

PJRB-SPARC

TRAINING PROGRAMS SERIES 2018

Training of Trainers

CONSERVATION AGRICULTURE

Foundation Course

Organised by

Pandit Jagat Ram Bhargava School for Profitable Agriculture and Resource Conservation

(An Institute by FORCE Group of Non-Profits, New Delhi, India)

on

September 11-14, 2018

at

RM Bhargava Conference Hall, PJRB-SPARC, Ghugial Village, Opp. KangMai Bus Stand, near Hoshiarpur City, Punjab.

PJRB SPARC

2018

About FORCE Group of Non-Profits, New Delhi

The FORCE for Water Security Group is a set of sister non-profits and institutions dedicated to the cause of Water Security, Safe Water, Sanitation and Hygiene for all. FORCE NGO, the parent organization of the FORCE group is a grassroots organization that also uses its community experiences to influence policy and for intellectual growth of all stakeholders. Established in 2004, FORCE was awarded for its work on Water Conservation at the National Urban Water Awards 2009 by the Ministry of Urban Affairs.

This training program is being offered by a FORCE Group Institution - Pandit Jagat Ram Bhargava School of Profitable Agriculture and Resource Conservation (PJRBS-SPARC). PJRBS-SPARC leverages the FORCE Group's expertise for water conservation to promote profitable, resource efficient and health-giving agriculture. It aims to remove the root cause of farmer distress viz. lack of water and information; access or the ability to adopt water efficient, resource efficient, high income generating methods of farming. Through its work for:

- Education, Training and Behavior Change in stakeholders
- Research and Policy Think Tanks
- Innovation and Entrepreneurship Support
- Certification and Advisory services
- Services for water efficient farming

...PJRBS-SPARC not only helps prevent farmer distress but also the nutrition crisis and environmental degradation of fertile lands.

Why Conservation Agriculture

Agriculture, as practiced by most farmers today, is unsustainable – economically and environmentally. As it spirals further and further away from nature, its dependence on high cost artificial inputs and specialized machines / labor increases as does the highly polluting footprint it leaves on the environment. The poison spreads and the result is a disastrous potpourri of polluted & depleted soil, water, impoverished farmers and unhealthy consumers.

The Food and Agriculture Organization (FAO) of the United Nations (UN) endorses Conservation Agriculture as a way to reverse this spiral. It takes farming closer to nature and thereby removes the excessive dependence on artificial products. Perhaps the most important benefit of Conservation Agriculture is that it makes farming profitable for the Marginalized and Small farmer.

The movement towards Conservation Agriculture is spreading across the globe. Farmers across Africa, Asia, Latin America and Europe have adopted it. Researchers are studying it and scientists are discussing it in conferences dedicated to the topic.

PJRBS-SPARC and Conservation Agriculture in India

PJRBS-SPARC prides itself on its association with a dynamic group of farmers and agricultural scientists who practice and promote a variant of Conservation Agriculture in Punjab, Haryana and Uttar Pradesh. Led by a pioneer in the field – M.Sc Agri, Avtar Singh – a farmer himself –

the Conservation agriculture movement is spreading. Extensive data collected by them shows that it increases yield by >20% but reduces water consumption by > 40%, fertilizer, pesticide and herbicide usage by > 80%. With much lower cost of production and higher yield, the **farmer earns double the profit** he would have made (if any) with conventional agriculture.

Conservation Agriculture is highly water efficient. As a leading non-profit in the water conservation sector, this aspect is particularly important for us at the FORCE Group. Water scarcity is perhaps the single biggest threat that India faces today. Agriculture consumes 80% of the country's water resources. Increasing water efficiency of agriculture therefore holds the key to 'freeing' up enough water for the burgeoning needs of a growing population. Even within agriculture, the worst sufferers because of water scarcity are the small and marginalized farmers. Mainstreaming low water consuming methods like Conservation Agriculture can help them earn a decent livelihood from agriculture.

The PJRB-SPARC facility in Ghughial village, Hoshiarpur, Punjab allows trainees a live experience of Conservation Agriculture. Not only do you learn the theory from agriculture experts but you interact with farmers who are practicing it and walk through the fields where it is being applied. Additionally, you gain access to global networks and resources on the topic.

All programs are designed and conducted with the personal guidance of:



Sh. Gurpreet Saini - Director, PJRB SPARC - A graduate and post graduate in Plant Pathology from the prestigious Punjab Agriculture University and an MBA from Punjab Technical University, Sh Gurpreet Singh Saini is the young, dynamic head of PJRB-SPARC. Gurpreet has a diversified experience of 12 years in Crop Financing, Crop Management, Consulting for Training and development. His experience in helping enhance farm incomes with good agriculture practices gives him a strong understanding the pschye of the farming community. He also has experience of advocacy with government officers particularly for helping farmers make informed choices. He was a part of pioneering private sector innovations to introduce mobile based customized, agri- information in India. Gurpreet is also a travelogue, sports and theater enthusiast.

Jyoti Sharma – A Social Entrepreneur and Environmentalist, Jyoti Sharma is the founder and Chairperson of the FORCE group of Non-profits based in India. Under her leadership, in recognition of FORCE's work for water conservation, it was awarded the National Urban Water Award by the Government of India.



Jyoti is an economics graduate from Hindu College, University of Delhi, business management alumna from the prestigious Indian Institute of Management (IIM), Bangalore and a trained expert in Groundwater Management and Water Footprints. She has worked in the For-Profit sector for many years before founding the FORCE group of Non-Profits in 2004. She is a part of the global Ashoka Social Innovators for Public network and is a Swearer Fellow at Brown University, USA. She has been nominated to several Policy making / Advisory Committees of the Indian Union and State Governments including the 9-member Drafting Committee for the sensitive 'National Framework Water Act'. She has also authored articles that have been

published in international journals. Due to her strong environmentalist credentials, she represented India as an Olympic Torch runner in the Green Beijing Olympics 2008.

She is the author of the insightful book on social innovation – [Effective Social Innovation](#) and of articles in national and international journals on Water, Sanitation and Social Innovation. She also offers talks, consultations and training modules based on these. Her recent articles were published in the Stanford Social Innovation Review.

PJRB-SPARC Advisory Panel – PJRB-SPARC’s advisory panel comprises of experts from agriculture, agro-industry, water management and academia. The panel members advise the Board of Trustees on strategic direction and program development. They also engage with PJRB-SPARC activities (including trainings) depending on its fit with their areas of interest.

The Training of Trainers (ToT) Foundation Program for Conservation Agriculture (CA)

(Program Schedule appended at the end of the document)

The training is part of a series – ‘Training of Trainers on Water Efficient, Profitable Agriculture’ - an initiative by PJRB-SPARC to support existing proponents of environment friendly, sustainable agriculture. The focus of ToT is to create multipliers – advisors and trainers – who can further train practicing farmers and influencers within village communities for adopting or facilitating adoption of sustainable agriculture forms.

The training modules for ‘Foundation Program for Conservation Agriculture’ will include -

- (i) **Understanding Conservation Agriculture as endorsed by FAO** – The practice of CA rests on three principles. These principles are essential to create the ecological conditions necessary for resource efficient, high productivity agriculture.
- (ii) **Global practice of Conservation Agriculture** - Case studies from across the world where conservation agriculture is being practiced. Special emphasis on practice in Africa and other parts of Asia.
- (iii) **Field visits to Indian CA sites and learning from practitioners** - Visit to Indian adapted CA farms and orchards in Punjab. In-field training sessions conducted by practitioners
- (iv) **Data collection and Analysis** – Data collection and comparative analysis vis a vis conventional farms. Also analysing the data about farm yield vs cost of production over a period of one year to assess financial viability.
- (v) **Group activity to create a planning tool for Conservation Agriculturists** – The trainees utilize the learnings to brainstorm for a PJRB-SPARC crowdsourcing project to develop an Agri-tech tool for mainstreaming CA.
- (vi) **Practice session in field preparation for CA** – Trainees will practice how to prepare a field based on the principles of CA. This will be done on the PJRB-SPARC demo practice farm.

- (vii) **Networking for continued learning** – Inducting all trainees into the SPARC CA network. Also introducing trainees to global networks, Associations & Resources for Conservation Agriculture that they can choose to be part of.

Community Immersion – Experiencing Punjab

We believe that an immersive community experience allows trainees to self-learn ground realities in Indian villages. With this objective, we have built in some additional features that not only allow trainees to enjoy the lovely Punjabi culture but also observe and learn.

- (i) **Village homestay with local cuisine** – You will stay as Guests of Village households. You will be given a neat, comfortable room that you will share with a co-trainee. You will have your meals with the family and will get to interact with all members. You can even join them on their daily chores (before & after training timings)
- (ii) **Interaction with village youth and farmers**– No training is complete if it is not grounded in an experience of ground realities. Through interactive sessions with village youth and farmers we help you get a realistic view of the rural environment so that you can situate your new learnings better. For village youth, you are also their window to the world – a community service that we are sure you would like to do.
- (iii) **Sightseeing opportunity** – Experience Punjab! In the free time after training sessions, we will arrange for visits to local tourist destinations.
- (iv) **Campus Canvas** – The campus is your canvas – create something to remind us of you!
- (v) **Yoga and Water Meditation everyday** – At FORCE we revere Water as a Teacher. For those interested, join us in our daily Learning from Water and Yoga sessions.

Program Fees – Rs 9,800/- inclusive of accommodation & meals on twin sharing basis, transport from Hoshiarpur railway station/bus stand/Adampur airport to PJRB SPARC

LAST DATE FOR REGISTRATION – AUGUST 7th, 31st 2018

For registration or queries, please email at trainings@pirbparc.org;

or call Sarthak Anand +91 9873053096



PROGRAM SCHEDULE

DAY 1

TIME	SESSION	DESCRIPTION	PEDAGOGY
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9.00- 10 am	Inaugural session	Registration, Kalash Ceremony, Ice breaker, About the FORCE group, Expectation setting	Activity, Presentation
10 – 10.45 am	Current agriculture practice	Patterns in agriculture, production trends, water consumption	Presentation, discussion
10.45-11 am	Reflections		Discussion
11am – 12 noon	Agriculture, environment and economy	Impact of current practices on natural resources and other economic segments	Presentation, discussion
12 noon – 1 pm	The environment, nutrition and economic threats.	Unviability and unsustainability of current agriculture	Presentation, discussion
1pm – 1.45 pm	LUNCH		
1.45- 2 pm	Reflections		discussion
2pm – 3pm	Introducing Conservation Agriculture	Need for and 3 basic principles of Conservation Agriculture	Presentation, discussion
3-3.30 pm	Summarizing Day 1 & Reflections		discussion
3.45-5 pm	Interaction with village youth, women and farmers		Round table discussion
5 – 5.15 pm	Summarizing & assigning group activity		Group activity discussion

DAY 2

TIME	SESSION	DESCRIPTION	PEDAGOGY
8-8.30 am	Water Meditation & Water Wisdom		activity
9.00-9.30 am	Discussion on group assignment	Group will present its findings	Activity, Group Presentation
9.30– 10.30 am	Deep Dive – Principle 1	Minimum Mechanical Soil disturbance – what, Why, how	Presentation, discussion
10.30-10.45 am	Tea break		

10.45– 11.45am	Deep Dive – Principle 2	Permanent organic soil cover – what, why, how	Presentation, discussion
11.45-12.45 pm	Deep Dive – Principle 3	Species diversification – what, why, how	Presentation, discussion
12.45-1.00 pm	Reflections		discussion
1pm – 1.45 pm	LUNCH		
1.45- 3 pm	Weaving together the CA Advantage		Presentation, films, discussion
3-3.15 pm	Tea & Reflections		
3.15 – 4.15pm	The Practice of CA – India and global	How CA is practiced across the world	Films
4.15-4.30 pm	Summarizing day 2		
4.30 onwards	Campus canvas activity		Activity

DAY 3

TIME	SESSION	DESCRIPTION	PEDAGOGY
7.30-8 am	Water Meditation & Water Wisdom		Activity
8.30-1.30 pm	Field visit	Visit to an orchard, and 2 fields with an Indian version of CA is practiced	Activity, Presentation
1.30 – 3 pm	LUNCH and discussion		
4 – 5.30pm	Multi stakeholder discussion - Barriers to mainstreaming of Conservation Agriculture	Round table, 360 degree view through discussion with farmers, financiers, marketers, insurers	Round table consultation

DAY 4

TIME	SESSION	DESCRIPTION	PEDAGOGY
7.30-8 am	Water Meditation & Water Wisdom		Activity
8.30-10.30 am	Field practice – Preparing a CA field	Working on the PJRB-SPARC demo site under supervision to practice their observations	Activity

10.30-11am	Tea and Freshen up		
11am-1pm	Group activity & presentation	Based on learnings from day 1,2, 3	Group activity and presentation
1-1.45pm	Working lunch with summarizing of learnings	Lunch and discussion	
2 pm onwards	Sightseeing visit / visit to agri prod SHGs	Exposure visit/ cultural immersion	Activity