

GOVERNMENT OF INDIA
MINISTRY OF FOOD PROCESSING INDUSTRIES
LOK SABHA
UNSTARRED QUESTION NO. 837
ANSWERED ON 23TH JULY, 2026

ASSESSMENT OF INTEGRATED COLD CHAIN

837. SHRI SRIBHARAT MATHUKUMILLI:

Will the Minister of **FOOD PROCESSING INDUSTRIES** be pleased to state:

- (a) whether the Government has undertaken any impact assessment of the Integrated Cold Chain and Value Addition Infrastructure component of the Pradhan Mantri Kisan SAMPADA Yojana (PMKSY), if so, the details of reduction in post-harvest losses, increase in food processing capacity and improvement in farmers' price realization recorded after commissioning of such projects, the commodity-wise and State-wise;
- (b) the estimated post-harvest losses, existing cold storage capacity, additional cold storage capacity required and the identified gaps between demand and available capacity as per the latest assessment, commodity-wise and State-wise;
- (c) whether Government has identified districts or value chains where post-harvest losses continue to remain high despite the creation of cold chain infrastructure and if so, the reasons therefor and the corrective measures proposed therein; and
- (d) the details of projects sanctioned, completed and operational, funds sanctioned and released, storage capacity created, average capacity utilisation under the scheme, State-wise?

ANSWER

THE MINISTER OF STATE FOR FOOD PROCESSING INDUSTRIES
(SHRI RAVNEET SINGH)

(a) & (b): The Ministry of Food Processing Industries (MoFPI) has commissioned a study on Impact Evaluation of Integrated Cold Chain and Value Addition Infrastructure Scheme (Cold Chain scheme) during 2025 through Academy of Management Studies, New Delhi. The above study reported that the commissioning of cold chain projects under the Cold Chain scheme has led to reduction in post-harvest losses, increase in processing and preservation capacity across the country and thereby assisting farmers in achieving better price realization for their farm produce.

To quantify post-harvest losses, the Ministry relies on periodic studies rather than annual estimates. These studies were conducted by the Ministry through (i) Central Institute of Post-Harvest Engineering & Technology (CIPHET), Indian Council of Agricultural Research(ICAR) – during 2015 with reference year 2012-14 and (ii) NABARD Consultancy Services Pvt. Ltd. (NABCONS) during 2022 with reference year 2020-22. As per these studies, the estimated percentages of post-harvest losses of various agricultural produce in the country are as mentioned below:

Crops/ Commodities	Estimated Percentage Loss	
	As per ICAR-CIPHET study (2015)	As per NABCONS study (2022)
Cereals	4.65 - 5.99	3.89-5.92
Pulses	6.36 - 8.41	5.65-6.74
Oil Seeds	3.08 - 9.96	2.87-7.51
Fruits	6.70-15.88	6.02-15.05
Vegetables	4.58-12.44	4.87-11.61
Plantation Crops & Spices	1.18-7.89	1.29-7.33
Milk	0.92	0.87
Fisheries (Inland)	5.23	4.86
Fisheries (Marine)	10.52	8.76
Meat	2.71	2.34
Poultry	6.74	5.63
Egg	7.19	6.03

State-wise post-harvest losses of major crops in percentage provided as per the NABCONS study (2022) is provided at **Annexure-I**. As per the data compiled and provided by the Department of Agriculture and Farmers Welfare, the existing cold storage capacity across the country as on 31.01.2026 is 402.87 lakh MT. As per the latest study on Impact Evaluation of Integrated Cold Chain and Value Addition Infrastructure Scheme during 2025 conducted by this Ministry through Academy of Management Studies, New Delhi, there is a gap of 48.03 lakh MT between the existing and required cold storage facility.

(c): The Cold Chain scheme operates on a demand driven basis, with Expressions of Interest issued periodically to invite proposals from the eligible entities nationwide, contingent upon fund availability. Importantly, proposals are considered irrespective of specific districts or value chains. To address post-harvest losses, the Ministry has conducted studies that provide crop-wise estimates across the supply chain. These assessments detail losses at various stages of different commodities, along with the primary causes and critical loss points. These findings inform policy measures and guide infrastructure development aimed at reducing losses. These studies do not furnish district-wise estimates of post-harvest losses of crops.

(d): As of 30.06.2026, under the Integrated Cold Chain and Value Addition Infrastructure (Cold Chain scheme) component of Pradhan Mantri Kisan Sampada Yojana (PMKSY), a total of 409 projects have been approved, with a sanctioned grant-in-aid of ₹3089.08 crore, of which, ₹2540.89 crore has already been disbursed. Of these approved projects, 311 have been successfully completed and operationalized, leading to the creation of a cumulative cold storage capacity of 9.236 lakh metric tonnes. A comprehensive State-wise breakdown of the

approved, completed and operational projects, along with the funds sanctioned and released along with total cold storage created is furnished in **Annexure-II**. Furthermore, the sector-wise average capacity utilization of various components supported under these projects has also been assessed; these utilization figures are drawn from the Ministry's 2020 evaluation study – titled "Impact of units implemented under Scheme for Integrated Cold Chain and Value Addition Infrastructure assisted by Ministry of Food Processing Industries" conducted by NABCONS Pvt. Ltd., and are detailed in **Annexure-III**.

ANNEXURE-I

Annexure-I referred in reply to part (a) & (b) of the Lok Sabha Unstarred Question No. 837 for answer on 23.07.2026 regarding “Assessment of Integrated Cold Chain”

State-wise Post-Harvest Losses of Major crops in percentage

Sl. No.	State/ UT	Post-harvest losses of crops in percentage																
		Bajra	Banana	Black gram	Cashew nut	Chickpea	Chili	Citrus	Coconut	Cotton seed	Egg	Green gram	Ground nut	Inland fish	Maize	Manago	Marijuana	Areca nut
1.	Andhra Pradesh	5.07	9.33	5.56	4.82	5.71	7.06	7.97	4.32	3.03	5.47	6.17	6.58	4.68	5.98	7.90	8.50	
2.	Assam										6.05							
3.	Andaman & Nicobar Islands								4.25									6.44
4.	Bihar											6.06			5.83	10.10		
5.	Chhattisgarh																	
6.	Gujarat	4.41	7.59	4.8						2.93		5.85	5.31		5.18			
7.	Haryana	3.77				5.66				2.55	6.74							
8.	Himachal Pradesh														2.27			
9.	Jharkhand																	
10.	Jammu & kashmir										6.08				3.92			
11.	Kerala				3.07				3.61		5.53						8.75	4.01
12.	Karnataka	5.03			3.17				3.78		5.64				4.41		8.97	4.15
13.	Madhya Pradesh	4.53		6.73		5.85	6.29	7.4			6.33		6.11		6.3			
14.	Maharashtra	4.21	6.06	7.48		5.4		8.79		2.98	5.55	5.9	6.16		5.3	8.61	8.8	
15.	Meghalaya				4.53													
16.	Nagaland																	
17.	Odisha					6.09					6.63	6.11		5.68			9.89	
18.	Punjab							5.4							6.91			

19	Rajasthan	5.03		5.74		5.83				2.53		6.21	5.03		5.81			
20	Tamil Nadu		7.47	5.93							6.6		5.31		4.39		9.14	
21	Telangana						6.06	7.73		3.04	5.36	6.24	6.67		6.51			
22	Uttarakhand																	
23	Uttar Pradesh	4.11		6.11							6.06				5.77			
24	West Bengal										7.07	6.24	7.24	3.79	5.42		8.94	

Sl. No.	State/ UT	Post-harvest losses of crops in percentage														
		Milk	Musk melon	Paddy	Papaya	Pomegranate	Poultry Meat	Sorghum	Tapioca	Tomato	Turmeric	Cabbage	Meat	Mushroom	Pineapple	Radish
1	Andhra Pradesh	0.58	7.42	5.73	6.58	8.69	7.39	5.67	-	12.36	4.97	-				
2	Assam			6.07			6.61					7.38	3.44	4.48	7.11	5.14
3	Andaman & Nicobar Islands															
4	Bihar			4.65								8.7			5.89	5.11
5	Chhattisgarh			3.92												6.66
6	Gujarat	0.5		4.54	5.81					10.97		8.39				
7	Haryana	0.74					4.63						2.88	5.91		7.51
8	Himachal Pradesh													6.01		
9	Jharkhand				6.73											
10	Jammu & kashmir															
11	Kerala						5.32		4.8				2.2			
12	Karnataka					8.19				9.97	4.63				3.73	
13	Madhya Pradesh	0.53	5.76	4.20						11.85						
14	Maharashtra	0.65		4.44		6.02	4.78						2.78	9.24		
15	Meghalaya								4.99		5.64					
16	Nagaland								5.42							
17	Odisha			4.17						13.19		8.08		13.64		
18	Punjab	0.63	5.48	3.15										6.7		
19	Rajasthan	1.35														
20	Tamil Nadu			5.98			6.08						3.04	11.03		
21	Telangana						8.12						1.61			
22	Uttarakhand	1.16		2.87												
23	Uttar Pradesh	1.12	7.25	4.00			7.24						2.8	2.74		
24	West Bengal	1.09		5.14			5.41					8.71	2.41		5.66	6.45

Sl. No.	State/UT	Post-harvest losses of crops in percentage														
		Bottle Gour d	Brinjal	Cauliflowe r	Guava	Inland fis h	Okra	Potato	Sugarcane	Sunflower	Sapota	Onion	Mustard	Wheat	Beans	Pigeon pea
1	Andhra Pradesh															
2	Assam															
3	Andaman & Nicobar Islands															
4	Bihar	7.35	7.52	6.76	15.36	5.99	6.27	6.11	8.99	5.18						
5	Chhattisgarh	6.77			13.79											
6	Gujarat		6.99	7.99			5.79	5.18			7.47	7.57	4.38	5.18	6.65	4.27
7	Haryana								6.34	4.44			4.52	4.37		
8	Himachal Pradesh													3.32		
9	Jharkhand															
10	Jammu & Kashmir															
11	Kerala															
12	Karnataka					4.82			4.84	4.22		8.70			7.33	4.57
13	Madhya Pradesh	7.46		6.46	14.93		5.84	7.00				8.11	4.86	4.94		6.43
14	Maharashtra								8.61	4.93		6.78				6.90
15	Meghalaya															
16	Nagaland															
17	Odisha	7.57	7.30	7.65			6.25									
18	Punjab							5.57	4.38					4.55		
19	Rajasthan												4.75	6.25		
20	Tamil Nadu								8.65						7.82	
21	Telangana															5.01
22	Uttarakhand								5.46					2.51		
23	Uttar Pradesh	6.43				4.99		5.82	6.91				5.97	6.36		
24	West Bengal		7.85	7.26	15.86		6.05	5.71		5.21			6.21	6.13	5.48	

Annexure-II referred in reply to part (d) of the Lok Sabha Unstarred Question No. 837 for answer on 23.07.2026 regarding “Assessment of Integrated Cold Chain”

State-wise details of projects approved, completed and operational, Grants-in-aid approved, Grants-in-aid released and total cold storage capacity created from the completed projects

Sl. No.	State/UT	No. of projects approved	No. of Completed/ Operational	Approved GIA (₹in cr.)	Released GIA (₹in cr.)	Total Cold Storage capacity created from completed projects (Lakh MT)
1	Andaman & Nicobar	1	1	2.81	2.81	0.00600
2	Andhra Pradesh	37	25	313.67	245.82	0.45614
3	Arunachal Pradesh	2	1	15.59	6.46	0.01000
4	Assam	2	2	17.37	17.37	0.081
5	Bihar	5	3	39.85	34.86	0.366
6	Chandigarh	0	0	0.00	0.00	0.00
7	Chhattisgarh	4	2	30.41	11.52	0.085
8	Dadra & Nagar Haveli and Diu & Daman	0	0	0.00	0.00	0.00
9	Delhi	0	0	0.00	0.00	0.00
10	Goa	0	0	0.00	0.00	0.00
11	Gujarat	29	25	233.27	203.77	0.568
12	Haryana	23	18	174.00	147.67	0.547
13	Himachal Pradesh	16	14	138.10	130.92	0.35
14	Jammu & Kashmir	7	5	52.83	32.83	0.053
15	Jharkhand	0	0	0.00	0.00	0.00
16	Karnataka	20	14	147.37	101.39	0.288
17	Kerala	8	4	56.96	24.31	0.411
18	Ladakh	0	0	0.00	0.00	0.00
19	Lakshadweep	0	0	0.00	0.00	0.00
20	Madhya Pradesh	11	9	83.03	71.20	0.221
21	Maharashtra	77	59	543.37	458.30	1.768
22	Manipur	1	1	9.96	9.96	0.029
23	Meghalaya	0	0	0.00	0.00	0.00
24	Mizoram	2	2	12.77	12.77	0.005

25	Nagaland	2	1	12.48	8.39	0.010
26	Odisha	9	5	71.38	52.05	0.11886
27	Pondicherry	0	0	0.00	0.00	0.00
28	Punjab	25	21	157.03	138.40	0.566
29	Rajasthan	14	13	83.42	81.00	0.435
30	Sikkim	0	0	0.00	0.00	0.00
31	Tamil Nadu	26	15	187.02	119.72	0.349
32	Telangana	15	11	113.03	93.54	0.188
33	Tripura	0	0	0.00	0.00	0.00
34	Uttar Pradesh	26	21	207.21	190.54	0.627
35	Uttarakhand	30	27	275.10	265.64	1.009
36	West Bengal	17	12	111.05	79.65	0.689
	Total	409	311	3089.08	2540.89	9.236

Annexure-III referred in reply to part (d) of the Lok Sabha Unstarred Question No. 837 for answer on 23.07.2026 regarding “Assessment of Integrated Cold Chain”

Sector-wise/ component-wise capacity utilisation of cold chain projects approved under Cold Chain scheme

Sector	Average Percentage Capacity Utilisation of components supported in Cold Chain projects					
	Single Cycle Components					
	IQF	Plate Freezer	Blast Freezer	Primary Processing	Sorting Grading Line	Packaging Line
Dairy	2	-	78	4	-	89
Fisheries	58	26	14	27	-	59
Fruit & Vegetable	26	20	-	68	39	12
Meat	41	49	56	23	-	-
Sector	Multi Cycle Components					
	Cold Storage/ CA		Reefer Vans/ Insulated Vans	Deep Freezer	Precooling units	
Dairy	42		78	15	-	
Fisheries	61		7	1	-	
Fruit & Vegetable	33		19	14	33	
Meat	13		-	68	45	
