Pulses play a major role in meeting the projected targets relating to food and nutritional security worldwide. The complementation of cereal based food with legumes keeps the vegetarian diet nutritionally balanced. However, the productivity of these crops is severely impacted by a number of biotic, mesobiotic and abiotic stresses causing substantial economic losses globally. Among the biotic/mesobiotic constraints, diseases and insect pests remain the most crucial factors affecting all parts of the plant at different growth stages.

Biotic stresses influenced by pathogens such as fungi, fungi like organisms, bacteria, nematodes, viruses, viroids, and insect pests cause serious impairments to the plants at various stages of crop growth. The losses due to biotic constraints are a major threat to enhance pulses productivity.

A range of strategies and tactics aiming at management of various diseases and insect pest of grain legumes are currently available. These include development of resistant varieties, genetically engineered plants, use of agrochemicals and physical methods. However each of these suffers from its own drawbacks. Use of agrochemicals is an expensive affair and in addition, it has detrimental effects on the environment, adversely affecting soil fertility, soil microfauna etc. Also, prolonged use of chemicals often leads to develop fungicide resistance in pathogens, and carcinogenic, teratogenic and mutagenic effects in humans, animals and plants. For these reasons, the use of potential biological control agents is an effective means for sustainable management of pulses.

It is in this context, the model training course entitled "Production and popularization of biological control agents to enhance pulse production: An ecofriendly approach" will provide an appropriate platform for interaction/discussion to different

Agriculture officers/Plant Protection Officers or equivalent from Sate agriculture department working on research and developmental activities on biological control agents and agriculture related discipline. The deliberations by experts on the field will add to better understanding of proposed area in solving the emerging issues of biological control agents.

Objectives

- ➤ To enhance the knowledge and capacity of extension/agriculture officials in production, popularization and application of potential biopesticides as a component of Integrated Pest Management strategies.
- To provide an opportunity of experience sharing, problem solving and interaction between experts and subject matter specialists in the field of biological control agents.

Course Content

- Biological Control Agents: Current scenario and future Prospects and success stories of BCAs in managing insect pests and diseases in India.
- BCAs and their commercialization: Indian Prospective.
- Recent advances, Scope and Importance of BCAs for pulse disease/insect management.
- Mass culturing and delivery methods of microbials for insect management and Mass rearing of predators and parasites.
- Low cost production technologies of BCAs.

Eligibility

The candidates should be working as a Agriculture/Horticulture Officers/Plant Protection Officers or equivalent from Sate agriculture department.

Duration of course:

22-29 February, 2016 (8 days)

Vonue

Indian Institute of Pulses Research Kanpur, Uttar Pradesh, INDIA-208 024

Number of participants: 20

Important dates

Last date for nomination: 30th January, 2016 Information on selection: 5th February, 2016

Travel

Participants will be paid for the journey, to and fro, restricted to the maximum of AC II- tier train fare or bus or any other means of transport in vogue, as the case may be, as per the norms & guidelines of Directorate of Extension, Department of Agriculture and Cooperation, Ministry of Agriculture, Govt. of India.

Boarding and lodging

Participants will be provided free boarding and lodging by IIPR, Kanpur in the Guest House, as per guidelines of winter/summer schools and short courses. Participants are requested not to bring their family/accompanying person with them.

How to Apply

Eligible and interested candidates may submit their application form in prescribed format. Take a printout and send nomination duly forwarded by the competent authority in the prescribed format to **Dr. R.K.Mishra, Course Coordinator,** Crop Protection Division, Indian Institute of Pulses Research, Kanpur, Uttar Pradesh-208 024

Location of IIPR, Kanpur

Indian Institute of Pulses Research (Dalhan Sansthan), Kalyanpur, Kanpur is located 12 km away from Kanpur Central railway station and about 10 km from Jhakarkatti Bus Stand, Kanpur on the GT Road. It is well connected by rail/road to the rest of the country. Kanpur is situated on the bank of the Ganges River and is known as **Manchester of the East**. The climate of Kanpur is slightly pleasant during the month of August. No need to bring warm clothes. During February, temperature ranges from 15-20°C with average humidity of 70-80 percent.

APPLICATION FORM FOR PARTICIPATION IN MODEL TRAINING COURSE

On "Production and popularization of biological control agents to enhance pulse production: An eco-friendly approach" at Indian Institute of Pulses Research, Kanpur -208 024 (Uttar Pradesh).

1. Full name (in capital	letters)-			
2. Designation	1				
3. Present em	ployer and	laddres	S		
4. Address to	which rep	ly shou	ld be sent (in capital	letters)
(Give telegi	raphic add	ress als	o if availal	ole), Phor	ne
numbers, e-	mail etc				
5. Date of Bir					
6. Sex (Male	/Female)				
7. Teaching/ research/ professional experience (mention post					
held during	last 5 yea	rs and r	number of j	publication	ns)
8. Marital status. (Married/Unmarried)					
9. Mention if you have participated in any training during the					
previous ye	ars under	ICAR/0	Other organ	nization	
10. Academic	: record:		T	ı	ı
Examination passed	Subjects (main/ subsidiary)	Year of passing	Class ranks, distinction,	University/ institution	Other information
Graduation	subsidial y)	passing	OGPA/%	institution	mormation
Post graduation					
Ph. D.					
1 11. D.			-		

Date	Signature of the applicant.
12. Recommendations of	forwarding authority. The application of
Mr. / Ms/ Dr	is hereby
recommended and forwar	ded for attending Model Training Course
On "Production and popu	ilarization of biological control agents to
enhance pulse production	on: An eco-friendly approach", to be
organized by Indian Instit	tute of Pulses Research, Kanpur-208 024
(Uttar Pradesh) during 22-	-29 February, 2016.
It is certified that the infor	mation furnished by the candidate has
been verified and found co	orrect.
	Signature
	Designation

N.B.: If more copies are required copies may be made locally for

use of applicants.

Address

Place



Correspondence Convener

Dr. N.P.Singh

Director

Indian Institute of Pulses Research

Kanpur-208 024 (Uttar Pradesh)

Phone: 0512-2570264, 2572011, 2572464

Fax: 0512-2572582

Email:director@iipr.ernet.in

Course Director

Dr. S.K.Singh

Head

Division of Social Sciences
Indian Institute of Pulses Research

Kanpur-208024

Course Coordinators

Dr R.K.Mishra, Senior Scientist Dr Naimuddin, Senior Scientist

Division of Crop Protection

Indian Institute of Pulses Research

Kanpur-208 024 (Uttar Pradesh)

Phone: 2572464/465 (Ext. 278 & 277),

Fax: 0512-2572582 Mobile: +91-9454554433

Email: <u>rajpathologist@yahoo.com</u> <u>rkmishraiipr@gmail.com</u>



Model Training Course On

Production and popularization of biological control agents (BCAs) to enhance pulse production: An ecofriendly approach

22-29 FEBRUARY, 2016

Sponsoring authority

Directorate of Extension
Department of Agriculture, Cooperation and
Farmer Welfare, Ministry of Agriculture and
Farmer Welfare
Govt. of India



Indian Institute of Pulses Research, Kanpur-208 024 (Uttar Pradesh)

Web site : http://www.iipr.res.in