

GOVERNMENT OF INDIA
MINISTRY OF JAL SHAKTI

DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION

RAJYA SABHA

UNSTARRED QUESTION NO. 1509

ANSWERED ON 05.08.2024

WATER REQUIREMENT FOR GROWING WATER-INTENSIVE CROPS

1509. SHRI M. MOHAMED ABDULLA

Will the Minister of **JAL SHAKTI** be pleased to state:

- (a) the total water consumption for growing high and low water-intensive crops in the State of Tamil Nadu, district-wise; and
- (b) the measures undertaken by the Ministry to collaborate with the Ministry of Agriculture and Farmers Welfare and the State Government to effectively promote cultivating less water-consuming crops in Tamil Nadu?

ANSWER

THE MINISTER OF STATE FOR JAL SHAKTI

(SHRI RAJ BHUSHAN CHOUDHARY)

(a) The total water consumption for growing high and low water-intensive crops in the State of Tamil Nadu, district wise is provided as follows:

- i. District wise cropped area under different crops at **Annexure-I**, as informed by the Department of Horticulture and Plantation crops, Government of Tamil Nadu.
- ii. Total water consumption and cropped area under different crops in Tamil Nadu at **Annexure-II**, as informed by Department of Agriculture, Government of Tamil Nadu.

(b) Government of India is committed to accord high priority to water conservation and its management. To this effect Command Area Development and Water Management (CADWM) component of Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) has been formulated with the vision of extending the coverage of irrigation and improving water use efficiency in a focused manner and to ensure last mile connectivity of water to the farm gate. Ministry of Agriculture & Farmers' Welfare (MoA&FW) is also implementing the Per Drop More Crop (PDMC) component under Rashtriya Krishi Vikas Yojana (RKVY). The PDMC scheme focuses on enhancing water use efficiency through promotion of micro irrigation technologies in water intensive/consuming crops like sugarcane, banana, paddy etc. In this regard, a Working Group has also been constituted in 2024 between the two Ministries, for effective convergence of CADWM component of PMKSY with PDMC and other schemes of MoA&FW.

Further, for Aquifer Management, the Ministry of Jal Shakti (MoJS) has constituted a National Interdepartmental Steering Committee (NISC) in 2024. The committee is headed by Secretary (Department of Water Resources, River Development & Ganga Rejuvenation) and includes Secretary (Department of Agriculture & Farmers' Welfare) and Principal Secretary/Secretary from Tamil Nadu State Government as members. The Terms of Reference of the committee includes weaning away farmers from water intensive crops especially in areas with severe groundwater shortage.

ANNEXURE REFERRED TO IN REPLY TO PART (a) OF UNSTARRED QUESTION NO. 1509 TO BE ANSWERED IN RAJYA SABHA ON 05.08.2024 REGARDING “WATER REQUIREMENT FOR GROWING WATER-INTENSIVE CROPS”.

District wise cropped area under different crops in Tamil Nadu

S.No.	District	Coconut (1)	Mango (2)	Banana (3)	Tapioca (4)	Cashew (5)	Tea (6)	Red chillies (7)
1	Ariyalur	299	358	176	305	30,529		127
2	Coimbatore	92,614	2,438	9,365	644	20	11,191	118
3	Cuddalore	2,402	505	5,744	4,772	30,419		9
4	Dharmapuri	5,917	12,535	1,539	14,498			982
5	Dindigul	30,821	16,167	4,472	672	278	3	664
6	Erode	18,966	806	22,118	6,581	11		64
7	Kancheepuram	504	915	148	-	40		0
8	Chengalpattu	2,586	3,470	272	41	257		17
9	Kanniyakumari	25,301	1,155	4,560	1,068	800	208	0
10	Karur	7,855	927	2,706	1,958	7		841
11	Krishnagiri	15,460	32,764	886	346	4		132
12	Madurai	13,307	5,626	3,180	38	109		65
13	Nagapattinam	2,714	2,534	52	-	787		0
14	Mayiladudurai	756	497	510	83	646		0
15	Namakkal	11,563	2,640	2,639	17,774	12		49
16	Perambalur	576	150	262	2,012	9		0
17	Pudukkottai	13,173	937	1,915	835	5,876		12
18	Ramanathapuram	9,741	289	28	-	44		17127
19	Salem	13,506	6,042	3,664	15,447	92		753
20	Sivagangai	8,362	2,355	1,180	127	2,388		2942
21	Thanjavur	43,459	743	3,688	651	1,593		9
22	Theni	24,071	8,979	7,109	130	2,907	1,509	0
23	The Nilgiris	53	18	740	36		56,010	0
24	Thiruvallur	528	11,337	678	25	60		368
25	Thiruvannamalai	1,269	1,709	2,845	5,244	21		73
26	Thiruvarur	6,981	265	498	175	14		0
27	Thoothukudi	6,568	660	8,864	4	379		16994
28	Thirupur	77,157	1,693	3,363	890	43		112
29	Thiruchirapalli	5,107	1,981	5,931	4,142	824		30
30	Thirunelveli	6,092	1,727	5,021	17	817	804	42
31	Thenkasi	14,411	3,985	1,475	64	1,473		11
32	Vellore	7,961	5,929	1,841	9	0		292
33	Ranipettai	1,103	1,092	930	4	17		651
34	Thirupathur	10,677	6,465	1,308	53			242
35	Villupuram	2,252	1,916	1,051	1,195	3,191		19
36	Kallakurichi	1,830	356	702	18,576	925		6
37	Virudhunagar	10,664	3,585	1,443	16	29		2106
38	Chennai				-		-	
	Total	4,96,605	1,45,551	1,12,903	98,431	84,623	69,725	44,857

S.No.	District	Onion (8)	Tomato (9)	Coffee (10)	Rubber (11)	Turmeric (12)	Bhendi (13)	Brinjal (14)
1	Ariyalur	47	19			5	212	298
2	Coimbatore	1,424	1,636	2,247	4	212	492	432
3	Cuddalore	17	1			157	436	822
4	Dharmapuri	1,828	11,507	92		8,021	3,614	3,342
5	Dindigul	3,460	2,274	11,396		9	608	787
6	Erode	2,242	387	14		3,770	366	266
7	Kancheepuram						490	108
8	Chengalpattu	3	4			1	543	375
9	Kanniyakumari		9	51	28,270		25	14
10	Karur	489	185			57	329	384
11	Krishnagiri	87	10,842			830	1,067	1,640
12	Madurai	301	165			4	608	389
13	Nagapattinam		0				172	145
14	Mayiladudurai						105	43
15	Namakkal	4,536	612	2,196		1,886	408	632
16	Perambalur	7,079	106			658	59	65
17	Pudukkottai	24	4			11	227	385
18	Ramanathapuram	274					45	54
19	Salem	1,910	3,751	7,125		5,259	2,736	2,548
20	Sivagangai	47	11			1	100	173
21	Thanjavur	16	0			17	344	267
22	Theni	1,122	1,567	2,753			446	546
23	The Nilgiris	-	0	7,349	49	5	-	2
24	Thiruvallur	10	2			15	714	379
25	Thiruvannamalai	82	561	1		397	1,827	1,696
26	Thiruvarur	1				6	373	174
27	Thoothukudi	6,215	41			2	98	93
28	Thirupur	2,745	1,877			170	184	319
29	Thiruchirapalli	5,395	240	5		222	311	494
30	Thirunelveli	42	98	111		4	105	141
31	Thenkasi	834	307	5	84	1	816	173
32	Vellore	13	576			132	572	891
33	Ranipettai	4	7			117	884	704
34	Thirupathur	112	1,447			70	895	905
35	Villupuram	23	5			3	745	514
36	Kallakurichi	1,200	515	9		2,772	900	984
37	Virudhunagar	2,159	87	12		1	434	160
38	Chennai			-	-		-	
	Total	43,740	38,845	33,365	28,407	24,814	22,288	21,344

S.No.	District	Moringa (15)	Watermelon (16)	Guava (17)	Green chilly (18)	Tamarind (19)	Arecanut (20)	Jasmine - Malligai, Gundumalli (21)
1	Ariyalur	1,356	81	44	205	292	4	29
2	Coimbatore	87	91	127	391	389	3,010	87
3	Cuddalore	910	512	1,241	416	81		403
4	Dharmapuri	112	441	409	643	951	2,114	1,013
5	Dindigul	5,625	405	2,298	1,057	3,227	53	847
6	Erode	153	409	150	264	117	1,595	930
7	Kancheepuram	4	97	115	75	21		73
8	Chengalpattu	9	8,470	171	293	10		78
9	Kanniyakumari	6		32	30	914	283	2
10	Karur	3,247	48	197	17	82	14	265
11	Krishnagiri	10	2	183	1,062	963	30	1,021
12	Madurai	552	2	1,753	367	1,132		1,331
13	Nagapattinam	13		12	23	129		11
14	Mayiladudurai	10	32	8	2	97	1	21
15	Namakkal	223	540	202	290	163	1,212	290
16	Perambalur	14	11	57	202	38	54	14
17	Pudukkottai	27	263	126	264	158	11	157
18	Ramanathapuram	29		40	-	106		81
19	Salem	131	733	293	859	201	3,304	877
20	Sivagangai	19	90	233	350	425		28
21	Thanjavur	35	7	140	63	118	2	8
22	Theni	2,822		472	564	1,646	166	299
23	The Nilgiris	-		16	-		432	
24	Thiruvallur	76	1,083	345	154	3		970
25	Thiruvannamalai	41	1,312	257	2,061	73	67	651
26	Thiruvarur	9		67	49	113	17	17
27	Thoothukudi	1,887	46	457	253	263	0	208
28	Thirupur	2,242	161	165	519	153	113	9
29	Thiruchirapalli	109	45	381	1,103	717	120	578
30	Thirunelveli	534	3	294	57	144	3	86
31	Thenkasi	29		388	217	391	208	328
32	Vellore	13		782	457	78		328
33	Ranipettai	9	129	166	118	9		327
34	Thirupathur	120	3	390	606	291	11	194
35	Villupuram	145	3,298	1,032	433	66		427
36	Kallakurichi	18	528	161	911	6	326	70
37	Virudhunagar	115	11	1,349	121	358		475
38	Chennai			-	-		-	
	Total	20,740	18,852	14,556	14,496	13,926	13,148	12,531

S. No.	District	Acidlime (22)	Chrysanthemum (23)	Palmyrah (24)	Beans (25)	Lablab (26)	Coriander (27)	Aonla (28)
1	Ariyalur	63	46	3	-	1	2	1
2	Coimbatore	117	0	41	-	999	108	274
3	Cuddalore	148	14	5	2	19		7
4	Dharmapuri	26	3,645	19	339	1,413	357	709
5	Dindigul	2,446	93	12	1,222	817	25	1,478
6	Erode	162	13	8	268	61		182
7	Kancheepuram	11	14	1	1	1		11
8	Chengalpattu	39	9	1	-	9		73
9	Kanniyakumari	6		598	-	-		51
10	Karur	87	3	16	-	14	10	273
11	Krishnagiri	75	4,189	186	5,772	1,033	1,096	12
12	Madurai	381	12	133	5	26	41	291
13	Nagapattinam	18		249	-	2		4
14	Mayiladudurai	15	0	46	-	0		2
15	Namakkal	153	7	1	-	185	178	124
16	Perambalur	329	3	1	-	3	10	10
17	Pudukkottai	457		99	-	2		105
18	Ramanathapuram	3		2,980	0	-	1,588	57
19	Salem	156	1,528	143	268	1,235	60	124
20	Sivagangai	135		9	14	2	0	240
21	Thanjavur	47	1	147	3	-		60
22	Theni	691	1	7	98	1,435	466	447
23	The Nilgiris	16			245	-	1	
24	Thiruvallur	28	46	31	34	25	2	42
25	Thiruvannamalai	134	566	15	20	137	21	43
26	Thiruvarur	89		174	-	-		19
27	Thoothukudi	776	1	2,569	4	4	2,184	276
28	Thirupur	117	1	14	3	134	295	472
29	Thiruchirapalli	1,063	72	26	5	29	6	102
30	Thirunelveli	216	2	793	-	0	0	1,293
31	Thenkasi	3,173	0	295	12	9	5	1,131
32	Vellore	69	25	5	35	797	35	10
33	Ranipettai	53	86		20	52	2	25
34	Thirupathur	199	25	12	174	148	273	56
35	Villupuram	112	24	29	9	5		137
36	Kallakurichi	41	4	12	162	3	3	20
37	Virudhunagar	865	7	408	2	113	1,630	208
38	Chennai		-	-	-	-	-	
	Total	12,513	10,434	9,085	8,715	8,715	8,398	8,367

S. No.	District	Black pepper (29)	Amaranthus (30)	Carrot (31)	Tuberose (32)	Glorylily (33)	Bittergourd (34)	Cabbage (35)
1	Ariyalur		3	-	45	4	178	1
2	Coimbatore	161	220	-	15		443	64
3	Cuddalore	12	23	-	288		215	1
4	Dharmapuri	70	422	2	2,404		1,487	220
5	Dindigul	1,482	21	1,020	357	3,276	262	84
6	Erode	72	30	0	561	1	79	441
7	Kancheepuram		22	-	4		25	-
8	Chengalpattu		13	-	29		121	-
9	Kanniyakumari	335	9	-	33		5	-
10	Karur		29	-		619	37	-
11	Krishnagiri	3	2,508	1,671	59		354	3,291
12	Madurai	0	51	-	174		59	8
13	Nagapattinam		97	-			133	-
14	Mayiladudurai		12	-	16	1	15	-
15	Namakkal	2,622	179	-	66	16	60	25
16	Perambalur		2	-	99		29	-
17	Pudukkottai	13	4	-	116		55	-
18	Ramanathapuram		4	-			35	-
19	Salem	1,481	1,102	-	188		487	218
20	Sivagangai		2	-	41		8	-
21	Thanjavur	2	31	-	40		42	1
22	Theni	146	13	-	73		151	128
23	The Nilgiris	980	3	4,210			112	489
24	Thiruvallur		491	-	55		121	-
25	Thiruvannamalai	110	163	-	1,419		249	3
26	Thiruvarur	0	124	-			19	-
27	Thoothukudi		34	-	8		58	-
28	Thirupur	7	31	-	7	2,596	146	7
29	Thiruchirapalli	20	32	-	104	32	126	0
30	Thirunelveli	0	2	-	7		5	-
31	Thenkasi	88	2	-	37		134	-
32	Vellore	2	893	-	10		36	-
33	Ranipettai		238	0	141		58	-
34	Thirupathur	3	410	4	157		76	9
35	Villupuram	0	112	-	102		156	2
36	Kallakurichi	187	116	-	92		131	1
37	Virudhunagar		19	-	27	8	216	-
38	Chennai			-	-	-	-	-
	Total	7,797	7,468	6,908	6,773	6,553	5,921	4,992

S. No.	District	Sapota (36)	Potato (37)	Radish (38)	Cucumber (39)	Elephant foot yam (40)
1	Ariyalur	2		1	0	17
2	Coimbatore	120	0	41	47	0
3	Cuddalore	15		0	15	173
4	Dharmapuri	115		2,654	102	13
5	Dindigul	1,010	2,673	40	12	-
6	Erode	76	869	1	18	410
7	Kancheepuram	14		2	3	-
8	Chengalpattu	35		4	32	1
9	Kanniyakumari	7		-	27	0
10	Karur	122		24	3	274
11	Krishnagiri	220	457	1,275	1,673	34
12	Madurai	244		1	97	21
13	Nagapattinam			-	39	-
14	Mayiladudurai	1		0	3	-
15	Namakkal	284		122	24	251
16	Perambalur	8		4	18	346
17	Pudukkottai	39		4	34	10
18	Ramanathapuram	32		1	-	-
19	Salem	220		163	154	302
20	Sivagangai	92		2	1	6
21	Thanjavur	23		11	15	39
22	Theni	264		12	59	3
23	The Nilgiris		802	145	-	6
24	Thiruvallur	91		18	15	18
25	Thiruvannamalai	74		97	1,247	155
26	Thiruvarur	1		-	4	1
27	Thoothukudi	250		-	191	135
28	Thirupur	159		13	6	17
29	Thiruchirapalli	70		22	24	74
30	Thirunelveli	154		0	118	2
31	Thenkasi	181		-	16	234
32	Vellore	98		3	1	30
33	Ranipettai	60		5	5	32
34	Thirupathur	461		95	12	6
35	Villupuram	76		1	175	15
36	Kallakurichi	11		3	187	1,811
37	Virudhunagar	352		-	349	83
38	Chennai	-		-	-	-
	Total	4,985	4,802	4,763	4,724	4,516

ANNEXURE REFERRED TO IN REPLY TO PART (a) OF UNSTARRED QUESTION NO. 1509 TO BE ANSWERED IN RAJYA SABHA ON 05.08.2024 REGARDING “WATER REQUIREMENT FOR GROWING WATER-INTENSIVE CROPS”.

Total water consumption and cropped area under different crops in Tamil Nadu

Crop	Area (ha)	Water requirement (mm / ha)	Water requirement (ham)	Water requirement (TMC)
High water intensive crops (> 600 mm / ha)				
Sugarcane	152242	2200	334932	117.2
Banana	98897	1800	178015	62.3
Paddy	2091131	1250	2613914	914.9
Mango	149597	1100	164557	57.6
Ginger	287	1000	287	0.1
Turmeric	22805	900	20525	7.2
Cardamom	3980	900	3582	1.3
Tamarind	14703	700	10292	3.6
Cotton	152132	600	91279	31.9
Potato	4779	600	2867	1.0
Brinjal	24015	600	14409	5.0
Low water intensive crops (< 600 mm / ha)				
Groundnut	370933	550	204013	71.4
Chillies	51821	550	28502	10.0
Maize	404901	500	202451	70.9
Jowar	401246	500	200623	70.2
Redgram	45769	500	22885	8.0
Castor	5648	500	2824	1.0
Tobacco	1800	500	900	0.3
Tomato	41545	500	20773	7.3
Sunflower	6151	450	2768	1.0
Tapioca	89136	400	35654	12.5
Gingelly	50784	400	20314	7.1
Onion	43502	400	17401	6.1
Pearl millet	61294	400	24518	8.6
Coriander	7553	400	3021	1.1
Bengalgram	5042	350	1765	0.6
Finger millet	78986	310	24486	8.6
Blackgram	435704	300	130711	45.7
Greengram	176351	300	52905	71.4
Horsegram	75219	300	22566	10.0
Kodo millet	2120	300	636	70.9

ham - hectare metre; TMC - Thousand Million Cubic feet; ha – hectare
