

Reminiscences of IASRI

A.K. Nigam*

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- It is heartening that Indian Agricultural Statistics Research Institute (IASRI) is celebrating Golden Jubilee of its foundation on 02 July 2009. Starting as a small statistical section in the then Imperial Council of Agricultural Research and in no time taking the shape of an institute speaks volumes of its journey towards excellence. The institute is known for its research and teaching programmes both nationally and internationally.
 - I have been associated with IASRI for several decades. This includes two periods of stay at IASRI, first as a student and Research Apprentice during 1962-1965, and then as a faculty in various capacities from August 1972 to April 1987. I had an occasion to work under several Directors – Late Dr. V. G. Panse, Late Dr. Daroga Singh, Dr. M. N. Das and Dr. Prem Narain. While being away at Banaras Hindu University (BHU) during 1966 to 1972, I still had my roots at IASRI as I was pursuing my Ph.D. under Dr. Das. It is indeed a great pleasure for me to write my experiences / impressions about this great institution.
 - My association with IASRI as a student was most rewarding and I spent my most memorable days as a hosteller. The competition in Professional Statisticians Certificate Course (PSCC) was fierce as there was a historical divide between north and south – a fellow from Lucknow University had been the topper for the last several years. The teaching here was entirely different from traditional universities as more emphasis was put on concepts and real world live data examples rather than derivations and proofs of theorems. I must confess that the best teacher that I came across was in our practical classes. Mr. M. B. Jain always laid more emphasis on concepts, and was open for discussions. The Practical Register was my most prized possession; it helped me a lot in imparting the concepts of Statistics to agricultural graduates when I moved to BHU as a lecturer in 1966. It was also used by many of my colleagues as a reference material for teaching. It also served as resource material for the IASRI Handbook on *Analysis of Agricultural Experiments*, compiled and edited by me and Dr. V.K. Gupta.
 - The life at the hostel, which is now the Panse Guest House, changed me from a timid shy boy to a flamboyant, ready to take the world on its stride, a complete youth. I quickly learnt and in no time became champion of games like Table tennis and Bridge. I still recall that we (V.K. Bhargava was my partner) defeated the duo – V.G. Panse and B.V. Sukhatme in the final of open bridge tournament, which was played at Dr. Panse's residence. I also won many other titles – doubles in badminton and carom, courtesy V. K. Bhargava, an outstanding sports person, who happened to be my partner.
 - After completing PSCC and Diploma in Agricultural Statistics, I joined as a Research Apprentice at IASRI and worked under Shri V.N. Amble. It was at this stage that I had my first real exposure to data analysis and computer programming. I vividly remember how happy we were when we jointly wrote our first *8 in 1* computer programmes in Fortran IV for fitting 8 production functions in one go.

*Executive President, Institute of Applied Statistics and Development Studies, Lucknow.

- My second stint with IASRI started in August 1972 as a faculty member. A strong group led by Dr. Alope Dey was already very active in research in combinatorics related to design of experiments. They had already published good quality papers in International Journals. I had no option but to join this race for survival and self esteem. It took almost five years to develop my own team of collaborators, mostly new faces, being just fresh post Graduates and Doctorate students. Within a few years, we started competing with the other team.
- Our work was not only restricted to combinatorics. We never lost sight of importance of analysis component in design of experiments and of applications in different areas. We even took up to sample surveys and our work on interplay of design of experiments and survey sampling received good acclaims internationally. The potential of the work impressed Professor J. N. K. Rao who invited me for a visiting assignment to Carleton University immediately after I quit IASRI in 1987. I followed up my first visit by consecutive four more visits in subsequent years and then I discontinued these because of family pressures back at home. During these years, I worked on the famous problem of optimum controlled sampling, and on bootstraps.
- Somehow, during these years it so happened that the institute started laying more emphasis on applied research, and at times to trivial applications, rather than basic research. Most of the applied research was still along the same lines and themes initiated by the duo – Dr. P. V. Sukhatme and Dr. V. G. Panse. Most of the work of these stalwarts was innovative using appropriate techniques and had earned worldwide acclaims. But, over the years there was a declining trend in the quality of applied work as same ideas and techniques could no more be classified as innovative after a gap of 2-3 decades. Some of us were eager that the quality of applied research became innovative again, but somehow, the idea had very few takers. Some of us felt that this change in attitude was perhaps not good for the healthy growth of a research institute. It cannot be denied that applied research is important, but it has to be innovative. For the existence of a research organization, it is also equally important to conduct basic research which has a strong potential of immediate application or in near future to solve problems of agricultural sciences.
- Late Dr. V. G. Panse has always been a legend because of his balanced approach to research. While he himself was basically not a theoretician, he always appreciated good theoretical work. I am reminded of the afternoon when I was giving a seminar talk on my Diploma thesis work related to construction of rotatable designs – pure theory based upon trial and error. The first question after my talk came from a very senior faculty member – *what is the application of your work in agriculture?* Almost simultaneously Dr. Panse expressed his anguish and intervened with his strong but motivating remark, *'this is an outstanding theoretical contribution'*.
- I really felt honored when I was invited to deliver Panse Memorial lecture at the International Conference on Statistics and Informatics in Agricultural Research held at Delhi in 2006 to mark the Diamond Jubilee Celebrations of the foundation of Indian Society of Agricultural Statistics. It may not be out of place to record here some part of the tributes I paid to this great person – *"His contributions to agricultural statistics are monumental and it would do no justice if one tries to enumerate them. While Dr. Panse was a strict administrator, he was also a very kind hearted person. He was a terror to incompetence, but an impetus to the conscientious work."*

- Although I left IASRI in 1987, after taking voluntary retirement, my connections with the Institute remained intact. From outside, it was a helpless feeling to note that ICAR was struggling to appoint a competent Director for IASRI. It was somewhat satisfying when I was approached by the then DDG (Engg), ICAR to take over the responsibility of leading the institute as Director. This unfortunately came a little too late and because of my other pre-occupations I had to decline the offer.
- I continued my association with the Institute through different Committees. I happened to become the Chairman of QRT for the period 2000-2005, and Member, RAC jointly for IASRI and NCAP. This provided me an opportunity to have a closer look at the activities of the Institute. It was really heartening to see that the Institute has made a valiant attempt to improve the status of agricultural experimentation in National Agricultural Research System (NARS) by way of rigorous advisory services being pursued by the scientists of the Institute. It was a pleasant surprise for me to find that alpha designs, extended group divisible designs, second order rotatable designs, experiments with mixtures, etc. have been used by the experimenters in NARS. The applications of non-linear models, state-space models, models for forewarning of pests and diseases in crops, small area estimation have been made by the scientists of the institute for explaining the behaviour of complicated and multi-dimensional agricultural research. Development of indigenous software and information systems is another area in which the institute has taken a big leap.
- In spite of the achievements as above in applied research, it is disturbing to note that fewer scientists are involved now in basic research. This has resulted into very few publications in International Journals with high impact factors. Basic research is the input to applied research. Therefore, this trend needs to be reversed and a balanced approach in basic and innovative applied research needs to be maintained. I, therefore, strongly feel that reviving the Division of Training and Basic Research at the institute should be top priority in the agenda of progress of the institute. This has also been one of the recommendations of QRT.
- For doing good quality basic and innovative applied research work, it is essential to have a blend of young new talent and experienced competent scientists. However, it is disheartening to note that the average age of the scientists at IASRI is very high. Since last many years, no new scientists have been posted at the Institute. Therefore, immediate efforts should be made to infuse new blood into the system so as to undertake research in newer emerging challenging areas.
- As stated earlier, the Institute has also developed outstanding methodologies that have helped improve the National Agricultural Statistical System (NASS) of the country. But some studies have been trivial in nature and seem repetitive. Perhaps there has been a seemingly trivial imbalance in the efforts of the institute towards applied research for NARS and NASS. This needs to be addressed for the sound health of the institute.
- The institute has some brilliant workers but unfortunately they are few in numbers. These workers have to be given all impetus and encouragement, and in turn, they are to provide leadership to motivate and energize the young workers. A spirit of competitiveness is to be induced to derive the best from the scientists. Then alone, it would attain the heights and recognition which it is aiming for.

