SCIENTIST PROFILE

1. Name & Designation : **Dr. Prakash Chandra Rath, Principal Scientist**

2. Date of Birth : **20th January, 1967**

3. Date of joining ICAR : **3rd June, 1993**

4. Date of joining the present post : **1st January,2011**

5. Qualification (highest degree) : **M.Sc.(Ag) & Ph.D. (Entomology)**

6. Post Doctoral Research Experience/Training:

• Participated in International Training on "Integrated Pest Management"at The Egyptian International Centre for Agriculture (EICA), Dokki, Giza, Cairo, Egypt w.e.f. 10th July to 25th September 2007.

7. Area of Specialization/research interest:

• Host plant resistance, chemical control of insect pest and IPM in rice.

8. Significant Contribution including products and patents (Five bullets):

• IPM module for upland rice has been developed.

• Factors responsible for swarming caterpillar outbreak in Odisha were identified which includes high rainfall in the 2nd week of June (June-July rainfall around 500 mm),undulating paddy fields surrounded with thick forest vegetation and early monsoon with prolonged dry spell and intermittent rain with high temperature.

1. Simple co-relation study of leaf folder resurgence with meteorological parameters concluded that sunshine hour(r=0.28), maximum temperature(r=0.49) and RH I (r=0.27) were positively correlated with leaf folder incidence,whereas rainfall (r= - .33) and Min T (r= -0.39)were negatively co-related.

• Control of field pests by chemicals and its long term effect in rice environment.

1. The insecticide Chlorantraniliprole, RIL-IS-109, Monocrotophos, Acephate 95 SG, Takumi, Dinotefuron, Applaud, Cartap, Carbofuran, Phorate and Chlorpyriphos were very effective against YSB.

2. Identification of biotic stress (BPH, WBPH and YSB) tolerant promising rice cultivars for irrigated land under optimum pest control: The identified promising genotypes are BG380-2, SKL7-61-9-10-12, IET10890 and IET11689

• Identification of new sources of resistance to major insect pests.

1. The genotype/cultivar AC-837, AC-1477, AC111, AC-1066, AC-1073,AC-1418, IC568061, IRGC13753, Samanta, Sidhanta, Naveen, PR114, IC519139 and AC1477 were resistant against WBPH

2. The cultivar, Surendra, MTU 1071 and PR 111 were resistant/tolerant against yellow stem borer.

• IPM module for unfavorable rice ecosystem: In HYV, Varshadhan, need based application of bio-pesticides supplemented with bio-control agents, cultural practices to conserve natural bio-agents, summer ploughing and mass trapping of YSB moths by pheromone are safe, sustainable and economical for rice production.

9. Awards/Honours:

• **Merit scholarship** during B.Sc (Ag.) in 1985-86 from OUAT, Bhubaneswar.

• **S. J. Jindal Trust scholarship** for meritorious student during M.Sc (Ag.) Entomology during 1989-91.

• **BHU Merit scholarship** during Ph.D in Entomology during 1991-93.

• **Elected as Fellow** of the society for the protection of Environment and Sustainable Development for the year 2000 and awarded on 4.1.2003

• **Best poster award** on topic" Insect pest of shallow rainfed lowland rice in eastern India and their management" in national symposium on "Frontier Areas of Entomological Research" held at IARI New Delhi, 5-7 November, 2003.

• **Felicited as out standing alumnus** on the occasion of Silver jubilee of College of Agriculture, Chiplima, (OUAT) by Associate dean of the college on 27.10.2006

• **Awarded training certificate** for participation in the training on IPM in Egypt held during 10th July to 25th September 2007 at Egyptian International Centre for Agriculture, Dokki, Cairo, Egypt.

• Conferred as **AZRA Fellowship Award** for the year 2007 for the out standings research contributions in the field of applied zoological researches.

• **Awarded Fellow** of Plant Protection Association of India (FPPAI) on 30th Nov.2012 in International Conference on Plant Health Management for Food Security, 28-30, November, 2012 at DRR Hyderabad.

10. Publications (10 best):

i) Rath PC and Dani RC **(2010).** Yield potential and insect pest reaction of promising rice cultures at Cuttack, Orissa. **Oryza 47(1): 62-65.**

ii) Rath PC and Marndi BC **(2010)** Evaluation of resistance in some rice germplasm against white backed planthopper, *Sogatella furcifera*. **Indian Jounal of Plant Protection 38(2): 197-199.**

iii) Rath PC, Meher J and Subudhi HN **(2010).** Field evaluation of improved rice genotypes against Yellow stem borer. **Oryza 47(4): 337-339.**

iv) Rath PC and Subudhi HN **(2011).** Greenhouse Evaluation of selected rice varieties against white backed plant hopper *Sogatella furcifera Horvath*)**. Oryza 48(2): 188-189.**

v) Kumar A, Nayak AK, Shukla AK, Panda BB, Raja R, Shahid M, Tripathi R, Mohanty S. and **Rath PC (2012).** Microbial biomass and carbon mineralization in agricultural soils as affected by pesticide addition. **Bulletin of Environmental Contamination and Toxicology 88(4): 538–542.**

vi) Rath PC (2012). Field evaluation of newer insecticides against insect pests of rice. **Indian Journal of Plant Protection 40(2): 148-149.**

vii) Rath, P.C.(2013) Field efficacy of granular insecticides against yellow stem borer and gundhi bug of rice. ***Oryza***. **50(2):194-195**

viii) Rath, P.C.(2014) Field efficacy of granular insecticides against rice gundhi bug and yellow stem borer. ***Indian journal of Plant protection*. 42(3):208-210**

ix) Rath, P.C.; Lenka,S.; Dasmahapatra S.D.; and Jena. M**.(2014)** Field evaluation of selected insecticides against insect pests of wet season transplanted rice ***Oryza*. 51(4):324-326**

x) Rath, P. C.; Chakraborty K; Nandi, P. and Moitra, M. N**. (2015)** Field efficacy of some new insecticides against rice stem borer and gundhi bug in irrigated rice ecology. ***International Journal of Plant, Animal and Environmental Science*. 5(2): 94-96**