Release of meagre amount under AIBP

1747. SHRI DILIP KUMAR TIRKEY: Will the Minister of WATER RESOURCES, RIVER DEVELOPMENT AND GANGA REJUVENATION be pleased to state:

(a) whether it is a fact that the Central Government has released very meager amount under the Accelerated Irrigation Benefits Programme (AIBP) during the last three years; and

(b) whether it is also a fact that inadequate allocation under the programme is adversely affecting the irrigation infrastructure in the country leading to droughts in many parts of the country and if so, what steps Government is taking in this regard?

THE MINISTER OF STATE IN THE MINISTRY OF WATER RESOURCES, RIVER DEVELOPMENT AND GANGA REJUVENATION (SHRI SANWAR LAL JAT): (a) Funds released to States under Accelerated Irrigation Benefits Programme (AIBP) during the last 3 years are as follows:

Year	Amount released (₹ in crores)
2012-13	6524.00
2013-14	4033.06
2014-15	2610.33

(b) The Government has earmarked additional funds to the tune of ₹ 2500 crore for completing 23 priority projects under AIBP, by March, 2017.

Water management technology

1748. PROF. M.V. RAJEEV GOWDA: Will the Minister of WATER RESOURCES, RIVER DEVELOPMENT AND GANGA REJUVENATION be pleased to state:

(a) whether Government has taken any measures to address the gaps in water management technology transfer and performance to farmers;

(b) if so, the details therefor;

(c) if not, reasons therefor;

(d) whether Government is aware that out of 502 technologies released till now, only 110 technologies have been transferred successfully to farmers and the returns on water management technologies average 21 per cent at the research station level as compared to average 10.8 per cent at the farm level;

(e) if so, the details thereof; and

(f) if not, the reasons therefor?

THE MINISTER OF STATE IN THE MINISTRY OF WATER RESOURCES, RIVER DEVELOPMENT AND GANGA REJUVENATION (SHRI SANWAR LAL JAT): (a) to (f) Yes, Sir. To demonstrate increase in yield and income per drop of water through appropriate use of water, crop variety and agronomic practices, this Ministry has implemented Farmers' Participatory Action Research Programme (FPARP) involving 5000 demonstrations in Phase-I at a cost of ₹ 24.47 crore. This was carried out in collaboration with 60 Institutes *viz.* Agricultural Universities, Institutes of Indian Council of Agricultural Research (ICAR), International Crop Research Institute for the Semi-Arid Tropics (ICRISAT), Water and Land Management Institutes (WALMIs) and Non-Government Organizations (NGOs). During the 2nd Phase of FPARP, the work was awarded to 31 Institutes for carrying out 2921 demonstrations, at a cost of ₹ 14.43 crore.

The selected institutions under FPARP were entrusted with the responsibility of organizing these demonstrations jointly with farm families to demonstrate the proven/ approved technologies that are available off the shelf to increase the agriculture production. The details of water savings and increase in crops yields with the use of different water technologies under FPARP is given in Statement-I (*See* below).

In general, the demonstrations under FPARP show a saving of water ranging between 5% to 54% (wheat from 5% to 33%, vegetables from 23% to 40% and paddy from 25% to 54%) and crop yield improvement ranging between 10% to 62% (wheat ranging from 16% to 43%, vegetables from 10 to 23%, paddy from 10 to 62%).

The details of water savings, increase in yields and income for the different crops in various States under FPARP, is given in Statement-II.

Statement-I

Impact of demonstrations, technology-wise - in terms of water savings and increase in yields of the crops under FPARP

Sl. No.	Technologies	Water Saving (%)	Increase in Yield (%)
1.	Micro Irrigation:		
	(a) Drip Irrigation	10-75	4-100
	(b) Sprinkler Irrigation	18-80	5.03-166
2.	Rainwater harvesting structure (water storage tanks)		(Meghalaya) 20-25 (Solan-H.P.) 30-45 (J & K)} 34-54

Sl. No.	Technologies	Water Saving (%)	Increase in Yield (%)
3.	Soil moisture conservation (mulching, dead furrow, opening of furrow, tied ridging etc.)	0.7-69	2.9-150
4.	System of rice intensification (SRI)	14.24-54	11-66
5.	Broad bed and Furrow irrigation	4.9-64.9	8.4-50
6.	Deficit Irrigation	5.65-44	7.3-15.2
7.	Irrigation management/ improve irrigation method	4-44	0.78-154.5
8.	Best management including water management	4-62.5	5.9-75
9.	Refinement of existing ITK recycling Tank silt to modern technical knowledge	-	4.2-229
10.	Micro nutrient management	0.7-46	1.98.100
11.	Low cost polyhouse /net house	50	38-83.3
12	Land leveling/configuration	0.4-42.2	4.2
13.	Precision farming irrigated crops	36-64	12.39-55
14.	Precision farming dry crops	48.8-80	9-57.7
15.	Zero tillage/Zero till drill	35	7-41.8
16.	Deep tillage	0.6	21.9
17.	Conservation tillage	18.8-46.7	5.0-54.3
18.	Improved varieties	10.76-46	10.81-288
19.	Dry farming technology in soil and water conservation	-	40-140
20.	Pit method/paired row planting of sugarcane	5.41-46.7	34-82.6
21.	Sub surface method of sugarcane cultivation	40	42
22.	Showing of paddy Seeds with drum Seeder	22.4	13.43
23.	Multiple use of water	25-41.7	35-125
24.	Conjunctive use of poor quality water	-	4.3-12

Statement-II

Impact of demonstrations, crop-wise - in terms of water saving, increase in yields and income under FPARP

Sl. No.	State	Crops	Water saving (in %)	Increase in Yield (in %)	Increase in Income (in %)
1.	Andhra Pradesh	Paddy	54.1	13.2	19.3
		Cotton	17.3	33.3	08.3
		Chickpea	7	19.5	2.24-4.92
		Groundnut	15-18	16-19	1.4-7.73
		Maize	47-58	45-58	4.8-6
		Pigeon pea	60	51	6-11
2.	Assam	Paddy	30	25	25.63
3.	Chhattisgarh	Chickpea	10-21	8-43	50
		Rice	8.1-65	8-43	50
4.	Gujarat	Wheat	33	18	12.59
		Vegetables	40	10-23	15.80
		Groundnut	26	18	20
		Gram	22	15	16
5.	Haryana	Wheat	66.67	8.15	4.91

Sl. No.	State	Crops	Water saving (in %)	Increase in Yield (in %)	Increase in Income (in %)
6.	Himachal Pradesh	Vegetables	25-35	20-55	1.25-1.5:1 (B. C. Ratio)
		Fruits	30-75	30-60	-do-
7.	Jammu and Kashmir	Wheat	5	16.38	7.55
		Paddy	31	10	12
		Vegetables	30-50	32-40	3.5:1 (B. C. Ratio)
		Fruits	32-52	30-45	-do-
8.	Karnataka	Vegetables	23.3	22.4	11
		Sorghum	-	2.46	12.5
		BengalGram/Chickpea	-	22	21
		Paddy	-	32	20
9.	Kerala	Paddy	40	13.74	11.19
		Coconut	50	24	10
10.	Madhya Pradesh	Gram	33	30	18
		Chickpea	13-33	28-52	₹ 10000/ha.
		Soya bean	25	33	₹ 5000/ha
11.	Meghalaya	Vegetables	-	30	-

12.	Maharashtra	Wheat	20	42.85	30
		Cotton	20.94	25.71	25
		Maize	12	48	34.22
		Potato	20.94	42.2	35
		Onion	20.94	30.8	35
13.	Odisha	Paddy	31	18	6
14.	Punjab	Wheat	-	4.3	6.2
		Paddy	21.4	12	4.8
		Cotton	26	10.5	10.3
		Vegetables	25.	5-15	16.3
15.	Rajasthan	Wheat	15.54	7.3	7.41
		Mustard	59	58	2.3:1 (B.C. Ratio)
		Chickpea	48	48	7.8:1 (B.C. Ratio)
		Maize	10	10	-
		Pearl Millet	10	7	-
		Sorghum	8-18	8-14	-
		Groundnut	16	16	-

Sl. No.	State	Crops	Water saving (in %)	Increase in Yield (in %)	Increase in Income (in %)
16.	Tamil Nadu	Paddy	55	23	44
		Sugarcane	38.6	34	10
		Coconut	43.66	-	40-50
		Turmeric	35	57	40-50
		Banana	28	42	40-50
		Maize	28	6	40-50
		Vegetables	32	8-9	40-50
17.	Uttar Pradesh	Paddy	35	30	32
18.	Uttarakhand	Wheat	31	43	22.23
		Millet	-	8-30	-
		Vegetables	-	27-41	-
19.	West Bengal	Paddy	25	62	40
		Colocacia	40	36.66	4-5.1:1 (B.C. Ratio)
		Maize	40	35.5	-do-
		Sunflower	25	125	-do=
		Sesame	41.7	50	-do-