar@icar.gov.in; kesavakumarh@gmail.com

6. Countries visited: Nil

B. Professional information

1. Area of specialization: Taxonomy of entomopathogenic nematodes

2. Area of interest: Utilization of entomopathogenic nematodes for pest management and Management of plant parasitic nematodes

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

a. Eco-friendly strategy for the management of insect pests in tuber crops
b. Conservation and utilization of germplasm of tuber crops for sustaining production
c. Developing Methodologies and Tools for Assessment and Transfer of Tuber Crops Technologies

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

a. Development of innovative technologies for the intensification of pest management in tuber crops through biorational approach
b. Development and refinement of integrated disease management and forecasting system for improved tuber crop production
c. Conservation and utilization of germplasm of tuber crops for sustaining production
d. Quality planting material production of tropical tuber crops
e. Developing Methodologies and Tools for Assessment and Transfer of Tuber Crops Technologies

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

a. XIIth Plan IP & TM Scheme 'National Agricultural Innovation Foundation (NAIF)' Component I
b. Augmentation of biopesticides production from cassava leaves using fully automated

manufacturing facilities

c. Scaling up biofortified tuber crops through 'Rainbow Diet Approach' in the North Eastern Hills Region

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

a. Radiation technology for quality improvement of tuber crops and management of its by-products

7. Number of students guided for a) Ph.D-Nil b) M.Phil- Nil c) M.Sc- 3

8. Number of students being guided for a) Ph.D_____b) M.Phil_____c) M.Sc- 3

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
Ms. Shajna R.H.	M.Sc. Microbiology	Characterization of bacteria associated with entomopathogenic nematode, *Oscheius* sp. (Nematoda: Rhabditidae)	shajnahussain14@gmail.com
Mrs. Sabina B.S.	M.Sc. Microbiology	Bioactivity of *Bacillus* sp. associated with *Oscheius* sp. against some important pests of tuber crops	sabinanishad18@gmail.com
Mrs. Farha Salim	M.Sc. Microbiology	Characterization of secondary endosymbiont associated with entomopathogenic nematode *Steinernema* sp. (Nematoda: Steinernematidae)	muneer693@gmail.com

9. Information on guide ship

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

10. Number of Research papers (Add list):

a. Kumar, H.K. and Ganguly, S. (2011). Bioefficacy of Indian strains of entomopathogenic nematodes against different homopterans under laboratory conditions. *Indian Journal of Nematology* 41 (2): 197-200.
b. Khan, R.M. and Kumar, H.K. (2013). Plant nematode pests as a sole and co-factor(s) in guava malady- A global perspective. *Current Nematology* 24 (1, 2): 77–91.
c. Kumar, H.K. and Khan, R.M. (2015). Community Analysis of Plant Parasitic Nematodes Associated with Mango Orchards in Four Districts of Uttar Pradesh, India. *Indian Journal of Nematology* 45 (1): 43-47.
d. Kumar, H.K., Gundappa, Rajkumar, B. and Khan, R.M. (2015). Effect of Insecticides on the Survival and Infectivity of *Steinernema abbasi* (CISH EPN-1). *Indian Journal of Nematology* 45 (1): 48-51.
e. Kumar, H.K., Muthukumar, M. and Khan, R.M. (2016). Molecular Characterization of *Steinernema abbasi* from Mango Orchards using ITS Region Based Markers. *Indian Journal of Nematology* 46 (1): 75-76.
f. Kumar, H.K., Ganguly, S. and Ramamurthy, V.V. (2017). Field evaluation of entomopathogenic nematode, *Steinernema thermophilum* against solenopsis mealybug, *Phenacoccus solenopsis* infesting brinjal. *Indian Journal of Nematology* 47 (2): 187-191.
g. Khan, R.M., Ahmad, I., Kumar, H.K. and Singh, A. (2019). Infestation of *Meloidogyne enterolobii* in newly established/ old guava orchards and nurseries in Madhya Pradesh, Rajasthan and Uttar Pradesh. *Annals of Plant Protection Sciences* 27 (1): 170-171.
h. Khan, R.M., Ahmad, I., Kumar, H.K. and Singh, A. (2019). Identification of *Meloidogyne enterolobii* infesting guava using mitochondrial DNA based analysis and host status. *Annals of Plant Protection Sciences* 27(2): 282-284.
i. Sirisha, T., Kumar, H.K. and Veena, S.S. (2020). *In-vitro* evaluation of potential bio agents on hatching and mortality of root knot nematode, *Meloidogyne incognita*. *Journal of Entomology and Zoology Studies*, 8(3): 767-770.
j. Tadigiri, S., Jayaprakas, C.A., Kumar, K.K. and Kumar, H.K. (2020). Bio-efficacy of cassava-based biopesticides against *Meloidogyne incognita* under *in-vitro* conditions. *Indian Journal of Nematology* 50 (1): 68-70.
k. Immanuel, S., Jaganathan, D., Koundinya, A.V.V., Prakash, P. Sivakumar, P.S., Kumar, H.K. and Muthuraj, R. (2020). Mapping of Livelihood capitals for technological interventions in elephant foot yam and banana cultivation in Andhra Pradesh. *International Journal of Current Microbiology and Applied Sciences* 9(8): 3686-3696.
l. Sooraj, S., Nisha, M.S. and Kumar, H.K. (2020). *In-vitro* potency evaluation of *Metarhabditis rainai* against termite, *Odontotermes obesus* (Rambur). *Indian Journal of Nematology* 50 (1): 65-67.
m. Tengli, M.B., Sivakumar, P.S., Paul, P. and Kumar, H.K. (2021). Sweet potato biofortification priority index - a strategic tool for scaling up of biofortified varieties. *Current Science* 121(7): 950-957.

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

a. Berliner, J., Prakash, A. and Kumar, H.K. 2019. Entomopathogenic Nematodes. In: Biopesticides in Indian Agriculture, Prakash, A. Rao, J., Shrivastava, S.K., Korada, R.R. and Mishra, V.K. (Eds). Azra Publications, Bhubaneshwar. pp. 255-290.

12. Number of Technical Bulletins (Add list):

a. Byju, G., Ravi, V., Sheela, M.N., Jayaprakas, C.A., Suja, G., Veena, S.S., Asha, K.I., Ramesh, V., Muthuraj, R., Rejin, D.T., Sunitha, S., Asha Devi, A., Sreekumar, J., Jyothi, A.N., Murugesan, P., Mohan, C., Santhosh Mithra, V.S., Harish, E.R., Jaganathan, D., Shiny, R., Sajeev, M.S., Shirly Raichal Anil, Makeshkumar, T., Jeeva, M.L., Saravanan Raju, Kumar, H.K., Vivek Hegde, Koundiniya, A.V.V. and Sasankan, V.R. 2018. Post-flood loss assessment and rehabilitation of tuber crops in Kerala. Technical Bulletin Series No. 69, ICAR-Central Tuber Crops Research Institute, Sreekariyam, Thiruvananthapuram Kerala, 97p.

b. Sivakumar, P.S., Kumar, H.K., Immanuel, S., Jayaprakas, C.A., Murugesan, P., Mohan, C. and Ravi, V. 2020. Rainbow Diet Campaign: An extension strategy for scaling up biofortified tuber crops varieties. ICAR-CTCRI NEH programme, Rainbow Diet Technical Bulletin No.1, ICAR-Central Tuber Crops Research Institute, Sreekariyam, Thiruvananthapuram, Kerala. 32p.

c. Sivakumar, P.S., Jayaprakas, C.A., Kumar, H.K., Bansode, V., Koundiniya, A.V.V., Nedunchezhiyan, M., Kanwat, M., Kumar, S. and Sacikumar, R. 2020. Tuber Crops Rainbow diet: Production and Utilisation of anti-oxidant rich sweet potato varieties. ICAR-CTCRI NEH programme, Rainbow Diet Campaign Training Manual No.1, ICAR-Central Tuber Crops Research Institute, Sreekariyam, Thiruvananthapuram, Kerala. 20p.

d. Byju, G., Veena, S.S., Ramesh, V., Suja, G., Ravi,V., Sunitha, S., Sheela, M.N., Jayaprakas, C.A., Sajeev, M.S., Asha Devi, A., Shirly Raichal Anil, Sreekumar, J., Makeshkumar, T., Jyothi, A.N., Jeeva, M.L., Murugesan, P., Saravanan Raju, Mohan, C., Kumar, H.K., Asha, K.I., Santhosh Mithra, V.S., Vivek Hegde, Harish, E.R., Koundinya, A.V.V., Muthuraj, R., Jaganathan, D., Sasankan, V.R., Rejin, D.T. and Shiny, R. 2020. Deluge of August 2018 in Kerala state, India: Changes in soil properties. Technical Bulletin No. 78, ICAR-Central Tuber Crops Research Institute, Sreekariyam, Thiruvananthapuram Kerala, 32 p.

e. Sivakumar, P.S., Sajeev, M.S., Kumar, H.K. and Bansode, V., 2020. Commercializable technologies from ICAR-CTCRI. ICAR-CTCRI ITMU

Technologies Series-1, ICAR-Central Tuber Crops Research Institute, Sreekariyam, Thiruvananthapuram, Kerala. 16p.

13. Consultancies offered (Add list and give a brief description): Nil
14. Technologies developed (Add list and give a brief description):
    a) Isolated a new strain of an entomopathogenic nematode, *Heterorhabditis* sp. from Thiruvananthapuram for the management of sweet potato weevil, *Cylas formicarius*.
15. Patents/Copyrights obtained (Add list and give a brief description): Nil
16. Any other information: Nil