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Supplementary

Agriculture: Water Management

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Agriculture: Water Management

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NCCSD,Ahmadabad

RAJASTHAN



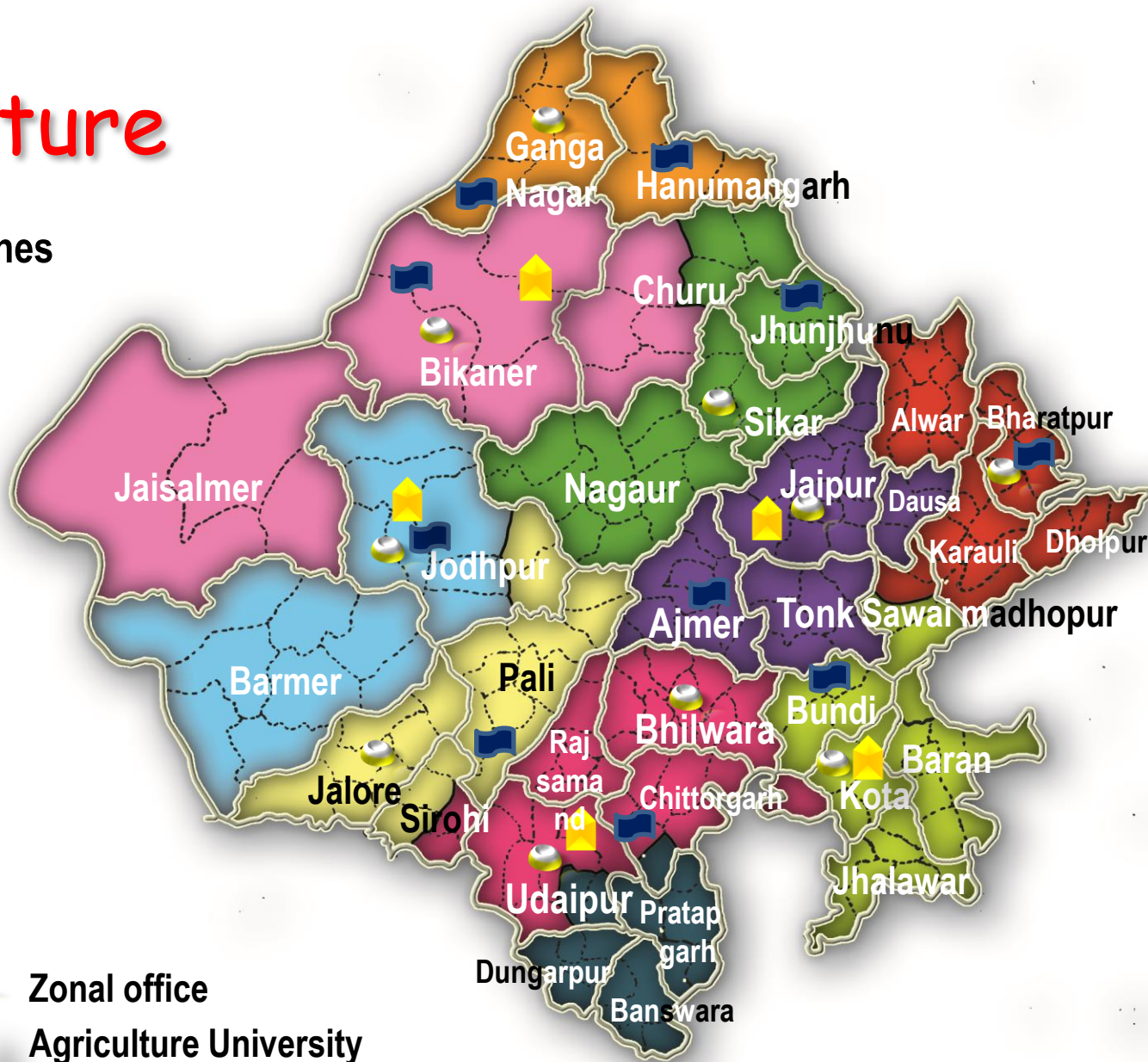
Rajasthan

Agriculture

Agro-climatic Zones

-  I A
-  I B
-  I C
-  II A
-  II B
-  III A
-  III B
-  IV A
-  IV B
-  V

-  Zonal office
-  Agriculture University
-  ATC (Adaptive Trial Centre)



Main Features

■ Largest state covering 10.5% of geographical area

■ 5.5% population of the country

■ 2/3 population depends on agriculture

■ 10% animal population of the country

■ Only 1% of water resources of the country

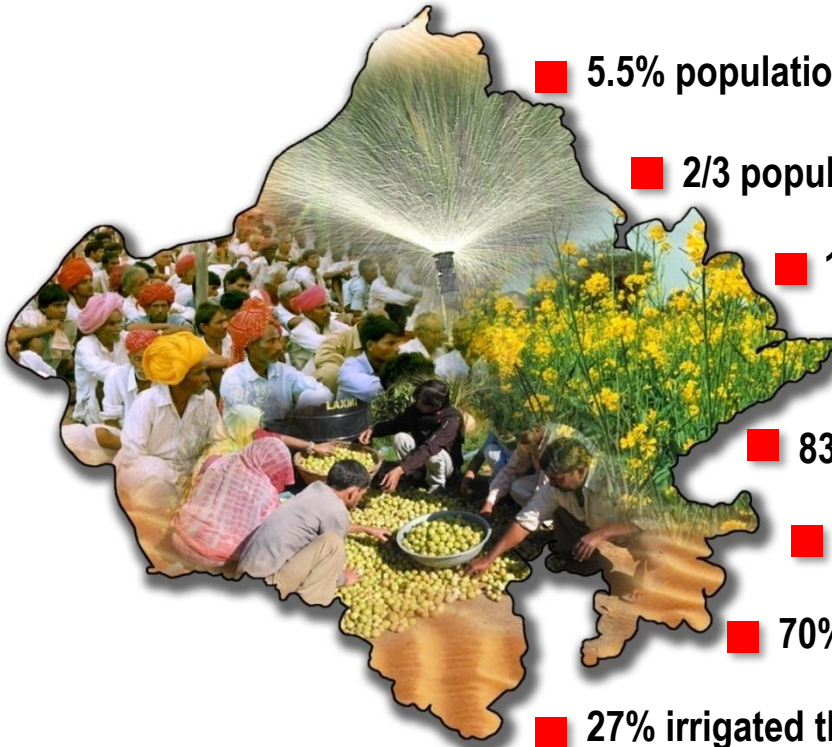
■ 83% of available water used for irrigation

■ 35% of cropped area irrigated

■ 70% area irrigated through wells & tube-wells

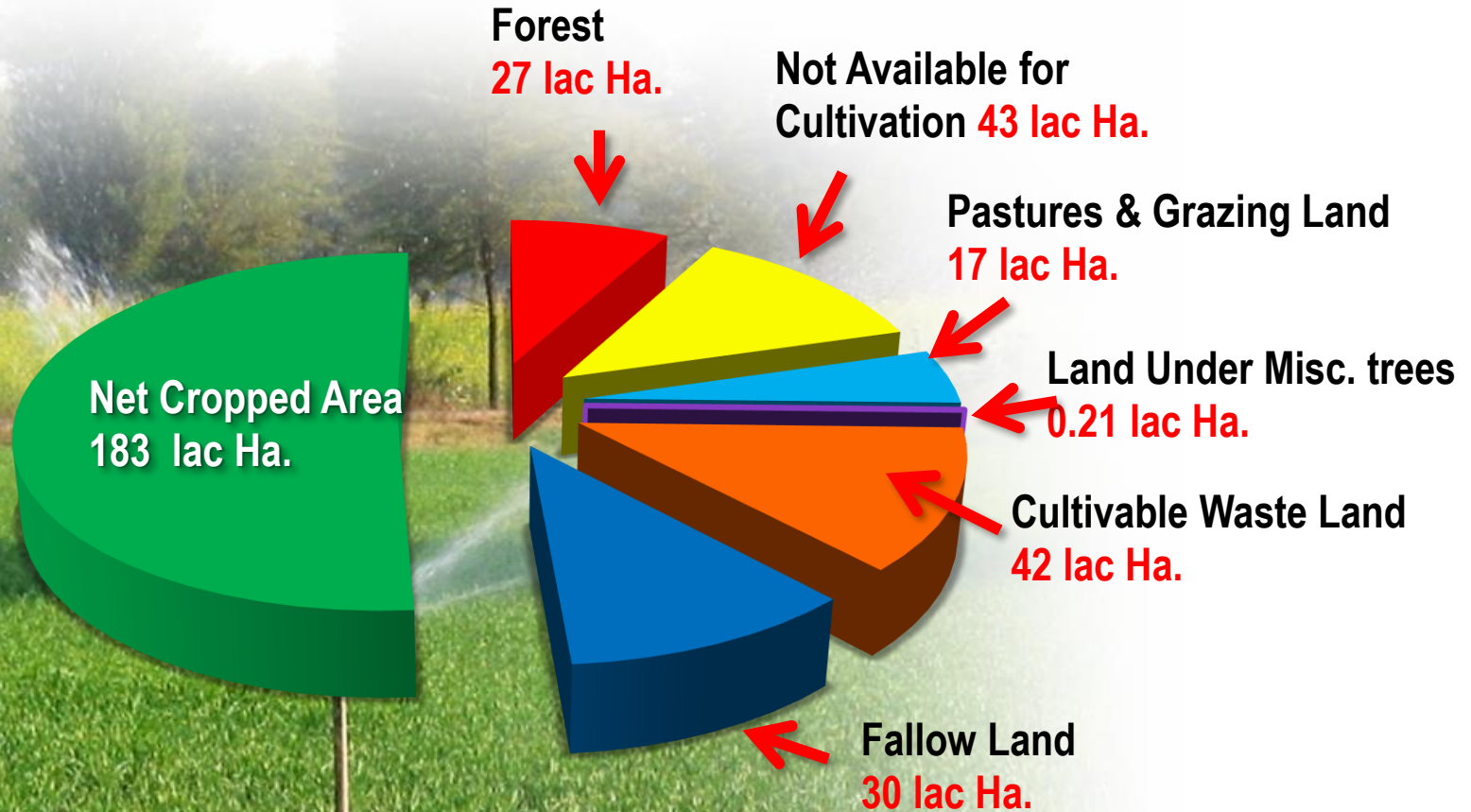
■ 27% irrigated through canals

■ 10.6 Lac ha saline and sodic soils



Land Use Pattern (2010-11)

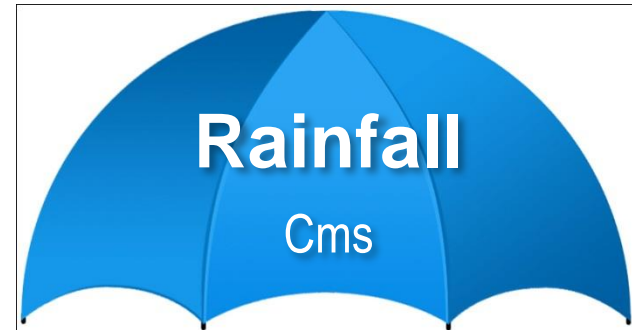
Total Land: 342.7 lac Ha.



Rajasthan Climate



Temperature : Celsius



Regions	Average		Average Rainfall
	Min	Max.	
Arid	5.3	45.0	33.2
Semi-arid	8.3	42.0	53.7
Sub-humid	7.8	40.5	72.2
Humid	10.6	41.0	82.7

State Average Rainfall : 56 cms.

Range: 15-90 cms

We Produce

	Ranks in India
48% Mustard	I
41% Pearl Millet (Bajra)	I
85% Cluster Bean (Gwar)	I
17% Gram	II
15 % Coarse Cereals	II
18 % Oil Seeds	III
13 % Total Pulses	III
8 % Soybean	III
9 % Groundnut	IV
9 % wheat	V
7% Jowar	V
6 % Maize	VII



graphic

We Produce

	Ranks in India
95 % <i>Psyllium</i> Husk (Isabgol)	I
98 % Henna	I
65% Coriander	I
40% Cumin	II



graphic

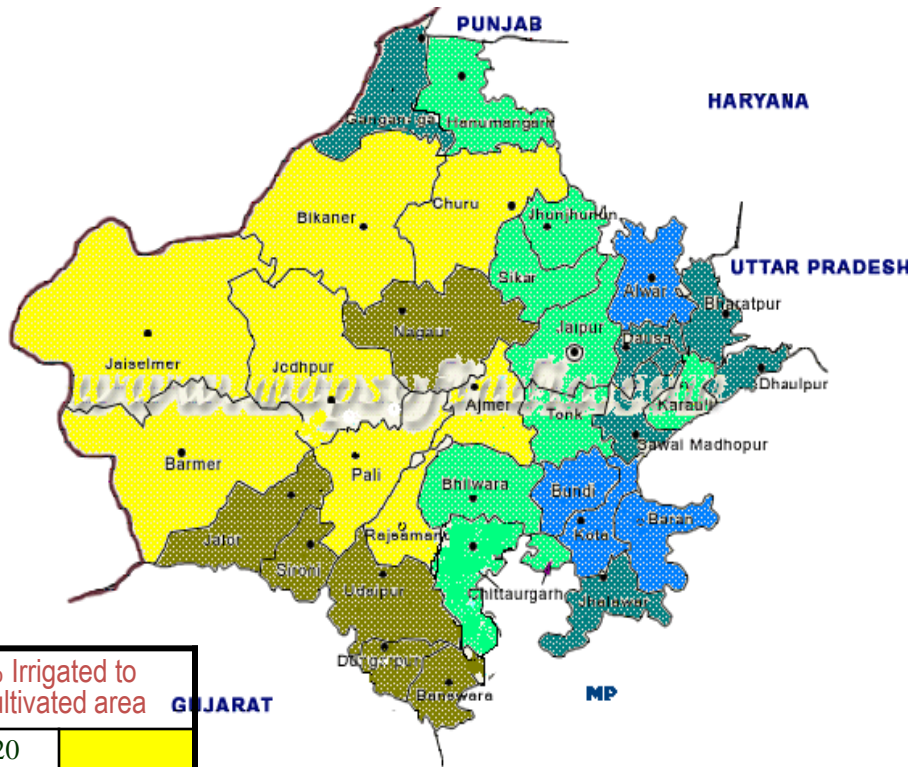
Rajasthan in the Context of India

Particulars	Rajasthan	India	Rajasthan as % of India
Area (Mha)	34.0	328.0	10.40%
Population (2001) (Million)	56.5	1,050.0	5.50%
Rainfall (mm)	531.0	1,125.0	47.20%
Utilizable water resources (BCM)	32.9	2,300.0	1.40%
a. Surface water (BCM)	21.7	1,870.0	1.16%
b. Ground water (BCM)	11.2	431.0	2.50%
Cultivable area (Mha)	25.7	184.4	13.94%
Irrigated area (Mha)	7.7	105.0	7.30%
Food production (Million tonne)	13.8	211.0	6.60%

Rajasthan...

Irrigation Scenario

1. 1/3rd of the cultivated area under irrigation
2. 70 % area is irrigated by wells & tube wells (ground water) and 27 % by canals
3. Irrigation efficiency (conventional system: sandy soils) low : 25-30 %
4. Ground water table going down rapidly and quality of water deteriorating



% Irrigated to Cultivated area	
<20	Yellow
21-40	Olive Green
41-60	Light Green
61-80	Dark Green
>80	Blue

Net Cultivated Area	: 17.1 m ha
Rain fed Area	: 10.7 m ha
Net Irrigated Area	: 772 m ha
Area under MI	: 1.25 m ha
Water share for irrigation	: >80%

Water Management

Harvesting & efficient use

Diggi Cum Sprinkler

- Capacity :4 lac litres or more, Implemented in 7 Districts

Farm Pond (Khet Talai)

- Minimum Size 20X20X3 Metre, Implemented in all Districts

Water Storage Tank (Jal Hauz)

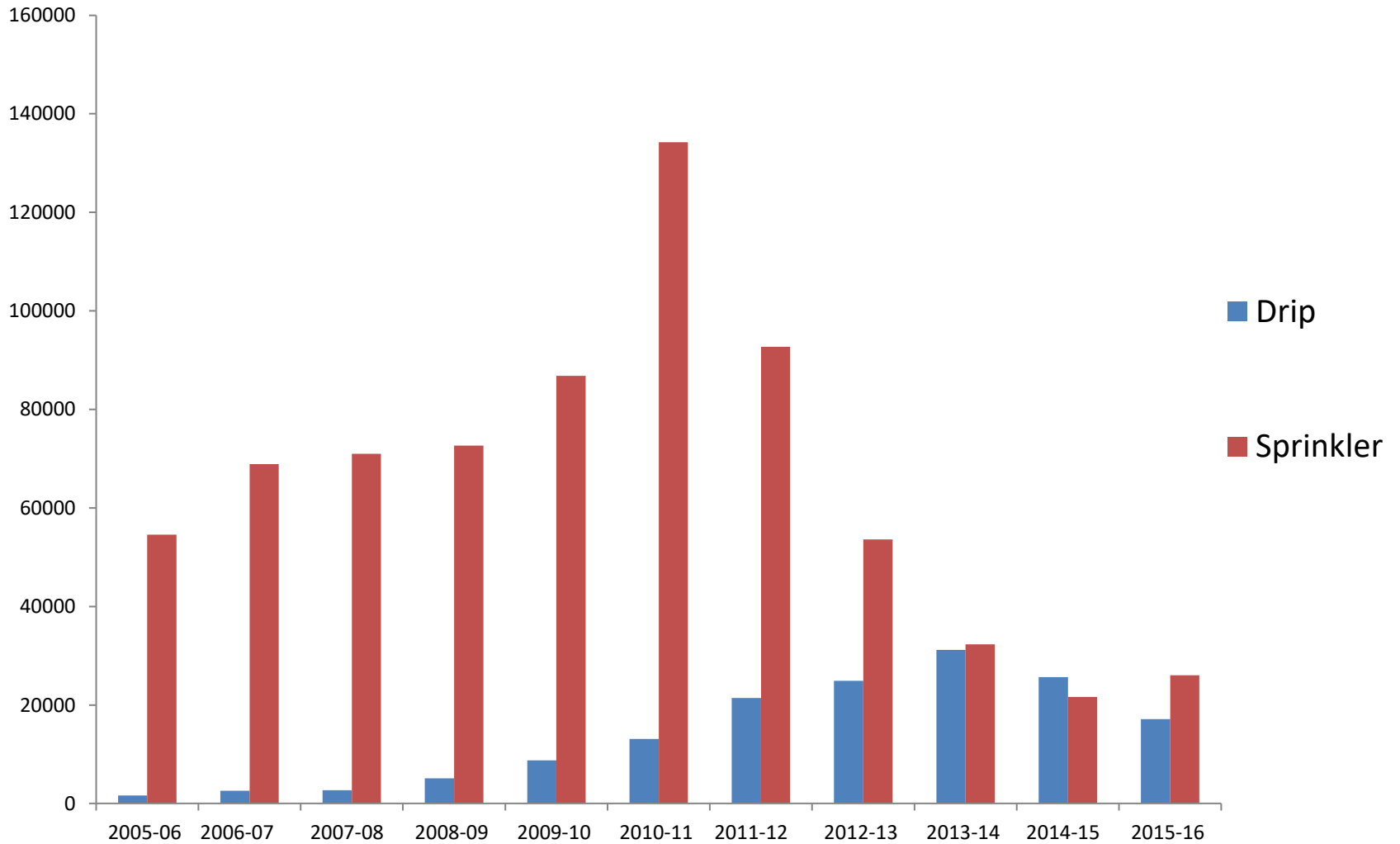
- Size 30X20X6 feet, Implemented in 15 Districts



Irrigation Pipeline

- Implemented in all Districts

Progress of Drip and Sprinkler under MIS



State-Rajasthan

Proposed Annual Action Plan PMKSY-MI : 2016-17

(Rs. in Lakh)

Component	Phy (ha)	Central Share (21- 36%)	State Share (14 -24%)	Total	Proposed State Add. Subsidy 5-25%	Grand Total
Drip - Mini	43145	9604.03	6402.45	16006.47	4830.50	20836.97
Sprinkler	31500	1792.93	1195.29	2988.22	—	2988.22
TOTAL	74645	11396.95	7597.73	18994.69	4830.50	23825.19
Admn. charges @5%	—	569.85	—	569.85	—	569.85
TOT	—	33.20	—	33.20	—	33.20
Total	74645	12000.00	7597.73	19597.74	—	24428.24

Mode of implementation

Process

1. On line application by farmer to DHDS/DMIC.
2. Administrative approval to eligible farmers
3. Installation of set by registered manufacturers (selected by farmer)
4. Physical verification of installed set by field staff
5. Financial sanction for eligible cases by DMIC/DHDS
6. Subsidy through RTGS to farmer or the supplier on behalf of farmer

Documents

1. Application with photo
2. Land ownership: Jamabandi/ passbook
3. Irrigation source: Electricity bill/ purchase bill of gen-set or pump set
4. Purchase bill/ invoice from registered manufacturer or their network
5. Soil water testing report (Drip cases)
6. Tri party Agreement: IA (Inspecting Authority)/Supplier/User

State Issues

1. Unit cost of Micro-Irrigation systems should be revised as per prevailing Market rates.
2. Pending liability of 2014-15 could not be cleared by State Govt. hence the permission is sought from GOI to utilize unspent balance of the year 2014-15 to utilize in 2016-17 for clearing the pending liability of 2014-15 as per GOI funding pattern 60:40.
3. State should not be emphasised to follow DBT as the financial condition of farmers in our state is not good and farmers are not in position to bear the full amount of Drip system. However DBT is being followed in case of Sprinkler systems in our State.

डिग्गी



Diggi cum sprinkler

- In canal areas to collect additional available water to be used when water is not available
- Subsidy- 50% of the cost or Rs. 350/- per cubic mtr for pakka Diggi and Rs.100 per cubic mtr on plastic lined Diggi to a maximum Rs. 2.00 lac which ever is less.
- Scheme available in Sri Ganganagar, Hanumangarh, Bikaner, Jaisalmer, Kota, Bundi and Baran Districts.



Farm Pond (Khet talai)

- To collect rain water in heavy soil areas to be available for life saving irrigation.
- Size -20x20x30 mtr (capacity 1200 cu. mtr)
- Scheme is being implemented in all the districts
- Subsidy - 50% of cost maximum Rs. 52,500 for kachcha farm pond and Rs.75,000 for HDPE / plastic lined ponds.



Water Storage Tank

- Size 30x206 (3600 cu. feet)/102 cu. mtr/ 1.00 lac ltr capacity.
- Subsidy- 50% of the unit cost or Rs.350 per cu. mtr maximum Rs.75,000 whichever is less.
- Scheme is being implemented in Jaipur, Ajmer, Dausa, Sikar, Jhunjhunu, Bikaner, Churu, Jodhpur, Barmer, Nagour, Jalore, Pali, Sirohi, Bundi, Jaisalmer, Hanumangarh & Rajasamand Districts.



Piped Water Conveyance

- PVC/HDPE/HDPE laminated woven lay flat Tube.
- 50% of cost or Rs 50/- per mtr. for PVC/HDPE and Rs 35/- per mtr. for HDPE laminated woven pipes maximum Rs 15,000/- whichever is less.
- Scheme implemented in all the districts



THANK YOU