

Societal project

Technical Architecture for Agriculture to promote plant health and less water consumption system

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BACKGROUND

Agriculture is the primary source of livelihood 58% of India's population.

Gross Value Added by agriculture, forestry and fishing is estimated at Rs 17.67 trillion (US\$ 274.23 billion) in FY18.



Pradhan Mantri Krishi Sinchayee Yojana
Department of Agriculture, Cooperation & Farmers Welfare
Ministry of Agriculture & Farmers Welfare, Government of India



The Government of India has launched the Pradhan Mantri Krishi Sinchai Yojana (PMKSY) with an investment of Rs 50,000 crore (US\$ 7.7 billion) aimed at development of irrigation sources for providing a permanent solution from drought.

National Mission on Micro Irrigation of the Union Ministry of Agriculture conducted in 64 districts of 13 states mainly — Andhra Pradesh, Bihar, Chhattisgarh, Gujarat, Haryana, Karnataka, Maharashtra, Odisha, Rajasthan, Tamil Nadu, Sikkim, Uttar Pradesh and Uttarakhand — are

Status of Centrally Sponsored Scheme (CSS) on Micro Irrigation

According to survey 140 million hectares (nearly half of the total net cultivated area) has to be under micro irrigation, but the fact is that only 10 million ha have been covered.

1	Total Geographical Area	24.09 m ha
2	Net Sown Area	16.56 m ha
3	Area under Horticulture Crops	1.87 m ha
4	Net Irrigated Area	13.93 m ha
5	Area covered under Micro Irrigation through CSS (till 2016-17):	0.62 lakh ha
	A) Area under Drip Irrigation	0.15 lakh ha
	B) Area under Sprinkler Irrigation	0.47 lakh ha
6	Target Area for 2017-18	40152 ha

Problem??





**Neighbors always
do favor**



Irrigation??

Artificial supply of water to dry land.

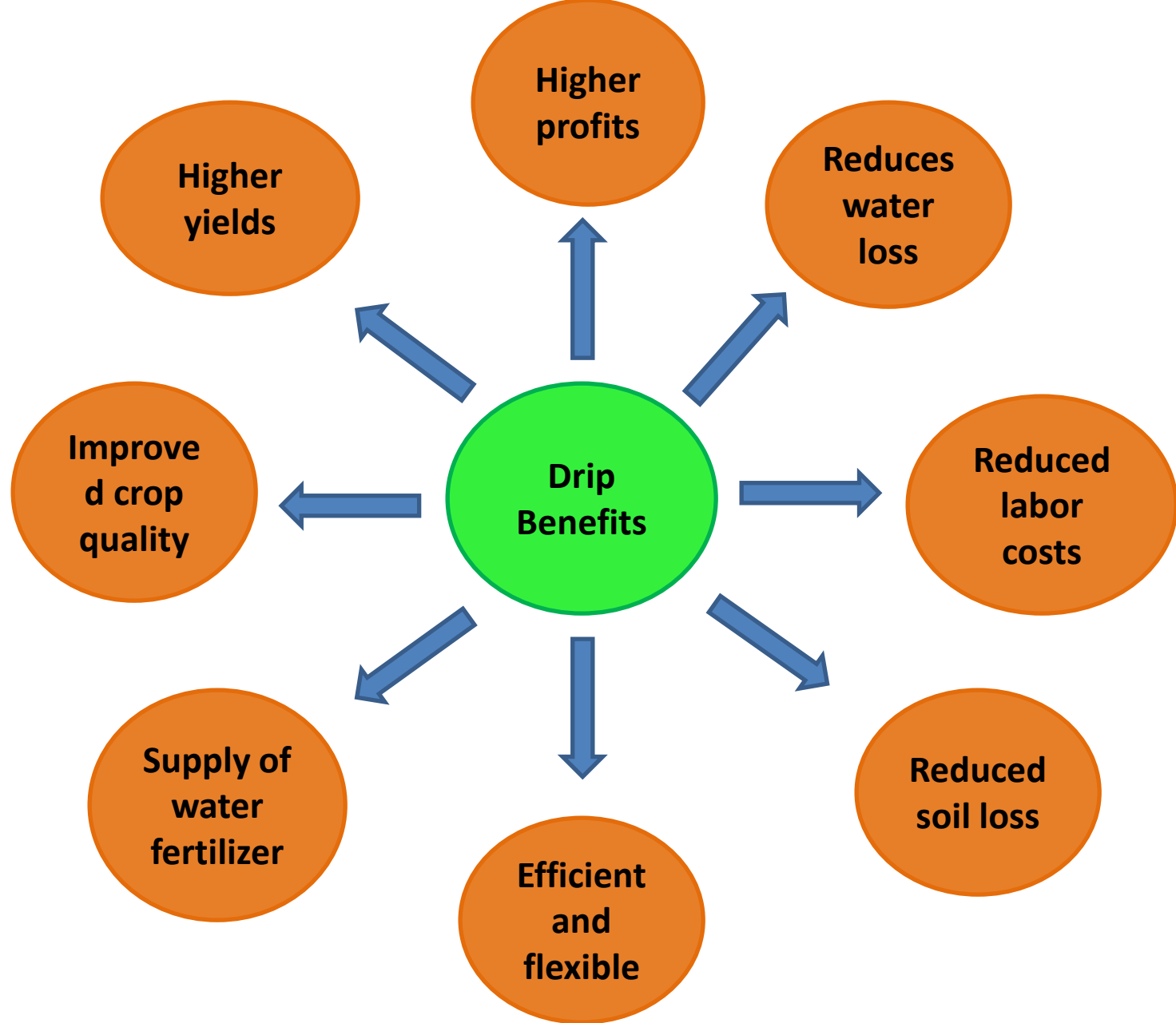


Drip irrigation



Sprinkler irrigation

In drip targeted to soil directly, less chances of evaporation whereas sprinkler system actually mimics natural rainfall



OBJECTIVES



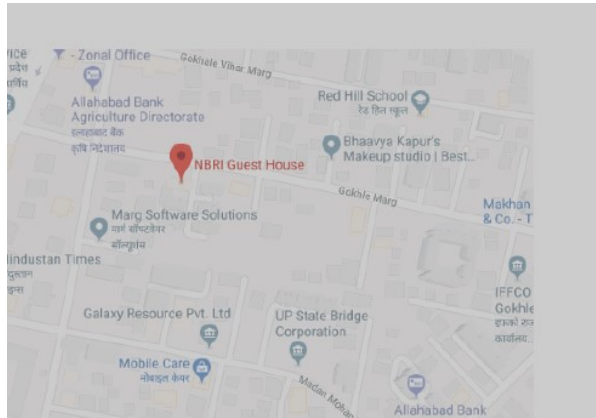
To set-up the drip irrigation system for water conservation and plant growth promotion

Survey and interaction with desired locality (KVK/ farmhouse) for model system

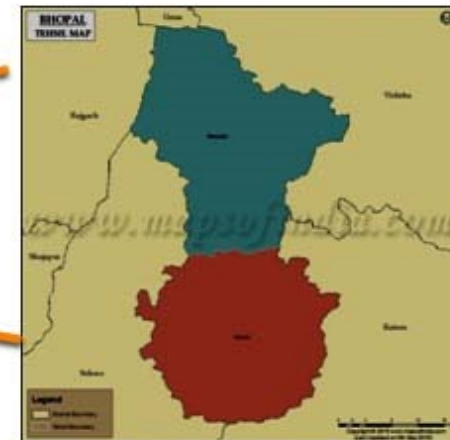
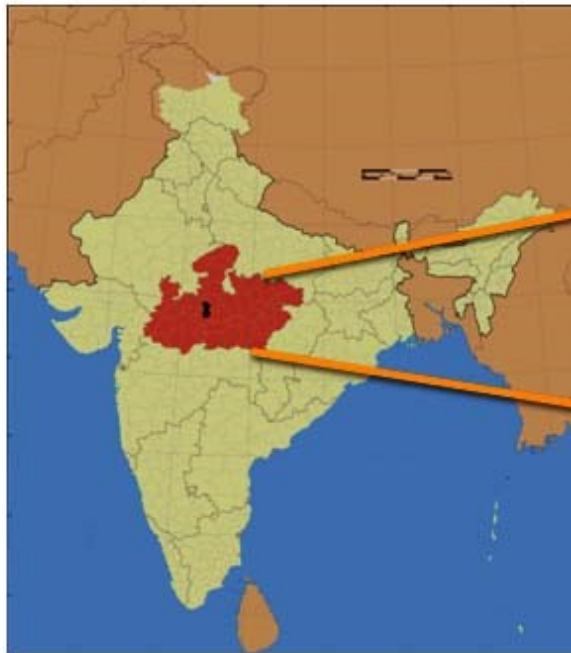
Implantation of designed model

Study Site

For indoor site

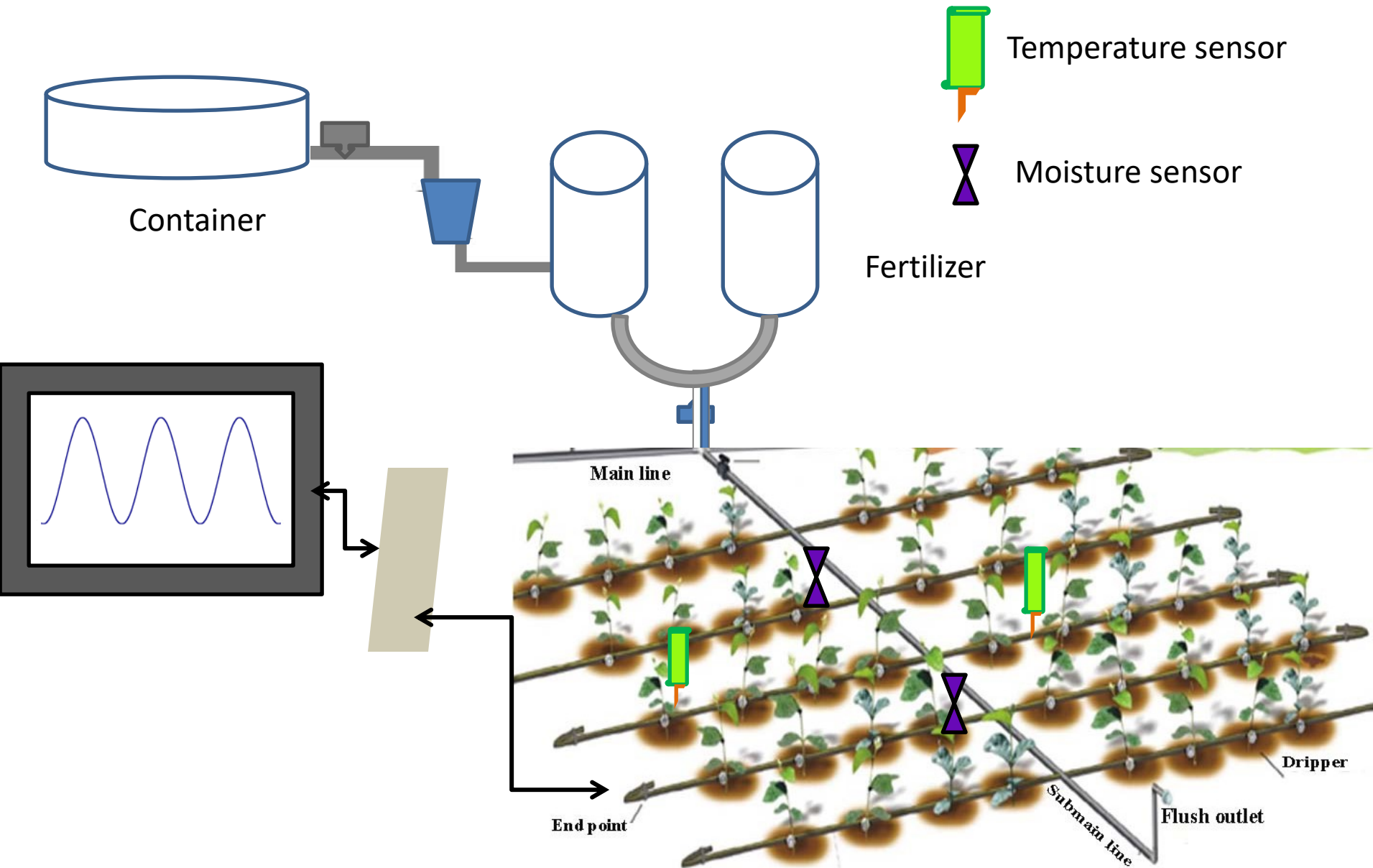


For field application



Bhopal (Madhya Pradesh)

Experimental Design:





**Don't afraid to fail, but be afraid
to remain the same.**

Android app based system



Work plan:

Survey of field type

Plant preparation at for in-house project

Application design for mobile

Plant construction for field at Bhopal

Data compilation

Awareness program for drip irrigation system

Work Plan

Districts	1 st Year				2 nd Year				3 rd Year			
	3	6	9	12	3	6	9	12	3	6	9	12
CSIR-NBRI Guest house												
KVK, Raisen, Bhopal												

Red: Survey, Blue: Designing and app preparation, Green: System installation and observation

Maintenance-

- For perennial crops, the drip hose should be lifted periodically
- Leaks can occur by insects, animals or other physical damage
- Once a month, flush the drip lines
- fix holes as soon as possible to prevent uneven irrigation

Outcomes:
net farm incomes is substantial

Technology to bridge the gap between water usage and water wastage.



You can water your plant any time anywhere
precisely and accurately.

Financial Requirement

Sl. No.	Head	1 st Year	2 nd Year	3 rd Year	Total (lakhs)
A	Recurring				
	Salaries/wages a) 1 JRF @ 25,000 + HRA b) 1 prodeveloper @30,000				
	2. Consumables	10.0	8.0	7.5	25.5
	3.Travels (inland)	1.0	1.0	1.0	3.0
	4. Contingencies	5.0	5.0	5.0	15.0
	Total A	28.06	25.06	24.56	77.68
B	Non Recurring				
	*Equipments	117.0			117.0
	Total (A+B)	145.06	25.06	24.56	194.68
C	Overhead charges @10% of total (A+B)				
	Total (A+B+C)				

