



**Proformae and Guidelines
for
Research Project Proposal,
Monitoring and Evaluation**

Indian Council of Agricultural Research

PREFACE

Scientific performance evaluation is as old as the story of science itself. Recent history of scientific research presents a clear deduction that scientific endeavour may not and does not always translate into immediate perceptible gain/achievement. But, over years, brick by brick, the edifice of successful technology or techniques does get built up. This implies that every scientific effort in a short run needs such measures which would effectively evaluate the scientific performance or the output of the endeavour. Quality improvement with focused direction towards increased production and productivity therefore, becomes an essential attribute of any dynamic organization especially one dedicated to Agricultural Research and Education.

Improving research has an inherent requirement of performance evaluation. In mundane life, success or failures is often weighted in terms of the goals we set for ourselves. Successful life is one in which the goals set have been accomplished, may be in varying degrees, to be distinguished from situations of not reaching where one had aimed at. The parameters for success or failure are purely to be judged against a set of yardsticks set by self or required of an individual. Irrespective of the type of measures for such evaluation, the net truth is that improvement cannot be achieved unless a criterion is in place for such judgment.

A vast section of scientific manpower in the National Agricultural Research System is relatively oblivious of placing himself/herself against pedestals of performance measurement. Often, in such cases, performance is poor, lacklustre, decimal and disappointing both to the scientist as well as to his/her science managers. Conversely, frustration among the performing scientists gets worked up in this sea of mediocrity as the scientific talent and performance is not getting its due in the absence of effective and efficient evaluation and assessment. Restoration of a time bound method for reward and award, through structural ranking and recognition, as recommended in this report, is intended to go a long way for recognizing talent and performance.

Research proformae are meant to inculcate a degree of responsibility to the scientists to keep a track of his/her research objectives and scientific activities, sharpen his/her focus on the research problems at hand, generate data regarding the scientific endeavours and present conclusions of the research. The proformae, meant to be an instrument for initiating a thorough exercise in deciding about the research project, identifying the activities through which he or she be able to monitor the course of his/her research, are therefore, very essential. Against each of the identified activities researcher can easily evaluate his own progress and that of his co-workers and also facilitate the managers to objectively and with an open mind rate the scientific endeavour and performance.

Unrecognized and unseen research elite on one hand and the "also ran" scientists on the other, often suffer under the yoke of indifference on the part of science managers since they have no tools to univocally decipher the abilities of scientific community. Getting even handed, leads them to take a median course thus averaging the performance. This has been

identified as a major bottleneck by research scientists in their research efforts. The silent performing group among them are insistent that they pay the price for the low profile of the National Agricultural Research System, primarily because their research efforts are not recognized. Probably rightly so, due to absence of any benchmark system of the research project formulation and evaluation. The committee has now made recommendation through which research formulation and output could be effectively and efficiently measured and recognized through research monitoring and evaluation system using the proformae developed for the same.

The recommendations in this report/document on the research proformae have introduced a new word in the area of research monitoring and evaluation. Research project proforma presented through this recommendation not only guide the scientists and science managers in terms of research project formulation and submission/approval but also lead towards identifying research output performance indicators, self evaluation and finally monitoring and servicing the projects. These proformae are also meant to serve as a guide to quality scientific performance of the scientists for annual assessment.

This exercise would not have been possible without the intense involvement of the members of the Committee Dr. M.M. Pandey, Dr. V.K. Sharma and Dr. V.K. Bhatia. Their intimate understanding of the guiding principles has resulted in achieving the twin objective of developing proformae for research project formulation and quality evaluation as well for as a procedure/protocol for efficient monitoring and evaluation/ appraisal of research output by scientists of ICAR. The committee feels highly thankful to the Director General, ICAR & Secretary, DARE, Dr. S. Ayyappan for having initially conceived about the essentiality of such exercise of Scientists evaluation & monitoring and also providing an opportunity for the members of the committee to serve the cause of scientific research.

The committee places on record the valuable inputs received from Dr. P. K. Malhotra and Dr. R.C. Goyal, Principal Scientists at IASRI who contributed significantly in the process of the formulation of this report. The committee also thanks Directors and Scientific staff of ICAR Institutes specially Director of NDRI, IVRI, NBAGR, CSSRI and their Scientists for their valuable inputs. The secretarial assistance provided by the office of Director, IASRI is thankfully acknowledged.

(M.L. MADAN)
Chairman

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EXECUTIVE SUMMARY

- 1. Indian Council of Agricultural Research has the distinction of being one of largest body of over 5000 scientists of different fields of Agricultural Sciences including areas of life science, basic science, applied science and managerial science.**
- 2. While reviewing the project monitoring and evaluation systems in the Council, it has overwhelmingly been clear that the present system of Research Formulation, Evaluation, and Monitoring was inadequate.**
- 3. Though a set of proformae was available with the ICAR institutes, there were identified and accepted inadequacies in proformae & evaluation system. Trans disciplinary knowledge and innovative research modelling often did not constitute an important bearing of project formulation.**
- 4. The evaluation system of research continued to be a serious lacuna since the scientist felt that their contributions were not appreciated while the science managers/ supervising officers always had difficulty in interpreting the degree of success the scientist had achieved in reaching his targets.**
- 5. A committee was constituted by ICAR to analyse the present format of Research Project Files I/II/III of ARS Scientists with reference to the content, grading and linking up the same to the Annual Confidential Reports of the Scientists and also to consider any other issue or matter for improvement of the system of research monitoring.**
- 6. The committee undertook this exercise and different procedures and mechanisms used by various scientific organizations were looked into. This report is a synthesis of detailed deliberations of the committee and their interaction with the scientific community. A set of recommendations have been made, proformae and checklists proposed, procedures for formulation of research projects laid, a system of monitoring and evaluation developed.**
- 7. The revised proformae identify the specific roles and contributions of each contributing scientist in terms of time allocation and expected output and basic monitoring and evaluation of the work of each scientist.**
- 8. The report identifies a set of check lists to be submitted along with the proposal and the annual/completed projects, to streamline the formal submission of project and facilitate monitoring of project proposal as well as its subsequent progress by the PME and the Institute Research Committee.**

9. A uniform criteria has been established through a set of parameters to assess the suitability of research projects as per Institute's mandate and responsibilities and rank the quality of research efforts in project preparation.
10. A common score card has been laid for project output in such a manner that it would suit scientists across the different institutions, subject matter divisions, commodities and ranks of scientists. The score card shall enable the scientist to analyse his/her research standing. The proforma has an in built mechanism of check and balance by which the self score of the scientists will be crossed checked by PME/Joint Director (the research management group) through independent scoring on the scientist's performance for the same parameters. In case of gross differences in the evaluation score, the evaluation will be referred back to the scientists/principal investigator for his/her comments and response.
11. The developed proformae:
 - a) Enable the research managers a pre determined, fair, evaluation system against well defined and identified parameters to judge the quality of research outputs in each project.
 - b) Empower, on one hand the bench scientists to evaluate his/her own performance to stimulate him/her to greater or better activity and on the other hand the research manager to judge/assess the annual performance of the scientists.
 - c) Give the ARS-research system a managerial evaluation tool's to rank the research performance so that the 'performers' could be distinguished from 'non-performers' and thus provide a quantitative basis for reward for some and added opportunity for others to improve.
 - d) Assist the research managers in making research evaluation compatible with annual assessment of the scientists in terms of total time management/utilization for research, teaching, extension and other activities.
12. The report describes in details the schedule of events for research project proposal submission, its approval, implementation and its completion.
13. The revised proformae make it mandatory for the principal investigator to submit all his/her records of data generated in the research projects to the Head/PME for safe custody as a property of the Institution/Council.
14. The implementation of the recommendations are envisaged to provide a mechanism for efficient, easy scientific monitoring and evaluation system - scientists friendly and science manager evaluation savvy.

1. PREAMBLE

The Indian Council of Agricultural Research (ICAR) is an autonomous organisation under the Department of Agricultural Research and Education (DARE), Ministry of Agriculture, Government of India. The Council is the apex body for coordinating, guiding and managing research and education in agriculture including horticulture, fisheries and animal sciences in the entire country. With over 97 ICAR institutes and 45 agricultural universities spread across the country, the Council has the distinction of being one of largest body of over 5000 scientists of diverse sciences fields in the area of life science, basic science, applied science and managerial science distributed in eight Subject Matter Divisions of ICAR namely Agricultural Engineering, Agricultural Education, Agricultural Extension, Horticulture, Crop Science, Animal Science and Natural Research Management. The scientists in these divisions obviously touch a vast canvass of scientific investigatory methodology pattern of output and result application. While one group may be devoted to only basic or fundamental research, some others engaged in transitional research and those in managerial sciences will have a different profile for investigation and result application. Therefore, it is very essential that Research Project proformae should be robust to answer the requirements of different groups and at the same time should be distinctly able to decipher the research outcome for comparative assessment of performance. The research proformae should be broadly equitable in setting a procedure for monitoring & evaluation of scientific research.

Aggressive project profiling leaves large body of scientists unseen and unsung, irrespective of the importance and implications of their research efforts. Also, several scientists take shelter under the totalage of a mega or a front line project and pocket disproportional credit without contributing as required. Other scientists in the same project or other projects may not be getting their due in terms input contributions. Research proformae are thus required to be even handed to both such groups. A qualitative identification of the role of each worker in a project at the initial stage will mean, fixing the activities of the project and assigning a role to individuals. Thus subsequent evaluation of role performance of individual becomes easy and a quantification possible.

As the goals of diverse projects in different science disciplines are also different, the task of evaluation and assessing the performance of individuals becomes highly challenging. It is therefore essential that there must be a system in place by which the performance can be comparatively assessed. Such system must have a set of parameters predecided to bring uniformity, which are uniformly applicable and given right weightage under different situations leading to a rating & ranking of the scientific performance in the project as also personal evaluation/appraisal of the scientist.

Thus the task before the committee constituted to review the existing proformae which are used for research project are to be considered in terms of the following:

- a) Developing proformae which are brief concise, all inclusive with common determinant of identifying the activities and the time frame in achieving the objectives of the project.
- b) Recast the project formulation within the system on a uniform basis ensuring that each individual scientific effort follow a protocol of research project formulation which will answer the current concepts of science with creditably and openness, identify and bridge the gaps in knowledge and also identify the parameters around which the project will be monitored & evaluated.
- c) Develop a standard and uniform system of project formulation and approval with a project ranking system for research prioritization/quality assertion at the time of initiation of programmes.
- d) Develop proformae by which principal investigator/researcher will be able to lay down criterion for his assessment (self as also by research managers)
- e) Develop a monitoring system by which the progress and performance of research project can be evaluated by managers against the self assessed performance of the Principal Investigators.
- f) Develop, procedures and protocols by which the scientific outcome of the project could be ranked in terms of its expected outcome to give impetus for result oriented research environment, and
- g) Develop proformae and management evaluation tools through which science manager could qualitatively and quantitatively rank performance for award/reward of the scientists and/or afford an opportunity to underperforming scientists to scale up their activities to better performance.

2. CONSTITUTION OF REVIEW COMMITTEE

A committee was constituted by the ICAR vide office order no. 38(4)/2011-Per.IV dated April 5, 2011 (Appendix – I) to review the existing format for Research Project Files I/II/III of ARS Scientists consisting of the following :

- | | |
|--|------------------|
| 1. Dr. M.L. Madan, Ex. Vice Chancellor
UP Pandit Deen Dayal Upadhyay Pashu Chikitsa,
Vigyan Vishwa Vidhyalaya, Mathura
Dr. Panjab Rao Deshmukh Agriculture University, Akola
and Former Deputy Director General (Anim. Sci.), ICAR | Chairman |
| 2. Dr. M.M. Pandey, DDG(Engg.), ICAR | Member |
| 3. Dr. V.K. Sharma, Principal Scientist & Office-in-charge,
CIFE, Rohtak Centre, Rohtak & President ARSS Forum | Member |
| 4. Dr. V.K. Bhatia, Director, IASRI | Member Secretary |

The terms of reference of this committee were

- (i) To analyse the present format of Research Project Files I/II/III of ARS Scientists with reference to the content, grading and linking up the same to the Annual Confidential Reports of the Scientists and all related aspects
- (ii) Any other issue or matter for improvement emanating or incidental to the above terms of reference.

3. SYNTHESIS AND HISTORY OF RESEARCH PROJECT FILES IN ICAR

3.1 System of Records for Research Projects

The system of maintaining records of the research projects in the ICAR is quite old. On the recommendation of the First Indo-American Team on Agricultural Research & Education, the scheme for maintenance of research project files of the projects relating to Agriculture and Animal Husbandry was initiated by the ICAR in September 1958. To evolve system of maintenance of complete file on all current agricultural research projects in the country, the performa and model project files were circulated to ICAR Scientific committees, State govt., Central Institutes for comments and suggestions. They also supported the idea of maintaining of RP Files and opined that the research information be made freely available to the research workers in the country. The Council agreed to implement this recommendation. Accordingly the lists of project files were circulated periodically for direct reference among the officers of the Council, study teams, project coordinators and research workers. This system was essentially designed with the following objectives:

- (i) Central source of information on current agricultural researches
- (ii) Safeguard against duplication of research efforts
- (iii) An aid in programme analysis
- (iv) A source of material for research coordination

Before completion of the above scheme in 1967, the Statistical Committee of ICAR in Jan., 1966 recommended to take up the above mentioned scheme as a regular activity of the Council. Thus, RP Unit was formed in 1967, which was responsible for the maintaining of research project files of the projects and to disseminate research information to the research workers. Subsequently a uniform project system for describing and reporting the research activities of the Central Research institutes on the standardized performa was developed, namely Research Project File (RPF). This Performa was circulated among the Institutes. Under the implementation of this performa, the detailed information about the project was maintained in three headings i.e., RPF-I, RPF-II, RPF-III.

RPF-I: *basic information about the project such as title of the projects, its associates, location, objectives, technical programme, observations to be undertaken, date of start, date of termination, financing approximate cost etc.*

RPF-II: *various items for obtaining annual reports*

RPF-III: *final report.*

Realizing the importance of project filling, the Council renamed RP Unit in 1974, as Agricultural Research Information Centre (ARIC) which apart from maintaining the research project files also maintained database of the AP Cess funded Adhoc Research schemes, AICRPs. These set of proforma were revised during early 1990 so as to digitise this information.

4. IDENTIFIED AND ACCEPTED INADEQUACIES IN PROFORMAE AND EVALUATION SYSTEM

While reviewing the project monitoring and evaluation systems in the Council, it overwhelmingly was clear that the present system of Research Formulation, Evaluation, and Monitoring through Research Project Files (RPFs) was inadequate. Over the years, while fast information creation and retrieval system had built strong inroads into daily functioning of scientists and scientific endeavour, research monitoring and evaluation had not kept pace particularly in

light of the digitization phenomena of the information storage and retrieval. Though a set of proformae was available with the ICAR institutes but invariably the institutes and scientists

Expectations from Research Monitoring and Evaluation System in the ICAR

A system must have

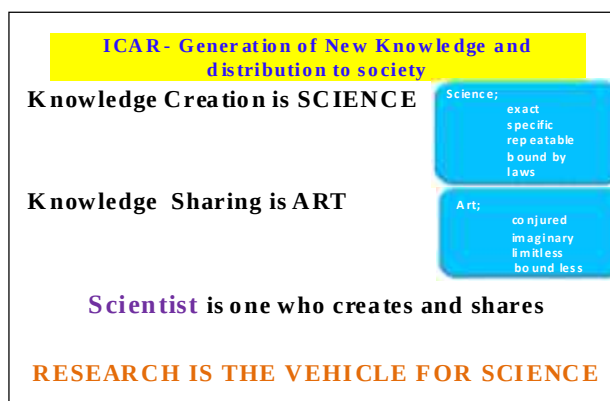
- An objective research monitoring and evaluation mechanism that would
 - effectively assess research efforts against well-defined targets
 - avoid duplication of research efforts and
 - provide feedback to research planning process.
 - establish link between performance evaluation and incentive mechanism.
- A Decision Support System based research monitoring and evaluation and its integration with research management process for
 - institutionalization of improved priority setting mechanism and
 - bring more objectivity and transparency in research resource allocation, facilitating informed debate.
 - effective, robust, interactive evaluation and appraisal system,
- Linkage with APAR/ACR so as to provide much needed support to PME Cell, IRC etc.

were not confirming to these proformae strictly and variations had been inadvertently and covertly introduced resulting into multiple proformae and accompanying difficulty for central monitoring. These proformae also specifically did not address in channelizing project formulation through which the division/discipline of a particular scientist will get involved in sharpening the project ideas. Trans disciplinary knowledge and innovative research modelling often did not constitute an important bearing of project formulation. In the absence of specific monitorable targets envisaged at the beginning of the project, the project output remained vague and unaccountable. The evaluation system of research continued to be a serious lacuna since the scientist felt that their contributions were not appreciated while the science managers/ supervising officers always had difficulty in interpreting the degree of success of the scientist has achieved in reaching his targets. The qualitative and quantitative assessment of research output, which today is an integer to essential evaluation, was difficult to ascertain and hence both the researcher and supervisor were often at cross roads. It is recognised in the agricultural research system that any research becomes meaningful when stake holders / industry /Farmers are partners in the research agenda evolution and all research should focus to problem solving- be it basic, applied or translational research. The proformae did not have any element of such identification. Assessment of scientific performance occupied the minds of scientists and science administrators, and inspite of scientist providing evidence to its scientific output, there was no objective method of assessment particularly involving scientist himself.

This required a hard relook into the system of research monitoring and evaluation process in the ICAR. An objective research monitoring and evaluation mechanism would effectively assess research efforts against well-defined targets, avoid duplication of research efforts and provide feedback to research planning process. It would also help to establish link between performance evaluation and incentive mechanism. Developments of a decision support system based on a sound research monitoring and evaluation system and its integration with research management process would help in the institutionalization of improved priority setting mechanism and would also bring more objectivity and transparency in research resource allocation, facilitating informed debate.

5. METHODOLOGY AND APPROACH

The committee in its first meeting held on 12th May, 2011 deliberated on the genesis of this exercise and expectations of the Council so that monitoring and concurrent evaluation of research projects is put in the right perspective having linkage with APAR so as to provide much needed support to PME Cell, IRC etc. The lack of consistency and uniformity in reporting in the system



was also discussed. It was hoped that once the ICAR Data Centre is in place, the information of the research projects would be available in the digitised form and subsequently central monitoring system would start functioning for evaluating different research programs of the Council. The committee through mutual discussion laid certain guiding principles which shall lead to the recommendation for effective and comprehensive Project Formulation, Monitoring and Evaluation System.

5.1 Guiding Principles

To undertake this exercise, different procedures and mechanisms used by various scientific organizations were looked into. ***It was agreed that the focus is now on multi disciplinary approach, the research must adapt to the new creation of knowledge, and the generated knowledge must be distributable to the society.***

With the emergence of new knowledge, there is also a need to evaluate research projects in a newer and effective ways accordingly keeping in view multi criteria evaluation of research activity and carriers of interdisciplinary knowledge and integrated relationship. It was also suggested that that management of research activity has changed in two main directions, namely,

- a) Evaluation procedures and tools of academic activity which aim to reach higher quality of output which is more objective and is standardised.
- b) Research has to adapt to what is called emergence of new production of knowledge linked to the requirement of the knowledge socially distributed to the society.

Concepts of Research Evaluation

MANAGEMENT OF RESEARCH HAS CHANGED IN TWO MAIN DIRECTIONS:

- A) Evaluation procedures and tools of academic activity aim to reach **Higher Quality of Output which is More Objective and is Standardised.**
- B) Research has to adopt to what is called **Emergence of New Production of Knowledge** linked to the requirement of the knowledge socially distributed to the society .

Online Monitoring of Research Projects

5.2 Research Evaluation Criteria

Nationally and internationally there are several methods in use for performance evaluation in the research management system. Traditionally performance was evaluated through a forced distribution or ranking system in which the top 10% and bottom 10% of the personnel were identified with ease and the rest constituted the middle average. Certain commercial/ industrial organisations even now evaluate their staff performance through a system based solely on productivity. Evaluation system which emphasizes the maturity of the scientific personnel in an organisation involves a 360 degree

Research Evaluation

Performance Management System

- 360 degree feed back
- Forced distribution or ranking
 - Top 10%
 - Middle Average
 - Bottom 10%
- Self evaluation (interactive)
- Evaluation based solely on productivity
- Assorted combination of the above

evaluation through colleagues, peers, seniors and juniors. The most prevalent evaluation system, of late has been self evaluation in which the central focus of evaluation remains the scientist himself in the first instance and receives an input to his performance from his seniors and peers. Considering these different evaluation system, keeping in view the existing circumstances procedures, rules and regulations of a scientist working in ICAR the committee evolved an associated combination of the above evaluation procedures. The major research evaluation criterion consisted in the following:

- (i) Mix of tools and multi dimensional criteria where weight could be variable according to different research practices and different profiles,
- (ii) Recognition of science innovations and attempts to innovate,
- (iii) Trans disciplinary knowledge production associated with research which becomes innovation oriented,
- (iv) Individual and collective evaluation to be used as a leverage to reach the purpose and more to implement the strategy, policy or direction determined by “needs and demands”,
- (v) Predetermined criteria/bench marks/ targets which shall be the basis for science/ scientist evaluation
- (vi) Strong component of self evaluation of the research by the researcher/ team
- (vii) Qualitative and quantitative assessment of the research output
- (viii) Experiences generated from NATP regarding Monitoring and Concurrent Evaluation (M & CE) of research project
- (ix) How the research output will lead towards creation of process/product/ knowledge?
- (x) Social, Economic and Industrial perspective of research output,
- (xi) Evaluation through procedures and tools for academic activity in terms of Higher Output, More Objectivity, More Standardisation and Higher Quality.

Research Evaluation Criterion

- Mix of tools and multi dimensional criteria where weight could be variable according to different research practices and different profiles
- Recognition of and attempts to innovate- science innovations
- Trans disciplinary knowledge production associated with research which becomes innovation oriented
- Individual and collective evaluation to be used as a leverage to reach the purpose and more to implement the strategy, policy or direction determined by “needs and demands”

Keeping above in view an exercise was undertaken to review the existing system of RPFs in ICAR. Following additional points were also considered:

- (i) Qualitative and quantitative assessment parameters may again be looked into
- (ii) RPFs must define activities and output on annual target basis
- (iii) To add level of PME Cell before the IRC
- (iv) Focus must be on scientific and technical indicators only
- (v) Prepare guidelines to fill up the RPFs as well as methodology for evaluation
- (vi) Provision of critical review for negative points

- (vii) **Economic benefits from output**
- (viii) **Innovativeness – how it will help in knowledge creation**
- (ix) **Product/ Process/ Technology developed**
- (x) **Problems encountered and clarity on exit policy**
- (xi) **Identification of stakeholders – who are stakeholders and contemporaries**
- (xii) **Project title should be suggestive of the work done rather a general area of research**

5.3 Feedback and Refinement

Based on the laid criterion, revision of RPFs was undertaken along with reduction and simplification in contents and highlighting qualitative and quantitative indicators through a series of meetings and interactions held between the committee members and different stakeholders. The developed proformae were sent to the SMDs of ICAR as well as to ICAR Institutes for getting their feedback. The genesis of revision and changes being suggested were also presented in the ICAR Institute's Directors Meet held on 15-16th July, 2011 under the Chairmanship of Secretary, DARE and Director General, ICAR. Suggestions for improvements were made by several participants in that meet and those relevant to the mandated task were incorporated. Interactions were also made with scientists at the ICAR Institutes located at Karnal (NDRI, CSSRI, NBAGR, DWR, Sugar Research Station, IARI Regional Station) and at New Delhi (IARI). The feedback received was suitably incorporated while revision of the existing RPFs. On-line suggestions received from some Institutes and from individual scientist were also considered while finalisation of the recommendations.

6. PROTOCOL FOR RESEARCH PROJECT PROFORMAE REVISION

6.1 Initiation, Progress and Completion of Research Project

Research Projects in the ICAR have been addressed in entirety including project conceptualization, formulation, developing into a research agenda with identified activities, techniques and methodologies to be used for its implementation, data generation and analysis, result interpretation, publication, application and economic identification of the project. The proformae for project formulation and implementation have now been focused *ab initio* to a system of product, process or technology generation, giving an equal space/ ground for such projects which are essentially basic science oriented or addressing fundamental science problems. However, in consideration of the fact that research under ICAR has to address Agriculture Community, the farmers and the landless livestock owners, it has invariably been made mandatory through the research project formulation mechanism to involve the stakeholders in the initial project formulation and in areas directly addressing the farmers, involving the clients in the project itself.

The project proformae under review had been reported to be cumbersome, repetitive, lengthy and of limited utility in extracting information even when there have been attempts in the past to digitize the same. The committee worked to make the proforma highly user savvy for

digitization of information, non repetitive, in filing the base information about the project just once, online generation of the project profile, objectives and identified activities. The project code will recall online all information in the project and annually only the new information generated and targets achieved will have to be entered.

The revised proformae identify the specific roles and contributions of each contributing scientist in terms of time allocation and expected output. The basic monitoring and evaluating the work of each scientist in the project has also been assigned in the first instance to Principal Investigator.

A set of check lists to be submitted along with the proposal have been developed to streamline the formal submission of project and facilitate monitoring of project proposal as well as its subsequent progress by the PME and the Institute Research Committee.

A uniform criteria has been established through a set of parameters to assess the suitability of research projects as per as Institute's mandate and responsibilities and ranking the quality of research efforts in the first instance.

The committee also deliberated to lay down a common score card for project output in such a manner that it would suit scientists across the different institution, subject matter divisions, commodities and ranks of scientists. The score card has been so designed that the score obtained shall enable the scientist to analyse his/her research standing. The proforma has an in built mechanism of check and balance by which the self score of the scientists will be crossed checked by PME/Joint Director (the research management group) through independent scoring on the scientist's performance for the same parameters and in case of gross differences in the evaluation score, the evaluation will be referred back to the scientists/principal investigator for his/her comments and response.

The revised proformae make it mandatory for the principal investigator to submit all his records of data generated in the research projects to the Head/PME for safe custody as a property of the Institution/Council.

Other major issues which had occupied the minds of the committees' members included

- a) Thorough project formulation involving critical appraisal of the status as well as the state of knowledge in the area of research and identification/documentation of research gaps so that research exercise is meaningful.
- b) Project development exercise to involve the whole scientific group in that area and in the allied areas to sit together and sharpen the research focus after identifying the gaps in knowledge.
- c) Allow the scientists submitting a research proposal to interact with the Institute Research Committee to explain his/her supposed project and if approved then submit a detailed programme with identified activities and targets thereby ensuring that only the appropriate and scientifically scrutinized proposal gets the final scientific nod for

implementation. This will also save valuable time of the scientists which he/she would have been spending in pursuance of ideas which have no scientific fit in the institute's mandate.

- d) Involve the scientist as well as the science manager to monitor the research project through a set of activities, pre identified by the researcher himself/herself.
- e) Provide an opportunity to the scientist to self evaluate his/her performance based on an equitably applicable and objectively fair score system.
- f) Enable the research managers a pre determined, fair, evaluation system against well defined and identified parameters to judge the quality of research outputs in each project.
- g) Empower, on one hand the bench scientists to evaluate his/her own performance to stimulate him/her to greater or better activity and on the other hand the research manager to judge/assess the annual performance of the scientists.
- h) To give the ARS-research system a managerial evaluation tool's to rank the research performance so that the 'performers' could be distinguished from non-performers and thus providing a quantitative basis for reward for some and added opportunity for others to improve.
- i) To assist the research managers in making research evaluation compatible with annual assessment of the scientists in terms of total time management/utilization for research, teaching extension and other activities.

6.2 Developed Proformae

In light the enunciations made above, a set of following seven proformae (Annexure – I to VII) have been suggested to capture the entire activity of initiation, progress, monitoring and completion and valuation of a research project. The items written in red in the proformae will be system generated.

1. Proforma for preparation of status report for proposal of a new research project
2. Research Project Proposal
Proforma for Initiation of a Research Project (RPP- I)
3. Checklist for Submission of RPP-I
4. Appraisal by the PME Cell of RPP-I
5. Research Project Proforma for Monitoring Annual Progress (RPP – II)
6. Checklist for Submission of Final Research Project Report
7. Final Research Project Report (RPP-III)

Suggested Process of Research Project Formulation, Submission, Monitoring and Evaluation

- RPPs (RPP-I, RPP-II and RPP-III) have been suggested with reduction and simplification in contents and highlighting qualitative and quantitative indicators along with guidelines to fill. Suggestions received from SMDs and Institutes also incorporated.
- A status report proforma for new research project proposal to help PME Cell to objectively assess the need of the project covering
 - Genesis and rationale of the project, knowledge/technology gaps and justification for taking up the present project
 - Critical review of present status of the project/technology at national and international levels, including compulsive consultation with stake holders
 - Details on propriety/patent /safety/welfare perspective s and expected output and clientele.
- A Checklist for of RPP-I for facilitating the process for approval of the project.
- Appraisal Report by the PME Cell of RPP-I for approval of the project by IRC

6.2.1 Proforma for Preparation of Status Report for Proposal of a New Research Project

This proforma provides a status report covering genesis and rationale of the project, knowledge/technology gaps and justification for taking up the present project, Critical review of present status of the technology at national and international levels, details on propriety/patent perspective and expected output and clientele. This would help to objectively assess the need of the project.

6.2.2 Research Project Proposal Proforma for Initiation of a Research Project (RPP- I)

This proforma provides details on the project, project team, institutions involved, objectives, activities and output details, technical programme, financial implications, expected output, expected benefits in economic terms and risk analysis and finally observation of PME Cell. The proforma essentially identifies activities against which the future research output evaluation will be carried out including self assessment.

6.2.3 Checklist for Submission of RPP-I

This proforma facilitates to check mandatory requirements e.g. presentation of the project in the Divisional/Institutional Seminar, and action taken on the inputs, details on the workload of team, additional manpower requirements, inclusion of work plan/activity chart, status of the requirements of the equipment for the project and their provision in the Institute EFC so that project does not face any problem during its operation.

6.2.4 Appraisal by the PME Cell of RPP-I

Appraisal by the PME Cell will be based on important parameters to recommend to IRC whether the project is worth execution. It will be based on parameters e.g. priority, availability of time of project team, soundness of project, duplication of research if any, actions/targets formed in consonance with the expectation of project, system review and meta analysis done or not, effective control to experiments, economic evaluation & cost efficiency analysis, appropriateness of questions to be answered etc. The information on these will be scored on 1 to 10 scale giving the project total base score of 100. The score obtained will be suggestive of overall quality ranking of the project.

6.2.5 Research Project Proforma for Monitoring Annual Progress (RPP – II)

It provides annual progress of the project covering activities and outputs and achievements earmarked for the year for each of the team member, in case of shortfall, how to catch up with the intended activities, constraints experienced, lessons learnt and self evaluation by the Principal Investigator of the project as well as of team, evaluation by Head, comments by IRC, observations by PME Cell and finally comments on progress/achievements, shortfall and constraints along with rating of the project by JD (R)/ Director of the Institute.

6.2.6 Checklist for Submission of Final Research Project Report

After the completion of the project and along with the final project report, a checklist will be submitted giving details on the changes that might have taken place in RPP-I during implementation of the project in terms of team, objectives, and a certificate of submission of various documents and mandatory requirements to PME Cell so that PME Cell can complete all the formalities for closing of the project with necessary records

6.2.7 Final Research Project Report (RPP- III)

RPP-III is a final project report that covers details on the project basic information, objectives, materials and methods used, results and discussion, objective wise achievements and conclusions. It also has information on financial aspects and cumulative outputs. The most significant information is on the extent of achievement of objectives/activities and outputs earmarked as per RPP-I. It also gives details the efforts made for commercialization/technology transfer, proposed utilisation of outputs, its significance in knowledge creation, expected benefits and economic impact, future line of research work/other identifiable problems and a certificate on handing of research data generated out of the project deposited to PME Cell for future use.

7. EVALUATION OF RESEARCH PROJECT AFTER COMPLETION

7.1 Evaluation Criterion and Weightage Parameters

The evaluation of the research projects after completion is important to objectively assess whether a project objectives have been achieved as per the planned programme. The evaluation must take into account qualitative and quantitative assessment of objectives and stipulated outputs, publications, timeliness, product/process/technology/IPR/commercial value of the technology developed with a relative scoring mechanism and grading of the project as Excellent, Very Good, Good, Average and Below Average. The evaluation of the research projects after completion will be based on the information provided as per the following specified proforma.

S. No.	Criteria	Methodology	Marks (output)
1.	Achievements Against approved and stipulated outputs under project	Qualitative and quantitative assessment of objectives and stipulated outputs under the project will be carried out a) Activity Input /Projected Output/ Output Achieved b) Extent to which standard design methodology, experimental designs, test procedures, analytical methods followed c) Does the data justify the conclusions? d) Innovativeness and creating of new knowledge e) Additional outputs over those stipulated under the project f) Creation of linkages for commercialization of technology developed under the project g) Is scientific input commensurate to output (manpower, Financial input and time duration)?	75 35 10 05 10 05 05 05
2.	Publication/ awards	Assessment will be done in respect of: Research papers; Reports/Manuals; Working and Concept Papers; Books/Book Chapters/Bulletins. Quality of publication (s) and Awards /Scientific recognitions received	10
3.	Additional facilities created	Facilities created in terms of laboratory. Research set-up, instrumentation, etc. during the project.	05
4.	Human Resource Development (Scientific and Technical)	Scientists trained in different areas	05
5.	Revenue generated under the project/ avenues created for revenue generation	Resources and revenues generated	05
6.	Product/Process/ Technology/ IPR / commercial value of the technology developed	Details to be provided on a. Products b. Process c. Technology d. IPR e. Registration of the varieties	10
7.	Quality of available documents of the project duly authenticated	Research Project Files, Data, Reports etc.	05
Total Marks			115
8.	Timelines of execution of the project	Marks will be deducted if extension sought over the approved project duration beyond recorded and officially granted extension with recorded reasons Up to 5% Up to 10% Up to 30 % Beyond 30 %	Marks to be deducted 01 02 03 05
Net Score: Score obtained to be counted out of 100 to compensate for activities not relevant to the project			100

7.2 Grading of Research Performance

Grading of a project will be done as per the marks obtained.

Marks obtained	Grading
≥ 80	(1) Excellent
≥ 70 and < 80	(2) Very Good
≥ 60 and < 70	(3) Good
≥ 50 and < 60	(4) Average
< 50	(5) Below Average

8. PERFORMANCE EVALUATION OF INDIVIDUAL SCIENTIST

Individual scientists participating in the project would be assessed for their performance through an appraisal system in a scale of 1 to 10 for each of the following attributes:

S. No.	Criteria	Marks
1.	Percentage of the assigned activity completed	40
2.	Quality of the completed activity	10
3.	Authenticity/reliability of the data generated	10
4.	Enthusiasm and sincerity to work	10
5.	Inferences made	10
6.	Collaboration and cooperation demonstrated in performing the task at hand	10
7.	Amenability to scientific/academic/laboratory discipline	10
	Total Score	100

The evaluation of the individual scientist will initially be done by the PI for his project team including self and will follow the reviewing mechanism as implied for the project evaluation.

9. MECHANISM FOR MONITORING AND SELF APPRAISAL/EVALUATION OF A RESEARCH PROJECT

The monitoring and evaluation (M&E) are very important functions in project management to ensure that the implementation of the technical program is as per planned, to see that the resources are allocated according to the program and to ensure that the objectives defined are achieved. It is essentially a scientific judgment about the accountability of the project in accordance with the established priorities. The project management perspective emphasizes monitoring as an internal

activity of project and its diagnostic study provides scope for mid-course corrections for the success of project. Evaluation on the other hand is useful for future project planning by the decision-makers. M & E of research projects will follow a bottom up process and be highly decentralized and will be an ongoing process. Keeping in view the way the projects are handled at ICAR institutes and at the Divisions of ICAR, the following diagram depicts the hierarchy and mechanism of monitoring and evaluation:

9.1 Yearly Evaluation

Component	Yearly Evaluation
Review by PI and PI Submits report to Head	Evaluation of the performance of Co-PI and Self evaluation by PI on the overall performance keeping in view the Targets set for various activities and achievements made giving self rating in the scale of 1 to 10 for various parameters (Annexure-VIII).
Review by Head and sends yearly observations to PME Cell	Specific comments on Progress/Achievements, Shortfall and Constraints along with rating of the project in the scale of 1 to 10 (on different parameters in consultation with PI)
PME Cell submits its observation to IRC/Joint Director/Director	Specific comments on the progress as per targets set (check list)
IRC meeting to review the yearly progress	PI presents the progress to IRC
Director submits his review report to DDG	Specific comments on Progress/Achievements, Shortfall and Constraints along with rating of the project in the scale of 1 to 10
DDG Submits his review to DG	Specific comments on progress/achievements, shortfall along with rating of the project in the scale of 1 to 10 and identifying comments to be sent to PI

9.2 Evaluation of a Research Project after Completion

9.2.1 The evaluation of the research projects after completion will be based on the information provided as per the following specified proforma:

S. No.	Criteria		Methodology	Marks (output)	
				Self evaluation by PI	Evaluation by Committee
1.	Achievements Against approved and stipulated outputs under project		Qualitative and quantitative assessment of objectives and stipulated outputs under the project will be carried out i. Activity Input /Projected Output/ Output Achieved ii. Extent to which standard design methodology, experimental designs, test procedures, analytical methods followed iii. Does the data justify the conclusions? iv. Innovativeness and creating of new knowledge v. Additional outputs over those stipulated under the project vi. Creation of linkages for commercialization of technology developed under the project vii. Is scientific input commensurate to output (manpower, Financial input and time duration)?		
2.	Publication/ awards		Assessment will be done in respect of: Research papers; Reports/Manuals; Working and Concept Papers; Books/Book Chapters/Bulletins. Quality of publication (s) and Awards /Scientific recognitions received		
3.	Additional facilities created		Facilities created in terms of laboratory. Research set-up, instrumentation, etc. during the project.		
4.	Human Resource Development (Scientific and Technical)		Scientist trained in different areas		
5.	Revenue generated under the project/ avenues created for revenue generation		Resources and revenues generated		
6.	Product/ Process/ Technology/ IPR/ commercial value of the technology developed		Details to be provided on i. Products ii. Process iii. Technology iv. IPR v. Registration of the varieties		
7.	Quality of available documents of the project duly authenticated		Research Project Data, Registers (Digitized /Electronic) etc.		
Total Marks				115	
8.	Timelines of execution of the project	Marks will be deducted if extension sought over the approved project duration beyond recorded and officially granted extension with recorded reasons	Marks to be deducted		
		Up to 5%	01		
		Up to 10%	02		
		Up to 30 %	03		
		Beyond 30 %	05		
Net Score: Score obtained to be counted out of 100 to compensate for activities not relevant to the project				100	

9.2.2 The process of evaluation will be as follows:

- (i) A two-page write-up, covering the achievements under different heads, listed above will be prepared and annexed to the RPP-III of a project along with self evaluation by the PI.
- (ii) A committee comprising of the following will carry out objective evaluation of the project based on the criteria/guidelines explained above:
 - i. Chairman, PME Cell
 - ii. HOD where the project is listed and two other HOD's of related disciplines
 - iii. Member-Secretary, PME Cell

(In case of score difference of more than 30 % points, between PI and the assessed score, PI will be informed.)

The evaluation report will be vetted by Chairman, IRC.

10. SCHEDULE OF EVENTS FOR RESEARCH PROJECT PROPOSAL SUBMISSION, ITS APPROVAL, IMPLEMENTATION AND ITS COMPLETION

S. No.	Activity	Responsibility
1.	Preparation of status report for proposal of a new research project and its submission to HoD	PI, CC-PI and Co-PIs
2.	Comments of HoD on the status report for proposal of a new research project	HoD
3.	Delivery of New Research Project Proposal Seminar in the Divisional Research Committee (DRC)	PI, CC-PI and Co-PIs
4.	(a) Preparation of Research Project Formulation, Monitoring and Evaluation - I (RPP- I) - for initiating research project incorporating suggestions of DRC (b) Preparation of Checklist for Forwarding of RPP-I (c) Submission of (a) and (b) along with Status Report to HoD	PI, CC-PI and Co-PIs
5.	Submission of Status Report, RPP-I and Checklist to PME Cell	HoD
6.	Appraisal of RPP-I	PME Cell
7.	Presentation of New Project Proposal in the IRC Meeting and incorporation of suggestions received and submission to PME Cell	PI, CC-PI and Co-PIs, HOD
8.	Submission of revised/final RPP-I along with Appraisal Report to JD/Director for approval	PME Cell
9.	Intimation to PI/HoD on the approval/disapproval	PME Cell

10.	Initiation of the project and intimation of Date of Start to PME Cell	PI
11.	Preparation of RPP – II (Annual) - For monitoring of the progress annually, Evaluation of the performance of Co-PI and Self evaluation by PI on the overall performance keeping in view the targets set for various activities and achievements made giving self rating in the scale of 1 to 10 submission to HOD	PI
12.	Specific comments on Annual Progress/ Achievements, Shortfall and Constraints along with rating of the project in the scale of 1 to 10 of HoD in consultation with PI and its submission to PME Cell	HoD
13.	Specific comments on the Annual Progress as per targets set and its submission to IRC/Joint Director/Director	PME Cell
14.	PI presents the annual progress in IRC meeting	PI
15.	Specific comments on Annual Progress/Achievements, Shortfall and Constraints along with rating of the project in the scale of 1 to 10 by the JD/Director and its submission to DDG	JD//Director
16.	Review and specific comments on Annual Progress/ Achievements, Shortfall along with rating of the project in the scale of 1 to 10 and identifying comments to be sent to PI and its submission to DG	DDG
17.	Project Completion Seminar and incorporation of suggestions/observations at the DRC	PI
18.	Internal referring of the Final Project Report in the Division	HoD
19.	Preparation of RPP – III	PI, CC-PI and Co-PIs
20.	Submission of Final Project Report- RPP-III after incorporating comments of Internal Referee, Check List for Submission of RPP-III. (including Performance Evaluation Proforma) to HoD for submission to PME Cell	PI and HoD
21.	Overall rating of the project and scientists in the scale of 1 to 10	PI and HoD
22.	Overall rating of the project in the scale of 1 to 10 and submission to Chairman IRC	Evaluation Committee
23.	Overall rating of the project and scientists in the scale of 1 to 10	JD/Director
24.	Final communication and return of duly signed copy of RPP-III to PI	PME Cell

11. GUIDELINES FOR FILLING THE PROFORMA

It is necessary that the ARS scientists as well as the research managers are provided with the guidelines to fill the RPPs. A set of guidelines are enclosed in Annexure - XI.

12. SOFTWARE IMPLEMENTATION OF RPPs AND MONITORING AND EVALUATION OF RESEARCH PROJECTS

The new set of Research Project Formulation, Monitoring and Evaluation (RPP) proformae are to be used for effective research project management in various ICAR Institutes. The structure of these proformae and process of implementation is different to the existing set of RPFs and its implementation. The on-line computerised system namely “Project Information & Management System of ICAR (PIMS-ICAR)” developed at IASRI, New Delhi however cannot be used for this new set of proposed RPPs as it will require extensive design and development effort. The software needs to be designed and developed as a part of MIS/FMS solution being developed for ICAR.

Computerized system will aid in effective implementation of the process and reduction of efforts at all the levels. In the software implementation, system generated information will be available for many parameters and very limited information will have to be entered in RPPs by the project team. The software will facilitate on-line M & E of research projects; reports can be generated for APAR, PME Cell and customised reports as per requirements of research managers.

13. SALIENT ASPECTS OF REVISED RESEARCH PROJECT PROFORMAE

More rigorous exercise for developing project/programs creating research environment in the division/cell since each scientist has to do, not only intensive research but also has to prepare an analytical deductions from available science to develop the project protocol.

- (i) Each project will be necessarily identifying and trying to answer research gaps or technology needs.
- (ii) The scientific focus of the project will be arrived through interactive mode in which different group of scientists will be involved with provision of associating stakeholders in project formulation.
- (iii) The project proforma includes a unique concept of checklist of forwarding RPP- I and RPP-III which will facilitate proper filling of these proforma and their subsequent evaluation and final assessment of performance.

- (iv) Activity wise output detail of each objective is being rated and has a focus for indicating the output in a targeted manner, identification not available in earlier proforma.
- (v) Time spent and works done by PIs and all Co-PIs (in the project and for all projects) will be an added documentation in the RPPs and will thus present a total profile of the scientist's work.
- (vi) Observations of the PME cell, comments of the IRC, future line of research work to be taken, are additional information animating from of the project proforma.
- (vii) The Principal Investigator will be self evaluating his/her performance as well as the performance of the Co-PIs against the self assigned tasks and the expected output from them through an appraisal system. This unique feature will add to answerability of scientist to his/her own scientific commitments. Self evaluation of project will put emphasis on quality output.
- (viii) Rating of the project every year by the HoD and the Director will be an assertion of quality of work done in a particular project.
- (ix) RPP-II will provide specific monitoring issues of shortfall, performance audit, and lacunae in conduct of research which can be adequately addressed in self correcting manner through a support system or critical evaluation.
- (x) RPP-II will provide midway correction/alteration on need based modification or correction in methodology/procedures leading the research project to be dynamic in time and robust in results. The qualitative evaluation of the project on yearly basis will directly be a part of Annual Performance Appraisal Report (APAR) of the scientist individually in a transparent manner in full and open knowledge to the participating scientist.
- (xi) The quality evaluation will provide encouragement for some as well as opportunity to others to improve who perform poorly over the period.
- (xii) Qualitative and quantitative milestones achieved will serve as guidance to the project workers.
- (xiii) The overall evaluation of the project in the end, based on RPP-III, will be a managerial tool for incentives and disincentives of scientists performance.

14. RECOMMENDATIONS

Keeping in view all the aspects as mentioned above, the committee makes the following recommendations:

- (1) The new set of interactive on-line forms, Research Project Formulation, Monitoring and Evaluation, RPP (I, II and III) are to be used for effective research project management in various ICAR Institute. The highly user friendly proforma, accessed online will involve considerable saving of time and effort on the part of scientists.
- (2) The process for initiation of a project, preparation of status report for proposal of a new research project, checklist prepared for forwarding of RPP-I should form an essential element in research project formulation.
- (3) Software needs to be integrated / developed as a part of MIS solution being developed for ICAR.
- (4) Identification/involvement of stakeholders should be a pre-requisite for each research project formulation.
- (5) PME Cell as the focus of research monitoring and evaluation at the Institute level should prepare an appraisal report on the submitted RPP-I for its approval by IRC.
- (6) The self assessment as well as the assessment of the project by PME/IRC should be mandatory.
- (7) RPP-II will be used to assess and evaluate the research report in the APAR/ACR by the ARS Scientist as it now provides annual progress of the project covering activities, outputs and achievements for the year for each of the team member.
- (8) Checklist for submission of RPP -III be submitted along with RPP-III to facilitate PME Cell to complete all the formalities for closing of the project with necessary records.
- (9) The evaluation proforma be used to objectively assess whether a project has been successfully completed as planned and the scientist evaluated for research output and graded for the same.

ANNEXURE - I

INDIAN COUNCIL OF AGRICULTURAL RESEARCH

PROFORMA FOR PREPARATION OF STATUS REPORT

FOR PROPOSAL OF A NEW RESEARCH PROJECT

(Refer for Guidelines ANNEXURE-XI(A))

1. Institute Name
2. Title of the project
3. Type of research project: Basic/Applied/Extension/Farmer Participatory/Other (specify)
4. Genesis and rationale of the project
5. Knowledge/Technology gaps and justification for taking up the present project
6. Critical review of present status of the technology at national and international levels along with complete references
7. Brief note on Proprietary/Patent Perspective (for projects related to technology development)/Ethics/Animal Welfare/Bio Safety Issues
8. (a) Expected output
 - i.
 - ii.
 - .(b) Clientele/Stake holders (including economic and socio aspects)
 - i.
 - ii.
 - .
8. Signatures

[Project Leader]

[Co-PIs]
9. Comments and signature

[Head of Division]

INDIAN COUNCIL OF AGRICULTURAL RESEARCH

RESEARCH PROJECT PROPOSAL PROFORMA FOR INITIATION OF A
RESEARCH PROJECT (RPP - I)

(Refer for Guidelines ANNEXURE-XI (B))

1. Institute Project Code (to be provided by PME Cell)
2. Project Title
3. Key Words
4. (a) Name of the Lead Institute
(b) Name of Division/ Regional Center/ Section
5. (a) Name of the Collaborating Institute(s), if any
(b) Name of Division/ Regional Center/ Section of Collaborating Institute(s)
6. Project Team(Name(s) and designation of PI, CC-PI and all project Co-PIs, with time proposed to be spent)

S. No.	Name, designation and institute	Status in the project (PI/CC-PI/ Co-PI)	Time to be spent (%)	Work components to be assigned to individual scientist

7. Priority Area to which the project belongs
(If not already in the priority area, give justification)
8. Project Duration: Date of Start: Likely Date of Completion:
9. (a) Objectives
(b) Practical utility
10. Activities and outputs details

Objective wise	Activity	Month & Year of		Output monitorable target(s)	% to be carried out in different years			Scientist(s) responsible
		Start	Completion		1	2	..	
1.	1							
	2							
	.							
2.	.	.						

11. Technical Programme (brief)

- (a) Material
- (b) Techniques/Methodology
- (c) Instrumentation
- (d) Special material
- (e) Analytical tools

12. Financial Implications (` in Lakhs)

(A) Financed by the institute

12.1 Manpower (Salaries / Wages)

S. No.	Staff Category	Man months	Cost
1.	Scientific		
2.	Technical		
3.	Supporting		
4.	SRFs/RAs		
5.	Contractual		
	Total		

12.2 Research/Recurring Contingency

S. No.	Item	Year(1)	Year (2)	Year (3)...	Total
1.	Consumables				
2.	Travel				
3.	Field Preparation/ Planting/ Harvesting (Man-days/costs)				
4.	Inter-cultivation & Dressing (Man-days/costs)				
5.	Animal/Green house/Computer Systems/Machinery Maintenance				
6.	Miscellaneous(Other costs)				
	Total(Recurring)				

Justification : -----

12.3 Non-recurring (Equipment)

S. No.	Item	Year (1)	Year (2)	Year (3)...	Total
1.					
2.					
.					
	Total (Non-recurring)				

Justification : -----

12.4 Any Other Special Facility required (including cost)

12.5 Grand Total (12.1 to 12.4)

Item	Year (1)	Year (2)	Year (3)...	Total
Grand Total				

(B) Financed by an organization other than the Institute (if applicable)

(i) Name of Financing Organization

(ii) Total Budget of the Project

(iii) Budget details

S. No.	Item	Year(1)	Year(2)	Year (3)...	Total
1	Recurring Contingency				
	Travelling Allowance				
	Workshops				
	Contractual Services/ Salaries				
	Operational Cost				
	Consumables				
2	Non - Recurring Contingency				
	Equipment				
	Furniture				
	Vehicle				
	Others (Miscellaneous)				
3	HRD Component				
	Training				
	Consultancy				
4	Works (i) New (ii) Renovation				
5	Institutional Charges				

13. Expected Output

14. Expected Benefits in Economic Terms

15. Risk Analysis

16. Signature

Project Leader

Co-PI-I

Co-PI-II

...

Co-PI-n

17. Signature of HoD

18. Signature of JD (R)/ Director

INDIAN COUNCIL OF AGRICULTURAL RESEARCH

CHECKLIST FOR SUBMISSION OF RPP-I

(Refer for Guidelines ANNEXURE-XI(C))

1. Project Title
2. Date of Start & Duration
3. Institute Project ☐ or Externally Funded ☐
4. Estimated Cost of the Project : _____
5. Project Presented in the Divisional/Institutional Seminar? Yes / No
6. Have suggested modifications incorporated? Yes / No
7. Status Report enclosed Yes / No
8. Details of work load of investigators in approved ongoing projects:

Project Leader				Co-PI – I				Co-PI – II...
Proj. Code.	% Time spent	Date of start	Date of completion	Proj. Code.	% Time spent	Date of start	Date of completion	

9. Work Plan/Activity Chart enclosed Yes / No
10. Included in Institute Plan Activity Yes / No
11. Any previous Institute/Adhoc/Foreign aided projects on similar lines? Yes / No
12. New equipment required for the project Yes / No
13. Funds available for new equipment Yes / No
14. Signatures

Project Leader Co-PI-I Co-PI-II ... Co-PI-n

HOD/PD/I/c

INDIAN COUNCIL OF AGRICULTURAL RESEARCH

APPRAISAL BY THE PME CELL OF RPP-I

(Refer for Guidelines ANNEXURE-XI (D))

1. Institute Name
2. Project Title
3. On scale 1-10 give score to (a) to (j)

(a)	Relevance of research questions	
(b)	Addressing priority of the institute and/or National priority	
(c)	New innovativeness expected in the study	
(d)	Appropriateness of design/techniques for the questions to be answered	
(e)	Elements of bias addressed in the study	
(f)	Adequacy of scientist(s) time allocation	
(g)	Extent of system review and meta analysis	
(h)	Effective control to experiments	
(i)	Economic evaluation and cost efficiency analysis	
(j)	How appropriately the expected output answers the questions being addressed in the specific subject matter/area (Basic/Applied/Translational/Others)?	
	*Total Score out of 100	

* The score obtained is suggestive of the overall quality ranking of the project

4. Was there any other project carried in the past in the same area/topic?

Yes ☐ No ☐

If yes, list the project numbers.

5. Signature of PME Cell Incharge

INDIAN COUNCIL OF AGRICULTURAL RESEARCH

RESEARCH PROJECT PROFORMA FOR MONITORING ANNUAL PROGRESS
(RPP- II)

(Refer for Guidelines ANNEXURE-XI (E))

1. Institute Project Code
2. Project Title
3. Reporting Period
4. Project Duration: Date of Start - Likely Date of Completion –
5. Project Team (Name(s) and designation of PI, CC-PI and all project Co-PIs, (with time spent for the project) if any additions/deletions

S. No.	Name, designation and institute	Status in the project (PI/CC-PI/ Co-PI)	Time to be spent (%)	Work components assigned to individual scientist

6. (a) Activities and outputs earmarked for the year (as per activities schedule given in RPP-I)

Objective wise	Activity	Scientist responsible	% of activity envisaged to be completed as per RPP-I	% achieved as targeted
1.	1			
	2			
	.			
2.	1			
	.			
.				

- (b) If shortfall/addition, reasons for the same and how to catch up with the intended activities

7. Annual Progress Report (research results and achievements in bullets)
8. Output During Period Under Report
 - a. Special attainments/innovations
 - b. List of Publications (one copy each to be submitted with RPP-II)
 - i. Research papers
 - ii. Reports/Manuals
 - iii. Working and Concept Papers
 - iv. Popular articles

- v. Books/Book Chapters
- vi. Extension Bulletins
- c. Intellectual Property Generation
(Patents - filed/obtained; Copyrights- filed/obtained; Designs- filed/obtained; Registration details of variety/germplasm/accession if any)
- d. Presentation in Workshop/Seminars/Symposia/Conferences
(relevant to the project in which scientists have participated)
- e. Details of technology developed
(Crop-based; Animal-based, including vaccines; Biological – biofertilizer, biopesticide, etc; IT based – database, software; Any other – please specify)
- f. Trainings/demonstrations organized
- g. Training received
- h. Any other relevant information

9. Constraints experienced, if any

10. Lessons Learnt

11. Evaluation

(a) Self evaluation of the project for the period under report by the PI with rating in the scale of 1 to 10

(b) Evaluation by PI on the contribution of the team in the project including self

S. No.	Name	Status in the project (PI/CC-PI/Co-PI)	Rating in the scale of 1 to 10

12. Signature of PI, CC-PI(s), all Co-PIs

13. Signature (with specific comments on progress/achievements, shortfall and constraints along with rating of the project in the scale of 1 to 10) of Head of Division/Regional Center / Section

14. Comments of IRC

15. Signature (with specific comments on progress/achievements, shortfall and constraints along with rating of the project in the scale of 1 to 10) of JD (R)/ Director

INDIAN COUNCIL OF AGRICULTURAL RESEARCH

CHECKLIST FOR SUBMISSION OF FINAL RESEARCH PROJECT REPORT (RPP-III)

(For Guidelines Refer ANNEXURE – XI (F))

1. Institute Project Code
2. Investigators as approved in RPP-I, If any change attach IRC proceedings:

Principal Investigator	CC-PI	Co-PI

3. Any change in objectives and activities Yes/No
(If yes, attach IRC proceedings)

4.	Date of Start & Date of Completion (Actual). If any extension granted enclose IRC proceedings		Yes	No
5.	Whether all objectives met		Yes	No
6.	All activities completed		Yes	No
7.	Salient achievements/major recommendations included		Yes	No
8.	Annual Progress Reports (RPP-II) submitted	1 st Year	Yes	No
		2 nd Year	Yes	No
		3 rd Year	Yes	No
		nth year	Yes	No
9.	Reprint of each of publication attached		Yes	No
10.	Action for further pursuit of obtained results indicated		Yes	No
11.	Report presented in Divisional seminar (enclose proceedings & action taken report)		Yes	No
12.	Report presented in Institute seminar (enclose proceedings & action taken report)		Yes	No
13.	IRC number in which the project was adopted		IRC No:	
14.	Any other Information			

15. Signature:

Project Leader

Co-PI

Co-PI...

Co-PI....

HOD/PD/I/c.

11.2 Total Expenditure

12. Cumulative Output

- a. Special attainments/innovations
- b. List of Publications (one copy each to be submitted if not already submitted)
 - i. Research papers
 - ii. Reports/Manuals
 - iii. Working and Concept Papers
 - iv. Popular articles
 - v. Books/Book Chapters
 - vi. Extension Bulletins
- c. Intellectual Property Generation
(Patents - filed/obtained; Copyrights- filed/obtained; Designs- filed/obtained; Registration details of variety/germplasm/accession if any)
- d. Presentation in Workshop/Seminars/Symposia/Conferences
(relevant to the project in which scientists have participated)
- e. Details of technology developed
(Crop-based; Animal-based, including vaccines; Biological – biofertilizer, biopesticide, etc; IT based – database, software; Any other – please specify)
- f. Trainings/demonstrations organized
- g. Training received
- h. Any other relevant information

13. (a) Extent of achievement of objectives and outputs earmarked as per RPP-I

Objective wise	Activity	Envisaged output of monitorable target(s)	Output achieved	Extent of Achievement (%)
1.	1.			
	.			
2..				

(b) Reasons of shortfall, if any

14. Efforts made for commercialization/technology transfer

15. (a) How the output is proposed to be utilized?

(b) How it will help in knowledge creation

16. Expected benefits and economic impact(if any)

17. Future line of research work/other identifiable problems

18. Details on the research data (registers and records) generated out of the project deposited with the institute for future use

19. Signature of PI, CC-PI(s), all Co-PIs

20. Signature of Head of Division

21. Observations of PME Cell based on Evaluation of Research Project after Completion

22. Signature (with comments if any along with rating of the project in the scale of 1 to 10

on the overall quality of the work) of JD (R)/ Director

ANNEXURE - VIII**INDIAN COUNCIL OF AGRICULTURAL RESEARCH****(For Guidelines Refer ANNEXURE – XI(H))****PROFORMA FOR RESEARCH PERFORMANCE EVALUATION OF INDIVIDUAL SCIENTIST****1. Institute Project Code *****2. Evaluation by PI on the contribution of the team in the project including self**

S. No.	Name	Status in the project (PI/CC-PI/Co-PI)	*Rating in the scale of 1 to 10

3. Signature of PI

* Individual scientists participating in the project would be assessed for their performance through an appraisal system in a scale of 1 to 10 for each of the following attributes:

S. No.	Criteria	Marks
1.	Percentage of the assigned activity completed	40
2.	Quality of the completed activity	10
3.	Authenticity/reliability of the data generated	10
4.	Enthusiasm and sincerity to work	10
5.	Inferences made	10
6.	Collaboration and cooperation demonstrated in performing the task at hand	10
7.	Amenability to scientific/academic/laboratory discipline	10
	Total Score	100

INDIAN COUNCIL OF AGRICULTURAL RESEARCH

(For Guidelines Refer ANNEXURE – XI(I))

PROFORMA FOR EVALUATION OF A RESEARCH PROJECT AFTER COMPLETION BY PI

1. Institute Project Code
2. Evaluation research project after completion by PI

S. No.	Criteria	Methodology	Marks (output)	Self Evaluation by PI
1.	Achievements Against approved and stipulated outputs under project	Qualitative and quantitative assessment of objectives and stipulated outputs under the project will be carried out a) Activity Input /Projected Output/ Output Achieved b) Extent to which standard design methodology, experimental designs, test procedures, analytical methods followed c) Does the data justify the conclusions? d) Innovativeness and creating of new knowledge e) Additional outputs over those stipulated under the project f) Creation of linkages for commercialization of technology developed under the project g) Is scientific input commensurate to output (manpower, Financial input and time duration)?	75 35 10 05 10 05 05 05	
2.	Publication/ awards	Assessment will be done in respect of: Research papers; Reports/Manuals; Working and Concept Papers; Books/Book Chapters/Bulletins. Quality of publication (s) and Awards /Scientific recognitions received	10	
3.	Additional facilities created	Facilities created in terms of laboratory. Research set-up, instrumentation, etc. during the project.	05	
4.	Human Resource Development (Scientific and Technical)	Scientist trained in different areas	05	
5.	Revenue generated under the project/ avenues created for revenue generation	Resources and revenues generated	05	

6.	Product/Processes/Technology/ IPR / commercial value of the technology developed	Details to be provided on a) Products b) Process c) Technology d) IPR e) Registration of the varieties	10	
7.	Quality of available documents of the project duly authenticated	Research Project Files, Data, Reports etc.	05	
Total Marks			115	
8.	Timelines of execution of the project	Marks will be deducted if extension sought over the approved project duration beyond recorded and officially granted extension with recorded reasons Marks to be deducted		
		Up to 5%	01	
		Up to 10%	02	
		Up to 30 %	03	
		Beyond 30 %	05	
Net Score: Score obtained to be counted out of 100 to compensate for activities not relevant to the project			100	

However, looking into the requirements of different research institutes and disciplines, IRC may modify the indicators, their weights and total scores. The time gap for assessment of different indicators may also be decided by IRC.

3. Signature of PI

INDIAN COUNCIL OF AGRICULTURAL RESEARCH

(For Guidelines Refer ANNEXURE – XI (J))

**PROFORMA FOR EVALUATION OF A RESEARCH PROJECT AFTER COMPLETION BY
EVALUATION COMMITTEE**

1. Institute Project Code
2. Evaluation research project after completion by Evaluation Committee

S. No.	Criteria	Methodology	Marks (output)	Evaluation by Evaluation Committee
1.	Achievements Against approved and stipulated outputs under project	Qualitative and quantitative assessment of objectives and stipulated outputs under the project will be carried out a) Activity Input /Projected Output/ Output Achieved b) Extent to which standard design methodology, experimental designs, test procedures, analytical methods followed c) Does the data justify the conclusions? d) Innovativeness and creating of new knowledge e) Additional outputs over those stipulated under the project f) Creation of linkages for commercialization of technology developed under the project g) Is scientific input commensurate to output (manpower, Financial input and time duration)?	75 35 10 05 10 05 05 05	
2.	Publication/ awards	Assessment will be done in respect of: Research papers; Reports/Manuals; Working and Concept Papers; Books/Book Chapters/Bulletins. Quality of publication (s) and Awards /Scientific recognitions received	10	
3.	Additional facilities created	Facilities created in terms of laboratory. Research set-up, instrumentation, etc. during the project.	05	
4.	Human Resource Development (Scientific and Technical)	Scientist trained in different areas	05	
5.	Revenue generated under the project/ avenues created for revenue generation	Resources and revenues generated	05	

6.	Product/Processes/Technology/ IPR / commercial value of the technology developed	Details to be provided on a) Products b) Process c) Technology d) IPR e) Registration of the varieties	10	
7.	Quality of available documents of the project duly authenticated	Research Project Files, Data, Reports etc.	05	
Total Marks			115	
8.	Timelines of execution of the project	Marks will be deducted if extension sought over the approved project duration beyond recorded and officially granted extension with recorded reasons Marks to be deducted		
		Up to 5%		
		Up to 10%		
		Up to 30 %		
		Beyond 30 %		
Net Score: Score obtained to be counted out of 100 to compensate for activities not relevant to the project			100	

4. Signature of Evaluation Committee

ANNEXURE – XI(A)

GUIDELINES FOR FILLING - PROFORMA FOR PREPARATION OF STATUS REPORT FOR PROPOSAL OF A NEW RESEARCH PROJECT

1. Title of the project

The word Project means "a piece of research work on specified and well- defined problem, limited in scope of its objectives and designed to be completed in a given length of time". The title should indicate the nature of problem to be dealt with, as precisely as possible, in a few words. It must be an indicative of the precise problem to be undertaken and not a problem in general.

2. Type of research project: Basic/Applied/Extension/Farmer Participatory/Other (specify)

Self explanatory

3. Genesis and rationale of the project

Genesis means "birth," "creation," "cause," "beginning," "source," and "origin" of a research project.

Rationale means fundamental reasons or basis of taking the project.

4. Knowledge/Technology gaps and justification for taking up the present project

Self explanatory

5. Critical review of present status of the technology at national and international levels along with complete references.

Compulsive consultation and identified linkage establishment.

Research projects are often born out of original thinking of scientists. However, each project concept has to be viewed in terms of available science concerning the project both at the national and international level. The project expected outcome needs to be delivered on the basis of

- (a) Hypothesis setting
- (b) Developing a null hypothesis
- (c) Evaluating the current literature
- (d) Identifying the research knowledge gaps and researchable areas
- (e) Justifying the envisaged research
- (f) Techniques and technologies being used for the envisaged research project need to be reviewed with respect to the techniques and technologies used earlier.

- (g) Stakeholders and methods to involve stakeholders in formulation and implementation/delivery of research results

A critical analysis of the data should lead towards the synthesis of the new project. A criterion/reason for such interpretation should be illustrative as well as expressive.

6. Brief note on Proprietary/Patent Perspective (for projects related to technology development)/Ethics/Animal Welfare/Bio Safety Issues

Self explanatory

7. (a) Expected output (in bulleted form)

i.

ii.

.

- (b) Clientele/Stake holders (including economic and socio aspects)

i.

ii.

.

The technology will be appropriated and suitable to whom and what will be the broad implications if any.

8. Signatures

[Project Leader]

[Co-PIs]

9. Comments* and signature

*[Head of Division]

* Head of Division will comment keeping following in view:

- (a) Does the research project addresses important activities of the division?
- (b) Is the title of the project in conformity to the expected output and analytical gaps identified by the investigator?
- (c) Does the methodology answers the hypothesis set up?
- (d) Is the research project technical programme/methodology suited to answer the questions?

GUIDELINES FOR FILLING - RESEARCH PROJECT PROPOSAL PROFORMA FOR INITIATION OF A RESEARCH PROJECT (RPP -I)

1. Institute Project Code (to be provided by PME Cell)

The institute code would be generated as a linear combination of the items (a) to (f) as given below. The procedure for generation will be as follows:

(a) Subject matter division of ICAR code, to which the institute belongs

S. No.	Subject Matter Division of ICAR	Code
i.	Crop Sciences	CRSC
ii.	Horticulture	HORT
iii.	Natural Resource Management	NRMA
iv.	Agricultural Engineering	AGEN
v.	Animal Science	ANSC
vi.	Fisheries	FISH
vii.	Agricultural Education	AGED
viii.	Agricultural Extension	AGEX

Since Directorate of Knowledge Management in Agriculture (DKMA) is under DG, ICAR, the code for the SMD for DKMA will be ICAR.

(b) Institute Acronym - As defined by the Institute/ICAR for its identification

(c) Project Type - $X_1 X_2 X_3$ (Three letters)

X_1 : Intra Institutional (S)

or

Inter Institutional (C)

X_2 : Institute Funded (I)

or

Externally Funded (O)

or

Consultancy (C)

X_3 : Institute is Leader (L)

or

Institute is Partner (P)

(d) Year of start - Four digits number

(e) Project number allocated for the year – Three digits number

(f) Cumulative project number - Five digits number

Example: Project code for an Inter Institutional Project which is Externally Funded with Lead Centre at Indian Agricultural Statistics Research Institute (IASRI) starting in the year 2011 and it is the 4th project to start in 2011 and 329th till date will be:

AGENIASRICOL201100400329

The institute project code is specific identification particular for a project within an institution where the project is being undertaken to facilitate the work of PME Cell. The software implementation for data entry/retrieval at the national level will be a special software application which will have its own unique code generated for authorised entry into the system. Software implementation will provide on-line data entry/retrieval/search/reports for RPP I, II and III.

2. Project Title

As defined under the guidelines on the proforma for Status Report for Proposal of a New Project

3. Key Words

Specify keywords (5 to 8) relevant to the project objectives and outcomes. Generally, keywords can be defined as a word or words identifying various activities related to the research project. The keywords may also identify the content of the project. At least one keyword should be indicative of the discipline.

4. (a) Name of the Lead Institute

Generally this is the name of the institute, where the PI of the project is located and major activities of the project will be executed.

(b) Name of Division/ Regional Center/ Section

To further illustrate the research workers working at the Regional Stations/Sub-stations of the main Research Institute, write the name of the parent Institute to which this Station belongs and are generally under the control of the Lead Institute.

5. (a) Name of the Collaborating Institute(s), if any

The name of the institute(s), who will be collaborating with the Lead Institute where the CC-PI of the project is located and where some of the activities of the project will be executed.

(b) Name of Division/ Regional Center/ Section of Collaborating Institute(s)

To further illustrate the research workers working at the Regional Stations/Sub-stations of the main Research Institute, and are under the control of the Collaborating Institute(s) where the activities will be executed.

6. Project Team(Name(s) and designation of PI, CC-PI and all project Co-PIs, with time proposed to be spent)

S. No.	Name, designation and institute	Status in the project (PI/CC-PI/ Co-PI)	*Time to be spent (%)	#Work components to be assigned to individual scientist

*Time to be spent (%) means the percentage of the time an individual scientist will devote for the project.

#Work components to be assigned to individual scientist: Briefly indicate the responsibilities of the (PI/CC-PI/Co-PI) in the project

7. Priority Area to which the project belongs

(If area is not under already identified priority areas of the Institute, give justification)

In general priority areas of research of an institute are well defined and listed in the Plan Document of the Institute. If not already in the priority area, give justification for taking research project out of priority area.

8. Project Duration: Date of Start: Likely Date of Completion:

Indicate the actual proposed date of start and likely date of completion of the project.

9. (a) Objectives

It is a complete and logically arranged statement of the objectives of the study specifying briefly the aims and goals of the project.

(b) Practical utility

10. Activities and outputs details

Objective wise	Activity	Month & Year of		Output monitorable target(s)	% to be carried out in different years			Scientist(s) responsible
		Start	Completion		1	2	..	
1.	1							
	2							
	.							
2.	.	.						

Activities and outputs details need to be proposed year wise for different objectives including all the associated activities with time frame, monitorable targets and the scientists responsible for the same.

Objective: For each objective, the proposed activities need to be specifically mentioned

Activities: For all activities with respect to a given objective, the Month & Year of Start and Month & Year of Completion need to be proposed.

Output monitorable target(s): As per the objectives of the proposed project, define monitorable scientific/technical targets for each activity. These targets may be the outcome of different research activities under taken for achieving the expected goals with their respective time frame. More over while defining the monitorable targets, the following must be taken into consideration:

- Scientific/Technical achievements
- Questions Attempted to be answered
- Anticipated Process/ Products/ Produce/ Technology/ Technique/ Software/ Knowledge Expected to be developed/ refined/ evolved by Pursuing the Project
- Anticipated Results/ Benefits etc.

% to be carried out in different years: For example an activity may be proposed to start in first year and may be completed in second year. For the proposed activity 30% work may be proposed to be completed in the first year and remaining 70% will be completed in the second year. Similarly some other activity may start in second year and may be 100% completed in the same year or 50% and 50% may be completed in two years like second year and third year.

Scientist(s) responsible: Name of the scientist(s) associated in the activity for achieving the Output monitorable target

11. Technical Programme (indicate briefly methodology, techniques, instruments, environments, special material and analytical tools etc.)

- a. Material
- b. Techniques/Methodology
- c. Instrumentation
- d. Special material
- e. Analytical tools

The detailed material, methodology, and techniques etc. that may be used for performing the different activities to achieve the objectives.

Different instruments, environment, materials and analytical tools that may be required for executing the different activities defined in the project proposal.

12. Financial Implications (` in Lakhs)

(A) Financed by the institute

12.1 Manpower (Salaries / Wages)

S. No.	Staff Category	*Man months	**Cost
1.	Scientific		
2.	Technical		
3.	Supporting		
4.	SRFs/RAs		
5.	Contractual		
	Total		

***Man Months:** For scientific staff category, it is the total scientific man-months required for completion of the proposed project, e.g. if the project has been envisaged to be completed in two years (24 months) and 3 scientists are required to work and each will be devoting 25% of his total time, the total man-months would work out to be $24 \times 3 \times 0.25 = 18$. The same is also applicable for other categories of staff.

****Cost:** The estimated cost of manpower (salaries/wages) of all staff category need to be estimated on the basis of man month involvement in the project of the respective staff category.

12.2 Research/Recurring Contingency

Self Explanatory...

S. No.	Item	Year(1)	Year (2)	Year (3)...	Total
1.	Consumables				
2.	Travel				
3.	Field Preparation/ Planting/ Harvesting (Man-days/costs)				
4.	Inter-cultivation & Dressing (Man-days/costs)				
5.	Animal/Green house/Computer Systems/Machinery Maintenance				
6.	Miscellaneous(Other costs)				
	Total(Recurring)				

Justification: -----

12.3 Non-recurring (Equipments)

Self Explanatory...

S. No.	Item(s)	Year (1)	Year (2)	Year (3)...	Total
1.					
.					
	Total (Non-recurring)				

Justification: -----

12.4 Any other Special Facility (s) required (including cost)

The facilities that may not be existing / available at the institute and are essentially required for execution of the activities proposed in the project need to be specifically mentioned.

12.6 Grand Total (12.1 to 12.4)

Item(s)	Year (1)	Year (2)	Year (3)...	Total
Grand Total				

Grand Total will indicate total amount that may be spent for the proposed duration of the Project on account of staff salaries, specified man-months, scientific equipments to be purchased, and other recurring and non-recurring expenditure.

(B) Financed by an Organization other than the Institute (if applicable)

Self Explanatory...

- (i) Name of Financing Organization
- (ii) Total Budget of the Project
- (iii) Budget details:

S. No.	Item	Year(1)	Year(2)	Year (3)...	Total
1	Recurring Contingency				
	Travelling Allowance				
	Workshops				
	Contractual Services/ Salaries				
	Operational Cost				
	Consumables				
2	Non - Recurring Contingency				
	Equipment				
	Furniture				
	Vehicle				
	Others (Miscellaneous)				

3	HRD Component				
	Training				
	Consultancy				
4	Works: (i) New (ii) Renovation				
5	Institutional Charges				

13. Expected Output

Define in brief the expected output on completion of the proposed project. Due consideration to the following, if applicable, may be given while defining the expected output.

- Scientific/Technical achievements
- Questions Attempted to be Answered
- Anticipated Process/ Products/ Produce/ Technology/ Technique/ Software/ Knowledge Expected to be developed/ refined/ evolved by Pursuing the Project
- Anticipated Results/ Benefits etc.

14. Expected Benefits in Economic Terms

Expected benefits quantifiable in monetary terms from the output generated from the proposed project. It may be improvement in productivity/ production efficiency, important substitution, reduction in cost of a process/technology, savings due reduction use of fertilizers/pesticides etc.

15. Risk Analysis

There are basically two important aspects of risk – risk involved in not taking a research project and the other being risk associated while execution of the project.

There are risks, harms, costs and benefits that arise in research that need to be assessed as it enables researchers, reviewers, and funders to decide whether the research is worth doing at all, and whether it could be made less risky. It would help in taking an informed decision. The key risks for an institution may include reputational damage and legal and/or financial liability. It is useful to think about harm-benefit during the early stages of planning a study, when it is still fairly easy to redesign the study to reduce risks. Risk analysis also involves identifying the most probable threats that may be encountered during the execution of the proposed project. We may also have to evaluate existing scientific, technical, physical, financial and/or environmental facilities available with the participating institute(s).

16. Signature of PI, CC-PI(s), all Co-PIs

17. Signature of HoD

18. Signature of JD (R)/ Director

GUIDELINES FOR FILLING - CHECKLIST FOR SUBMISSION OF RPP-I

1. Project Title (Self explanatory)
2. Date of Start & Duration (Self explanatory)
3. Institute Project ☐ or Externally Funded ☐
4. Estimated Cost of the Project : _____
5. Project Presented in the Divisional/Institutional Seminar? Yes / No
6. Have suggested modifications incorporated? Yes / No
7. Status Report enclosed Yes / No
8. Details of work load of investigators in approved ongoing projects:

In the following table, the details of work load of investigators involvement in all other approved ongoing projects (institute funded/externally funded) in terms of % Time spent and duration in the respective projects need to be specifically mentioned so that total research workload of individual scientist may be assessed.

Project Leader				Co-PI – I				Co-PI – II...
Proj. Code.	% Time spent	Date of start	Date of completion	Proj. Code.	% Time spent	Date of start	Date of completion	

9. Work Plan/Activity Chart enclosed Yes / No
10. Included in Institute Plan Activity Yes / No
11. Any previous Institute/Adhoc/Foreign aided projects on similar lines? Yes / No
12. New equipment required for the project Yes / No
13. Funds available for new equipment Yes / No
14. Signatures

Project Leader Co-PI-I Co-PI-II ... Co-PI-n

HOD/PD/I/c

ANNEXURE-XI(D)

GUIDELINES FOR FILLING - APPRAISAL BY THE PME CELL OF RPP-I

1. Project Title (Self Explanatory)
2. On scale 1-10 give score to (a) to (j)

After scrutinizing the proposal document, the PME Cell in charge need to give his/her own assessment with regard to the project related components addressed in the project proposal before submission to the competent authority for approval.

(a)	Relevance of research questions	☐
(b)	Addressing priority of the institute and/or National priority	☐
(c)	New innovativeness expected in the study	☐
(d)	Appropriateness of design/techniques for the questions to be answered	☐
(e)	Elements of bias addressed in the study	☐
(f)	Adequacy of scientist(s) time allocation	☐
(g)	Extent of system review and meta analysis	☐
(h)	Effective control to experiments	☐
(i)	Economic evaluation and cost efficiency analysis	☐
(j)	How appropriately the expected output answers the questions being addressed in the specific subject matter/area (Basic/Applied/Translational/Others)?	☐
	*Total Score out of 100	

* The score obtained is suggestive of the overall quality ranking of the project

3. Was there any other project carried in the past in the same area/topic?

Yes ☐ No ☐

If yes, list the project numbers.

4. Signature of PME Cell Incharge

GUIDELINES FOR FILLING – RESEARCH PROJECT PROFORMA FOR MONITORING ANNUAL PROGRESS (RPP- II)

1. Institute Project Code *
2. Project Title*
3. Reporting Period*
4. Project Duration*: Date of Start - _____ Likely Date of Completion – _____
5. Project Team (Name(s) and designation of PI, CC-PI and all project Co-PIs, (with time spent for the project) if any additions/deletions*

S. No.	Name, designation and institute	Status in the project (PI/CC-PI/ Co-PI)	*Time to be spent (%)	#Work components to be assigned to individual scientist

* (Guidelines for filling Item 1 to 5 are as in RPP-I)

6. (a) Activities and outputs earmarked for the year (as per activities schedule given in RPP-I)

Objective wise	Activity	Scientist responsible	% of activity envisaged to be completed as per RPP-I	% achieved as targeted
1.	1			
	2			
	.			
2.	1			
	.			
.				

% of activity envisaged to be completed as per RPP-I: This is the targeted percentage of the activity as proposed in the RPP-I for the period under report

% achieved as targeted: Out of the proposed target, it is the percentage of achievement during period under report. This percentage may be greater than, equal or may be less than the proposed targets. In case of greater than or equal to the proposed targets, it is fine; otherwise for the shortfalls, reasons need to be mentioned under (b) given below.

(b) If shortfall, reasons for the same and how to catch up with the intended activities

7. Annual Progress Report

The research results and achievements during the period under report must be mentioned in bullets form. It should include only the salient research accomplishments with regard to the proposed activities during the period under report.

8. Output During Period Under Report (Self explanatory ...)

- a. Special attainments/innovations
- b. List of Publications (one copy each to be submitted with RPF-II)
 - i. Research papers
 - ii. Reports/Manuals
 - iii. Working and Concept Papers
 - iv. Popular articles
 - v. Books/Book Chapters
 - vi. Extension Bulletins
- c. Intellectual Property Generation
(Patents - filed/obtained; Copyrights- filed/obtained; Designs- filed/obtained; Registration details of variety/germplasm/accession if any)
- d. Presentation in Workshop/Seminars/Symposia/Conferences
(relevant to the project in which scientists have participated)
- e. Details of technology developed
(Crop-based; Animal-based, including vaccines; Biological – biofertilizer, biopesticide, etc; IT based – database, software; Any other – please specify)
- f. Trainings/demonstrations organized
- g. Training received
- h. Any other relevant information

9. Constraints experienced, if any

A paragraph on the constraints experienced during the period under report with reference to the objective and the activities that could not be executed because of manpower/finance/administrative/technical and/or any other reasons.

10. Lessons Learnt

Lessons and experiences gained during the course of the execution of the project activities. Suggestions and/or precautions for future research accomplishments, if any.

11. Evaluation

(a) Self evaluation of the project for the period under report by the PI with rating in the scale of 1 to 10

(b) Evaluation by PI on the contribution of all the team members in the project including self by giving rating in the scale of 1 to 10.

S. No.	Name	Status in the project (PI/CC-PI/Co-PI)	Rating in the scale of 1 to 10

12. Signature of PI, CC-PI(s), all Co-PIs

13. Signature of Head of Division/Regional Center / Section (with specific comments on progress/achievements, shortfall and constraints along with rating of the project in the scale of 1 to 10) ☐

14. Comments of IRC

15. Signature (with specific comments on progress/achievements, shortfall and constraints along with rating of the project in the scale of 1 to 10) of JD (R)/ Director ☐

ANNEXURE – XI (F)

GUIDELINES FOR FILLING - CHECKLIST FOR SUBMISSION OF FINAL RESEARCH PROJECT REPORT- (RPP-III)

1. Institute Project Code: (Self Explanatory)
2. Investigators as approved in RPP-I, If any change attach IRC proceedings:
(Self Explanatory)

Principal Investigator	CC-PI	Co-PI

3. Any change in objectives and activities
(If yes, attach IRC proceedings) Yes/No
(Self Explanatory)

4.	Date of Start & Date of Completion (Actual). If any extension granted enclose IRC proceedings		Yes	No
5.	Whether all objectives met		Yes	No
6.	All activities completed		Yes	No
7.	Salient achievements/major recommendations included		Yes	No
8.	Annual Progress Reports (RPP-II) submitted	1 st Year	Yes	No
		2 nd Year	Yes	No
		3 rd Year	Yes	No
		nth year	Yes	No
9.	Reprint of each of publication attached		Yes	No
10.	Action for further pursuit of obtained results indicated		Yes	No
11.	Report presented in Divisional seminar (enclose proceedings & action taken report)		Yes	No
12.	Report presented in Institute seminar (enclose proceedings & action taken report)		Yes	No
13.	IRC number in which the project was adopted		IRC No:	
14.	Any other Information			

15. Signature

Project Leader

Co-PI-I

Co-PI-II...

Co-PI-n

HOD/PD/I/c.

GUIDELINES FOR FILLING - FINAL RESEARCH PROJECT REPORT (RPP- III)

1. Institute Project Code
2. Project Title
3. Key Words
4. (a) Name of the Lead Institute
(b) Name of Division/ Regional Center/ Section
5. (a) Name of the Collaborating Institute(s)
(b) Name of Division/ Regional Center/ Section of Collaborating Institute(s)
6. Project Team(Name(s) and designation of PI, CC-PI and all project Co-PIs, with time spent)

S. No.	Name, designation and institute	Status in the project (PI/CC-PI/ Co-PI)	Time to be spent (%)	Work components to be assigned to individual scientist

- 55

(d) Any Other Expenditure Incurred

11.2 Total Expenditure

12. Cumulative Output

- a. Special attainments/innovations
- b. List of Publications (one copy each to be submitted if not already submitted)
 - i. Research papers
 - ii. Reports/Manuals
 - iii. Working and Concept Papers
 - iv. Popular articles
 - v. Books/Book Chapters
 - vi. Extension Bulletins
- c. Intellectual Property Generation
 - i. (Patents - filed/obtained; Copyrights- filed/obtained; Designs- filed/obtained; Registration details of variety/germplasm/accession if any)
- d. Presentation in Workshop/Seminars/Symposia/Conferences
 - i. (relevant to the project in which scientists have participated)
- e. Details of technology developed
 - i. (Crop-based; Animal-based, including vaccines; Biological – biofertilizer, biopesticide, etc; IT based – database, software; Any other – please specify)
- f. Trainings/demonstrations organized
- g. Training received
- h. Any other relevant information

13. (a) Extent of achievement of objectives and outputs earmarked as per RPP-I

Objective wise	Activity	Envisaged output of monitor able target(s)	Output achieved	Extent of Achievement (%)
1.	1.			
	2.			
	.			
2..				

Envisaged output of monitorable target(s): These are to be mentioned exactly the same as proposed in RPP-I whereas in output achieved one has to state the output achieved after completion of the project. The variations need to be mentioned, if any.

(b) Reasons for shortfall, if any

14. Efforts made for commercialization/technology transfer

Here enumerate the efforts made for commercialization/technology transfer. The list of the activities executed may also be given like organisation of awareness programmes.

15. (a) How the output is proposed to be utilized?
(b) How it will help in knowledge creation?
16. Specify whether the project requires submission of RPP-IV for up scaling of research output.
17. Expected benefits and economic impact(if any)
18. Future line of research work/other identifiable problems
19. Details on the research data (registers and records) generated out of the project deposited to PME Cell for future use
20. Signature of PI, CC-PI(s), all Co-PIs
21. Signature of Head of Division
22. Observations of PME Cell based on Evaluation of Research Project after Completion
23. Signature (with comments if any along with rating of the project in the scale of 1 to 10 on the overall quality of the work) of JD (R)/ Director

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INDIAN COUNCIL OF AGRICULTURAL RESEARCH
RESEARCH PROJECT PROFORMA FOR UPSCALE OF
RESEARCH OUTPUT TO THE END USER (RPP- IV)

1. Institute Project Code
2. Project Title
3. (a) Name of the Lead Institute
 (b) Name of Division/ Regional Center/ Section
4. (a) Name of the Collaborating Institute(s)
 (b) Name of Division/ Regional Center/ Section of Collaborating Institute(s)
5. Project Team(Name(s) and designation of PI, CC-PI and all project Co-PIs, with time spent)

S. No.	Name, designation and institute	Status in the project (PI/CC-PI/ Co-PI)
1.		
2.		

6. Details of Research Outputs
 - a. Details of research output (Product, Process, Technology, Methods, Tools, Software etc.) developed (Crop-based; Animal-based, including vaccines; Biological – biofertilizer, biopesticide, etc; IT based – database, software; Any other – please specify)
 - b. Intellectual Property Generated
 - i. Patents - filed/obtained;
 - ii. Copyrights- filed/obtained;
 - iii. Designs- filed/obtained;
 - iv. Registration details of variety/germplasm/accession, if any
 - c. Publications
 - i. Research Papers
 - ii. Reports/Manuals
 - iii. Working and Concept Papers
 - iv. Popular Articles
 - v. Books/Book Chapters
 - vi. Extension Bulletins

- 7. Efforts made for commercialization of Research Output/ Technology transfer (with reference to item 15 of RPP - III)**

Enumerate the efforts made for commercialization of research output/ technology transfer. The list of the activities executed like organization of awareness programmes may also be given.

S. No.	Details of the research output	Expected end users	Efforts made for transfer of research output to clientele	Outcome of the efforts
1.				
2.				
.				

- 8. Economic Benefits and Impact (with reference to those identified under item 14 of RPP - I and item 16 of RPP - III)**

- 9. Research work undertaken on the problems identified as future line of research work**

- 10. Signature of PI, CC-PI(s), all Co-PIs**

- 11. Signature of Head of Division**

- 12. Observations of PME Cell**

- 13. Signature of JD (R)/ Director**

Dated: April 5, 2011

OFFICE ORDER

1.	Dr. M.L. Madan, Vice- Chancellor UP Pandit Deen Dayal Upadhyay Pashu Chikitsa Vigyan Vishwa Vidhyalaya, Mathura	-	Chairman
2.	Dr. M.M. Pandey, DDG(Engg.), ICAR Hqrs	-	Member
3.	Dr. V.K. Sharma, Principal Scientist & Office-In-charge, CIFE, Rohtak Centre, Distt. Rohtak, Haryana-124411 & President, ARSS Forum	-	Member
4.	Dr. V.K. Bhatia, Director, IASRI, New Delhi	-	Member Secretary

1. To analyse the present format of Research Project Files I / II/ III of ARS Scientists with reference to the content, grading and linking up the same to the Annual Confidential Reports of the Scientists and all related aspects.
2. Any other Issue or matter for improvement emanating or incidental to the above terms of reference.

The TA/DA in respect of Dr. M.L. Madan, Vice Chancellor, UP-Pandit Deen Dayal Upadhyay Pashu Chikitsa Vigyan Vishwa Vidhyalaya, Mathura shall be met by the ICAR as per norms.

Contd...../-

The Committee may submit its report within three months from the date of issue of this Office Order.

This issues with the approval of Secretary, DARE and Director General, ICAR.



(RAJIV MANGOTRA)
Deputy Secretary(P)

Distribution:-

1. All members of the Committee (by name)
2. PSO to DG, ICAR
3. Sr. PPS to Secretary, ICAR
4. PPS to FA, DARE
5. Director(P)/Director(F)
6. D-KMA for placing the Office Order on the ICAR website
7. Guard File



(RAJIV MANGOTRA)
Deputy Secretary(P)