



QRT, RAC, Management Committee and IRC

Quinquennial Review Team (QRT)

Quinquennial Review Team (QRT) to review the work done by the Indian Agricultural Statistics Research Institute for the period 01 January 2006 to 31 March 2011 was constituted vide Council's Office Order No. 5-10/2011-IA-II(AE) dated 29 June, 2011. The composition of the QRT is:

Dr. Padam Singh Chairman

Former Member, National Statistical Commission and Head Research and Evaluation, EPOS Health Consultants (India) Pvt. Ltd. 445, Phase-III, Udyog Vihar, Gurgaon, Haryana

Dr. SK Das Member

Director General
Central Statistical Office
Ministry of Statistics and Programme Implementation, Sardar Patel Bhawan
Parliament Street, New Delhi

Dr. GM Saha Member

Visiting Professor
Bayesian and Interdisciplinary
Research Unit, Indian Statistical Institute
203, Barrackpore Trunk Road
Kolkata-700 108, West Bengal

Prof. Karmeshu Member

Professor, School of Computer
and Systems Sciences
Jawaharlal Nehru University
New Delhi-110 067

Dr. RPS Malik Member

Senior Researcher, IWMI-India
II Floor Office, Block-B
NASC Complex, DPS Marg
Pusa, New Delhi-110 012

Dr. TR Sharma Member

Principal Scientist
National Research Centre on Biotechnology
Lal Bahadur Shastri Building
Pusa Campus, New Delhi-110 012

Dr. KN Singh Member Secretary

Head, Division of Forecasting
and Econometric Techniques
IASRI, Library Avenue, Pusa
New Delhi-110 012

A number of meetings of the QRT were held during the period under report. The Committee submitted its final report to the Council and presented it before the Hon'ble DG (ICAR). The final recommendations of the QRT were received from the Council vide letter no. 5-10/2011-IA-II (A.E.) dated 06.12.2012

Approved Recommendations of the QRT

1. The scientists working in the core areas of statistics may be sent for training to International Institutes of repute. As far as feasible, the young scientists should attend more long term trainings abroad and in India and should be encouraged to apply for such funding from different funding agencies of GOI.

2. It is matter of satisfaction that a few scientists of the Institute have been sent for training in the area of bioinformatics, geo-informatics and technology forecasting through National Agricultural Innovation Project. The QRT desired that these efforts should continue in future also.
3. At present, Institute conducts post graduate teaching in collaboration with PG School, IARI, New Delhi. The students admitted mostly have graduate degree in Agricultural Sciences. The students with B.Sc. Mathematics/ Statistics/ Computer Science as one of the subjects are at disadvantageous position as they need to spend one extra year to complete deficiency courses in Agriculture to complete their Master/s degrees. Further, number of seats offered in each courses are few. As a consequence, the manpower requirements in NARS, Government and Private Sector in Agricultural Statistics and Informatics are not met. To attract talent, the students having B.Sc. with Mathematics/Statistics/ Computer Science should be encouraged with provision to complete their degrees in stipulated time without devoting additional year for remedial courses in agriculture.
4. Human resource especially trained in the discipline of Computer Science/ Computer Application is required for undertaking research in the wide gamut of knowledge management and statistical computing. The discipline of Computer Application in the ARS is very important and will continue to be relevant as far as research programmes of ICAR Institutes are concerned. This will also be very important factor in the new IPR regime and changing global scenario. In view of this, direct recruitment in the discipline of Computer Application in Agriculture must be restarted in the ARS.
5. The work in the computer division needs to be reoriented towards problems in “Data Analytics” which is unavoidable in view of enormous amount of data being generated in agriculture including meteorology and environment. It may be mentioned that Data Analytics is currently an important topic for researchers. The data could be potentially analyzed to meet the expectations of agricultural scientists and policy planners. This requires developing intelligent and imaginative techniques for efficiently storing accessing, and processing the data, and most importantly, analytics for inference, alerts, and decisions. Further the group should take up the problems in development of algorithms for statistical computing to keep pace with the peers in the field.
6. The Council may be approached to enhance the Plan fund allocation for the Institute. This is required as several of the research and service activities that have been initiated in the recent past are needed to cater to the requirements of whole NARS. The activities such as Strengthening Statistical Computing for NARS, Strengthening of National Agricultural Bioinformatics Grid and Research in Computational Biology in Agriculture; Statistical Genetics; Strengthening of MIS of ICAR; Strengthening of Data Centre of ICAR etc. are to be taken up in network mode.
7. The Institute should take more proactive steps to harness the opportunities given under the NAIP, particularly Strengthening Statistical Computing for NARS and Establishment of National Agricultural Bioinformatics Grid in ICAR (NABG) through Centre for Agri-Bioinformatics which provide an opportunity to the Institute to contribute in these areas.
8. The Design Resources Server has been helpful in establishing linkages with scientists in NARS. Possibility to extend this further to other disciplines like sample surveys, forecasting, statistical genetics, and statistical modeling should be explored.
9. The availability of the high performance computing facilities, both in terms of hardware and software at IASRI, the Institute has an opportunity to undertake research in handling massive data sets for analysis. Data analytics is another area where the Institute can venture into.
10. Climate change and its impact on agriculture need to be explored. The Institute has an opportunity to develop statistical techniques for studying the implications of climate change and other natural hazards.
11. The basic research in statistics is of paramount importance to handle the statistical issues of agricultural sciences. Therefore, impetus and special emphasis is required on basic research especially on development of new statistical methodologies through basic research. For this, the institute should first identify the scientists who capable of publishing in high impact statistical journals and assign them the major responsibility of developing statistical techniques, tools and new



methodologies for solving emerging problems in agricultural statistics. Such scientists can form a distinct group within the institute and their work will only contribute to strengthening the work in other divisions engaged in applied statistics in a fundamental way. Thus a Division may be created in addition to the existing six Divisions of the Institute, which may be named as Division of Basic Research and Training or Division of Research Methodology and Statistical Techniques.

12. There is overlapping in the work of Forecasting and Econometrics Division of Statistical Modelling work in the Division of Biometrics and Statistical Modelling. It is suggested that these activities could be combined and Division of Forecasting and Econometrics be named as Division of Forecasting and Agricultural Systems Modelling. The Division of Biometrics and Statistical Modelling has been doing good amount of research work in Statistical Genetics. In fact Statistical genetics has been the stronghold of this Institute and historically, Statistical Genetics has been one of the important specializations along with Design of Experiments and Sample Surveys. It will continue to be an important discipline in future as well. In view of this fact, the activities relating to Statistical Genetics in the Division of Biometrics and Statistical modeling should be in new Division with name changed to Division of Statistical Genetics.

Research Advisory Committee (RAC)

The composition of Research Advisory Committee (RAC) of the Indian Agricultural Statistics Research Institute constituted for a period of three years w.e.f. 22 June 2010 is as follows:

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| Prof. Prem Narain Former Director, IASRI 27 A, Pocket B-3, Lawrence Road Delhi-110 035 | Chairman |
| Dr. GM Boopathy Deputy Director General National Accounts Division Central Statistical Organization Sardar Patel Bhavan, Parliament Street New Delhi-110 001 | Member |
| Dr. SC Gulati Former Professor Population Research Centre B-15, Kirti Nagar, New Delhi-110 015 | Member |

Dr. Sridhar Sivasubbu Member
Institute of Genomics and
Integrative Biology, IGIB Extension
Center at Naraina
IA, 93-94, Naraina Indl. Area, Phase-I
Naraina, New Delhi-110 028

Dr. SD Sharma Member
Vice-Chancellor
Dev Sanskriti University
Gayatri Kunj, Shantikunj
Haridwar-249 411(Uttarakhand)

Dr. VK Bhatia Member
Director, IASRI (till 28.02.2013)
Library Avenue, Pusa
New Delhi-110 012

Dr. NPS Sirohi Member
Assistant Director General (Engg.)
Indian Council of Agricultural Research
Krishi Anusandhan Bhavan-II, Pusa
New Delhi-110 012

Dr. Rajender Parsad Member Secretary
Head, Division of Design of Experiments
IASRI, Library Avenue
Pusa, New Delhi-110 012

The 14th meeting of the Research Advisory Committee of IASRI was organized on 30 January 2013 under the Chairmanship of Dr. Prem Narain, Former Director, IASRI, New Delhi. The meeting was attended by Dr. SD Sharma, Former Director, IASRI, New Delhi and Vice-Chancellor, Dev Sanskriti Vishwavidyalaya, Haridwar; Dr. VK Bhatia, Director, IASRI; Dr. GM Boopathy, Deputy Director General, National Accounts Division, Central Statistical Organization, New Delhi; Dr. Sridhar Sivasubbu, Institute of Genomics and Interactive Biology, New Delhi; Dr. NPS Sirohi, ADG (Engg.), ICAR and Dr. Rajender Parsad, Head, Division of Design of Experiments, IASRI, New Delhi. Dr. VK Gupta, National Professor, ICAR and all Heads of Divisions, All Professors and Incharge, PME Cell of IASRI also attended the meeting as special invitees.

Dr. VK Bhatia, Director, IASRI introduced the Honorable Chairman and other members of the RAC and welcomed all members of the RAC. Thereafter, he apprised the members with the important activities of the Institute. After Chairman, Members and National Professor remarks, Dr. Seema Jaggi, In-charge, PME Cell presented the historical development, genesis, functions,

research achievements and future research programmes of the Institute. She spelled out the changes made in Goal, Vision, Mission, Mandate and six research programmes of the Institute for the XII Plan. She also presented the 78 research projects in which scientists of the Institute were involved during the year. She apprised the members regarding 19 completed research projects and 22 new projects undertaken during the period. It was also informed that the Institute has submitted applications to the Registrar, Office of Copyrights, New Delhi for registration of copyright for Monograph on Hadamard Matrices and Monograph on α -designs this year. Institute has submitted applications to the Registrar, Office of Trade Mark, New Delhi for registration of Trade Mark for AGRIdaksh. She also presented the recommendations of QRT for the period 2006-2011. Further, she presented the broad plan budget outline for XII Five Year Plan. She also highlighted the awards and recognitions won by the scientists of the Institute. Dr. VK Bhatia, Director, IASRI received Dr. C Subramaniam Award for Outstanding Teacher in Agriculture and Allied Sciences 2011 for excellent teaching in the field of Social Sciences on 16 July 2012 at the Foundation Day of the Indian Council of Agricultural Research. Two scientists have received Fellowship of Indian Society of Agricultural Statistics; one scientist was elected as Fellow of National Academy of Agricultural Sciences; one scientist was conferred the title of Sankhyiki Bhushan by Indian Society of Agricultural Statistics (ISAS); one scientist received Professor PV Sukhatme Gold Medal Award 2012 from ISAS; one Scientist received Dr. DN Lal Memorial Lecture Award from ISAS; one scientist received Dr. GR Seth Memorial Young Scientist Award from ISAS; one scientist has been elected as Member of International Statistical Institute. Many scientists have received Best Paper Awards and are nominated on Editorial Boards of national and international journals and one scientist served as an FAO consultant to Bangladesh on Harmonization and Dissemination of Unified Agricultural Production Statistics in Bangladesh.

The details of the training and teaching activities of IASRI were presented by Dr. PK Malhotra. It was informed that during the year 03 Ph.D. (Agricultural Statistics), 09 M.Sc. (Agricultural Statistics) and 04 M.Sc. (Computer Application) students have completed their respective degrees. Dr. Eldho Varghese was awarded IARI Merit Medal in the Golden Jubilee Convocation of Indian Agricultural Research Institute for his outstanding

research during Ph.D. A land mark event is that the Ph.D. programme in Computer Application has been approved by Academic Council of PG School, IARI, New Delhi and this programme would start from academic session 2013-14 and onwards. It was also informed that during the year 352 researchers have been trained through various training programmes.

Dr. VK Gupta, ICAR National Professor apprised about the research activities of the National Professor Scheme. He informed the house that during the year, he has published a book on Combinatorics in Sample Surveys vis-à-vis Controlled Selection through Lambert Academic Publishing, Germany. He explained the need, applications and research achievements on supersaturated designs specially k-circulant designs, designs for biological assays and calibrated approach for estimation of population parameters. He also informed that Sample Survey Resources server has been initiated with the help of colleagues from Division of Sample Survey and Design of Experiments for providing e-learning and e-advisory resources.

The Members were highly appreciative of the efforts made and said that results obtained are interesting, excellent and useful to NARS. Members also felt satisfaction on the co-ordination between ICAR National Professor Research Unit and the Institute. The Chairman and members gave their best wishes for continued outstanding work.

Thereafter all Heads of the Divisions presented the research achievements of their respective Divisions.

After discussions, the following action points emerged:

1. The Institute should concentrate its efforts on development and dissemination of efficient design of experiments, statistical analytical techniques for innovative applications in agricultural sciences, new and efficient algorithms for bioinformatics and knowledge management of NARS. Training programmes and dissemination workshops at the doorstep of the users need to be continued for dissemination of advances in statistics and informatics.
2. Proactive interaction with the researchers of NARS has helped in identification of statistical researchable issues and in taking up collaborative research programmes. These efforts need to be formalized through subject matter Divisions. National Conference of Agricultural Research Statisticians may

- be organized biennially with subject matter divisions of the Council for the identification of researchable issues.
3. For enhancing the capabilities of scientists and providing an international exposure, the scientists in the core areas of statistics may be sent for training to International Schools of repute. Besides the resources from the Council, different Government of India agencies such as DST/DBT/CSIR/INSA may be approached for training the scientists.
 4. Good provision of capacity building of Scientists in Bioinformatics has been kept in XII plan. For training the scientists, a list of topics of the specific requirement of NARS may be identified and as per requirement the schools of repute may be identified. The scientists should be sent for training in these areas only rather than sending them for training in generic areas.
 5. The efforts on strengthening the Web Resources on Design of Experiments and Sample Surveys have enhanced the visibility of the Institute at global level. These efforts need to be pursued rigorously. Web Resources must be replicated in other areas such as Statistical Modelling and Statistical Genetics.
 6. Indian NARS Statistical Computing Portal established for providing service oriented computing through IP Authentication for the researchers of NARS has been immensely useful to the researchers in NARS. Adding more modules of analysis on this portal should be a continuing activity so as to culminate into a service oriented computing resource for standardization of statistical analysis of data generated by researchers in Indian NARS and facilitate customized modules for automation of one-two AICRPs/Network Projects.
 7. The efforts for development of statistical methodologies for using Remote Sensing Data to obtain estimates of parameters of interest are significant. Some studies should also be initiated to see whether the use of Remote Sensing and GIS can be helpful in reducing the sample size for crop cutting experiments.
 8. The data repository steps in National Agricultural Bioinformatics Grid should be automated without involvement of subject matter specialist. Further, the efforts should be made to conduct basic research and methodological development, development of generic tools, algorithm, etc. in bioinformatics.
 9. More efforts may be made to disseminate the research achievements of the Institute in small area estimation to State Department of Agriculture and Planning Commission.
 10. Vacant scientific positions at IASRI should be filled on priority basis and for this the concerned authorities may be approached. Efforts may be made to revive the direct recruitment at scientist level in the discipline of computer applications which has also been recommended by the QRT.
 11. PG School, IARI, New Delhi and Deputy Director General (Education) Indian Council of Agricultural Research should be approached for making a provision in which the students of Masters' degree programme in Agricultural Statistics and Computer Applications from IARI possessing B.Sc. in Statistics/Mathematics may be given the option to offer remedial courses as extra credit hours in each trimester so that they can complete their degree requirements without spending one extra year. The committee also felt that the number of seats in these programmes must be increased. From this year onwards, the qualifications in ARS are M.Sc. in Agricultural Statistics/Biostatistics/Statistics with specialization in Agriculture. As statistical tools can be applied in any area of science and looking into the large number of vacant positions and for attracting the talent from outside the system, efforts should be made for dropping of "with Specialization in Agriculture" from the qualifications. The members strongly felt that the Institute should get a Deemed University status and felt satisfaction that QRT for the period 2006-2011 has also made the same recommendation. The Institute should make efforts to get the Deemed University Status.
 12. The list of Core Activities and Service Activities such as Indian NARS Statistical Computing Portal, National Agricultural Bioinformatics Grid, FMS/MIS, HYPM, etc. may be prepared. To run the service activities 24 x 7, technical manpower is must. The Council may be requested to allow to fill the vacant positions of Technical Personnel as a special case.
 13. The Council may be requested to waive the fees of trainees (coming to the Institute from different Institutes and working for the Institute Projects).

Institute Management Committee (IMC)

The Director of the Institute, who is In-charge of the overall management of the Institute, is assisted in the

discharge of his functions by the Institute Management Committee (constituted by the Council) by providing a broad-based platform for decision making process by periodically examining the progress of the Institute activities and by recommending suitable remedial measures for bottlenecks, if any. The present Institute Management Committee comprises of:

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| Dr. VK Bhatia Director, IASRI (ICAR), Pusa New Delhi-110 012 | Chairman (till 28.02.2013) |
| Dr. UC Sud Director (A), IASRI (ICAR), Pusa New Delhi-110 012 | Chairman (w.e.f. 01.03.2013) |
| Dr. Suresh Pal Head, Division of Agricultural Economics, IARI New Delhi-110 012 | Member |
| Dr. (Smt.) Ravindra Kaur Project Director Water Technology Centre, IARI New Delhi-110 012 | Member |
| Dr. (Smt.) Rajni Jain Senior Scientist NCAP, New Delhi | Member |
| Dr. Niranjana Prasad Head, Division of Processing and Product Development IINRG, Ranchi | Member |
| Dr. NP Sirohi Assistant Director General (Engg.) KAB-II, ICAR, Pusa New Delhi-110 012 | Member |
| Sh. KPS Gautam Chief Administrative Officer IASRI (ICAR) New Delhi-110 012 | Member Secretary |

The 61st meeting of Institute Management Committee was held on 22 February 2013 at the Institute.

At the outset, Dr.VK Bhatia, Director, IASRI, New Delhi and the Chairman of the Management Committee welcomed all the distinguished members and special

invitees present in the meeting and also introduced newly nominated members Dr. (Mrs.) Ravinder Kaur, Project Director, Water Technology Centre, IARI and Dr. Niranjana Prasad, Head, Division of Processing and Production Development, IINRG, Ranchi.

Dr. Seema Jaggi, Incharge (PME) made presentation on Institute Research Committee. She also presented Research Achievements on the completed research projects and on-going projects at IASRI. Dr. Rajender Parsad, Head (DE) and Member Secretary, RAC gave presentation on Research Advisory Committee recommendations of the Institute. Dr. PK Malhotra, Professor (Computer Applications) and Incharge, Training & Administration Cell gave presentation on Teaching and Training Activities of the Institute and Dr. KN Singh, Secretary, QRT presented recommendations of QRT Report of the Institute.

Institute Research Committee (IRC)

The Institute Research Committee (IRC) is an important forum to guide the scientists in the formulation of new research projects and to review the progress of on-going research projects periodically. It also monitors the follow up action on the recommendations of the Quinquennial Review Team (QRT), Research Advisory Committee (RAC) in respect of technical programmes of the Institute. Director, IASRI is the Chairman and In-charge (PME Cell) is the Member Secretary of the IRC.

Two (77th & 78th) meetings of the Institute Research Committee (IRC) were held during 19-22 September 2012 and 25-26 March and 01-02 April 2013. In the 77th meeting 06 new research projects (04 Institute funded and 02 outside funded) were approved and progress of 56 on-going research projects (28 Institute funded, 15 in collaboration with other Institutes and 13 outside funded) were discussed and 07 research projects were declared as completed. In the 78th meeting 06 new research projects (04 Institute funded and 02 outside funded) were approved and progress of 48 on-going research projects (27 Institute funded, 10 in collaboration with other Institute and 11 outside funded) was reviewed and 07 research projects were declared as completed.

During the year, 12 new research projects were approved and progress of 104 on-going research projects was reviewed and 14 research projects were declared complete.

