

18. Organization and Management

DARE

The Department of Agricultural Research and Education (DARE) was established in the Ministry of Agriculture in December, 1973. Subjects allotted to the DARE, as per the Government of India (Allocation of Rules) are specified in Appendix I of DARE.

The Indian Council of Agricultural Research (ICAR) is an autonomous body under the Department of Agricultural Research and Education. The Secretary to the Government of India in DARE functions as the Director General of the ICAR. The Financial Advisor of the DARE is the Financial Advisor of the ICAR. Generally single-file system is followed between DARE and ICAR.

The Department of Agricultural Research and Education has one more autonomous body, viz. the Central Agricultural University, Imphal under its administrative control. The Central University, established in 1993, has its jurisdiction over the Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Sikkim and Tripura, and is wholly financed by the Government of India.

The DARE has 16 Group A, 14 Group B, 12 Group C, and 6 Group D posts (Appendix II). The recruitment to the post in the Groups A, B, C is being made centrally, either through the Department of Personnel and Training or through the Department of Agriculture and Co-operation, depending on the level of the post. The DARE makes direct recruitment only to Group D posts. Such recruitments are being made in accordance with the orders of the Government of India regarding reservations for Scheduled Castes, Scheduled Tribes, and Other Backward Class. Presently, DARE has 6 Scheduled Castes and 1 Scheduled Tribe employee.

A detailed break up of the posts and names of the important functionaries is given in Appendix II of DARE. The financial requirement (Grant No. 2) includes budget estimates (BE) and revised estimates (RE) of DARE and ICAR (Plan and Non-Plan) 2009–2010 respectively and BE for 2010–11 (Plan and Non-Plan).

The detailed break up of these financial figures is given in Appendix III of DARE.

ICAR

The Indian Council of Agricultural Research is an autonomous organization under the Department of Agricultural Research and Education, Ministry of Agriculture, Government of India. Formerly known as Imperial Council of Agricultural Research, it was established on 16 July 1929 as a registered society under the Societies Registration Act 1860, on the recommendations of the Royal Commission of Agriculture, and has been reorganized twice, in 1965

and 1973. The headquarters of the ICAR is located at Krishi Bhavan, New Delhi, and its other buildings are Krishi Anusandhan Bhavan I and II, and NASC Complex, New Delhi.

The Union Minister of Agriculture is the President of the ICAR. The Principal Executive Officer of the ICAR is the Director General, who also acts as Secretary to the Government of India in the Department of Agricultural Research and Education.

The General Body of the ICAR Society is the supreme authority of the ICAR, and the Union Minister of Agriculture, Government of India, heads it. Its members are the Ministers for Agriculture, Animal Husbandry and Fisheries, and the Senior Officers of the various state governments, representatives of Parliament, industry, education institutes, scientific organizations and farmers (Appendix 1).

The Governing Body (Appendix 2) is the chief executive and decision-making authority of the ICAR. It is headed by the Director General who also acts as Secretary, DARE. It consists of eminent agricultural scientists, educationists, legislators and representatives of the farmers. It is assisted by the Accreditation Board, Regional Committee, Policy and Planning Committee, several Scientific Panels, and Publications Committee. In the scientific matters, the Director General is assisted by eight Deputy Directors General, one each for (i) Crop Science (ii) Horticulture, (iii) Natural Resource Management, (iv) Agricultural Engineering, (v) Animal Sciences, (vi) Fisheries, (vii) Agricultural Education and (viii) Agricultural Extension, one National Director (NAIP) and one National Co-ordinator who looks after the Secretariat of National Basic Strategic and Frontier Application Research in Agriculture (NFBSFARA). The Deputy Directors General are responsible for the Institutes, National Research Centres, and the fundings of Projects Directorates in their respective fields. The National Director (NAIP) is responsible for all the research projects running under Components I to IV of NAIP. During 2010–11 a renewed thrust has been given to the activities of NFBSFARA. A new empowered committee was formed and a separate unit was established as the secretariat of NFBSFARA which is responsible for the National Fund for Basic, Strategic and Frontier Application Research in Agriculture that strongly encourages collaborative and multi-institutional research based on innovative ideas of scientists for solving advanced scientific and technological problems in agriculture. The Senior Officers post at the ICAR (Hqrs) are listed in Appendix 3 of the ICAR.

The ICAR recruits scientists and to such other posts and services as may be specified by the President, ICAR from time to time through competitive examination/



direct recruitment by selection etc. through its independent recruitment body, Agricultural Scientists' Recruitment Board, established on 1 November 1973. ASRB is accountable to the President of the ICAR Society.

The ICAR received funds from the Government of India and from the proceeds of the Agricultural Produce.

The Research set-up of the ICAR includes **49** Institutes (Appendix 4), **6** National Bureaux (Appendix 5), **34** Project Directorates and Zonal Project Directorates (Appendix 6), **19** National Research Centres (Appendix 7), and **79** All-India Co-ordinated Research Projects including Network Projects (Appendix 8).

The Directorate of Information and Publications of Agriculture is working independently with the approval of the Competent Authority. Besides Media and Information Unit, ARIS Unit and Library at ICAR (Hqrs) work under the supervision of the Project Director. This integration of various units under DIPA provides organized strength and efficient use of manpower, financial and infrastructural resources for creating public awareness through dissemination of information globally by print media as well as electronic media. DIPA has got 4,476 users of its research journals in 47 countries through E-Publishing Knowledge System in Agricultural Research, a project under NAIP.

The ICAR promotes research, education and extension education in **49** State Agricultural Universities, **5** Deemed Universities, and **5** Central Universities by giving financial assistance in different forms; and DARE promotes **1** Central Agricultural University for the North-Eastern Hills Region (Appendix 9).

For effective communication of research findings among farmers, the ICAR maintains an effective network of Krishi Vigyan Kendras and Trainers' Training Centre along with Zonal Co-ordinating Units.

The total sanctioned as well as existing strength of the employees of the ICAR system, including scheduled castes, scheduled tribes and other backward classes, is given in Appendix 10.

Thus with an extensive network of research infrastructure, backed by an excellent team of scientists and other employees, the ICAR is making rapid strides in agricultural research, and provides support to the national efforts in achieving food security and self-sufficiency.

Intellectual property and technology management

Patents: Five patents, one patent in Mexico and four in India, were granted to ICAR; 30 patent applications filed by ICAR were published on completion of 18 months lock-in period; and, further, 53 new patent applications were filed by the 15 ICAR institutes, including CIFT Cochin (13), CIRG Makhdoom (12), IVRI Izatnagar (9), CMFRI Cochin (2), CIRCOT Mumbai (3), CAZRI Jodhpur (2), CIBA Chennai (2), NCIPM New Delhi (2), CRIJAF Barrackpore (2), IINRG Ranchi (1), NIRJAFT Kolkata (1), NRC on Plant Biotechnology New Delhi (1), NRC on Mushroom Solan (1), NBAII Bengaluru (1) and SBI Coimbatore (1).

Plant varieties: Eighty-one varieties titles were granted to ICAR, raising the cumulative total of protected varieties in the notified crops to 225. *The Plant Variety Journal of India* published 109 ICAR plant variety applications (including 98 extant varieties and 11 new varieties) for public notice. Further, applications for 11 varieties of notified genera/crops (10 new and 1 extant) were filed for the protection. Overall, 745 plant variety applications (653 extant and 92 new) have been filed by ICAR and, out of these, 225 titles were already granted; whereas another 410 applications were published in the *The Plant Variety Journal of India* for public awareness.

Trademarks: Two trademarks: KRISHIBROT and KRISHILAYERT were secured by Project Directorate on Poultry, Hyderabad; another two, namely, EATRIGT and JAICAR by Directorate of Sorghum Research, Hyderabad; and one more, namely, ARKA by Indian Institute of Horticultural Research, Bengaluru so as to distinguish ICAR products and services offered by these institutes.

Patents Granted to ICAR

Patent Number	Granted in (Country)	Date of Grant (Priority Date/Effective up to)	Title	Inventor
IN243803	India	08 November 2010 (27 April, 2000 to 26 April, 2010)	Pusa Fruit Coring Device (Hand Operated)	Hari Shankar Sharma and Amar Singh
MX279550	Mexico	30 September 2010 (31 May 2002 to 30 May 2022)	Rapid detection of <i>Bt</i> -cry toxins	Keshav R. Kranthi
IN242768	India	09 September 2010 (18 September 2006 to 17 September 2026)	Synthetic gene encoding a Cry1Fa1 Delta-Endotoxin of <i>Bacillus thuringiensis</i>	P. Ananda Kumar
IN238046	India	19 January 2010 (12 November 2002 to 11 November 2022)	A process for eradication of polluting gas	R.C.Yadav
IN237912	India	12 January 2010 (18 September 2006 to 17 September 2026)	Synthetic gene encoding a chimeric-endotoxin of <i>Bacillus thuringiensis</i>	P. Ananda Kumar



Copyrights: The Central Institute of Agricultural Engineering, Bhopal, and Indian Veterinary Research Institute, Izatnagar have registered two copyrights each of the softwares developed.

Commercialization of technologies

ICAR-Industry Meet, 2010: An ICAR-Industry Meet, 2010 was organized from 28 to 29 July, 2010 at New Delhi to enhance ICAR’s technology transfer pursuits vis-à-vis relationship with agri-industry of all kinds and scale. Four thematic areas of agri-technologies were focused upon: (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 and value-addition. A total of 168 industry representatives and entrepreneurs participated to understand prospects for their business in goods and services available in ICAR. Besides recommending 15 action points relevant to the commercialization of ICAR technologies, the exhibits of 111 technologies in crops, animal, fishery and engineering sciences generated by 38 ICAR Institutes received attention of

85 industrial houses/private companies and 19 organizations/associations. Expression of interest was indicated in about 75 technologies displayed, whereas high prospects of commercialization/licensing were received in about 40 ICAR technologies, including crop varieties/hybrids, particularly in maize and vegetables; *Bt* cotton detection kit, infectious bursal disease diagnostic kit, molecular kit for detection of nodavirus in finfish, biopesticides, snow ball tender nut machine, particle board manufacturing from cotton stalk, area specific mineral mixture, Pusa fruit drinks, value-added meat products, value-added milk products, ready-to-serve fish products, and dry flower technology among others. Few Memoranda of Understandings were also signed by agro-industries with the ICAR during the ICAR–Industry Meet, 2010.

ICAR Technologies for Commercialization: Besides several varieties/hybrids in various crops, many commercial agri-technologies were reported in 2010 from various institutes.

The ICAR institutes commercialized over 70 agri-technologies and products through more than 90 public agencies and private companies. For example the IIHR has licensed 21 ARKA products and process technologies to 23 companies; IARI transferred 10 PUSA products and other promising technologies to 12 private companies; DWR, Karnal entered into partnership with 11 private companies for resource management and crop protection in wheat; CIPHET, Ludhiana commercialized 10 processing and value-addition technologies by licensing to 30 private industries; NRC on Banana, Trichy transferred three technologies to two private companies; and, similarly, other ICAR institutes including CIBA, CIFA, CPRI, IGFRI, VPKAS, NDRI and DOR commercialized technologies related to fish, potato, grasses, maize, milk products and biopesticides to different private companies.



CIBA	<ul style="list-style-type: none"> Asian Seabass Feed Technology (CIBA-Bhetkiahar) Cost effective kits for testing pH and dissolved oxygen in water 	CIRG	<ul style="list-style-type: none"> Dot Elisa Kit for detection of Brucellosis in goat and sheep (Bruchek) Plate ELISA kit for diagnosis of Johne's disease
CIFA	<ul style="list-style-type: none"> Manually operated handy cryofreezer (CIFA-CRYO) 	CPRI	<ul style="list-style-type: none"> Biofertilizer-cum-biofungicide/biobactericide composition B5
IARI	<ul style="list-style-type: none"> Events for TYLCV and TOSPO resistance in tomato Plant Virus Detection Kit Basmati Rice Threshing System – Evaluation System Animal Feed Block Making Machine Irrigation Scheduler - Programmable System Modified atmospheric packing for vegetables 	IIHR	<ul style="list-style-type: none"> Micro-nutrient Foliar Formulations (crop-specific) Cost effective Pheromone Trap Mass production of Bio-control Agents (<i>Verticillium chlamydosporium</i>, <i>Trichoderma harzianum</i>, <i>T. viride</i>, <i>Paecilomyces lilacinus</i> and <i>Pseudomonas fluorescens</i>) Osmotic dehydration technologies
IGFRI	<ul style="list-style-type: none"> Berseem-chicory seed separator 	NRCB	<ul style="list-style-type: none"> Banana Fiber Extraction Technology
NDRI	<ul style="list-style-type: none"> Low cholesterol <i>ghee</i> 	CIPHET	<ul style="list-style-type: none"> Evaporative Cooled Room CIPHET Pomegranate Aril Extractor (Hand Tool) Banana Comb Cutter
DOR	<ul style="list-style-type: none"> DoR <i>Bt-1</i> 0.5% WP biopesticide DoR <i>Beauveria bassiana</i> 30% SC biopesticide 		



Strengthening of IP and technology management and HRD

Efforts to facilitate systematic and harmonious IP and Technology Management, were continued through 5-zonal level Meetings-cum-Workshops in February-March 2010, with focused technical sessions on IP asset management, and planning and development of IP business. In East Zone there were 60 participants from 16 participating technology management units at IINRG, Ranchi; in West Zone 94 participants from 17 technology management units at CICR, Nagpur; in North Zone 202 participants from 30 technology management units at IARI, New Delhi and IVRI, Izatnagar; and in South Zone 132 participants from 22 technology management units at CIFT, Cochin during 2010.

The ICAR scientists (25) were given international exposure in plant variety protection, DUS testing, and IP and Technology Management at Wageningen, the Netherlands (3); Cambridge, UK (10); and East Lansing MI, USA (12) in 2-week customized programmes. Besides trainings were organized/attended by several ICAR scientists engaged in IP&TM activities so as to firm up the learning process and strengthen the IP&TM system to enhance over all competitiveness.

ADMINISTRATION

There are 4,619 scientists and RMP out of 6,429 total posts sanctioned; 6,318 Technicals out of 7,263 total post sanctioned; 4,274 Administrative personnel

out of 5,075 total posts sanctioned; and 7,580 supporting-skilled staff out of 8,862 total sanctioned posts in position in ICAR system, Annexure 10.

Filling up of vacant posts

After the Cadre Review proposal for administrative and allied posts approved by Department of Expenditure, Ministry of Finance vide their I.D. No. 2(25)/E.III Desk/2008 dated 23 June 2010, a number of posts have been sanctioned in the grade of Director, Deputy Secretary/Chief Administrative Officer/Under Secretary/Senior Administrative Officer/Administrative Officer/Finance & Accounts Officer/Section Officer/ Private Secretary/Assistants and promotions have been made consequently. Besides, regular promotions against the vacant posts have also been made in the grade of Under Secretaries, Senior Administrative Officers, Administrative Officers/ Finance & Accounts Officers/Section Officers/Private Secretaries/Assistants/Personal Assistants/UDCs/Stenographers/LDC/Group 'D'.

Financial upgradation granted under MACP scheme

As per the Government of India instructions Financial Upgradation was granted to many eligible employees in various grades during this period, viz. CAO/SAO/SF&AO/F&AO/PS/PPS/AO/SO/AAO/AF&AO/AD(OL)/Stenographer/Assistant/LDC & Group 'D' employees.

Budget Estimate and Revised Estimate of DARE

(₹ in lakh)

Items	Budget Estimate 2009-2010		Revised Estimate 2009-2010		Budget Estimate 2010-2011	
	Plan	Non-Plan	Plan	Non-Plan	Plan	Non-Plan
Major Head '3451'- Secretariat Economic Services 090 Secretariat	-	374.00	-	324.00	-	305.00
Major Head '2415' Agricultural Research and Education 80 General						
798 International Co-operation(010032) – India's MembershipContribution to Commonwealth Agricultural Bureau (CABI)	-	10.00	-	13.50	-	13. 50
(020032) – India's Membership Contribution to Consultative Group on International Agricultural Research	-	400. 00	-	380.00	-	400.00
(030032) – Other Programmes	2100	-	477	-	2100*	-
(040032) – India's contributions to Asia Pacific Association of Agricultural Institutions	-	5.00	-	5.00	-	5.25
(050032) – India's contributions to NACA	-	9.00	-	10.50	-	10.25
(060032) – India's contributions to CGPRT	-	5.00	-	5.00	-	5.00
(070032) – India's contributions to Seed Testing Associations	-	2. 25	-	2.50	-	2. 50
(080032) – Internal Society for Horticultural Science, Belgium	-	0. 75	-	0.50	-	0. 50

*Includes ₹. 20.00 crore for National Fund for Basic, Frontier and Strategic Research in Agriculture.



Staff welfare fund scheme

- (i) As per the recommendations of the Managing Committee of ICAR (Hqrs) Welfare Fund financial assistance of ₹ 2,00,000 was extended to the family of eight deceased employee of the ICAR (Hqrs).
- (ii) Forty-three scholarships (₹ 2,500 each) amounting to ₹ 1,07,500 were awarded to the meritorious wards of the Council's employees under Staff Welfare Fund Scheme.

Finance and Audit

The Budget Estimate (BE) and Revised Estimate (RE) of DARE and ICAR (Plan and Non-Plan) for 2009–10 are ₹ 3,281.40 crore and ₹ 3,261.36 crore respectively and BE for 2010–11 (Plan and Non-Plan) is ₹ 3,818.05 crore.

Results-Framework Document

The DARE/ICAR achieved the highest composite score of 95% amongst all 59 Government of India Departments covered under the first phase of Government of India's Results-Framework Document policy made for 2009-2010.

PROGRESSIVE USE OF HINDI

DARE

The Department of Agricultural Research and Education has an Official Language Section for the compliance and implementation of the Official Language Policy of the Government of India. It consists of one post each of Assistant Director (Official Language), Junior Hindi Translator and Hindi Typist. Besides the Hindi translation of the Budget, compilation and preparation of the Annual Report of the Department etc. also take place. The functioning of this section also includes holding Hindi workshops, meetings, reports, organizing Hindi *Pakhwada* to encourage the employees for doing their official work in Hindi.

ICAR

The achievements of Hindi Unit, ICAR are:

- During the period under report two Institutes/Centres of the Council were notified in the Gazette of the Government of India thus raising the total number of notified Institution to 116 under rule 10(4) of the Official Language Rule 1976.
- Joint Official Language Implementation Committee of the DARE and the ICAR working under the Chairmanship of the Additional Secretary, DARE/Secretary, ICAR met thrice during 2010. Similarly, Official Language Implementation Committees constituted at Institutes/Centres convened its meetings.
- Proceedings of the Official Language Implementation Committee meetings held by the Institutes etc. as well as the quarterly progress reports regarding the use of Official Language Hindi received from various institutes at the ICAR

(Hqrs) were reviewed and proper measures were suggested to overcome the shortcomings found therein.

- Rosters have been maintained for imparting training in Hindi, Hindi typing and Hindi stenography and officials were accordingly deputed for training during the year. For Hindi stenography and typing three stenographers and 17 typists were nominated respectively.
- The *Hindi Chetna Maas* was celebrated at ICAR (Hqrs) and many programmes were organised for staff to promote the progressive use of Hindi in official business. Hon'ble Union Minister of Agriculture issued a message at this occasion. The Director General, ICAR also issued an appeal requesting the officers/staff to do their maximum official work in Hindi. Hindi Day/Week/Month was also organized in different Institutes/Centres of ICAR.
- The Hindi Workshops (4) were also organized during the period for various category of officers/staff.
- During 2009–10 cash awards were given to 10 officials at the ICAR (Hqrs) for doing their maximum official work in Hindi.
- The following Institutes were awarded by *Rajarshri Tandon Rajbhasha Puraskar* for doing maximum work in Hindi during 2009–10.
 - (i) *Big Institutes Award*: First has gone to Indian Veterinary Research Institute, Izatnagar and Second to Central Marine Fisheries Research Institute, Kochi.
 - (ii) *Small Institutes Award of 'A' and 'B' Region*: First has gone to Central Institute for Research on Goats, Makhdoom, Mathura and Second to Central Agricultural Research Institute, Port Blair.
 - (iii) *Region's Institute Award*: First has gone to Central Institute of Fisheries Technology, Kochi and Second to National Academy of Agricultural Research Management, Hyderabad.
- During 2009 *Ganesh Shankar Vidyarthi Utkrist Hindi Krishi Patrika Puraskar*, launched in 2004–05 for the best Hindi House magazine being published by various Institutions of ICAR, went to *Karabh* of NRC on Camel, Bikaner as First prize; *Krishi Kiran* of CSSRI, Karnal as Second prize; and *Pusa Surbhi* of IARI, New Delhi as Consolation prize.
- In accordance with the recommendations made by the Department of Official Language and the Parliamentary Committee on Official Language, to assess the progressive use of Hindi at the ICAR (Hqrs) as well as its institutes 21 offices were inspected during 2010, and suggestions were given to improve the shortcomings. Second sub-Committee of the Parliamentary Official Language Committee inspected 6 Institutes/Centres of the Council during this year.
- The 12th issue of the magazine, *Rajbhasha Alok*,

was released on the 16 July, 2010 on the occasion of ICAR Foundation Day.

- The Council and its institutes are organizing regular training programmes for farmers in Hindi and in other regional languages and remarkable progress has been made at Krishi Vigyan Kendras located in Hindi speaking region in the use of Hindi and in the other regional languages in their day-to-day official work.
- Besides material pertaining to Parliament, Annual Plan Report, Review of demands for grants, General Body, Parliamentary Standing Committee on Agriculture, Annual General Meeting of ICAR Society and many other meetings were prepared bilingually. The drafts of speeches of Hon'ble Union Agriculture Minister and other higher officials of ICAR were prepared originally in Hindi also.

ICAR AWARD CEREMONY

The ICAR Award Ceremony, 2009 was held on 16 July, 2010 at NASC Complex, Pusa, New Delhi. The Chief Guest of the function Hon'ble Union Agriculture Minister, Shri Sharad Pawar, said that the recognition through Awards should lead to enhanced zeal and creative work by the Awardees as well as enthuse and encourage others to strive harder for greater accomplishment and also gave away the awards. One



Hundred thirty awardees under 11 different categories comprising 4 Institutions, 122 scientists and 3 farmers. Out of 122 scientists 10 women scientists received the awards.

TECHNICAL CO-ORDINATION

The Co-ordination work comprised the work of financial support to 33 journals for publication, 44 societies/associations/universities for holding National Seminars/Symposia/Conferences and 24 societies/associations/universities for holding International Seminars/Symposia/Conferences. National and International Seminars/Symposia/Conferences are being processed by concerned Subject Matter Divisional Head. It also included work related to selection of Best Annual Report of Institutes, preparation of *ICAR International Training Calendar* for conducting training, replies to Parliament Questions, VIP references and queries under RTI Act, 2005. Meetings of Regional Committees No. I at Jammu, No.VIII at Bengaluru, No. II at Port Blair, No. IV at Ranchi, and No. VI at Bikaner; and Directors' Conference were organized during this year.

Each month Coordination Unit prepared monthly report of major breakthroughs achieved in research and other related matters at various ICAR Institutes/ National Research Centres /Project Directorates and it was submitted by the Secretary (DARE) and Director General, ICAR to the Cabinet Secretariat, Government of India. Copies were also circulated to various Ministries and other related Departments.

Assistance of technical nature was rendered to Department of Science and Technology, Department of Agriculture and Co-operation and Council of Scientific and Industrial Research other Departments of the Government of India. The Co-ordination Unit assists in preparation of Memoranda of Understandings and formulation of Work Plans for technical cooperation between DARE and various collaborating partners from abroad. Several Memoranda of Understandings with Work Plans between DARE/ICAR and various countries were finalized.

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