

has plans for buying 600 MT. They have already purchased 200 MT. STCL has a plan to buy 1,000 MT. And they have just purchased some quantity. We have directed the STC to enter the market and buy pepper on commercial consideration. Sir, when these agencies enter the market, that chop will certainly create a spurt in the market and the price will go up.

SHRI PALA K.M. MATHEW: The basic problem is the low and most unremunerative price of pepper which makes it impossible for the farmer to even bear the cost of production. So, I would like to know, through you, from the Minister whether the Government would fix a minimum floor price of Rs. 60 per kilo so that it will become remunerative for the farmer. I would also like to know as to what further steps the Government will take to increase exports. Would the Government constitute a Pepper Board to increase productivity as also a pepper research centre to deal with diseases and all that?

MR. SPEAKER: He wants four in one.

PROF. P.J. KURIEN: Sir, Government appreciates and fully understands the problem of the farmers. That is why, we are taking certain steps. But price is beyond our control. Two-thirds of our pepper was being exported. Unless we get export orders and unless international market prices go up, we will not be able to just announce a higher price.

SHRI PALA K M MATHEW: I asked for minimum floor price.

PROF. P.J. KURIEN: So, price is beyond our control. Then, with regard to the specific suggestion of the hon. Member on minimum floor price, even if they procure at minimum floor price, where will we stand? Can we ask our people to eat more pepper? Nobody will eat more pepper. We have to only export. Therefore, it is again market or

commercial consideration. However, the Kerala Government has been asked to put up a proposal for some kind of a market intervention. For such a scheme, the State Government should bear 50 percent of the cost. If such a proposal comes, then the Government is prepared to consider that proposal.

Regarding Pepper Board, there is already Spices Board which takes care of all the activities of all the spices. All problems of pepper are being dealt with by the Spices Board. So, I do not think there is any need of having another Board. It will only duplicate the work.

SHRI P.C. THOMAS: It is a welcome step which the Minister and the Government has taken in regard to cess. That will, of course, give a boost to the price. But as the Minister has said, it is very difficult to make people eat more pepper. So, I would suggest and appeal that the Government should think of starting new pepper-based industries so that we can consume and process pepper, make new product out of pepper, export it to find a very good market in the international market for pepper. Could you kindly do something on that?

PROF. P.J. KURIEN: We are also trying to have more value addition to pepper. We are encouraging export-oriented units producing oleoresins from pepper. I would request the hon. Member to use his good offices to bring more proposals so that we can support such proposals.

Investment R & D

27. **SHRI BIR SINGH MAHATO:** Will the PRIME MINISTER be pleased to state:

(a) whether Research and Development investment in India is low as compared to other developed and developing countries;

(b) if so, the specific steps taken to improve the situation, and

(c) the comparative figures in respect of per capital expenditure on Research and Development in the developing and developed countries?

THE MINISTER OF STATE IN THE MINISTRY OF PARLIAMENTARY AFFAIRS AND THE MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY (DEPARTMENTS OF ELECTRONICS AND DEPARTMENT OF OCEAN DEVEL-

OPMENT) (SHRI RANGARAJAN KUMARMANGALAM): (a) to (c). A Statement is laid on the Table of the House

STATEMENT

(a) and (b). Per Capita Research and Development expenditure in India is low as compared to that of the developed countries, but is higher than what is the case for some of the developing countries. The Research and Development Expenditure in India has been increasing from year to year

STATEMENT

(a) and (b). Per Capita Research and Development expenditure in India is low as compared to that of the developed countries, but is higher than what is the case for some of the developing countries. The Research and Development Expenditure in India has been increasing from year to year.

(c) Per Capita Expenditure on Research and Development in some Developing and Developed Countries in US

Sl. No.	Country	Year	Per Capita R&D expenditure
1	2	3	4
1.	Australia	1987	153.85
2.	Austria	1985	110.71
3.	Brazil	1985	6.41
4.	Canada	1987	216.06
5.	Cuba	1987	30.14
6.	Czechoslovakia	1988	177.43
7.	Denmark	1987	283.30
8.	Egypt	1982	1.29
9.	Federal Republic of Germany	1987	523.98

Sl. No.	Country	Year	Per Capita R&D expenditure
1	2	3	4
10.	France	1987	364.13
11.	German Democratic Republic (GDR)	1988	383.21
12.	Guyana	1982	1.03 -
13.	Hungary	1988	60.82
14.	India	1990	2.76
15.	Indonesia	1988	0.88 -
16.	Israel	1983	246.43
17.	Italy	1987	157.64
18.	Japan	1987	558.80
19.	Republic of Korea	1988	75.21
20.	Pakistan	1987	2.91
21.	Panama	1986	0.10 -

Sl. No.	Country	Year	Per Capita R&D expenditure
1	2	3	4
22.	Philippines	1984	0.68 -
23.	Singapore	1987	68.14
24.	Spain	1987	45.97
25.	Sweden	1987	577.57
26.	U.K.	1986	226.63
27.	U.S.A.	1988	514.70
28.	USSR	1988	218.63
29.	Venezuela	1985	10.87
30.	Yugoslavia	1988	26.24

Source: UNESCO Statistical Year Book 1990

SHRI BIR SINGH MAHATO: I would like to know from the hon. Minister as to what steps the Government is taking to attract talents to research and development in view of the gradual deterioration. Secondly, what steps is the Government taking to curb brain drain?

SHRI RANGARAJAN KUMARAMAN-GALAM: Firstly, I would like to inform the hon. Member that I would not agree with him that there is a degradation in research and development. For attraction of younger and newer talents, various schemes are there starting from what is called pool scientists scheme. We have schemes whereby scientists who have Master's qualifications with Ph.D. and two years' experience are given 3 to 5 years contract, so that they have opportunities. But more than that, I think what is really necessary is that missions in the arena of science and technology be identified. It is very important for us to concentrate on those areas because it is impossible for a country like ours with limited resources to concentrate on all areas of science and technology. It is with this objective in mind that the Government is having a serious look at whether we should have missions on specific areas of frontier technology.

I can assure the hon. Member that brain-drain is not really the problem when it comes to science and technology. If one looks at the resource base available with us, what is really required is to ensure that the resources that we have in terms of scientific talent are fully utilised for further development.

SHRI BIR SINGH MAHATO: Import of foreign technology is causing a lot of heart-burn among the Indian scientists. They feel that their work is completely ignored by the Indian industry. Will the Government assure the scientists that henceforth there will be no import of foreign technology or in any case,

that would be confined only to high technology areas?

SHRI RANGARAJAN KUMARAMAN-GALAM: In a world, which is becoming more and more a global village, it is going to be impossible to say something blanket like that. One thing is definite. Repetitive imports of technology or technologies that are indigenously available are not going to be permitted. I can assure the hon. Member one thing and that is, whatever technology that is available with us, is invariably more competitive and definitely far better than most of the imported technology. In fact, we find that the Indian industrialists under the new Economic Policy are today pushing forward to tell the Indian scientists and research organisations that they are willing to invest and share in R & B because technology is extremely relevant if one has to be in the competitive arena.

[*Translation*]

SHRI MOHAMMAD ALI ASHRAF FATMI: Just now, we received some information from the ministry, which clearly shows that research work in India is being carried out on a very low scale as a result of which today we are importing technologies, the way we were doing it at the time of attaining independence. If you compare the data of India with the data of developing countries you will find that we are making a per capita investment of 2.76 U.S. dollars in comparison to their investment of 500 U.S. dollars. I would like to know from the government whether it will consider to increase the per capita expenditure on research and development in order to take India into a new era. Because, as per your data, even Pakistan is also investing much more than India on research and development. So, in order to stop further import of technology and to develop new technologies within the country more funds should be provided for research and development.

[English]

SHRI RANGARAJAN KUMARAMAN-GALAM: Mr. Speaker, Sir, I do agree with the hon. Member that if one looks at the amount of R & D expenditure that we have in our country on a per capita basis, it is low because the population is rather high. That is the real truth. But if one looks at the per capita GNP, then one would realise that we are in a much better position. In fact, it is in India that such a high percentage is contributed from Government to R & D compared to other countries including Japan. The percentage of Government expenditure to R & D in terms of GNP is 0.6 per cent in Japan, whereas it is 0.7 per cent in India. The truth is, about 87 per cent of R & D expenditure is contributed by Government. The industry's contribution has been extremely little. While in the developed countries it is the industry which contributes more and the Government contributes less in R&D. What we really need is to encourage the industry to come forward. I believe the new Economic Policy has already brought these changes. The industry is coming forward and I think over a period of time there will be substantial increase in the investment in R & D.

SHRICHANDRAJEET YADAV: I agree with the Minister that the Indian industrialists' response is very poor while all over the world the maximum contribution to the Research and Development is made by the industrialists only whether it is the research and development in the field of university or in Science and Technology. I feel it will not be the case that automatically because of the new Economic Policy the industrialists will come in a big way and start contributing more in R & D. I would like to know from the Minister whether the Government has come out or will come out with a scheme and will call a meeting specifically for this purpose so that it can fix the priorities and also can give certain schemes to the industrialists to see

that their contribution is much larger than it is today.

SHRI RANGARAJAN KUMARAMAN-GALAM: I am obliged to the hon. Member for having raised the issue from the right perspective. The Government has already held discussion with the representatives of industry. Various schemes are being worked out, including the financial incentives that could be given to encourage R&D, as well as efforts are being made to involve the representatives of industry in the various Research Councils that are there in various Government Research Organisations. Their involvement is there at the stage of planning for the research itself. Their involvement is not just financial but it is also in the plan and in the understanding. Therefore, I can assure the hon. Member that we are going along those lines. The schemes as and when finalised will be brought to the notice of the House.

[Translation]

SHRINITISH KUMAR: (Barh): Just now, the hon. Minister said that the amount of R&D expenditure that we have in our country on per capita basis, is very low because the population is rather high but so far as the question of G.N.P. is concerned, that is much more than Japan. We would like to know from the government, what percentage of the total G.N.P. of Public sector and Private sector is spent in Japan and India respectively. If the data provided by him only pertain to the public sectors of Japan and India respectively then what is the total G.N.P. of Public sector and private sector of India as well as Japan. You should clearly state the total expenditure incurred by the Government of India in comparison to Japan.

[English]

SHRI RANGARAJAN KUMARAMAN-GALAM: Sir, I want to assure the hon.

Member that I was not playing the statistical game I have given him the actual figures On the total GNP, no private sector or public sector division is made In Japan, otherwise the per capita may not have been so low, the fact is that industrial contribution to R & D is much more than

[Translation]

SHRI NITISH KUMAR We have asked about the total expenditure, not about the government expenditure alone What is the total expenditure incurred in Japan by the government and the private sector and the expenditure incurred in India on that account You just say that our expenditure is much more than Japan Do you wish to give this false message to the nation You just tell us about the total expenditure of Japan in this regard

[English]

SHRI RANGARAJAN KUMARAMANGALAM The hon Member would kindly appreciate that there was no attempt to give any false message I categorically said that in Japan the participation of industry in R&D is greater than the participation of Government I pointed out that the Government's participation is more What we need as rightly pointed out by the hon Member Shri Chandra Jeet Yadav is that industry must participate more in R&D More Government participation alone will never finally meet the answer That is why I have said that if one take the Government participation as a percentage of GNP we are at a very good level What we need is to encourage industry to come forward and participate Mr Jena is also very much aware of the problem

Export Promotion Campaign in Germany

28 SHRI MAHESH KANODIA
DR LAXMINARAYAN PANDEYA

Will the PRIME MINISTER be pleased to state

(a) whether the Indian Mission in Germany has identified thirteen thrust items for an export promotion campaign in that country,

(b) if so, the details in this regard, and

(c) the steps taken by the Union Government to boost the exports?

THE MINISTER OF STATE IN THE MINISTRY OF INDUSTRY (DEPARTMENT OF SMALL SCALE INDUSTRIES AND AGRO AND RURAL INDUSTRIES) AND THE MINISTER OF STATE IN THE MINISTRY OF COMMERCE (PROF P J KURIEN) (a) and (b) The Indian Embassy in Germany has identified 14 items for export promotion in that country A statement showing these items is laid on the Table of the House

(c) Recent policy changes and the process of economic liberalisation initiated are, inter-alia, aimed at increasing Indian exports Besides Government also facilitates other export promotion measures such as participation in fairs/exhibitions, holding buyer-seller meets and exchange of trade/industry delegations

STATEMENT

List of Items

- (i) engineering products
- (ii) computer softwares
- (iii) all leather products
- (iv) carpets,
- (v) cotton textiles and garments,