

## 12. Academic record

Degree Discipline	Year	University/Institution	Passing Rank
Ph.D.			
Master			
Bachelor			
Other			

Date :

Place :

Signature of the applicant

## 13. Recommendation of the Forwarding Institute/University

Date :

Signature

Name

Designation

## Certificate

It is certified that the information furnished has been verified from the office records and found correct.

Signature & designation of the Sponsoring authority



## LOCATION OF BIKANER

The erstwhile Princely state of Bikaner and its capital city Bikaner was founded by Rao Bika (1465-1504 AD.) by the blessings of Goddess Karni Mata in the year 1488 AD. In those days this vast tract of desert country was called "Jangaladesh". The desert city of Bikaner is located in north-western Rajasthan. The gaudy palaces, the magnificent fortress and the richly sculptured temples of red and yellow sandstone exemplify some of the finest creations of Rajput culture and tradition. Some major attractions in Bikaner are Junagarh Fort, Camel Research Farm, Lalgah Palace, Gajner Wild Life Sanctuary, Karni Mata Temple to name a few. ICAR-CIAH, Beechwal, Bikaner is located 12 km away from Railway Station and 8 km from bus stand on Bikaner- Ganganagar highway and is well connected by road and rail routes. During the month of December, the temperature normally ranges from 10-35°C.



## CORRESPONDENCE

All correspondence should be addressed to:

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## ICAR SPONSORED SHORT COURSE ON

### Water Management and Micro-irrigation for Quality and Higher Production of Horticultural Crops in Sandy Soils of Hot Arid Region

### Revised Schedule

### From 05-14 March 2019

Course Director : Prof. (Dr.) P.L. Saroj  
Course Coordinators : Dr. M.K. Jatav  
: Dr. B.D. Sharma



Organized by



## ICAR-CENTRAL INSTITUTE FOR ARID HORTICULTURE

Sri Ganganagar Road, Beechwal  
Bikaner - 334 006, Rajasthan, INDIA



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## ABOUT THE COURSE

Due to recurring droughts every year, micro-irrigation has become a policy priority in India. The new catch-phrase in one of the central government's schemes, Pradhan Mantri Krishi Sinchai Yojana (PMKSY or Prime Minister's Agriculture Irrigation Programme), is "Per Drop More Crop". Apparently, the shift towards micro-irrigation is thought to "save" water and boost crop yields. It added that savings from using micro-irrigation systems like drip and sprinklers are enormous between 20% and 48% water use, about 28.5% less fertilizer use and 30.5% energy savings. In India, 7.73 million hectares is under micro irrigation, compared to a potential 69.5 million hectares. In six states i.e. Rajasthan, Maharashtra, Andhra Pradesh, Karnataka, Gujarat and Haryana account for over 82% of India's micro-irrigation coverage.

In India, about 12% of the total geographical area is under hot arid ecosystem, which spreads in Rajasthan, Gujarat, Haryana, Punjab and peninsular India and cold arid region in J & K and Himachal Pradesh. This region is characterized by high and low temperatures, low rainfall, low relative humidity, high potential evapotranspiration, high sunshine, abundant solar energy, sparse vegetation and high wind speed during summer. Soils are dry for most part of the year, having aridic moisture regime, The region consists of vast sandy and other wastelands, which have productivity constraints such as salinity in soil and irrigation water, low soil fertility and extreme climatological stress conditions.

Sustainable livelihood of resource poor farmers is the top priority for the nation today. Sustainable agriculture crop production depends entirely on the optimal use of the limited resource of water specifically in hot arid regions and this can only be achieved with efficient use of water and fertilizers. Fertigation, is an attractive technology in modern irrigated agriculture increases vegetable and fruit yield & quality as well as. In fertigation, nutrients are applied to the root zone of the crop by micro irrigation, where they are mostly needed, normally resulting in a better water and fertilizer use efficiency than conventional irrigation and fertilization methods. Water management and fertigation has become the most viable and efficient technology option in such situations. At present, the total coverage of micro irrigation is less than one per cent of the total irrigated area in the country. The short course training programme related to water management and micro-irrigation for fruit and vegetable crops is urgently required to popularize the technology in the arid region. Being resource constraint, these regions were given low priority for agricultural development, have gained immense importance since they have waste land resources, low population density, low humidity and high temperature which are conducive for disease free production of arid fruits and vegetables. The soil of these regions, particularly of Rajasthan, is mostly sandy, low in fertility, low moisture retention, low carbon and mineral contents. Such areas can be fruitfully utilized for commercial cultivation of horticultural crops because majority of horticultural crops are perennial in nature, widely spaced, low water requirement in comparison to field crops, deep and extensive root system capable of extracting water from deeper layers, large canopy to harvest optimum natural resources better and high yielding.

Evidences from drip irrigation trials have clearly indicated the advantages like water saving, higher productivity, limited weed growth, better management of assets, off-season maturity, better fruit quality and reduced incidence of insects & pests and disease salient findings of micro-irrigation research at various institutions in India. The productivity of various horticulture commodities are far below than the potential productivity in arid and semi arid regions of the country.

The Institute is also shouldering the responsibility of the All India Coordinate Research Project on Arid Zone Fruits spread at eighteen centers in ten states. Different agro techniques for arid region have been standardized for aonla, pomogranate, bael, ber, chironji, jamun, ker, khejri, lasora, tamarind etc. High

density planting and multi storey cropping system has shown several models to be remunerative under arid eco system. Several traditional and rural wisdom practices related to natural resource conservation, crop production technologies, processing and value addition has been documented/standardized and analyzed critically for their utilization in a greater way. The present winter school will try to address water management and micro-irrigation for quality and higher production of horticultural crop in sandy soils of hot arid region.

ICAR-CIAH, Bikaner and its regional station, Central Horticulture Experimental Station, Vejalpur, Godhra and centres of AICRP on AZF spread all over India have been devoted nearly decades to solve the major problems in cultivation of arid horticultural crops particularly in the field of water and nutrient requirement, water conservation techniques, water and nutrient productivity, pressurized irrigation techniques, nutrient diagnosis techniques, development of DRIS norms, organic farming, integrated nutrient and water management, quality production of the horticultural crops under controlled water and nutrient application, etc. As a dedicated efforts of ICAR-CIAH, Bikaner; CHES, Vejalpur, Godhra and AICRP-AZF, immense information have been generated and the need of hour is to disseminate/ share information with agriculture scientists who are engaged in enhancing the water and nutrient productivity of crops in the country.

### HOW TO APPLY

Eligible and interested candidates may submit application form in prescribed proforma or apply online as per the steps given: 1. Visit the website <http://www.iasri.res.in/cbp> or click on capacity building programe link at <http://icar.org.in> 2. Login using your User Id and Password. To create User ID use "Create New Account" link 3. After login, click on "Participate in Training" link and fill the proforma. Take a printout and send nomination duly forwarded by the competent authority in the prescribed format to Prof PL Saroj, Director, ICAR-Central Institute for Arid Horticulture, Beechwal, Bikaner- 334006 alongwith Demand Draft of Rs. 50.0 as registration fee (non refundable) in favour of 'ICAR Unit-CIAH payable at Bikaner.

### ELIGIBILITY

Applicant should be post graduate in any branch of horticulture/agriculture not working below the rank of Assistant Professor/SMS or equivalent in the concerned subject under the National Agricultural Research System.

### TRAVEL

Participants will be paid travel fare to and fro by the shortest route restricted to the maximum of AC-II tier or bus or any means of transport in vogue, as the case may be, as per the norms & guidelines of ICAR.

### BOARDING AND LODGING

Free boarding and lodging (shared) will be provided to participants only during the training programme by ICAR- CIAH, Bikaner.

### NUMBER OF PARTICIPANTS: 25

### IMPORTANT DATES:

Last date of nomination : 25 February 2019

Communication of selection : 26 February 2019

### VENUE

**ICAR-CENTRAL INSTITUTE FOR ARID HORTICULTURE**  
Sri Ganganagar Road, Beechwal, Bikaner - 334 006, Rajasthan, INDIA

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On

### Water Management and Micro-irrigation for Quality and Higher Production of Horticultural Crops in Sandy Soils of Hot Arid Region

(Revised Schedule : 05-14 March 2019)

Application format for participation in Short Course

1. Full Name (in block letter): \_\_\_\_\_
2. Designation : \_\_\_\_\_
3. Present employer address: \_\_\_\_\_
4. Address to which: \_\_\_\_\_  
reply should be sent \_\_\_\_\_  
(in block letter) \_\_\_\_\_
5. Present : \_\_\_\_\_  
Address \_\_\_\_\_
6. Date of Birth : \_\_\_\_\_
7. Sex : \_\_\_\_\_
8. Teaching/Research/ Professional experience :  
mention post held during last five years and number of research publication
9. Marital status: Married/Unmarried :
10. Mention if you have participated in any, Summer/ Winter School/ Short course, etc. during the last (5) years under ICAR/ Other organizations.
11. Draft/Postal Order No. .... dated.....  
of Rs. 50/- (in favour of ICAR Unit CIAH, payable at Bikaner) towards registration (Non Refundable).