

# Division of Entomology

## At a Glance



division has transferred specific technologies with widespread adoption in J&K.

- Location specific IPM for Basmati rice, off-season tomato and maize.
- Management of termites and cutworm through seed treatment
- Cultural control of paddy leaf folder in Jammu.
- Honey bee rearing technologies for honey production and pollination
- For the Management of fruit borer *Helicoverpa armigera* in tomato crop, 4 weekly releases of *Trichogramma pretiosum* @ 50000 eggs followed by 2 spray application of HaNPV @  $1.5 \times 10^{12}$  at weekly intervals has been demonstrated on farm trials to the

Department of Agriculture, Govt. of J&K and recommendation made thereof.

- IPM package for grasshopper management was developed and demonstrated successfully.
- Biological suppression of anar butterfly through six weekly releases of *Trichogramma embryophagum* @1 lakh /ha
- Field release of *Cotesia plutellae*@15000/ha for managing *Plutella xylostella*

### Success story

- Seven Success story of Division
- Ten (10) minutes Video on Integrated Pest Management in Vegetable crop in collaboration with Department of Agriculture (2015)



Compiled & edited by:

Dr. Uma Shankar

Corresponding Address:

Dr. Hafeez Ahmad, Prof. & Head  
 Division of Entomology  
 Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu,  
 Chatha-180009, J&K  
 e-mail:hafeezskuastj786@gmail.com,  
 9419856094 (Mob.)



Faculty of Agriculture  
 Sher-e-Kashmir University of Agricultural Sciences  
 and Technology of Jammu  
 Chatha, Jammu-180009, J&K, INDIA

Entomology, the study of insects, is an interdisciplinary life science that contributes much to our understanding of life, our environment, and the well being of our society. Insects are the predominant species on earth, representing the greatest biodiversity with more than one million known species. Insects significantly affect human civilization, whether the impact is positive, such as pollination of our food plants, or negative, such as competition with our food supply.

The Division of Entomology at R. S. Pura started functioning as a section of Entomology, at Regional Agriculture Research Station, R. S. Pura, Jammu, since the inception of SKUAST, J&K. With the bifurcation of University in September 1999, this Division attained a full-fledged status to develop skilled and efficient human resource in the field of entomological aspects at Faculty of Agriculture, Udheywalla, Jammu. The division moved to main campus Chatha in May 2008. We have developed strong entomological programs and traditions in teaching, outreach, and research. The department has got one UG, PG laboratory, biological control laboratory, apiculture laboratory and an Insect Museum, which cater to the needs of students for conducting practicals and imparting identification skills for the respective programmes. Research in the Division of Entomology addresses diverse questions and uses a wide variety of experimental approaches and methodologies. The Division is entrusted with the specific objectives of evolving IPM strategies for major pests of cereals, pulses, vegetables, fruits, oilseeds, ornamentals

and, estimation of pesticide residues and developing management practices for honey bee. The Division also undertakes extension activities in collaboration with the Directorate of Extension. It also imparts need based training to farmers and agricultural officers of Jammu.

#### Mandate

- Imparting quality education and furthering the advancement of learning in frontier areas of entomology and related branches, for ushering in an era of total quality management.
- Sustainable improvement of agricultural production through development and popularization of location specific, economically viable and eco-friendly pest management technologies to minimize crop losses due to pests and improve socio-economic conditions of farmers through rearing of beneficial insects like honeybees and lac cultivation.
- Undertaking extension for transfer of technology to end users

#### Teaching Faculty

Professor	03
Assoc. Professor	02
Asstt. Professor	01

#### Academic Programme

The division is actively involved in UG, and PG (M.Sc. and Ph. D) teaching. Apart from modifying the ICAR courses for UG and PG as per the needs of local conditions, we have also developed course for undergraduate programme in Biotechnology, complete elective courses for B. Sc Agri. Programme, entrepreneurship course in beekeeping and

Experiential learning for productive insects. Some Practical manuals and bulletins have also been developed for instructional programme.

#### Lab & Classroom Facilities

Facilities such as Audio-visual system for classroom, dissection microscopes, models and charts and Image analysis system have been created for effective teaching and research programme.

#### Number of students pass outs from the division w.e.f 1999

Completed		Ongoing	
M. Sc	Ph. D	M. Sc	Ph. D
70	28	23	10

About 95 per cent pass outs of this division have been placed in SAU's, state administration and banking sector etc. Four Ph. D. students have been awarded DST-Inspire fellowship and National Fellowship for ST Students, respectively.

#### Flagship Areas in Research

The Division is currently involved in research on various Flagship areas as under-

- Apiculture/Beekeeping: Queen rearing, Bee flora studies, pesticide residues analysis of honey
- Integrated Pest Management
- Bio-agents for Pest Management

#### Subject Areas

- To increase crop productivity through development of Biological Control  
Explore indigenous parasitoids, predators and pathogens of Jammu region and develop pest management practices for
- Basmati rice, off-season tomato and maize.

- Evaluation and Screening of new molecules of insecticides for effective pest control
- Identify nematode problems and their control to enhance crop productivity
- To enhance crop productivity through planned pollination

#### Projects

Externally funded

Completed 20

Ongoing 11

#### Significant contributions by Division of Entomology

- Package of practices for *Varroa destructor*
- Management of anar butterfly
- Management of grasshoppers
- Management of Snails and Slugs
- Bio-intensive management of fruit borer, *Helicoverpa armigera*
- Bio-intensive management of shoot & fruit borer of brinjal, *Leucinodes orbonalis*
- Management of termites in Wheat
- Management of insect pests on oilseeds
- Developed IPM modules against insect pests of Cole crops, Brinjal, Okra and Tomato, Rajmash, Urdbean

#### Extension

- Involved in extension activities relating to training of field functionaries through short term trainings and monthly workshops.
- Field visits for diagnosis of pest problems and attending problems of visiting farmers. Render Advisory services to farmers visiting division of Entomology

#### Transferred to farmer

- In addition to the technologies incorporated in package of practices the