

Circular and Registration Form

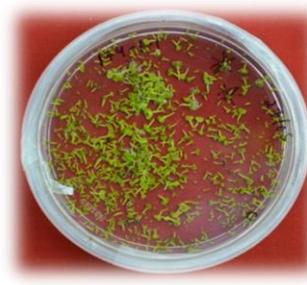
SUMMER SCHOOL (2018-19)

June, 01– June 21, 2018

Sponsored by:



Indian Council of Agricultural Research, New Delhi



Breeding strategies and seed production techniques of temperate and exotic vegetables under changing climatic condition

Organized by:

**ICAR-Indian Agricultural Research Institute,
Regional Station, Katrain, Kullu, HP-175129**

Course Director :Dr. Raj Kumar

Course Coordinators: Dr. Reeta Bhatia

: Dr. Chander Parkash



IMPORTANT DATES:

Last date for receipt of application : 15/05/2018

Intimation of selection : 18/05/2018

Confirmation of participation by candidates : 21/05/2018

INTRODUCTION

Vegetable crops occupy 10.1 million hectares producing 169 million tonnes of vegetables annually (NHB Database, 2016). Temperate and exotic vegetables are generally considered as high value vegetable crops for their potential to improve the income of the farmers. However, majority of the seeds in these crops are imported from outside. Breeding works in these crops are also very limited in India mainly because of limited genetic resources and their specific requirements for seed production. With the temperature increasing day by day the improvement and seed production in these crops have become more challenging. The present scenario demands technologies which can sustain crop production under different adverse climatic factors. Thus, the on-going breeding objectives in these crops need further refinement keeping in mind the future necessities. Seed production techniques in most of the temperate and exotic vegetables are little tricky when compared to the conventional vegetable crops. Moreover, the present situation demands more climate resilient seed production technologies for successful indigenous seed production industry.

THEME

Temperate vegetables like cabbage, cauliflower, carrot, radish, turnip, beet root and capsicums are important constituents of Indian diet. Besides, exotic vegetables like broccoli, Brussels sprouts, knol khol, lettuce, celery and parsley are becoming very popular day by day. These vegetables play vital role in supplying the various health beneficial nutrients and bioactive compounds. Some of these vegetables are well known for their anti-carcinogenic properties. Most of the seeds of these crops are imported in our country. In India, very limited research work is being undertaken to improve productivity and quality of these high value and low volume crops. Indigenous seed production is needed urgently to meet the increasing demand of crops. Therefore, this course focuses on training young scientists and assistant professors in vegetable breeding about the modern breeding tools, recent advances, techniques and other emerging trends in enhancing the productivity and quality of temperate and exotic vegetables and their seed production.

OBJECTIVE

The objective of the course is to impart training on breeding for higher productivity and industry suitable temperate and exotic vegetable crop plants through employing conventional and molecular approaches. Besides, the participants will be provided information regarding recent trends in seed production and future challenges.

ABOUT THE COURSE

The course includes theory lectures as well as practical classes including participants exposure to the modern laboratories for in vitro based breeding strategies, analytical methodologies, molecular approaches in order to develop trained personnel capable of carrying out improvement works and seed production in these crops. The course will also provide an opportunity to the participants to interact with subject-experts and fellow workers from different parts of the country and update themselves with the latest information in the field of conventional breeding (selection procedures and handling of segregating populations) and modern approaches (tissue culture, marker assisted breeding) in improvement of these crops. The participants will also have hands on experience on seed production in these crops under temperate condition.

MAJOR SUBJECT AREAS OF THE TRAINING

- Classical breeding approaches to enhance productivity and quality
- Heterosis breeding in enhancing productivity and quality
- Modern biotechnological and molecular tools
- Haploid breeding
- Biotic and abiotic stress resistance breeding
- Seed production and DUS and IPR issues

ABOUT ICAR-IARI, REGIONAL STATION, KATRAIN

ICAR-IARI, Regional station, Katrain is a historical station involved in seed production and improvement of temperate vegetables since 1949. After the partition of India, the government of India set up a Central Vegetable Breeding Station at Kullu Valley. The station was transferred to the Indian Agricultural Research Institute, New Delhi in 1955 with a view to intensify the improvement work on temperate vegetables. Since then, the station has been making steady progress in the area of vegetable improvement and seed production. This station is pioneer in developing F₁ hybrids in vegetable crops since the development of cucumber hybrid, Pusa Sanyog and summer squash hybrid, Pusa Alankar in 1973. This station is the only research institute in India involved in improvement of temperate and exotic vegetables through application of modern breeding tools. This station is credited with development of F₁ hybrid for the first time in cabbage, snowball cauliflower and temperate carrot in the country.

TRAVEL ALLOWANCES

The participants will be paid for the journey, to and fro, restricted to AC-II-tier train fare or bus. TA will be paid from the place of duty to the summer school location and back by the shortest route. Facilities for boarding and lodging will be made available for the participants free of cost at IARI, RS, Katrain Guest House and Training Hostel. Local participants are not eligible for boarding and lodging. However, local hospitality i.e. working lunch, tea, etc. will be provided to all participants.

ELIGIBILITY OF PARTICIPANTS

Young active researchers/teachers not below the rank of Assistant Professor or equivalent working in SAUs/CU/ DUs/ ICAR/ National institutes having research/teaching experiences in the field of Horticulture, Genetics, Plant Breeding or any other related discipline having experience in vegetable crops are eligible to apply. Only **25** participants shall be selected for the course by a Screening Committee as per ICAR guidelines.

HOW TO APPLY

Application for participation in the Winter School in the given format and forwarded by the competent authority of the institute should be sent the Course Director at the address given below. It is also necessary to apply online <http://cbp.icar.gov.in>. Application not having forward of the competent authority shall not be considered. Advanced copy of application will be considered for final selection only after receipt of the original copy through proper channel. **A Postal Order/DD of Rs. 50/ (non-refundable)** drawn in favour of the **Head, ICAR-IARI, Regional station, Katrain** and **payable at Katrain** must be sent along with the application. **Last date of application is 15-05-2018.** Once selected, candidates will be intimated through e-mail, fax or by post to which they should reply with firm acceptance immediately.

HOW TO REACH ICAR-IARI, RS, KATRAIN

Katrain is 296 km away from Chandigarh and located on National Highway 21 between Kullu and Manali about 20 km from either side. It is well connected by road from Delhi, Chandigarh and Shimla.

All correspondence may kindly be addressed to:

Dr. Raj Kumar, Head Course director Email: head_katrain@iari.res.in Phone: 01902-241280; Fax: 01902-240124 M: 9805201028	or	Dr. Chander Parkash Principal Scientist Course Co-ordinator Email: cp1968@gmail.com M: 9418075652
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APPLICATION FORM

SUMMER SCHOOL ON

**Breeding strategies and seed production techniques of temperate and exotic vegetables under changing climatic condition
(June 01 – June 21, 2018)**

1. Full name (in BLOCK letter):
2. Designation:
3. Major area of specialization:
4. Present employer & address:
5. Correspondence Address:
6. Telephone No. Mobile No: E-mail:
7. Permanent address:.....
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8. Date of birth & age: 9. Sex: Male/ Female:

10. Marital status: Married/ Un-married:

11. Academic record: (Degree onwards)

Examination passed	Subjects	Year of passing	Class ranks distinctions etc.	University or Institution	Other information
Bachelor					
Master					
Doctorate					

12. Professional experience (during the last 5 years)

Sl. No.	Post held	Period with dates
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13. Publications:

14. Mention if you have participated in any research seminar, Summer/ Winter School/ Short course, etc. during the previous years under ICAR/ other organizations:

15. State how this training is going to be useful to you-----

16. Postal order No. _____ Dated_____ of Rs. 50/-(NON REFUNDABLE) for registration of application(in favor of Head, ICAR-IARI, Regional Station, Katrain, Kullu, HP-175129)

Place:
Date:

Signature of the applicant

17. Recommendations & certificate of forwarding institution:

Place:
Date:

Signature, designation and address (Office seal)