

Agriculture Land Damaged Due to Water Logging

***1395.** Smt. Geeta Bhukkal, M.L.A.: Will the Agriculture and Farmers Welfare Minister be pleased to state-

- 17/12/2021
- a) whether it is a fact that more than 550 acres of agriculture land in village Gorla, Khanpur Khurd and Lilodh has been damaged due to leakage of water tanks of NTPC Thermal Plant; if so, the action taken by the Government in the abovesaid matter; and
 - b) whether it is also a fact that the thousand acres of Agriculture land in village Nivada, Redhuwas, Kondrawali, Mundahera, Chadhwana, Bilochpura etc. has been damaged due to water logging of Bhindawas lake/Pakshi Vihar; if so, the action taken by the Government to safe guard the livelihood of residents of abovesaid villages togetherwith the time by which the abovesaid problem is likely to be solved?

JAI PARKASH DALAL, MINISTER OF AGRICULTURE AND FARMERS WELFARE DEPARTMENT, HARYANA

a) & b) Sir, a Statement is placed on the table of the house.

Statement referred to the reply of starred Assembly Question No. *1395 regarding Agriculture Land Damaged Due to Water Logging.

- a) Presently, there is no water leakage from the water tanks of NTPC in the villages Goria, Khanpur Khurd and Lilodh. During the year 2012, leakage of water from the water tanks of NTPC was observed. A comprehensive and integrated seepage water re-circulation system project was implemented in June, 2016 for permanent solution. NTPC has approached Panchayati raj for installation of ten deep borewell pumps for lowering the water table of that area under CSR scheme. However, there is a problem of salinity and water-logging in these villages. An eye-survey of the affected village Goria has been conducted by the Department recently and reclamation work will be done in due course with farmer's participation. The work of the reclamation in village Khanpur Khurd and Lilodh will be taken up in Phase-II.
- b) The area of the villages is affected with the waterlogging due to seepage from Bhindawas lake. The area is somewhat low lying. The problem becomes severe during the rainy season. An eye-survey of the affected villages Nivada, Kondrawali, Mundahera, Bilochpura, Chadhwana has also been conducted by the Department and reclamation work will be done in due course. The work of the reclamation in village Redhuwas will be taken up in Phase-II.

NOTE FOR PAD

Agriculture Land Damaged Due to Water Logging

STARRED ASSEMBLY QUESTION NO. *1395 ASKED BY SH. GEETA BHUKKAL, M.L.A.

Haryana is in the forefront of implementation of Sub Surface Drainage (SSD) system for reclamation of water-logged & saline lands. Over a period of two decades, Haryana Operational Pilot Project (HOPP), Department of Agriculture, Haryana has implemented SSD projects in 28250 acres (11300 hectares) of water-logged and saline soils in the State with Technical support of Central Soil Salinity Research Institute (CSSRI), Karnal. The problem of water-logging can be tackled through surface drainage, vertical drainage, bio-drainage and sub-surface drainage depending upon the nature and extent of the problem. However, where salinity and water-logging exist together, lying of sub-surface drainage system is the most effective technology. The affected area got reclaimed within 2-3 years through this technology. The average cost of system under this technology is about Rs. 45,000/- per acre.

1. Criteria for selection of Sub Surface Drainage Project sites

Selection of a location for SSD project is governed by the following criteria:

- (i) An open surface drains for disposal of saline effluents.
- (ii) Adequate canal water supplies in the affected area for leaching of salts.
- (iii) Water table depth should be 0-1.5 meter continuously for 4-5 years in the month of May-June.
- (iv) Farmer's willingness to form Farmers' Drainage Societies (FDS) and sharing cost of pumping after the completion of the project.

2. Methodology of SSD Projects

In this system perforated corrugated PVC pipes, covered with synthetic filter material are laid at a depth of 2.5-3.0 m (collector pipes), whereas lateral pipes are laid at a depth of 1.5-2.0 m with laser controlled trencher machines. The saline ground water of the area is thus collected by gravity in the sump and then pumped out into adjoining surface drains. The affected area thus got reclaimed after

2-3 years of pumping, thus it improves crop yield and productivity. Such water can further be used for irrigation purpose.

3. Status of Water-logged and Saline Soils in Haryana

According to survey carried out by Ground Water Cell of the Department in June, 2020, about 982740 acres (393092 hectare) area in the State is affected with the problem of water-logging and salinity, out of which about 174470 acres (69788 hectare) area is under critical condition (water table 0-1.5 m). Most affected areas fall in the districts of Rohtak, Jhajjar, Sonapat and Bhiwani followed by Hisar, Jind, Fatehabad, Sirsa and Palwal etc., which goes on fluctuating depending upon the rainfall. The district-wise details of depth to water table in Haryana is given in **Annexure-A**.

4. Progress of Sub Surface Drainage System

Sub Surface Drainage System (SSD) is well recognized as an effective technology for reclamation of water-logged and saline soils. An area of 28250 acres (11300 hectare) has been reclaimed with the technology covering 8075 no. of beneficiaries till date (**Annexure-B**). Under this technology, the work is undertaken when the fields are fallow i.e. during summer months (April to June) and for a short period after the harvest of Kharif crops and before sowing of Rabi crops (October-November).

5. Association of Irrigation Department in SSD Projects

Association of Irrigation Department in SSD projects is mandatory and highly desirable, as open surface drains and canal irrigation water which is pre-requisite for successful selection/operation of the Sub Surface Drainage Projects, both these parameters comes under Irrigation Department. Besides above, the Irrigation Department helps in (i) under taking de-silting and cleaning operation of surface drains to be utilized for disposal of SSD water and (ii) for permitting discharge of saline water in canal/distributaries passing through project area in cases of absence of surface drains.

Annexure-A

District-wise water logged area for the period June, 2020

Sr. No.	District	Geographical Area (ha)	Hilly Area (ha)	Water Logging (ha)			% Area
				0-1.5 (m)	1.5-3.0 (m)	Total	
1.	Rohtak	174500	0	16824	90548	107372	61.53
2.	Jhajjar	183400	0	14186	60584	74770	40.77
3.	Sonepat	212200	0	19729	53899	73628	34.70
4.	Bhiwani	341300	824	0	47428	47428	13.89
5.	Hisar	398300	0	2520	19841	22361	5.61
6.	Jind	270200	0	7965	17087	25052	9.27
7.	Ch. Dadri	136500	3624	5154	14140	19294	14.13
8.	Fatehabad	253800	0	1935	11700	13635	5.37
9.	Ambala	157400	300	1102	5315	6417	4.08
10.	Gurgaon	125800	3789	0	1102	1102	0.88
11.	Sirsa	427700	0	0	1100	1100	0.26
12.	Palwal	135900	129	373	560	933	0.69
13.	Karnal	252000	0	0	0	0	0
14.	Panipat	126800	0	0	0	0	0
15.	Kaithal	231700	0	0	0	0	0
16.	Kurukshetra	153000	0	0	0	0	0
17.	Y. Nagar	176800	15300	0	0	0	0
18.	Mewat	150700	13900	0	0	0	0
19.	Rewari	159400	2308	0	0	0	0
20.	M.Garh	189900	4646	0	0	0	0
21.	Faridabad	74100	8717	0	0	0	0
22.	Panchkula	89800	39356	0	0	0	0
	Total	4421200	92893	69788	323304	393092	-
	State %age	100	2.10	1.58	7.31	8.89	-

Annexure-B

SUB SURFACE DRAINAGE PROGRESS REPORT AT A GLANCE IN HARYANA

Indo Dutch Project and Macro Management Mode of Agriculture Scheme					
Sr. No.	Name of Project	Total village Covered	Reclaimed Area (ha)	No. of Beneficiaries	Remarks
1	Gohana	Moi, Bali, Katwal & Rewara	1253	872	June 1999
2	Kalayate-I	Kherilamba, Kalayat & Kurar	746	425	June 2001
3	Kalayate-II	Kalayate, Kherilamba & Kole Khan	407	300	July 2002
Total (A)			2406	1597	
Ministry of Rural Development (M.O.R.D) Scheme					
4	Jhajjar	Beri Dopana, Beri-khas, Dhandlan, Gochhi & Bakra	805	873	May, 2007
5	Ch.Dadri (Bhiwani)	Rawaldhi, Khatiwas, Loharawara, Jhinjar & Achina	904	963	July, 2008
6	Sirsa (Rori)	Surtia, Darba-kalan, Manak-Diwan & Nathusri Chaupta	479	180	June, 2010
7	Sonepat	Rindhana, Dhanana, Dhanana-II & Jagsi	1137	836	July, 2011
Total (B)			3325	2852	
Rashtriya Krishi Vikas Yojana (RKVY)					
8	Fatehabad	Banmandori	277	152	June, 2011
9	Jhajjar-II	Wazirpur, Baghpur & Beri	1034	798	June, 2012
10	Palwal	Kherli Jeeta Kanoil & Madkola	351	253	July, 2012
11	Rohtak-I	Mokhara-Kheri & Madina	980	546	July, 2013
12	Jind	Siwana-Mal, Gangana, Bambewa & Ludana	355	281	July, 2013 & Work Under Progress
13	Rohtak-II	Kharakara, Basana & Madina	526	364	July, 2014
14	Sonapat-II	Gharwal, Kohla and Banwasa	703	445	July, 2014
15	Sonepat-III	Kathura, Katwara and Ahulana	882	496	July, 2015 & work under Progress
16	Rohtak-III	Kahni, Rithal and Sangi	160	166	June, 2019
17	Hisar	HAU Hisar	40	0	June, 2018
18	Vertical Drainage Technology	Sikrona (Faridabad)	200	100	Jan, 2019
19	Gharonda	Horticulture Farm, Gharonda	1	1	
20	Ch. Dadri-II	Sarupgarh	60	24	June, 2021
Total (C)			5569	3626	
Grand Total (A+B+C)			11300	8075	