

GOVERNMENT OF INDIA
MINISTRY OF AGRICULTURE AND FARMERS WELFARE
DEPARTMENT OF AGRICULTURE, COOPERATION AND FARMERS WELFARE

LOK SABHA
UNSTARRED QUESTION NO. 3689
TO BE ANSWERED ON THE 16TH JULY, 2019

ADOPTION OF METHODS OF IRRIGATION

3689. SHRI L.S. TEJASVI SURYA:

Will the Minister of AGRICULTURE AND FARMERS WELFARE कृषि एवं किसान कल्याण मंत्री

be pleased to state:

- (a) the percentage of agricultural land in the country adopting flood method of irrigation and drip method of irrigation, State-wise;
- (b) whether the Government has conducted any study detailing the benefits of drip irrigation over flood irrigation, if so, the details thereof;
- (c) the amount of water that is expected to be saved by the use of drip irrigation over flood irrigation, crop-wise; and
- (d) the initiatives undertaken and the amount sanctioned by the Government to promote the extensive use of drip irrigation?

ANSWER

MINISTER OF AGRICULTURE AND FARMERS WELFARE

कृषि एवं किसान कल्याण मंत्री (SHRI NARENDRA SINGH TOMAR)

(a): The net sown area in the country is 140130 thousand ha and net irrigated area is 68385 thousand ha. As per available information, the area covered under drip irrigation is 4374.53 thousand ha. The State wise percentage of net irrigated area and area under drip irrigation to the net sown area is given at **Annexure-I**.

(b)&(c): An Impact evaluation study of Micro Irrigation scheme was carried out by Department of Agriculture Cooperation & Farmers Welfare in 2014 through M/s Global Agri System Ltd. The major findings of the study are as under:

- Irrigation cost is reduced by 20% to 50% with average of 32.3%.
- Electricity consumption is reduced by about 31%.
- Saving of fertilizers in the range of 7% to 42%.
- Average productivity of fruits and vegetables increased by about 42.3% and 52.8%.
- Overall income enhancement of farmers in the range of 20% to 68% with an average of 48.5%.

Water use efficiency of Micro Irrigation including drip irrigation is as high as 80 to 95% in comparison to only 30-50% in conventional flood irrigation resulting in considerable amount of saving irrigation water under drip irrigation as also evident from the research studies conducted on different crops by centres of All India Coordinated Research Project on Irrigation Water Management in different agro-ecological regions of India. Details of water saving due to drip irrigation over flood/surface irrigation at different centres are given at **Annexure-II**.

(d): Department of Agriculture, Cooperation & Farmers Welfare (DAC&FW) is implementing Per Drop More Crop component of Pradhan Mantri Krishi Sinchayee Yojana (PMKSY-PDMC) which focuses on enhancing water use efficiency at farm level through Micro Irrigation technologies viz. Drip and Sprinkler Irrigation systems. The details of Central Assistance released to States under PMKSY-PDMC is given at **Annexure-III**.

Besides, the Department creates awareness about Micro Irrigation by wide publicity through press & print media, publication of leaflets/booklets, organization of workshops, exhibitions, farmer fairs, information on State/Government of India web portals etc. In addition, Indian Council of Agricultural Research (ICAR) imparts training and organizes field demonstrations through Krishi Vigyan Kendras (KVK) to educate farmers for promotion of Micro Irrigation.

Annexure - I

Annexure to Lok Sabha Unstarred Question No. 3689 for answer on 16.07.2019

State wise Net Sown area, Net Irrigated Area and Area under drip irrigation

(in thousand hectares)

Sl. No.	States	Net Sown Area*	Net irrigated area*	Area covered under Drip Irrigation#	% Net irrigated area to the Net Sown Area	% Drip Irrigation Area to the Net Sown Area
1	Andhra Pradesh	6236	2927	1135	46.94	18.20
2	Arunachal Pradesh	225	56	0	24.89	0.00
3	Assam	2827	296	0.26	10.47	0.01
4	Bihar	5278	2987	8.7	56.59	0.16
5	Chattisgarh	4681	1466	19	31.32	0.41
6	Goa	129	39	0.54	30.23	0.42
7	Gujarat	10302	4233	622	41.09	6.04
8	Haryana	3522	2974	33	84.44	0.94
9	Himachal Pradesh	550	113	3.5	20.55	0.64
10	Jammu & Kashmir	758	331	0.02	43.67	0.00
11	Jharkhand	1385	207	20.4	14.95	1.47
12	Karnataka	10044	3589	541	35.73	5.39
13	Kerala	2043	414	13	20.26	0.64
14	Madhya Pradesh	15351	9584	303	62.43	1.97
15	Maharashtra	17345	3244	855	18.70	4.93
16	Manipur	383	69	0.36	18.02	0.09
17	Meghalaya	286	81	0.31	28.32	0.11
18	Mizoram	145	16	2.2	11.03	1.52
19	Nagaland	384	97	0.44	25.26	0.11
20	Orissa	4474	1259	25	28.14	0.56
21	Punjab	4119	4118	30	99.98	0.73
22	Rajasthan	17521	7882	179	44.99	1.02
23	Sikkim	77	12	1.56	15.58	2.03
24	Tamil Nadu	4819	2726	360	56.57	7.47
25	Telangana	4377	1726	192	39.43	4.39
25	Tripura	255	79	0.44	30.98	0.17
26	Uttarakhand	700	330	7	47.14	1.00
27	Uttar Pradesh	16598	14389	21	86.69	0.13
28	West Bengal	5238	3102	0.8	59.22	0.02
29	A & N Island	15	0	0	0.00	0.00
30	Chandigarh	1	0	0	0.00	0.00
31	D&N Haveli	19	4	0	21.05	0.00
32	Daman & Diu	3	0	0	0.00	0.00
33	Delhi	22	22	0	100.00	0.00
34	Lakshadweep	2	0	0	0.00	0.00
35	Pondicherry	16	13	0	81.25	0.00
	Total	140130	68385	4374.53	48.80	3.12

Source: *Land use Statistics at Glance;2017; Directorate of Economics & Statistics DAC&FW

**Net Irrigated area includes irrigation by Government canals, Private canals, Tanks, Tube-wells, Other Wells, Other sources.

#Area covered through Central Sponsored Schemes

Annexure- II

Annexure to Lok Sabha Unstarred Question No. 3689 for answer on 16.07.2019

Water saving due to drip irrigation over flood/surface irrigation at different centres of All India Coordinated Research Project on Irrigation Water Management

Centre	Crop	Water saving over flood/ surface irrigation (%)
Bhavanisagar, Tamil Nadu	Banana	29.7
Chiplima, Odisha	Banana	50.1
Faizabad, Uttar Pradesh	Tomato	67.8
Faizabad, Uttar Pradesh	Okra	49.5
Sriganganagar, Rajasthan	Chilli	24.1
Sriganganagar, Rajasthan	Brinjal	51.7
Sriganganagar, Rajasthan	Bt cotton	19.8
Sriganganagar, Rajasthan	Bitter gourd	45.4
Sriganganagar, Rajasthan	Tomato	28.7
Hisar, Haryana	Cotton	27.8
Hisar, Haryana	Cotton	40.3
Hisar, Haryana	Wheat	23.0
Bilaspur, Chattisgarh	Sugarcane	35.0
Palampur, Himachal Pradesh	Potato	31.3
Rahuri, Maharashtra	Sugarcane	35.0
Sriganganagar, Rajasthan	Hybrid cotton	25.9
Sriganganagar, Rajasthan	Bt cotton	24.7
Hisar, Haryana	Cotton – on farm	28.1
Rahuri, Maharashtra	Cotton – on farm	48.6
Sriganganagar, Rajasthan	Summer squash	122.4
Shillong, Meghalaya	Strawberry	63.0
Rahuri, Maharashtra	Watermelon	207.1
Rahuri, Maharashtra	Marigold	19.2
Bhavanisagar, Tamil Nadu	Sugarcane	25.0
Morena, Madhya Pradesh	Soybean	25.1
Kota, Rajasthan	Soybean	16.2
Parbhani, Maharashtra	Turmeric	20.0
Parbhani, Maharashtra	Watermelon	20.0
Navsari, Gujarat	Watermelon	29.2
Parbhani, Maharashtra	Groundnut	33.3
Madurai, Tamil Nadu	Groundnut	39.0
Dapoli, Maharashtra	Cashew	19.4
Palampur, Himachal Pradesh	Broccoli	30.0
Gayeshpur, West Bengal	Gladiolus	36.6
Madurai, Tamil Nadu	Sugarcane	17.9
Chiplima, Odisha	Onion	32.0
Palampur, Himachal Pradesh	Strawberry	58.6
Rahuri, Maharashtra	Summer chilli	161.2

Annexure to Lok Sabha Unstarred Question No. 3689 to be answered on 16.07.2019

State wise Central Assistance released under PMKSY- PDMC

Rs. in Crore

S.No.	State	2015-16	2016-17	2017-18	2018-19
1	Andhra Pradesh	206.47	308.69	517.10	520.00
2	Bihar	28.60	21.60	12.50	27.91
3	Chhattisgarh	20.30	44.80	55.00	43.39
4	Goa	0.30	0.80	0.00	1.20
5	Gujarat	213.05	274.00	300.00	272.50
6	Haryana	34.97	27.00	14.01	27.41
7	Himachal Pradesh	7.60	8.50	19.25	26.00
8	Jharkhand	14.97	30.70	25.00	10.00
9	Jammu & Kashmir	4.87	5.40	3.00	7.80
10	Karnataka	213.12	229.00	385.00	372.03
11	Kerala	8.53	0.00	25.00	4.00
12	Madhya Pradesh	161.74	121.10	150.00	132.56
13	Maharashtra	107.26	305.70	362.50	360.00
14	Odisha	28.70	39.70	48.00	58.00
15	Punjab	43.00	1.18	0.00	9.00
16	Rajasthan	142.84	129.00	107.50	168.48
17	Tamil Nadu	129.78	143.50	369.55	355.00
18	Telangana	111.32	189.00	257.00	122.00
19	Uttarakhand	9.60	15.00	27.20	43.00
20	Uttar Pradesh	37.51	41.40	55.00	87.88
21	West Bengal	4.80	19.90	31.00	40.00
22	Arunachal Pradesh	2.60	2.00	8.30	12.50
23	Assam	5.03	11.00	3.00	30.00
24	Manipur	2.76	3.60	7.50	40.00
25	Meghalaya	1.43	0.00	3.30	12.00
26	Mizoram	3.27	8.10	12.30	27.80
27	Nagaland	2.34	4.50	11.80	35.00
28	Sikkim	4.86	5.40	4.00	55.19
29	Tripura	1.55	0.00	3.75	15.00
30	UTs	2.23	0.00	0.50	0.00
31	HQ	1.33	0.67	1.43	2.73
	Grand Total	1556.73	1991.24	2819.49	2918.38
