

# Advanced Course- Asia

## Conservation Agriculture:

### Gateway for Productive & Sustainable Cropping Systems

**6<sup>th</sup> Batch  
commencing  
from October 24, 2015**

#### Dates

Oct 24-Nov 07, 2015

#### Venue

BISA-CIMMYT,  
Ludhiana, India

Conservation Agriculture (CA) based management practices with increased acceptance across the globe are today being considered as harbinger for sustainable intensification of farming across diverse production ecologies and farm household typologies. Its positive impact on farm profitability, natural resources, and adaptation to climate change with mitigation co-benefits are widely acknowledged. In Asia, CA is a relatively new introduction and capacity development of stakeholders' especially young researchers is vital for development, adaptation and scaling-out for impact at scale in the region. Hence, a course on conservation agriculture offer a unique capacity development opportunity to the NARS scientists associated with the areas of natural resource management research. The advanced course on CA in Asia, was initiated during 2010 as a regional capacity development program and over 80 young male and female researchers across eight Asian countries have been trained who are taking the CA research for development (CAR4D) forward in their respective domains. Considering increasingly high response, CIMMYT and BISA under the aegis of CGIAR Research Programs on WHEAT, CCAFS, and in close collaboration with Indian NARS (ICAR, PAU etc) are organizing the 6<sup>th</sup> course on CA. This course links the advances and multidisciplinary systems approaches for sustainable intensification of maize and wheat systems, restoration of natural resource degradation and climate smart agriculture with vast expertise across Asia, Africa and America.



## Learning Objectives

By the completion of the course, the participants would be able to:

- Develop enhanced understanding on the principles of conservation agriculture, sustainable intensification, climate smart agriculture, application of new tools and techniques on CA based management for diverse production systems, agro-ecologies and farmer circumstances
- Synthesize and apply the information and knowledge related to CA technologies such as
  - Basic understanding on CA research
  - Basic elements of CA adapted of range of situation
  - CA machinery protocols for different production environments
  - Component technologies for CA viz. genotype adapted to CA, crop enhancement, precision water management, precision nutrient management, weed management strategies, crop residue management
- Acquire skills to plan and manage long-term basic and strategic research trials on CA and monitor soil, plant and GHG emissions vis-a-vis different cropping systems
- Generate scientifically-sound hypotheses, data management strategies, and interpret data and summarize them into scientifically sound conclusions and recommendations and linking to knowledge networks
- Understanding on innovation system, business models for out-scaling and impact pathway

## Desired Behavioral Outcomes

- At their respective regions, the participants are expected to appreciate the imperative need of nurturing a new attitudinal approach in the working environment towards implementing farmer and environment-friendly technologies including CA
- Initiate activities, and extend to farmers the location-specific CA based management solutions/technologies
- Deliver short-term ToT courses on CA

## Contents and Methodology

- CA based crop management technologies: principles and practices
- Sustainable intensification
- Component technologies (water, nutrient, weed etc) for CA systems
- GxExM interactions
- Farming systems typologies and targeting
- Small holder precision agriculture: concepts and applications
- Calibration, operation and maintenance of scale appropriate CA machinery
- Innovation systems and pathways: CA hubs and modules
- Impact assessment of CA technologies
- In-field hands-on for CA based crop management technologies for planting to harvest including decision support tools
- Interaction with farmers, stakeholders of public and private sector and CA machinery manufacturers.
- Field visit to experiment station/research platform.

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## Eligibility for participation

- Minimum level of Master of Science (MSc) in Agriculture/M.Tech.(Engineering)
- Women and youth will be given specific preference
- Good proficiency in English to allow full participation in the program and during discussions and interactions.
- Active involvement in Agriculture Research for Development (AR4D).
- Demonstrated professional experience and leadership potential.
- Good health, as the course includes hands-on field activities
- Participants health insurance is mandatory
- Maximum number of participants: Fifteen (15).



## Course fee and Logistics

Course fee is \$3500 per participant, which includes:

- Accommodation & Food
- Field trips, training material and internet wi-fi facility
- Local Transportation



**Participants are responsible for their own international travel and the corresponding incidental expenses.**

Medium of instruction: English.

**Nominations to reach Training Executive on or before 25<sup>th</sup> July, 2015**

## About CIMMYT

The International Maize and Wheat Improvement Centre, known by its Spanish acronym, CIMMYT ([www.cimmyt.org](http://www.cimmyt.org)), is a not-for-profit research and training organization with partners in over 100 countries. The centre works to sustainably increase the productivity of maize and wheat systems and thus ensure global food security and reduce poverty

## About BISA

The Borlaug Institute for South Asia (BISA) ([bisa.org](http://bisa.org)) is a non-profit research institute dedicated to the improvement of food security and reduction of hunger in South Asia. BISA is a collaborative effort between the ICAR, Govt of India and CIMMYT. The objective is to harness the latest technology in agriculture to improve farming productivity. It is a concerted effort to catalyze *second Green Revolution*.

## For application and other details contact:

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### Course-Co coordinator (Field Trips)

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