

Agricultural research service: An overview

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The Agricultural Scientists Recruitments Board (ASRB) in pursuance of the recommendations of the Gajendragadkar Committee Report on ICAR, 1972 was established on 1 November 1973 as an independent recruitment agency. Agriculture Research Services abbreviated as ARS is the research services of the Indian Council of Agricultural Research (ICAR), organization under the Department of Agricultural Research and Education (DARE), Ministry of Agriculture, Government of India. The Agricultural Scientists Recruitment Board (ASRB) conducts all India competitive examination for ARS examination, to recruit entry level posts in the Agricultural Research Services of ICAR. Problems in agriculture now are complex than in the past. To solve complex problems recruitment of competent scientific manpower and putting right person for the right job is need of the hour. To achieve this, every effort will be made for holding merit, integrity and transparency in ASRB examinations, promotions and recruitments. The basic purpose of the service is to set a cutting edge model of education, perform research for its application in agriculture, agro forestry, animal husbandry, fisheries, home science and allied sciences. The agricultural research services has been playing a major role in make the country self-reliant as far as production of food grains, horticultural crops, milk, meat, fish and eggs are concerned and the role of the services goes further scathing and challenging owing to widening demand of the country growing at a decadal growth rate of 17.2 per cent. The formation of Agricultural Research Service was considered a significant milestone in the organization of research in the field of agricultural sciences in India. This service has been in operation long enough for a meaningful evaluation of the various aspects of the service. It is needless to emphasise that the focal point of this service was to foster a spirit of co-operation in the place of unhealthy competition. The career opportunities provided under the new system afford maximum encouragement to a dedicated worker. The ICAR is probably the second

largest organization in agricultural research in the world in terms of the number of qualified scientists associated with it. More important, it has been able to foster a fair degree of integration of research, education and extension education. Central Institutes and Agricultural Universities have been welded together into a symbiotic working partnership through All India Co-ordinated Research Projects. The organization of Krishi Vigyan Kendras (Farm Science Centres) based on the principles of learning by doing and the identification of breakthrough points for generating opportunities for gainful employment on the basis of an integrated analysis of the material, biological and human resources of an area are among ICAR's recent contributions towards bridging the prevailing gap between the capacity to grow food and the ability to purchase and eat food on the part of a considerable proportion of our population. The ICAR has fortunately now achieved the desired synchrony between its organizational structure and its research and educational mandate. It has a structure which enables it to maintain continuous contact with the policy maker, on the one hand, and the farmer, who is the user and hence the ultimate judge of the value of agricultural research, on the other hand. Its structure also permits the speedy rectification of deficiencies as and when they come to light. Above all, ICAR introduced on October 2, 1975, an Agricultural Research Service for its scientists which will enable a young scientist entering a research career to get the highest salary possible in public services without changing his or her field of specialization and without shifting to managerial and administrative posts merely for receiving a better salary.

Mandate of ASRB :

– Recruitment to posts in the Agricultural Research Service (ARS) of the ICAR and to such other posts and services that the President, ICAR, may specify from time to time.

– Rendering such other assistances to the Council in personnel matters, including promotion, as may be required by the President, ICAR.

- Advising the Council on disciplinary matters relating to personnel recruited through ASRB or appointed by the Council in consultation with the Board.
- Recruitment to entry level scientific positions of the ARS through an All-India Competitive Examination.
- Induction of existing scientists of the ICAR to ARS under the initial constitution of ARS.
- Assessment for merit promotion and grant of advance increments to scientists of the ARS.
- To conduct National Eligibility Test (NET) which is a prerequisite for the initial recruitment as Assistant Professor/Lecturer in the State Agricultural Universities.
- Recruitment to posts in the combined cadres of Administrative Officers/Finance and Accounts Officers of the ICAR which are required to be filled by direct recruitment.
- Submitting annually a report on its activities to the President, ICAR. The Board is headed by a whole-time Chairman who reports directly to the President of the ICAR Society.

Aims of agricultural research service :

- Foster co-operation in the place of unhealthy competition.
- Enable scientists to get the highest salary possible within the system while remaining rooted to work in their respective discipline/field, thereby eliminating both the undue importance attached in the past to research management posts and the quest for such positions purely for advancement of salary.
- Promote an outlook where solving a specific field problem through inter-disciplinary team work is regarded as the primary goal of research than the worship of a discipline or publication of papers.

- Promote horizontal and vertical mobility and adequate attention to neglected and backward areas.
- Link rights and responsibilities and instil through the five year assessment system the conviction that dedicated and efficient discharge of responsibilities alone would be means of securing professional advancement.

Objectives of agricultural research service :

- To generate a scientific culture and opportunity for continuous professional growth and life-long specialization without any constraint and to promote individual and collective initiative for improving the productivity of research and application of knowledge in matters relating to all aspects of agriculture.
- To attract, recruit and train the most promising postgraduates (graduates in the case of engineering and technology) from the universities as may have an aptitude

for research in agriculture.

- To induct proven talent and experience into the ICAR by direct recruitment of highly qualified scientists on a permanent or a tenurial basis.
- To promote team work and genuine professional collaboration particularly on an interdisciplinary basis and to eliminate unhealthy rivalry.
- To enable a scientist to advance in his/her career while continuing to work on problems relating to a particular crop, animal or area of agricultural study, for an extended period of time.
- To give explicit recognition to the research management function and to ensure that those desiring and having an aptitude for research management and co-ordination responsibilities are able to concentrate on the task of effective planning and implementation of research programmes and of promoting organized cooperation.
- To develop an effective system of career planning, management and advancement.
- To ensure that interchange of scientists between positions involving research performance and research management responsibilities takes place smoothly and reciprocally.
- To facilitate mobility of scientists from one institute of ICAR to another as also from the ICAR to sister organizations like Universities, Council of Scientific and Industrial Research (CSIR), Bhabha Atomic Research Centre (BARC) etc.
- To facilitate specific scientific attention to the problems of such areas of the country whose potential for agricultural growth is yet to be converted into wealth meaningful to the people.

Initial constitution of the agricultural research service :

- The Agricultural Scientists' Recruitment Board shall constitute a Selection Committee with the Chairman or his nominee as President with not more than three Scientists as core members and not more than three other Scientists as additional members (to be determined according to the background of the scientists to be assessed) to assess the suitability of the 'Council's Candidates' in the grades included in the cadre.
- On receipt of recommendation of the selection committee, the Board shall forward its recommendation to the Secretary, ICAR.
- Council's candidates who are not absorbed in the initial constitution of the Service will continue to work as at present.
- The candidates referred to in Sub-Rule 3 may be

considered by the Controlling Authority for appointment to the Service at a subsequent stage or stages in consultation with the Board and suitability of such candidates for appointment to various grades of the Service shall be determined by a Selection Committee.

– To the extent that the authorised permanent strength of various grades is not filled at the time of the initial constitution by the Council's candidates, it shall be open to the Controlling Authority to decide whether, and if so, to what extent.

– Candidates from the open market is necessary. If any recruitment is considered necessary after the appointment of Council's candidates is over, the controlling authority shall decide the qualifications of candidates and mode of selection of such candidates in consultation with the Board.

– Any candidate of the Council referred to in Sub-Rule (1) who does not desire to be absorbed in the Service, may continue to hold the position already held by him, provided he informs the Council in writing accordingly within a period of 6 months from the date of his selection for inclusion in the Service (Appointing Authority means the President; Council means ICAR; "Council Candidates" mean persons specified in schedule I on the date of constitution of the service).

Unique feature of the agricultural research service:

The Service is designed to replace the current "post-centered" system by a "scientist –centered system". The most significant feature of the service is that promotions will be irrespective of occurrence of vacancies, on the basis of rigorous periodic assessment by an external panel of eminent scientists headed by Chairman, Agricultural Scientists' Recruitment Board. Professional colleagues need not hereafter view each other as potential rivals for a vacancy in a higher salary scale. Apart from providing better opportunities for career advancement, the Service facilities optimal use of scientific manpower and the desired mobility of scientists. A scientist may be allowed to have a personnel scale of pay higher than that of his grade, while continuing in the Service, in recognition of outstanding service in research on the basis of a procedure for assessment prescribed by the Controlling Authority in consultation with the Agricultural Scientists' Recruitment Board.

Most significant features of the new policies : Keeping the personnel needs in view, the Council has restructured its personnel policies towards all the categories of the staff-scientific, technical, administrative and supporting. For the Scientific Personnel two Services, viz., Agricultural Research Service (ARS) and Research Management

Positions (RMP) for conducting research and management of research were constituted with effect from October 1, 1975 and April 1, 1976, respectively. The ARS was inaugurated on October 2, 1975 at NDRI, Karnal. Three most significant features of the new policies are : No scientist needs to move hereafter from his/her field of specialization just for the sake of an improvement in salary; a scientist doing his or her job with dedication and distinction can hope to get the highest salary possible within the organization without recurrent application and competition with professional colleagues and without having to shift to a research management position; Every scientist may have to help for some time during his/her career to solve the problems of neglected and tribal areas; and All research management and co-ordinating positions will be filled up on a tenurial basis, so that no scientist needs to give up his/her active research career for too long.

Controlling authority of the service: The controlling authority of the Service is the President of the ICAR Society assisted by a Committee Known as Committee on Agricultural Research Service. The Committee presided over by the Director-General, ICAR, has, in addition, six members nominated by the President of the Society, of whom three members shall be the Secretary, ICAR, the Director, IARI and one Director of another Institute of the Council.

Future high priority focus areas of ASRB : Some of the high priority areas which ASRB would like to focus in the near future include : clearing back log of pending assessments of scientists, holding of NET / ARS-Prelim examination in online, recruitment of skilled manpower and upgradation of skills of existing staff, construction of ASRB building and developing infrastructure, creation of agricultural research manpower analysis and planning unit and updating of question bank and data base of specialist advisors.

Agriculture research service examination : The ARS examination conducted by the ASRB consists of three stages viz., Prelims, Mains and Interview. The prelims stage is the qualifying examination and all those candidates who desire to appear for the ARS examination have to appear for both prelims and mains examination. The ARS examination is the initial port of entry into the services of ICAR and the new entrants are imparted foundation training called as FOCARS (Foundation Course for Agricultural Research Services) at the National Academy of Agricultural Research Management (NAARM), Rajendranagar, Hyderabad.

Foundation course for agricultural research service:

The FOCARS is designed for the newly recruited entry level scientists to the Agricultural Research Service of the ICAR. The course aims at providing exposure to the trainees on the concepts and principles of project management with special emphasis on project formulation and implementation. It also includes capsules in related areas on human resources development, and information and communication management.

Career progression : The recruits through the ARS Examination are designated as 'ARS' or 'Scientist'. The post of entry level ARS or Scientist is same with Jr. Class I cadre of Central government. The initial pay is fixed after granting advance increments for higher qualification, with PhDs getting highest salary. Initially, they are kept on 'tenure track' or 'probation' for 2 years and upon satisfactory completion of this period they are given 'tenure' and confirmed in the ARS. On completing service for designated years and meeting a set performance criteria, they are progressively promoted to the next higher grades in a Flexible Complementation system known as Career Advancement Scheme (CAS). The incumbents without a Ph.D. degree are given paid study leave to acquire Ph.D. qualification, which is necessary for career progression. Through CAS, Scientists can rise upto Principal Scientist grade, which is equivalent to the scale of Joint Secretary to the Government of India. The ARS encourages fresh infusion of talent at all senior levels through lateral entry in which incumbent scientists can also participate in the open competition and move their career ahead in much shorter time than CAS. All the Research Management Positions are filled through open competition only. The Director General of ICAR is the highest-ranked member of the ARS, who is ex officio Secretary to the Government of India, Department of Agricultural Research and Education (DARE), Ministry of Agriculture.

ASRB NET : ASRB NET Exam is specific qualifying examination for lecturers and assistant professors in state agricultural universities (SAU's) and other agricultural universities (AU). Agricultural Scientist Recruitment Board is tasked with responsibility of conducting this online assessment. National Eligibility Test (NET) is conducted in sessions in 55 key disciplines across centers all over India. Candidates with a masters degree or equivalent qualification in relevant discipline are eligible to apply for ASRB NET.

Goals of agricultural research scientists' forum :

- To develop a culture and outlook which could become the tradition of the Agricultural Scientific community

- To promote and advance agricultural research in the country.

- To facilitate scientists' participation in formulation and execution of agricultural research policy in the country.

- To protect the interests and look after the welfare of the Agricultural Research Service Scientists in order to bring about excellence and relevance in the purpose of their mission.

Membership of agricultural research service

scientists' forum : The membership of the Forum will be open to the scientists of the Indian Council of Agricultural Research (ICAR). The ICAR scientists, who are interested in promoting professional excellence in research, education and development and believes in fostering socio-cultural fraternity among ICAR Scientists and whose admission would promote the interests of the Forum shall be eligible for Life Membership on payment of prescribed fees. Every member of the Forum will be expected : To strive to develop the feeling of fraternity and mutual trust among the community of ICAR scientists, To uphold the principles of Forum in letter and spirit and to work for the welfare of ICAR Scientists and for the advancement of science in the overall interest of humanity.

Conclusion : India is second largest country in the world in respect of population (according to 2011 census 121.1 crores population) and seventh largest country in the world in respect of area coverage (3.287 million km²) where population growth rate always crossing agricultural growth rate. To feed the ever-increasing population of our country is the greatest challenge. Like European countries which are industrially advanced and having so much skilled labourers, our country is not industrially advanced nor having so many skilled labourers in every field of development. It is the Economists' estimation that if we divert all attention to industrial development instead of agriculture development, whatever the income will come that is not sufficient to feed the hungry bellies of millions in our country, minimum two times in a day. Therefore, other aspects of social development will really be a daydream. Therefore, only industrial sector development in respect of our country is not a pathfinder of overall progress. Obviously we will jump to agriculture sector. As a seventh largest country in the world, we have vast agricultural land. Hence, if we give emphasis on agriculture sector development it will be able to feed our countrymen. More emphasis on agriculture, simultaneously emphasis on industrial sector and service sector will bring desired result in way of our national progress and this model is most suitable model for our country. Agriculture

Table 1 : List of approved disciplines for purposes of recruitment to the Agricultural Research Service (ARS) and National Eligibility Test (NET) Examination

Code No.	Discipline	Code No.	Discipline
1	Agril. Biotechnology	29	Veterinary Parasitology
2	Agricultural Entomology	30	Veterinary Pathology
3	Agril. Microbiology	31	Veterinary Pharmacology
4	Economic Botany and Plant Genetics Resources	32	Veterinary Public Health
5	Genetics and Plant Breeding	33	Veterinary Surgery
6	Nematology	34	Aquaculture
7	Plant Bio-chemistry	35	Fisheries Resource Management
8	Plant Pathology	36	Fish Process Technology
9	Plant Physiology	37	Fish Nutrition
10	Seed Science and Technology	38	Fish Health
11	Floriculture and Landscaping	39	Fish Genetics and Breeding
12	Fruit Science	40	Agricultural Chemicals
13	Spices, Plantation and Medicinal and Aromatic Plants	41	Agricultural Meteorology
14	Vegetable Science	42	Agro-forestry
15	Animal Biochemistry	43	Agronomy
16	Animal Biotechnology	44	Environmental Sciences
17	Animal Genetics and Breeding	45	Soil Sciences
18	Animal Nutrition	46	Agricultural Business Management
19	Animal Physiology	47	Agricultural Economics
20	Animal Reproduction and Gynecology	48	Agricultural Extension
21	Dairy Chemistry	49	Agricultural Statistics
22	Dairy Microbiology	50	Home Sciences
23	Dairy Technology	51	Farm Machinery and Power
24	Livestock Product Technology	52	Agril. Structures and Environ. Management
25	Livestock Production Management	53	Land and Water Management Engineering
26	Poultry Science	54	Agricultural Process Engineering
27	Veterinary Medicine	55	Food Technology
28	Veterinary Microbiology		

development is the need of the hour. There are several problems in recent day agriculture, decreasing per capita land holding for agriculture, decreasing natural resources, lack of irrigation water or lack of sufficient amount of irrigation water, increased infestation of insect-pests and diseases, soil health deterioration, lack of scope of proper farm mechanization due to segmentation of land, marketing related problems etc. In this background, making agriculture dynamic, scientific way of cultivation is necessary means we will depend on science and scientists. Scientists need a suitable environment to carry out various research works based on scientific knowledge. Before Green revolution our Govt. did not realize the importance of scientists in country's agriculture development, but green revolution incident was an eye opener to realize the importance of agricultural scientists. Green revolution taught a lesson that scientific research of scientists can bring a revolution in agriculture development in our country. Green revolution taught a lesson to our policy makers that we will not depend on Public Law 480 (PL-480), but we

will depend on country's agricultural scientists and they will bring self-sufficiency in foodgrain production in our country. Therefore, administrators and policy makers realized to give emphasis on scientists' betterment for carry out better scientific research work in field of agriculture. In 1950-51 foodgrain production was 50 million tons and in 2016-17 foodgrain production is over 250 million tons, therefore four times more production is obviously the contribution of scientists. Therefore, formation of Agricultural Scientists Recruitment Board (ASRB) on 1st November, 1973 and introduction of Agricultural Research Service (ARS) on 2nd October, 1975 was a farsighted attempt to develop gradually our country in agriculture. Realizing this basic truth, Govt. will be more sensitive to agricultural scientists' betterment.

“The most humble research scientist in the Department of Agriculture is at this time contributing more to this country than the most useful member of Congress.” — Fiorello La Guardia

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