

Artificial Managed-flood to Irrigate 10000 Acres of Drought Affected

Paddy Field by Farmers in 33 Villages of Madhubani District

Mithila, the North Bihar can be said as a land of rivers, lakes and ponds. The region has best fertile agriculture land with abundance of water resource. Mismanagement of water resource/rivers has resulted in either recurrent flood or drought. People and farmers of the region have their own knowledge and technique to cope with flood or drought. This report highlights the experience of farmers of Laksena village of Madhubani district related to coping with drought. Farmers built a bundh/mud wall over Sugerbe river on 5/8/12, and thus created artificial flood to irrigate 10,000 acre drought affected paddy field. But this age-old practice by farmers of the region has not got due recognition and encouragement either by administration or NGOs.

- On 4/8/12 in the evening, two persons informed villagers of Laksena, Novtoli, Godamtol, Mahindwar, Madna and Madanpatti by drum beating to assemble on 5/8/12 early in the morning for making a temporary bundh(mud wall) on river of Sugarbe for irrigation of drought affected paddy land. More than 500 farmers participated in building the bundh on 5/8/12.
- **Sugarbey River:**
Its origin is somewhere at Barail village of Khutauna Block in Madhubani district. It flows round the year. It has width of 20 to 30 ft and deep about 15 to 20 ft. It is said that the river has source of water from artisan well and rain water from a Chaur/wetland. That's why it flows round the year.
- **Date of Construction of Bundh:**
5/8/12, Starting Time: 7am and completed at 9 pm, after 14 hours.
- 2 JCB Machines and 5 tractors have been used to bring dry soil/mitti.
- 24 hours guarding by 10 to 15 farmers in shift, additional stock of dry soil to repair the bundh.
- River flows from North to South, the dam raised the water level in the river which flows in farm land like flood water.
- The dam will be broke on 10 Aug, and again it will be built in the upstream about 2.5 to 3 km from the existing Bundh.
- Location of Temporary Bundh: Gaughat, In between Madanpatti and Godamtol village in Andhrathadhi Block of Madhubani district

Cost & Benefit Analysis

COST			BENEFIT		
1	Two JCB Machines	35,000	1	Land irrigated	+10,000 acres
2	Five Tractors	50,000	2	Per acre cost (85,000/10000 acres = Aprox. Rs. 8 to 9 per acre)	Rs. 8 to 9 per acre
3	Labour Contribution by 500 farmers	free	3	Minimum Expected Paddy Yield (10000 acres x 10 qnt per acre x 1000/per quintal= 10 crores	10 to 12Crores *
4	Bamboo & other materials	free	4	Approx. Fodder (10000 acres x 3000 per acres)	3 crores
		85,000	5	Moisture land will be available for wheat farming/seed sowing	Un-calculated
			6	Saving of diesel/natural resource (Rs. 44/ litre x 80,000 litre = Rs.35,20,000.00)	Approx. 80,000 litre or Rs. 35,20,000.00
			7	Pollution Prevention	80,000 litres of diesel not used by diesel pump set

Calculation of Irrigated Land:

- About 4 km east + 4 km west of the bundh = 8 km
- North to south of the bundh = Approx. 5 to 6 km
- Say total areas = 8 km x 5 km = 40 sq km.
- 1 sq km = 247 acres
- 40 sq km = 40 x 247 = 9,880 acres land irrigated, (say 10,000 acres).

Calculation of Yield:

- Paddy yield in one acre= minimum 10 to 12 quintals = Rs. 10,000 to 12,000/acre.
- Benefit in terms of Income: 10000 acres x 10 to 12 thousands = 10 to 12 crores.
- Fodder, per acre cost has been calculated Rs. 3,000, as suggested by local farmers.

Cost Analysis of Conventional and non-conventional Method of Irrigation:

- Cost of Irrigation by using diesel pump set= Rs. 1200 to 1400 per acre.
- So. Cost of irrigation of 10,000 acres of land = 1.2 to 1.4 crores!
- Cost by construction of temporary bundh for 10000 acres = Rs. 85000 to 90,000!

Land Get Irrigated of the following villages:

SN	Name of Villages	S N	Name of Villages	S N	Name of Villages	S N	Name of Villages
1	Laksena	9	Madana	17	Koriyapatti	25	Sohpur
2	Novtoli	10	Tharuahi	18	Rahmanganj	26	Amha
3	Madanpatti	11	Thathari	19	Navnagar	27	Musahari
4	Godamtol	12	Dihtol	20	Thadhi	28	Dihtol
5	Jalsain	13	Gosaitol	21	Sangram	29	Jagatpur
6	Bhagawatipur	14	Dhrmadiha	22	Parsha	30	Rudrapur
7	Sitapatti	15	Bachchauni	23	Sangram	31	Sudai
8	Mahindwar	16	Baika	24	Parsa	32	Ratauli 33. Khopa

Technical Details of Bundh:

- Length of Bundh : Approx 30 ft
- Height: Approx 19 ft
- Width: base level: 25 ft and upper level 6 ft
- Front Gurd of Bundh by Bamboo wall.

Suggestion:

Relief package for drought affected farmers include diesel subsidy, subsidy on purchasing of irrigation pump, subsidy on fertilizers etc. Artificial flood is best nature friendly and very low cost method of irrigation. A map of potentials rivers, their streams and sub-streams must be identified for popularization and replication of experience of Laksena village. Disaster Management Authority or Deptt. of Relief and Rehabilitation should encourage the farmers so that they can use this technique in drought period as well as in non-flood period for irrigation. NGO should undertake advocacy to promote and popularize this technique of coping with drought.

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