

INNOVATIONS IN AGRICULTURE IN CONTEXT TO RAJASTHAN

REPORT on Agriculture theme

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Introduction

Agriculture is the world's largest industry. Today's world intensive agriculture practises are more focused upon the better production and yield. But along with this it depletes the soil and pollutes the environment, loss of diversity, green house gas emissions, etc. because of the use of pesticides. The focus is always on sustainable development of agricultural enterprises. For instance, solar energy is used as solar dripper which is an optimized drip irrigation system for gardens and indoor plants. So it is important to seek the answer to question- How India considers innovations in Agriculture practises to sustainably deal with changing life?

Instead of being a dry desert state, Rajasthan is the leading producer of oilseeds and food grains. It is the third largest producer of pulses and wheat, and the largest producer of moth beans. Rajasthan is second largest producer of milk in the country. Again the main focus of the state is increasing efficiency, reducing costs and ensuring sustainability of agricultural enterprises.

Special initiatives taken by government

Over the past decade, the Government of Rajasthan has coordinated their efforts to systematically develop agriculture in the state. The government has concerned over diversification of agriculture through a balanced use of land, water and other resources for promoting sustainable agriculture. The detail of the initiatives taken by the government:

- **GOLDEN RAYS PROJECT**
- **WATER MANAGEMENT**
- **Diggi cum sprinkler**
- **Farm ponds (Khet talai earthen)**
- **Water storage tanks (Jal hauz cemented)**
- **Pipeline programmes**
- **SOIL TESTING LABS**
- **ORGANIC FARMING**
- **OLIVE CULTIVATION**
- **PRADHAN MANTRI FASAL BIMA YOJANA (PMFBY)**
- **RASHTRIYA KRISHI VIKAS YOJANA (RKVY)**
- **DRAGON FRUIT FARMING**
- **CUSTARD APPLE CULTIVATION**

➤ Golden Rays project

- Maize is staple food of tribal and its present productivity is 8-10 qtl/ ha.
- Comprehensive area approach programme taken up with Monsanto India Ltd. on PPP Mode.
- Besides, hybrid seed extension support in form of training programme and POP on hybrid maize also provided to cultivators.

➤ Water Management

- a. **Diggis and diggi cum sprinklers-** the diggis are being made to store water and is used to irrigate land when the Canal is not in operation. It improves the water efficiency as it uses the sprinkler which improves the water holding capacity of the land.



b. Farm ponds (khet talai earthen)- Farm ponds are used as life saving at critical cropping stage. The runoff's are collected in these farm ponds and will not only be utilized for irrigation but also help in recharging the ground water level.



- c. **Water Storage Tanks (Jal Hauz cemented)**- Jal Hauz is also called “ as and when required “ irrigation facility. The water can be stored at the night time when the electricity is available and fields can be irrigated during the day time as per requirement.

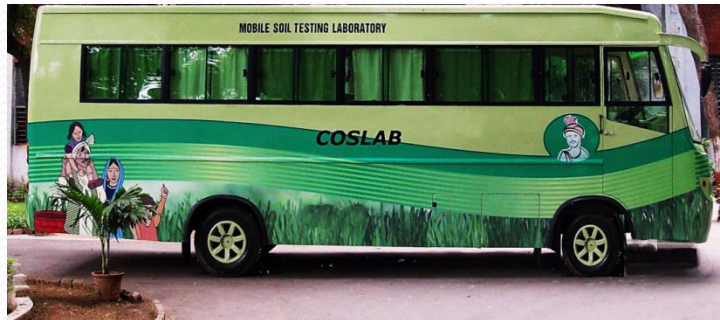


d. Pipeline programme- Pipelines are very important in minimizing the conveyance losses of water from source to the field. The percolation, seepage and weed infestation practises used in kaccha irrigation causes great loss of water during the process. To reduce this conveyance loss subsidy is provided on P.V.C. pipelines so that water can be saved and be used much for irrigation.



➤ Soil Testing Facility

The state agricultural department has now soil testing labs in all 33 districts. To further strengthen the soil testing facilities and to provide soil health cards to the farmers. NGOs are being involved in running the 12 mobile soil testing labs recently sanctioned by Government of India. These Mobile Labs, loaded with latest soil testing equipment will be used for macro and micro nutrient analysis of soil. In addition to this, these Mobile Labs are also equipped with Audio-Video system to educate farmers on various agricultural topics.



➤ Organic Farming

It is defined by the use of fertilizers of organic origin such as compost manure, green manure, and bone meal and places emphasis on techniques such as crop rotation and companion planting. Biological pest control, mixed cropping and the fostering of insect predators are encouraged.



➤ Olive cultivation

- Olive's fruit has much importance as it is the main source of olive oil in Mediterranean region.
- Olive is the crop which can sustain the temperature ranging from 5 to 48 degree Celsius.
- Plants have been imported from Israel and been planted at various sites starting from March 2008.
- Irrigation is done through drip irrigation process. And farms are equipped with Hi-tech control fertigation (fertilizer or manure mixed with water and together used through drip irrigation technology), plant protection and Agronomical practices are being used by the farmers.



➤ Pradhan Mantri fasal bima yojana (PMFBY)

- It provides financial support to farmers suffering crop/damage arising out of unforeseen events.
- It helps in stabilizing the income of farmers to ensure continuance in farming.
- To encourage farmers to adopt innovative and modern agricultural practises.
- By ensuring flow of credit to agriculture sector which will contribute to food security.
- Protects farmers from production risks.
- Service tax is not applied to this scheme

➤ Rashtriya Krishi Vikas Yojana (RKVY)

The Rashtriya Krishi Vikas Yojana was introduced with an aim to provide support to the agricultural sector in achieving 4% annual agriculture growth. RKVY scheme was launched in the year 2007 which was later rebranded as Remunerative Approaches for Agriculture and Allied sector Rejuvenation (RAFTAAR) to be implemented for three years till 2019-20 with a budget allocation of Rs 15,722 crore.

➤ Dragon Fruit or Pitaya

Dragon fruit is native to Mexico, now this fruit will be grown on the experimental basis at the agricultural department's centre of excellence at Bassi and Deorawas near Tonk, if the project is successful then it will be replicated in the western Rajasthan.



➤ Custard Apple

- New variety is pulpier with smaller seeds.
- Outer layer of the fruit is much thinner in comparison to other fruits found in Rajasthan.
- It grows best in dry and hot climate and requires light soils along the slope of hills.
- Plants are raised from seeds and bear the fruit in about 3-4 years.





Online report

Social Norms, Social changes

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- This is a course of social norms, the rules that glue societies together. It teaches how to diagnose social norms, and how to distinguish them from other social concepts, like customs or conventions.
 - Social norms are ideas shared by a group of people that encourage people in that group to behave in a certain way. Social norms describe what acceptable and desirable behaviour within society is and such as are an effective form of social control.

➤ Interdependent & Independent Behaviour

The people do certain things because they think they need to do it. If a person uses an umbrella or a person indulge in open Defecation, they both are self motivated, people indulge in it because people want to do it and are completely independent.

- Habitual pattern of behaviour.
- Such that individuals prefer to conform to it.
- Because it meets their needs.

Interdependent deeds-

In Cameroon, the mother's generally don't feed their babies with mother's milk instead of that they generally give them water, this is so because everyone is doing the same but if we see biologically they should give them mother's milk for first six months as it builds the immune system of children.

Types of expectations

- What other people do.
- What other people think I should do.

For instance, people generally obey the traffic rules & give the way to others. This behaviour is interdependent as we have to do the things according to others.

Reference network

Means people you care about when you make a particular decision. This is also very much connected with the social expectations, it matter which affects the behaviour.

A set of individuals matters while making decisions. It varies from situation to situation.

- Usually local
- Social expectations about one's reference network influence one's choice.

Ex- Child Marriage, or in a Restaurant the reference network will be different.

Types of Reference Networks

- Centralized Network Structure
- Decentralized Network Structure
- Distributed Network Structure

Empirical Expectations

- Unidirectional
- Unilateral
- Multilateral

Descriptive Norm

- A pattern of behaviour that we prefer to engage in because we believe others follow it.
- The pattern of behaviour that people regularly engage in.

NORMATIVE EXPECTATION

Normative Expectation often accompanied by sanctions, i.e. if other people we ought , we should behave in a particular way, often they are prepared to sanction our transgressing this behaviour.

- Normative expectations are the second order beliefs: What we believe people in our reference network believe we should do.
- I believe that most people think we ought to do.
- I believe that most people think the right thing to do is.....
- Normative expectations are often paired with the expectation of sanctions.

Conditional Preferences

- Apply both to descriptive norm and social norm
- When do expectations motivate behaviour?
- Empirical and Normative expectations do not necessarily motivate behaviour. One must prefer to act in a certain way given that certain expectations one holds.