the survey in regard to the most fertile region of the world has been conducted and that is the basis of Ganga-Yamuna. It is unfortunate that minimum yield is received from this region today. Through you I would like to know from the honourable Minister that whether he has prepared any plan for the most fertile land of the world giving minimum yield and which extends from Haridwar in Uttar Pradesh to Bihar . . . (Interruptions) This is a very important question.

MR. SPEAKER: We do not have the time.

SHRI VIRENDRA SINGH: Mr. Speaker, Sir, through you I would like to know from the honourable Minister whether Government have formulated any plan for the irrigation of unirrigated land. If you have, by what time this plan would be implemented?

SHRI SOMPAL: Mr. Speaker, Sir, since India have become independent three modes of irrigation - large scale project, Medicine scale project, and small scale project have been used. So far as the question of potential is concerned, 1135 million hectares of land can be irrigated by all the water resources of India. By large and medium projects, 58.5 million hectares of land can be irrigated.

SHRI VIRENDRA SINGH: Mr. Speaker, Sir, This answer is not related to my answer.

SHRI SOMPAL: I am telling that all the projects prepared so far are related with it. In all 366 projects have been prepared. So far as northern plain is concerned, i.e., the irrigation facilities in Ganga-Yamuna basis is better than other States and it is irrigated by Canals, small irrigation development scheme and National watershed Development schemes.

[English]

SHRI NADENDLA BHASKARA RAO: Mr. Speaker, Sir. the hon. Minister has admitted that the National Water Policy is yet to be formulated.

[Translation]

SHRI VIRENDRA SINGH: Mr. Speaker, Sir, please allow half-an-hour discussion on it. It is an important subject.

MR. SPEAKER: How many half-an-hour discussions would be held?

[English]

SHRI NADENDLA BHASKARA RAO: While there is a scarcity in some parts of the country, there is a wastage of water also.

### 12.00 hrs.

There is water shortage also. For example, in Godavari river, 70 percent of water is going waste. As a matter of, fact, earlier Governments thought of linking the rivers. Is there any proposal with the Government to link Godavari, Krishna and also Ganga with Cauvery? That is my auestion.

SHRI SOMPAL: Mr. Speaker, Sir. Inter-Basin Water Transfer Plan had been formulated. . . . (Interruptions)

[Translation]

I am telling but nobody is ready to listen. . . . (Interruptions)

[English]

MR. SPEAKER: You may please conclude.

SHRI SOMPAL: Preliminary technical feasibility reports in regard to 17 rivers in the Southern Peninsula and 14 rivers of the North have already been formulated; and six in the North and five in the South are underway.

#### WRITTEN ANSWERS TO QUESTIONS

# Agricultural Institutions

\*505, DR. LAXMINARAYAN PANDEY: Will the PRIME MINISTER be pleased to state :

- the total number of Agricultural Universities in (a) India:
- whether any Indian Agriculture University has to its credit any exclusive research achievement of its own;
- if so, the name of such university and the details of research achievement to its credit?

THE MINISTER OF STATE IN THE MINISTRY OF AGRICULTURE (SHRI SOMPAL): (a) There are twentyeight State Agricultural Universities (SAUs), one Central Agricultural University and four deemed to be Universities (DUs) in India.

(b) and (c) The ushering in of green revolution is mainly on account of contributions made by the SAUs and DUs resulting in an increase in foodgrain production from 51 MT to 193 MT during 1997-98 and becoming number one in fruit production and number two for vegetable production in the world. SAUs have also contributed significantly towards White and Blue revolutions. Each SAU has been involved in developing, assessing, refining and dissemination of technologies for different agroclimatic conditions in the country. Brief details of their significant achievements are given in the enclosed statement.

Based on the Impact Reports received from SAUs, it is observed that almost all of these SAUs have given zonal research recommendations which cover a variety of crops 25

like rice, wheat, barely, sorghum, pearl millet, maize, groundnut, soybean, pulses, vegetables etc. A good number of crop varieties have been released and existing agronomic practices refined. Indications are that most of these recommendations are being increasingly adopted by local farmers. There are many useful findings relating to moisture conservation in rainfed areas; use of paddy straw, forage and fodder crops for animal nutrition; design of new and modification of existing animal drawn implements; water management in rice and equitable water distribution in river command areas, post-harvest technologies and value addition, biotechnology etc.

#### Statement

Some Examples of Research Achievements of SAUs.

Rajasthan Agricultural University, Bikaner has developed and released, moth variety RMO-40. clusterbean M-83 (vegetable type), Urd RBU-38, Cowpea RCV-7 (vegetable type), Foxtail millet SR-16, pearlmillet RHB-90, cotton RB-423

C.S.A. University of Agriculture and Technology, Kanpur has developed wheat varieties K88, K9107 (Deva), K8962 (Indra) for late sown rainfed, user-1 and Ashwani of paddy, varsha of jowar, Bhawani of Toria, Chitra, Kaushal and Amber of groundnut, Neelam and Gaurav of Inseed, Rachna and Shikha of field pea, T-21 and T-17 of pigeon pea, Azad T-3 and T-1 of tomato, and Azad P-1, P-2 and P-3 of vegetable peas.

Konkan Krishi Vidyapeeth, Dapoli has evolved many high yielding varieties of cereals, pulses, oilseeds, spices and fruits including first parthenocarpic hybrid mango variety Sindhu' and a regular bearer with good quality fruits free from spongy tissue mango hybrid variety Ratna'. It has developed and released three high yielding varieties of cashew viz., Vengurla-4, Vengurla-5 and Vengurla-6. It has also made significant contribution in producing planting material on commercial scale.

Jawaharlal Nehru Krishi Vishwa Vidyalaya, Jabalpur has released Ja-3 variety of arhar, JS 90-41 and JS 335 of soybean, JG315(WR) of gram, and JKH-1 and JKH-2 of cotton.

Indira Gandhi Krishi Vishwa Vidyalaya, Raipur has developed rice variety Kranti, Ruchi, Abhaya, Shyama'a, Mahamaya, Poornima, Madhuri-9, and Madhuri-11, R-552, Kiran and Sheetal varieties of linseed, RUM-1 of mung and RLS-1 of lathyrus.

Central Agricultural University, Imphal has developed CAU Rice-1 and CAU Rice-2 varieties of rice and has launched a model farmers' participatory watershed management project in Singda Watershed.

University of Agricultural Sciences, Banglore has developed the first interspecific cotton Varalakshmi hybrid and the first sunflower hybrid (BHS-10) in the country. It has developed and released URBO-1 and 2 and IBB-83 broiler birds followed by dual purpose Giriraja bird. Its work on medicinal plants is also well recognized.

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Rajendra Agricultural University, Pusa has introduced rice variety 'Gautam' and 'Prabhat' and 'Turanta' for contingency crop planting for flood affected area of the state. It has developed Rajendra-1 and Rajendra-2, late blight resistant varieties of potato and also introduced Rajendra Sonia variety of turmeric. Its work on arhar, maize and fruits is also impressive.

Central Institute of Fisheries Education, Mumbai has developed along with participating institutions techniques for prawn culture and technology for higher marine fish production including measures for disease control.

- Dr. Y.. Parmar University of Horticulture and Forestry, Solan has developed technology for growing of kiwi in Himachal Pradesh which has brought higher income to farmers. It has also developed technologies for higher production of apple, peach and apricot. The work relating to apiculture has shown potential for expert of honey.
- C.C.S. Haryana Agricultural University, Hisar has developed a number of varieties of wheat rice oilseeds, forages, cotton and pulses. Surgical techniques for treating cases of diaphragmatic hernia in buffalo have been developed. Its work on tissue culture of datapalm is of considerable significance.
- G.B. Pant University of Agriculture and Technology, Pantnagar has developed a number of varieties of rice, wheat, pulses, and sugarcane. The ecofriendly and ecosustainable technologies developed by the university have transformed from sustenance agriculture to commercial agriculture. Also technologies for dense planting of mango developed and zero tillage seeddrill has been evolved for rice-wheat croppping system.

Orissa University of Agriculture and Technology, Bhubaneswar has developed technique of growing cashew in Orissa for first time and farmers are adopting the technology. The water management techniques developed are helping in conservation of water and maximising water use efficiency. Its work on vegetables and flowers is also well acknowledged.

Indian Veterinary Research Institute, Izatnagar has developed vaccines for foot and mouth disease and other diseases. It has also contributed significantly in increasing livestock production.

National Dairy Research Institute, Karnal has contributed several technologies for processing of milk & milk products. Dairy biotechnology work has also been developed. New strains of cattle have also been evolved.

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Tamil Nadu Veterinary and Animal Science University, Channai has developed diagnostic kits for identification of emerging microbial protozoan and parasitic diseases. It has also developed technology for control of fish diseases. Biotechnology research is aiming at development of synthetic vaccines.

Kerala Agricultural University, Trichur has released Vyttila-3 (culture 4-4) rice variety for the Pokkali farming situation suitable for the saline conditions and varieties Pavizham and Karthika for Kuttanad farming situation. Also technologies for plantation crops and fish and poultry as well as piggery farming developed.

Tamil Nadu Agricultural University, Coimbatore has released Paiyur-1 tomato hybrid (Pusa Ruby X Co-3) for rainfed conditions and Paiyur-1 dwarf statured with compact canopy mango variety suitable for high density planting under rainfed conditions. Its work on cotton, minor millets, sorgham, bajra and vegetables has also been appreciated by the Farmers. Work on fruits and plantation crops is also well recognized.

Punjab Agricultural University, Ludhiana has released several high yielding varieties of wheat, rice, maize, oilseeds, and pulses. It has also released improved sugarcane varieties CoJ-84 and CoP-211 resistant to red rot for general cultivation. Improved practices like planting of cane in autumn season, intercropping with raya/potato/winter maize/wheat and use of press mud, a waste product of sugar industry, were introduced.

Indian Agricultural Research Institute, New Delhi has developed more than 50 high yielding varieties of wheat. The main varieties have been Kalyan Sona, Arjun, Sonalika and HD 2329. Presently, variety HD 2329 occupies the highest area under cultivation. It has played a major role in ushering green revolution. Basic work has led to development of biopesticides from neem. It has released a somaclone Bio-902 for commercial cultivation as 'Pusa Jaikisan' in mustard, Brassica Junicea. Bt gene has been introduced into cabbage, cauliflower, tomato and brinjal for insect resistance.

Gujarat Agricultural University, Sardar Krushinagar has released improved varieties of bajra, maize, fodders, cotton, groundnut and bidi tobaccos. It has also developed technique for raising true potato seed (TPS) at Deesa

research station. University has also done good work on agro forestry and medicial plants.

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Acharya N.G. Ranga Agricultural University, Hyderabad has released Black gram LBG-17, a high yielding shiny, light black seeded, powery mildew resistant variety for rabi season. It has also released rice variety Swarna (MTU-7029) as a better substitute for existing variety Mahsuri.

Assam Agricultural University, Jorhat has developed three high yielding lines of deep water rice (LPR) 96-10, LPR 95-2 and LPR 56-49) by crossing Pankaj X local floating rice Negheri bao. To escape ravages of flood, two short duration varieties Luit and Kapilee have been developed. It has been doing good work on tea research and processing and also on fruits and vegetables.

[Translation]

# **Multinational Food Processing Companies**

\*506. SHRI MAHESH KANODIA : DR. MADAN PRASAD JAISWAL :

Will the PRIME MINISTER be pleased to state :

- (a) whether several Indian companies are collaborating with multinational companies in the field of food processing;
- (b) if so, the details of the companies alongwith their annual turnover during the last year;
- (c) whether the Government are providing incentives to these companies in setting up of cold storages;
  - (d) if so, the details of incentives?

THE MINISTER OF STATE IN THE MINISTRY OF AGRICULTURE (SHRI SOMPAL): (a) and (b) The total number of (i) foreign technical collaborations and (ii) foreign investment-cum-technical collaborations (irrespective of level of equity) approved in the food processing sector from July, 1991 to March, 1998 is 689. The yearwise details of such approvals is attached as statement. However, the data regarding annual turnover of such companies is being collected and will be laid on the Table of the House.

(c) and (d) The Ministry under its plan Scheme for development of infrastructural facilities provides financial assistance for development of post-harvest cold chain infrastructure such as pre-cooling, cold storage, refrigerated transportation etc. The assistance is available to public sector undertakings, Joint/assisted/private sector companies, non-government organisations and co-operatives.