

Foreword


I appreciate the catalytic role being played by ICAR in addressing comprehensively the present and emerging challenges. Its innovative research programmes, skilled and expert services, robust technologies and their delivery to ensure productivity enhancement through optimal resource use provide strong base for achieving positive growth in agriculture. An innovation-driven technology development effort of ICAR has helped to strengthen Indian agriculture as evidenced by the release of more than 60 improved varieties of field and horticultural crops during this year for cultivation by the farmers in different agro-ecological zones. Short duration and drought tolerant varieties of rice, coarse grains, pulses and oilseeds were developed to address the vagaries of weather. Research and development programmes also laid emphasis on mitigation of post-harvest losses and impact of climate change, therein contributing towards sustainability of our agriculture.

The birth of second and third cloned buffalo calves using embryonic stem cells to produce animals of superior germplasm with desired sex is indeed a commendable achievement. The recognition of Project Directorate on Foot and Mouth Disease as FAO Regional Reference Laboratory of South Asia is a global acknowledgement to our continuous efforts of creating state-of-art research facilities. Breeding of the marine fish *Cobia* in captivity, for the first time in the country, is an important development.

Introduction of international fellowships scheme attracting 47 foreign students from 19 countries during the year is an effort towards ICAR's global presence in agriculture education. E-connectivity facilities provided to 192 Krishi Vigyan Kendras (KVKs) and eight Zonal Project Directorates (ZPDs) helped to strengthen the technology delivery system in reaching the poorest of the poor. It is a good effort by ICAR to share technical information through 1.5 lakh messages on different aspects of farming delivered to over 64,000 farmers under Kisan Mobile Advisory Service offered by KVKs. These efforts of ICAR also benefited 106 lakh farmers and extension personnel in timely adoption of some of the new technologies.

The National Fund for Basic and Strategic Research with a provision of ₹ 100 crore and establishment of ten Business Planning and Development (BPD) units were the novel initiatives by ICAR for addressing the critical research gaps alongside the issue of commercialization of its promising technologies. During ICAR-Industry Meet, the Council displayed its technologies in the areas of: (i) seed, planting material and plant biotechnological products; (ii) diagnostics, vaccines and other animal biotechnological products; (iii) farm implements and machinery; and (iv) post-harvest engineering and value addition; thus making its presence visible to the industry. The Meet has been followed with similar efforts at the regional level, thereby opening a new vista for collaborative R & D programmes under public-private partnership mode.

The effort of ICAR on visioning for the next twenty years i.e., 2030 to address the growth of Indian Agriculture, in terms of national and global challenges, resource capacity, competitiveness and sustainability, speaks of ICAR's efforts for preparedness for the future. I am also happy to note that the performance of DARE/ICAR for the commitments made for 2009-10 under the first phase of Government of India's Results-Framework Document (RFD) policy was rated the best. Yet another important event has been the appreciation of the low cost farm implements developed by the ICAR by Mr Barack Obama, President of USA, during his recent visit to India and interaction at Mumbai in November 2010. I compliment ICAR for its all-out efforts in strengthening Indian Agriculture with innovations and timely technology delivery. I am sure that *DARE/ICAR Annual Report 2010-11* will be a valuable reference material for the researchers, policy makers and all the stakeholders involved in agricultural research and development.



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