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Principal Scientist (Entomology)

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Education

Ph.D., Entomology, 1992-1996, IARI, New Delhi

M.Sc., Agricultural Entomology, 1989 - 1991, ANGRAU, Hyderabad

B.Sc., Agriculture, 1985 - 1989, ANGRAU, Hyderabad

Professional career

Scientist, NRC for Grapes, Pune, 30 Dec '96 to 29 Dec 2000

Scientist (Senior Scale), CRIDA, Hyderabad, 30 Dec 2000 to 29 Dec '05

Senior Scientist, CRIDA, Hyderabad, 30 Dec '05 to 29 Dec '11

Principal Scientist, CRIDA, Hyderabad from 30 Dec 11 onwards

Field of research

Remote sensing & GIS for crop health management, Crop-pest-weather interactions, Seasonal dynamics & natural biological control of crop pests.

Publications

Research articles, International : 6

Research articles, National : 26

Symposia/ conference papers : 14

Book chapters : 5

Technical bulletins/brochures : 17

International journals:

- ❖ **Prabhakar M**, Prasad YG, Desai S, Thirupathi M, Gopika K, Ramachandra Rao G, Venkateswarlu B (2013). Hyperspectral remote sensing of yellow mosaic severity and associated pigment losses in *Vigna mungo* using multinomial logistic regression models. *Crop Prot* 45: 132-140.
- ❖ **Prabhakar M**, Prasad YG, Rao, GR, Venkateswarlu B (2012). A new record of longicorn beetle, *Acanthophorus rugiceps* as a root borer on physic nut, *Jatropha curcas* from India with a description of life stages, biology and seasonal dynamics. *J Insect Sci* 12: 141.
- ❖ Prasad YG, **Prabhakar M**, Sreedevi G, Ramachandra Rao G, Venkateswarlu B (2012). Effect of temperature on development, survival and reproduction of the mealybug, *Phenacoccus solenopsis* Tinsley (Hemiptera: Pseudococcidae) on cotton. *Crop Prot* 39: 81-88.
- ❖ **Prabhakar M**, Prasad YG, Thirupathi M, Sreedevi G, Dharajothi, Venkateswarlu B (2011). Use of ground based hyperspectral remote sensing for detection of stress in cotton caused by leafhopper (Hemiptera: Cicadellidae). *Comput Electron Agric* 79: 189-198.
- ❖ **Prabhakar M**, Prasad YG, Desai, S, Thirupathi M, Vennila, S, Ramachandra Rao G, Venkateswarlu B (2013). Hyperspectral indices for assessing damage by the solenopsis mealybug (Hemiptera: Pseudococcidae) in cotton. *Comput Electron Agric* (In press).

National journals:

- ❖ **Prabhakar M**, Prasad YG, Desai S, Thirupathi M (2013). Spectral and spatial properties of rice brown plant hopper and groundnut late leaf spot disease infestation under field conditions. *J Agromet* (In press)
- ❖ Vennila S, Prasad YG, **Prabhakar M**, Agarwal M, Sreedevi G, Bombawale OM (2013). Weed hosts of cotton mealybug, *Phenacoccus solenopsis* Tinsley (Hemiptera: Psedococcidae). *J Env Biol* 34: 153-158
- ❖ **Prabhakar M**, Padmavathy P, Prasad RD, Lakshmi Prayaga (2012). Retrieval of biophysical parameters and assessment of *Alternaria* disease severity in safflower using ground based hyper spectral radiometry. *J Oilseed Res* 29: 377-382.
- ❖ Prasad YG, **Prabhakar M**, Sreedevi G, Thirupathi M (2011). Spatio-temporal dynamics of the parasitoid, *Aenasius bambawalei* Hayat (Hymenoptera: Encyrtidae) on mealybug, *Phenacoccus solenopsis* Tinsley in cotton based cropping systems and associated weed flora. *J Biol Control* 25: 198-202.
- ❖ **Prabhakar M**, Prasad YG, Venkateswarlu B (2010). New record of *Hexameris dactylocercus* Poiner Jr. and Linares (Nematoda: Mermithidae) parasitizing red hairy caterpillar, *Amsacta albistriga* (Walker) (Lepidoptera: Arctidae) from India. *J Biol Control* 24: 285-287.
- ❖ **Prabhakar M**, Prasad YG (2010). Characterizing biotic stress in castor and other oil seed crops using multispectral radiometry. *J Oilseed Res* 22: 351-352.
- ❖ **Prabhakar M**, Prasad YG, Rao GR (2009). Pests of economic importance on *Jatropha curcas*, a bio diesel plant in India. *Entomon* 33: 83-86.
- ❖ **Prabhakar M**, Prasad YG, Yella Reddy D (2008). Models for forewarning the incidence of castor semilooper *Achaea janata* Lin (Noctuidae: Lepidoptera) and its parasitoids. *J Agromet* 10: 529-534.
- ❖ Prasad YG, Nagalakshmi T, **Prabhakar M**, Yella Reddy D, Rao NHP, Srivasa Rao M, Desai S, Rao GGSN, Ramakrishna YS (2007). Development of prediction models for bacterial leaf blight *Xanthomonas axonopodis* pv. *Malvacearum* of cotton (*Gossypium hirsutum*) in Andhra Pradesh and Maharashtra. *Indian J Agric Sci* 77: 752-756.
- ❖ Yella Reddy D, **Prabhakar M**, Reddy CS, Ramakrishna YS, Prasad YG, Nagalakshmi T (2006). Dynamic cumulative weather based index for forewarning of rice blast. *J Agromet* 8: 1-6.
- ❖ **Prabhakar M**, Prasad YG (2005). Biology and dynamics of *Snellenius maculipennis* (Szepliget) (Hymenoptera: Braconidae), a larval parasitoid of castor semilooper, *Achaea janata* (Linnaeus) (Lepidoptera: Noctuidae). *J Biol Control* 19: 29-34.
- ❖ **Prabhakar M**, Prasad YG (2005). Natural parasitisation of castor semilooper, *Achaea janata* Linn. *Indian J Entomol* 66: 301-307.

Symposia/ Conference papers:

- ❖ **Prabhakar M**, Padmavathy P, Prasad RD, Lakshmi Prayaga (2012). Retrieval of biophysical parameters and alternaria disease severity in safflower using hyperspectral radiometry. Proc. 8th Intern Safflower Conf., Jan 2012, DRR, Hyderabad.
- ❖ **Prabhakar M**, Prasad YG, Thirupathi M, Sreedevi, G (2011). Assessment of mealybug severity in cotton using hyperspectral radiometry. Proc. Nat Sem

Agromet Res & Services to Combat Climate Change Challenges, 9-10 Dec, 2011, BCKV, Kalyani, W.B.

- ❖ **Prabhakar M**, Prasad YG (2010). Characterizing biotic stress in castor and other oil seed crops using multispectral radiometry. Proc. Nat Symp Res & Dev in Castor: Present Status & Future Strategies, 22-23 Oct 2010, DOR, Hyderabad.
- ❖ **Prabhakar M**, Prasad YG, Rao GR (2008). Early detection of root borer incidence in *Jatropha curcas* L. using remote sensing techniques. Proc. Second Insect Sci Congress, PAU, Ludhiana, pp 133-134
- ❖ **Prabhakar M**, Prasad YG, Venkateswarlu B, Ramakrishna YS (2008). Reflectance characteristics of crop canopies under stress due to pest and disease infestation. Proc Nat Symp HYPERSPEC- 2008, Annamalai Univ, Chidambaram, India pp 9-11
- ❖ **Prabhakar M**, Prasad Y G, Yella Reddy D (2008). Determining instars of the castor semilooper *Achaea janata* Lin. (Noctuidae: Lepidoptera) based on head capsule widths and models for forewarning their incidence. Proc Intern Symp Agromet & Food Security, 18-21 Feb 2008, CRIDA, Hyderabad, India.

Book chapters:

- ❖ Prasad YG, **Prabhakar M** (2012). Pest monitoring and forecasting. In: Integrated Pest Management Principles and Practices (Eds. Abrol DP, Shankar U). CABI Publishing, UK. (H ISBN 9781845938086)
- ❖ **Prabhakar M**, Prasad YG, Rao MN (2011). Remote Sensing of Biotic Stress in Crop Plants and its Applications for Pest Management- By Prabhakar M, Prasad YG, Rao MN, In: *Crop Stress and its Management: Perspectives and Strategies* (Eds: B Venkateshwarulu et al.), Springer Science+Business Media, ISBN 978-94-007-2219-4
- ❖ **Prabhakar M**, Prasad YG, Ramakrishna YS (2009). Reflectance characteristics of crop canopies under stress due to pest and disease infestation. In: *Hyperspectral Remote Sensing and Spectral Signature Applications* (Eds: S. Rajendran, S. Aravindan, T.J. Rajakumar, K.R. Murali Mohan and R. Sivakumar), ISBN: 8189422340, New India Publishing Agency, Delhi, pp 526

Technical bulletins/ Brochures:

- ❖ Vennila S, Prasad YG, **Prabhakar M**, Rishikumar, Nagrare V, Amutha M, Dharajyothi, Meenu Agarwal, Sreedevi G, Venkateswarlu B, Kranthi KR, Bombawale, OM (2011). Spatio-temporal distribution of host plants of cotton mealybug, *Phenacoccus solenopsis* Tinsley in India. Tech Bull 26, NCIPM, New Delhi, p 50.
- ❖ Vennila S, Ramamurthy VV, Deshmukh A, Pinjarkar DB, Ararwal M, Pagar PC, Prasad YG, **Prabhakar M**, Kranthi KR, Bombawale OM (2010). A treatise on mealybugs of Central Indian cotton production system. Tech Bull 24, NCIPM, New Delhi, p 39.
- ❖ Rao GR, Prasad YG **Prabhakar M**, Srinivas I, Rao KV, Korwar GR, Venkateswarlu B, Shankar AK, Ravindra Chary G, Reddy NN (2010). Bio-fuel crops for drylands: Cultivation and processing Issues. Tech Bull 1/2010. CRIDA, Hyderabad, 32p.
- ❖ Venkateswarlu B, Ramakrishna YS, Subba Reddy G, Mayande VM, Korwar GR, **Prabhakar M** (2008). Rainfed Farming: A profile of doable technologies.

CRIDA Tech Bull, 48p.

- ❖ **Prabhakar M**, Prasad YG, Reddy RDR, Venkateswrlu B, Ramakrishna YS (2007). Neem in Integrated Pest Management, CRIDA Tech Broch No.1/2007.
- ❖ **Prabhakar M**, Prasad YG, Prasad MS, Reddy RDR Ramakrishna YS (2007). Integrated Pest Management in Rainfed crops. CRIDA KVK Tech Bull 13/2007, 56p.
- ❖ **Prabhakar M**, Prasad YG, Reddy RDR, Venkateswarlu B, Ramakrishna YS (2007). Production and Use of Baculovirus. CRIDA Tech Broch , 2/2007
- ❖ Rao GR, Prasad YG, **Prabhakar M**, Rao JV, Korwar GR, Ramakrishna YS (2006). Agro-techniques for Biodiesel Plantations in rainfed crops. Tech Bull, CRIDA, Hyderabad.
- ❖ **Prabhakar M**, Prasad YG (2005). *Trichogramma* egg parasitoid for Biological Control of Insect Pests. Technical Brochure No. 2/05, CRIDA, Hyderabad.
- ❖ Prasad YG, **Prabhakar M** (2005). Viral Bio-pesticides for Eco-friendly Pest Management. Tech Broch No. 1/05, CRIDA, Hyderabad.

Professional activities

- ❖ Life member - Entomological Society of India, New Delhi
- ❖ Life member - Society for Bio Control Advancement, Bangalore
- ❖ Life Member - Association of Agrometeorologists, Anand
- ❖ Life member - Plant Protection Association of India, Hyderabad
- ❖ Treasurer- Association of Agrometeorologists, AP Chapter, Hyderabad

Patents

- ❖ Insect Parasitoid and Predator Collection Device (Patent Appl. No: 3515 /CHE/2011)

Awards/recognitions

- ❖ DST-SERC -Fast Track Young Scientists, Department of Science and Technology, Ministry of Science and Technology, Govt. of India, 2005-2008.
- ❖ NUFFIC Fellow, Government of Netherlands, May 2005
- ❖ Fellow, Entomological Society of India, New Delhi, 2008
- ❖ Fellow, Plant Protection Association of India, Hyderabad, 2012
- ❖ Visiting Scholar, Department of Geography, Oklahoma State University, Stillwater, OK, USA, 14 February- 15 May 2009
- ❖ Best Research Paper award, National Seminar- Agrometeorological Research and Services to Combat Climate Change Challenges, BCKV, Kalyani, 9-10 Dec, 2011
- ❖ Best Research Paper award, National Symposium- Climate Change and Indian Agriculture: Slicing Down the Uncertainties, CRIDA, Hyderabad, 22-23 Jan 2013
- ❖ Topped the all India merit list of candidates selected for Agricultural Research Service (ARS) in Agricultural Entomology for the year 1994 by Agricultural Scientists Recruitment Board, New Delhi.