

**New technologies/systems to check the loss of foodgrains**

\*243. SHRI T.T.V. DHINAKARAN: Will the Minister of AGRICULTURE be pleased to state:

(a) whether it is a fact that Government have assigned the task of evolving new technologies/systems to check the loss of foodgrains and post-crop production to some Central Research Organisations;

(b) if so, the details thereof; and

(c) whether any headway has been made so far?

THE MINISTER OF AGRICULTURE (SHRI SHARAD PAWAR): (a) to (c) A Statement is laid on the Table of the House.

**Statement**

(a) Yes, Sir.

(b) Indian Council of Agricultural Research in the Department of Agricultural Research and Education, Ministry of Agriculture and Indian Grain Storage Management and Research Institute, Hapur in the Ministry of Consumer Affairs, Food and Public Distribution have the mandate to develop new techniques/systems to check the losses in foodgrains and post harvest production.

The Indian Council of Agricultural Research has assigned the responsibility to:—

1. Central Institute of Post Harvest Engineering and Technology, Ludhiana; and
2. All India Coordinated Research Project on Post Harvest Technology through its 33 cooperating centres [Statement-I (See below)] located throughout the country.

Indian Grain Storage Management and Research Institute, Hapur conducts applied research in the field of foodgrain storage and preservation.

(c) Some of the appropriate technologies/systems developed to check the loss of foodgrains and post harvest production have been given in Statement-II.

**Statement-I*****Locations of Centres of All India Coordinated Research Project on Post Harvest Technology***

Sl.No.	State	District	Location
1	2	3	4
1.	Maharashtra	Akola	Punjabrao Krishi Vishvavidyalaya
2.	Orissa	Bhubaneswar	Orissa University of Agri. & Tech.
3.	Madhya Pradesh	Bhopal	Central Institute of Agri. Engg.
4.	Rajasthan	Jodhpur	Central Arid Zone Research Institute
5.	Madhya Pradesh	Jabalpur	Jawahar Lal Nehru Krishi Vishvavidyalaya
6.	Gujarat	Junagadh	Gujarat Agricultural University Institute
7.	Kerala	Kasargod	Central Plantation Crops Research Institute
8.	West Bengal	Midnapore	Indian Institute of Technology, Kharagpur
9.	Punjab	Ludhiana	Punjab Agricultural University
10.	Kerala	Thiruvananthapuram	Central Tuber Crops Research Institute
11.	Rajasthan	Udaipur	Maharana Pratap University of Agriculture & Technology
12.	Uttar Pradesh	Faizabad	Narendra Dev University of Agriculture & Technology
13.	Andhra Pradesh	Bapatla	Andhra Pradesh Agricultural University
14.	Bihar	Samastipur	Rajendra Agricultural University
15.	Chhattisgarh	Raipur	Indira Gandhi Agricultural University
16.	Jammu & Kashmir	Srinagar	Sher-e-Kashmir University of Agricultural Sciences and Technology
17.	Uttaranchal	Almora	Vivekanand Parvatiya Krishi Anusandhanshala
18.	Uttaranchal	Udham Singh Nagar	G.B. Pant University of Agri. & Technology
19.	Tamil Nadu	Coimbatore	Tamil Nadu Agricultural University
20.	Karnataka	Bangalore	University of Agricultural Sciences
21.	Assam	Jorhat	Assam Agricultural University
22.	Uttar Pradesh	Aligarh	Aligarh Muslim University

1	2	3	4
23.	Haryana	Hisar	Haryana Agricultural University
24.	Kerala	Trichur	Kerala Agricultural University
25.	Rajasthan	Bikaner	Rajasthan Agricultural University
26.	West Bengal	Kolkatta	West Bengal University of Fisheries and Animal Sciences
27.	Tamil Nadu	Chennai	Tamil Nadu Veterinary and Animal Sciences University
28.	Himachal Pradesh	Solan	Dr. Yashwant Singh Parmar University of Horticulture & Forestry
29.	Karnataka	Dharwad	University of Agricultural Sciences
30.	Uttar Pradesh	Lucknow	Indian Institute of Sugarcane Research
31.	Maharashtra	Kolhapur	Regional Sugarcane and Jaggery Res. Station
32.	Andhra Pradesh	Anakapalle	Regional Agricultural Research Station
33.	Assam	Jorhat	Assam Agricultural University

### ***Statement-II***

#### ***Appropriate technology/systems to check the loss of foodgrains and post harvest production***

- Optimum stage of harvesting for rice, sorghum, groundnut, pigeonpea etc. (JNKVV, Jabalpur, PKV, Akola, IIT, Kharagpur, OUA&T Bhubaneshwar and other centres)
- Plant material based stored grain disinfectants (GBPUA&T Pantnagar)
- Low cost grain infestation detector (CIAE, Bhopal)
- Evaporatively cooled storage structures for oranges and potato (PKV, Akola)
- Temporary crop covering devices (PKV, Akola)
- Groundnut pod grader (power operated) (TNAU, Coimbatore)
- Rotary screen grain pre-cleaner (PAU, Ludhiana)

- Single and double drum paddy grain pre-cleaner (PAU, Ludhiana)
- Paddy winnower (TNAU, Coimbatore)
- Mango grader (GBPUAT, Pantnagar)
- Storage technology for pulses (JNKVV, Jabalpur)
- Rapid curing of betel leaf (OUA&T, Bhubaneshwar)
- Trolley-cum-batch type drier (PAU, Ludhiana)
- Paddy husk fired furnace (GBPUA&T, Pantnagar)
- Solar heat treatment machine for seeds (RAU, Udaipur)
- Osmo-vac drying of mushrooms (GBPUA&T, Pantnagar)
- Batch type drier for arcanuts (UAS, Bangalore)
- Cardamom drier (UAS, Bangalore)
- Sun drying of chillies on different floors (CIAE, Bhopal)
- Solar-cum-husk fired paddy drier (CRRRI, Cuttack)
- Solar Cabinet drier (RAU, Udaipur)
- Solar batch-in-bin drier (JNKVV, Jabalpur)
- Process for erogt-bajra separation (RAU, Udaipur)
- Solar drier-cum-green house (GAU, Junagarh)
- Household paddy parboiling unit (TNAU, Coimbatore)
- Chittore stone bin for safe storage of food grains (RAU, Udaipur)
- Low cost seed storage bins from used bitumen drums (CIAE, Bhopal)
- G.I. sheet metal bins for storage of foodgrains (PAU, Ludhiana, CIAE, Bhopal)
- Use of biogas for stored grains insects disinfestation (PAU, Ludhiana)
- Safe storage of soybean seeds (CIAE, Bhopal)
- Use of Acorus calamus as grain protectant (JNKVV, Jabalpur)
- Plywood bin (PAU, Ludhiana)

- Natural air ventilated onion storage structure (CIAE, Bhopal)
- Use of activated clay as grain protectant (JNKVV, Jabalpur)
- Infrared seed treater (TNAU, Coimbatore)
- Magnetic treater for seed (PKV, Akola)
- Packaging of banana for enhanced shelf life (TNAU, Coimbatore)
- Packaging of mango (GAU, Junagadh)
- Process for bottling of sugarcane Juice (TNAU, Coimbatore)
- Snowball tender coconut machine (CPCRI, Kasargod)
- Small scale bailing gadget for straw (GAU, Junagadh)
- Straw bailing system (CIAE, Bhopal)
- Sunflower decortication (UAS Bangalore, CIAE Bhopal)
- Groundnut stripper (TNAU, Coimbatore)
- Alkali treater for straw (GBPUA&T, Pantnagar)
- Roller sugarcane crusher (TNAU, Coimbatore)
- Coconut dehusker (TNAU, Coimbatore)
- Cassava chipper (TNAU, Coimbatore)
- Pearler for sorghum (TNAU, Coimbatore)
- Power operated groundnut decorticator (TNAU, Coimbatore)
- Paddy parboiling process (IIT, Kharagpur)
- Farm level paddy parboiling tank (CRRI, Cuttack)
- Briquetting of bio-mass and pyrolyser (JNKVV, Jabalpur, PAU Ludhiana)
- Briquetting of wir pith (TNAU, Coimbatore)
- Turmeric boiler (TNAU, Coimbatore)
- Oleoresin from ginger (AAU, Jorhat)
- Production of ragi flour (UAS, Bangalore)

- Puffing of coarse cereals (IIT, Kharagpur)
- Roofing tiles from soybean straw and cement (JNKVV, Jabalpur)
- Guava toffee (JNKVV, Jabalpur)
- Tamarind kernel paste (UAS, Bangalore)
- Infrared stabilization of rice bran (GBPUA&T, Pantnagar)
- Board from leather dust and banana pseudo-stem (TNAU, Coimbatore)
- Post Harvest Management of turmeric (OUAT, Bhubaneshwar)

SHRI T.T.V. DHINAKARAN: Sir, what is the quantum of annual foodgrains loss due to post harvest management problem in the country and has that come down or gone up over the years?

SHRI SHARAD PAWAR: Will you please repeat the question?

SHRI T.T.V. DHINAKARAN: Sir, what is the quantum of annual foodgrains loss due to post harvest management problem in the country and has that come down or gone up over the years?

SHRI SHARAD PAWAR: You see, losses are there in foodgrains sector, losses are there in horticulture sector and losses are there in milk sector. In the milk sector, they are one per cent of the total production; 10 per cent in the foodgrains sector; and 30 to 40 per cent. in the horticulture sector. The total value of the losses is about Rs. 50, 000 crores.

SHRI T.T.V. DHINAKARAN: Sir, Tamil Nadu is a major producer of paddy and there is a huge loss of paddy everywhere. Will the Government set up a Grain Storage Management and Research Centre in Tamil Nadu to prevent the loss of foodgrains, particularly during the harvest season?

SHRI SHARAD PAWAR: It is not a question of one State. The total approach here is to review these losses and the work has been going on crop-wise and that is for the whole country. That includes Tamil Nadu also.

श्री मूल चन्द मीणा: सभापति जी, खाद्यान्नों और कटई के उपरान्त उत्पादन में हानि को रोकने के लिए मंत्री जी ने नई तकनीक व प्रणाली की बात की है। मैं माननीय मंत्री जी से यह जानना चाहूंगा कि पिछले तीन सालों में, प्रति वर्ष, इस प्रणाली के ऊपर कितना खर्च किया गया है?

श्री शरद पवार: सर, इसके लिए जो टोटल प्रावधान बजट में किया गया है, संशोधन और रिसर्च के लिए, in the Tenth Plan is Rs. 38 crores and 94 lakhs. In the Ninth Plan, it was Rs. 11 crores and 84 lakhs.

**SHRI RAVULA CHANDRA SEKAR REDDY:** Sir, we are aware that foodgrains saved are foodgains produced. Sir, we are very weak in post-harvest management. As you have rightly stated, we are losing Rs. 50,000 crores by post-harvest management problem. Sir, I would like to know from the hon. Minister since it is 30 to 40 per cent losses in horticulture, what exactly is the programme of the Government of India so as to save the farmers? More particularly, I would like to cite the example of lime and tomato in Andhra Pradesh in Chittoor-Cuddapah districts where people have thrown them to the streets. So, I would like to know from the hon. Minister, to have a special stress on these two—lime and tomato—what exactly is the amount proposed to be spent?

**SHRI SHARAD PAWAR:** You see, the basic reason here is that we have not provided for infrastructure for the food processing units, and especially, in respect of the horticulture products, the losses are more because hardly 2 per cent of the produce is processed in this country. If you compare it with some other country, for instance, Malaysia. Malaysia processes about 80 per cent of its produce, Philippines processes about 45 per cent, china processes about 23 per cent and in India, we process hardly 2 per cent. That is the reason why we are incurring such huge losses. The Ministry of Food Processing Industries is handling this particular subject, and recently, a number of schemes have been introduced by the Ministry of Food Processing Industries just to give more weightage, more support to the new entrepreneurs who would like to go in this line.

**श्रीमती सुषमा स्वराज:** सभापति जी, मैं मंत्री महोदय से जानना चाहती हूँ कि क्या मंत्री जी को इस बात की जानकारी है कि खाद्यान्नों में होने वाले नुकसान का एक बड़ा कारण गोदामों में रखे हुए अनाज का सड़ना है? इसका एक प्रमुख कारण यह है कि हमारे यहां गोदामों में जब अनाज रखा जाता है तब पुरानी बोरियों के ऊपर हर वर्ष नया अनाज खरीद कर रख दिया जाता है और जब उसे पीन्डीणस के लिए उठाया जाता है तब वे नई बोरियां उठ जाती हैं और पुराना अनाज पड़ा रह जाता है। वही अनाज चार-पांच वर्ष के बाद सड़ जाता है और खाने योग्य नहीं रहता, जिससे नुकसान होता है। विदेशों में इस प्रकार की तकनीक है कि कन्वेयर बेल्ट जैसे उपकरण के माध्यम से पहले नीचे की बोरियां निकाली जाती हैं और बाद में ऊपर की बोरी निकलती हैं जिससे बराबर नीचे वाला अनाज हर वर्ष निकलता रहता है और वह अनाज पुराना नहीं हो पाता है। आप जिस नई तकनीक की बात कर रहे हैं, क्या मंत्री जी इस तरह की तकनीक का इस्तेमाल भारत में करने की बात करेंगे, जिससे नीचे की बोरी पहले उठाई जाए और पुरानी बोरी पुरानी न होने पाए? इस प्रकार यह जो हमारा करोड़ों रुपये का नुकसान अनाज सड़ने के कारण हो जाता है वह बच सके।

**श्री शरद पवार:** आपने जो सुझाव दिया, इस पर पिछले कुछ दिनों से डिस्कशन भी हो रही है और कोई रास्ता निकालने की कोशिश भी की जा रही है। एक दूसरा सुझाव जो हमारे सामने आया है वह साइलोज का है। इसमें हम साइलोज के बारे में ज्यादा ध्यान दे सकते हैं और इस पर भी कार्य करना चाहते हैं। किन्तु यह तीन या चार साल का स्टॉक रखना गलत है और हम इस पर ध्यान दे रहे हैं कि एक साल से अधिक स्टॉक हम न रखें जिससे नुकसान न हो। आपने जो सुझाव दिया है, इस पर भी ध्यान दिया जाएगा।

**DR. M.S. GILL:** Thank you, Sir. With your assistance, I would express to the Minister, first that the answer is very disappointing. Infact, it gives really no information. The question asked is: Give us the details. Who have you asked to do some research for processing across Indian agriculture? Give us some details and some knowledge. Now, all that we have in the next three pages of your answer is the list of the institutions, where they are located and so on. That is all. Of course, the Minister has been giving something else. But this is a major problem of Indian agriculture, processing to save the crop from loss. Everybody would say it, and this continues. But I hope, the Minister can, with the Ministry of Food Processing Industries together, give us a detailed note which enlightens us somewhat. Thank you.

**SHRI SHARAD PAWAR:** Sir, I will be happy to give a detailed note and circulate it among the hon. Members. But if you read Annexure No. 2, the entire list is giving a detailed information. Now, the first optimum stage of harvesting for rice, sorghum, groundnut etc. that job has been given to Jabalpur, PKV, Akola and IIT, Kharagpur. Like that, there are more than 70 places where work has been going on. What type of technology they are developing, those details are also given. But still, if the hon. Member wants more information, I have no hesitation to provide that information.

**SHRIMATI S.G. INDIRA:** Sir, I would like to know from the hon. Minister whether the Government is considering the proposal to enhance the production of horticulture products to 300 million tonnes and bring 40 lakh hectares of land under horticulture. In order to achieve that target, whether the Government is also concentrating on the ways and means to enhance horticulture production. In Tamil Nadu, the hon'ble Chief Minister is very particular about the Wasteland Development Schemes. I would also like to know from the hon. Minister whether the Government is considering to convene a meeting of the State Ministers to chalk out a strategy.



**SHRI SHARAD PAWAR:** Sir, the former Prime Minister, Shri Atal Bihari Vajpayee, in one of the policy statements had announced that the horticultural production would be doubled in the next four years' time. The Government and the Agriculture Ministry are working to execute that particular commitment which has been made by our former Prime Minister. A new proposal has been prepared, and has been submitted to the Planning Commission, where we are expecting to invest about Rs. 15,000 crores in the next five years and we would like to convert substantial areas under the wasteland essentially into horticulture. That includes all the States including North-East.

**SHRI JAIRAM RAMESH:** Sir, this issue has been on the agenda for the last 25 years. The hon. Minister has identified 23 sectors and 65 different technologies that are under developed. I would like to put a very pointed question to him. Is there any one success story that we have in the country through which we can say that the post-harvest losses have been reduced? Just one big success story.

**SHRI SHARAD PAWAR:** Sir, the main thing is that unless and until we set up substantial agro-processing units, we will not be able to get success. The country has neglected this particular thing; we have to give a lot of weightage to it. That will bring success, and that will save a lot of farmer's money.

### **CGHS Homoeopathic Dispensaries**

**\*244. SHRI DWIJENDRA NATH SHARMA:** Will the Minister of HEALTH AND FAMILY WELFARE be pleased to state:

(a) the details of new CGHS Homoeopathic Dispensaries opened in Delhi since 1987 till date, year-wise and location-wise;

(b) if not, the specific reasons therefor;

(c) the number of new CGHS Allopathic dispensaries opened in Delhi since 1987 till date, year-wise and location-wise; and

(d) the necessary steps being taken by Government to set up new CGHS Homoeopathic dispensaries in comparison to Allopathic dispensaries in Delhi?