Sl.No.	Category	Total number of posts	Filled	Vacant
1.	Professor	30	10	20
2.	Associate Professor .	70	43	27
3.	Assistant Professor	116	88	28

(d) 256 programmes are proposed to be conducted by NCERT during 2012-13 at a total cost of about Rs. 27.45 Crores. The numbers of participants and resource persons are decided and finalized at the time when the programme is conducted. 386 Academic Programmes were conducted by NCERT during 2011-12.

Revival of closed units of chemical fertilizers

†*418. SHRI BHARATSINH PRABHATSINH PARMAR : Will the Minister of CHEMICALS AND FERTILIZERS be pleased to state:

(a) whether, even as Government is working to revive closed units of chemical fertilizers, there remains a predominant possibility of a major chemical disaster, given the antiquated and deplorable condition of machinery of these old and functional chemical fertilizer units;

(b) the concrete measures taken by Government in this regard;

(c) whether Government is going to frame any new policy in this regard; and

d) if so, the details thereof?

THE MINISTER OF STATE IN THE MINISTRY OF CHEMICALS AND FERTILIZERS (SHRI SRIKANT JENA) : (a) to (d) There is no possibility of a major chemical disaster in the closed units of Hindustan Fertilizer Corporation Limited (HFCL) and Fertilizer Corporation of India Limited (FCIL), as the Government has proposed to revive these units by establishing new urea plant at each units. The new plants would be of latest technology and shall meet the international standards of safety. The Draft Rehabilitation Scheme (DRS) of HFCL and FCIL have been submitted to Board for Industrial Financial Restructuring (BIFR) for approval.

R & D in agriculture and allied fields

*419. DR. T.N. SEEMA : Will the Minister of AGRICULTURE be pleased to state:

(a) the total amount allocated and spent for Research and Development (R&D) in agriculture and allied fields, under the Centrally funded schemes, during the period from 2007-2012;

† Original notice of the question was received in Hindi.

(b) the major achievements in the field of R&D in agriculture and allied fields during the last decade; and

(c) the contribution of R&D in improving the productivity of major crops in the last decade?

THE MINISTER OF AGRICULTURE (SHRI SHARAD PAWAR) : (a) The total plan funds allocated and spent during the period 2007-12 (upto February, 2012) for Research and Development (R&D) in agriculture and allied fields under the Centrally Funded schemes of DARE/ICAR was ₹ 10,325.76 crores and ₹ 8865.97 crores, respectively and the corresponding non-plan funds allocated and spent was ₹ 9475.24 crores and ₹ 8864.20 crores, respectively.

(b) The major achievements in the field of R&D in agriculture and allied fields in the last decade are as follows:-

1. Developed agro-ecology-specific high yielding, nutritionally improved crop varieties/hybrids, with resistance/tolerance to pests, extreme weather conditions, salinity, sodicity, alkalinity and acidity in soils, using modern scientific tools; scientific crop husbandry through good agricultural practice and making available high quality, genetically true to type breeder seed.

2. Developed agro-ecology-specific, high yielding breeds, using modern scientific tools, of livestock, poultry, pigs, marine and freshwater fish and other edible aquatic animals, that have relevance to farmers of the country; scientific animal husbandry and fisheries practices including management of their health; making available genetically true to type quality seed, semen, breeds, etc.

3. Developed prototypes and commercially viable manufacturing designs and processes of tools and machines that reduce farm drudgery and enhance efficiency of farming operations and address carbon credit development as well as agro-ecology-specific, energy efficiency; post-harvest primary and secondary processing techniques and machinery for agricultural commodities for commercial post-harvest processing.

4. Developed tools and techniques of dissemination of research-originated knowledge in various agro-ecosystems with enhanced use of modern ICTs.

(c) The contribution of R&D in improving the productivity of major crops in the last decade is as follows:-

- The R&D programmes under schemes have resulted in development of high yielding, disease resistant varieties/hybrids, enhancing the productivity of foodgrains from 1734 kg/ha in 2001-02 to 1921 kg/ha in 2010-11; of

oilseeds from 913 kg/ha to 1159 kg/ha during the same period. There has been similar productivity improvement in commercial crops like cotton (186 kg/ha to 510 kg/ha). The development of improved varieties coupled with suitable farm mechanization technologies have played an important role in improving the productivity, by way of facilitating timeliness in field operations and reducing drudgery.

- Several location-specific cost effective NRM technologies (suiting soil and climate) like crop diversification, resource conservation technologies (zero tillage, bed planting, laser leveling, SRI) soil reclamation/ amelioration measures, integrated soil-water-nutrient management, water harvesting and conservation, participatory watershed models, micro irrigation, integrated farming system and agroforestry models etc. resulted in boosting agricultural production and productivity in the country. The preparation of district level contingency plans have enabled proactive planning to mitigate the effects of extreme climatic events like drought, floods, heat & cold wave .

- Some of the newly developed and popularised high yielding varieties/ hybrids of major crops include:

  - Rice: *Sahbhagi Dhan* drought and *Swarna-Sub 1,* capable of withstanding water submergence for 14 days, PRH 10, and *Pusa Basmati*-1121, a fine grained rice, *Vandana*, MTU-1010, KRH-2, CSR-23.

  - Wheat: PD-PBW-621, HD 2967, DBW-17, PBW 550, PBW 502

  - Maize: QPM 1, 5 & 7, QPM Vivek Hybrid - 9, for high quality of protein, HM-4 (baby corn), HSC-1 sweet corn

  - Pulses: *Mung bean* SML668, SML832, *Pusa* Bold, *Pusa Vishal;* Pigeonpea-CO7 (CORG9701), MALI 3, *Pusa* 991; Urdbean - *Uttara*, WBG 26, TU 94-2, KU 301; Lentil -DPL 62, JL 3,1PL 81, KLS 218, HUL 57, Redgram (BSMR-736)

  - Oilseeds: Groundnut CG-16, ICGV 00530 and HNG-123; Brassica - *Pusa Agrani* JD-6 and *Kranti;* Sunflower - KBSH-41, KBSH-44, NDSH-1, RSFH-1, DRSF-108, SS-56, Co-4; Soybean - JS 335, JS93-05, NRC 37, JS 97-52, JS 95-60, DS98-14, PS 1347.

- The most beneficial contribution of R&D to growth is through improvement in total factor productivity. This results in reducing cost of production by either enabling higher output for same bundle of inputs or same output for

lower amount of inputs. This gain, in turn, reduces cost of production in real terms contributing to resource saving and lowering of price for consumers. The technology led growth has decreased real cost of production by 1-2 per cent a year in major crops since mid 1970s. The highest gain is in wheat that experienced 2.3 % decline in cost of production. Similar decline was found in the case of barley, jowar, bajra and rapeseed mustard. Rice, mung, groundnut and gram show annual decline of around one percent. Research has been a major cause of growth in total factor productivity of agriculture. A study in 2011 covering the recent two decades indicates 42 to 46 per cent internal rate of return to public investment in agricultural research and education. Return per Rupee invested in agricultural R&D was found to be ₹ 13.45 during 1970-1993. These estimates prove high pay off from public sector R&D investments.

Expanding Mid-Day-Meal Scheme

†*420. SHRI BHAGAT SINGH KOSHYARI : Will the Minister of HUMAN RESOURCE DEVELOPMENT be pleased to state:

(a) the type of various schools in which Mid-Day-Meal Scheme is being implemented in the country, at present;

(b) whether the Working Group on Primary Education and Literacy for Twelfth Five Year Plan has recommended to expand Mid-Day-Meal Scheme in the unaided private schools in Scheduled Tribe areas;

(c) if so, details and the present status thereof;

(d) whether suggestions have been received from different sections regarding conditional cash transfer under Mid-Day-Meal Scheme for the benefit of children from Economically Weaker Sections of society along with BPL families; and

(e) if so, details thereof and reaction of Government thereto?

THE MINISTER OF HUMAN RESOURCE DEVELOPMENT (SHRI KAPIL SIBAL) : (a) The Mid Day Meal (MDM) Scheme covers children studying in class I-VIII in all Government, Government aided, Local Body and National Child Labour Project Schools, Education Guarantee Scheme/Alternative and Innovative Education centres and Madarsas/Maqtabs supported under Sarva Shiksha Abhiyan.

(b) and (c) The Working Group on Elementary Education for 12th Plan has recommended inclusion of children in private unaided schools in 109 Scheduled Tribe

† Original notice of the question was received in Hindi.