

FORTY-EIGHTH REPORT
PUBLIC ACCOUNTS COMMITTEE
(2002-2003)

(THIRTEENTH LOK SABHA)

AUDIT REVIEW ON INDIAN
AGRICULTURAL RESEARCH INSTITUTE

[Action Taken on Nineteenth Report of P AC (13th Lok Sabha)]

MINISTRY OF AGRICULTURE

(Deptt. of Agricultural Research & Education)



Presented to Lok Sabha on 13 March, 2003

Laid in Rajya Sabha on 13 March, 2003

LOK SABHA SECRETARIAT

NEW DELHI

March, 2003/ Phalguna, 1924 (Saka)

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COMPOSITION OF PUBLIC ACCOUNTS COMMITTEE

(2002-2003)

Sardar Buta Singh — *Chairman*

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SECRETARIAT

- | | | |
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| 3. Shri Devender Singh | — | <i>Deputy Secretary</i> |
| 4. Shri R.C. Kakkar | — | <i>Under Secretary</i> |

* Shri Chhatrapal Singh ceased to be Member of the Committee consequent upon his appointment as Minister on 29 January, 2003.

** Elected on 7.8.2002 *vice* Dr. Sahib Singh Verma ceased to be Member of the Committee consequent upon his appointment as Minister on 1.7.2002.

INTRODUCTION

I, the Chairman, Public Accounts Committee having been authorised by the Committee to present the Report on their behalf, do present this Forty-Eighth Report on action taken by Government on the recommendations of the Public Accounts Committee contained in their Nineteenth Report (13th Lok Sabha) on "Audit Review on Indian Agricultural Research Institute".

2. The Report was considered and adopted by the Public Accounts Committee at their sitting held on 10 March, 2003, Minutes of the sitting form *Part-II* of the Report.

3. For facility of reference and convenience, the recommendations of the Committee have been printed in thick type in the body of the Report and have also been reproduced in a consolidated form in Appendix to the Report.

4. The Committee place on record their appreciation of the assistance rendered to them in the matter by the Office of the Comptroller and Auditor General of India.

NEW DELHI;
12 March, 2003

21 Phalguna, 1924 (Saka)

SARDAR BUTA SINGH,
Chairman,
Public Accounts Committee.

CHAPTER-I

REPORT

This Report of the Committee deals with the Action Taken by the Government on the observations/recommendations contained in their 19th Report (Thirteenth Lok Sabha) on Paragraph 4.1 of the report of C&AG of India for the year ended 31 March, 1995 (No. 6 of 1996), Union Government (Scientific Department) relating to Audit Review on Indian Agricultural Research Institute.

2. The 19th Report, presented to Lok Sabha on 23 March, 2001 contained 13 observations/recommendations. The Action Taken Notes have been received in respect of all the observations/recommendations and categorized as under:

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|-------------|--|
| Chapter II | Recommendations/observations that have been accepted by the Government.
Sl. Nos. 1, 2, 5, 7 —10, 11, 12, and 13
(Para Nos. 58, 59, 62, 64—66, 67, 68, 69 and 70) |
| Chapter III | Recommendations/observations which the Committee do not desire to pursue in view of the replies received from the Government.
Sl. No. 6
(Para No. 63) |
| Chapter IV | Recommendations/observations replies to which have not been accepted by the Committee and which require reiteration.
Sl. Nos. 3 and 4
(Para Nos. 60 and 61) |
| Chapter V | Recommendations/observations to which the Government have furnished interim replies.
Nil. |

3. The Committee had found numerous instance of imprudent planning in financial and administrative matters in the IARI despite the existence of a comprehensive monitoring mechanism in the Institute. The Committee's examination also revealed that Research Project Files (RPF) meant to contain extensive feedback of the projects were not properly maintained with the result, the work of monitoring of the projects was totally jeopardized. It was also noticed by the Committee that during 1990-95, IARI implemented 230 projects which were started between 1986 to 1988 and terminated in March 1994 without any critical appraisal, contrary to ICAR instructions. The Committee had further found that there was no procedure of keeping record of cost overrun in case of in-house projects. The Committee also noticed that as on 31st March, 1995 Rs. 3.92 crore remained unspent out of total amount of Rs. 10.70 crore *i.e.* 40% received by Institute, for the execution of schemes funded by ICAR. The

examination had further revealed that there was inordinate delay in the execution of the projects for creation of national phytotron facility, an externally aided project and also there were delays in the execution of the World Bank aided schemes. The Committee had also found that as on 31 March, 1995 accumulated balance of Rs. 388.44 lakh against advances given to the employees towards TA/LTC/Contingency and to various Government Departments for procurement of equipment etc., was pending for adjustment/recovery. It was also noticed that cheques issued upto 1979 for Rs. 7 lakh and for Rs. 1027 lakh from 1985-86 to March 1995 remained uncashed and not debited in the bank account. There was delay of more than three years for the construction of Lal Bahadur Centre for advance research in Bio-technology and crop protection which necessitated revision in estimates and huge extra expenditure.

4. In the light of deficiencies/shortcomings noticed, the Committee, in their 19th Report, had emphasised the need for proper maintenance of records, suitably revamping the monitoring mechanism and desired the Ministry to pursue the sponsoring departments for realization of outstanding expenditure. The Committee had further desired that the cases of lapses with regard to Bank reconciliation work might be enquired into also recommended that the Department should seriously look into the drawbacks and revamp the necessary procedure so as to obviate such financial and administrative irregularities in future.

5. The conclusions/recommendations made by the Committee and the Action Taken Notes furnished by the Ministry thereon have been reproduced appropriately in the subsequent chapters of this Report.

6. In the succeeding paragraphs, the Committee, however, deals with the action taken by Government on some of their conclusions/recommendations.

Monitoring and Evaluation of Research Activities (Sl. No. 3, Para 60)

7. The Committee had expressed surprise over the fact that the Research Council which was required to meet once in each quarter to consider the merits of fresh research projects, conduct periodic appraisals of ongoing Research Projects and to evaluate completion reports for accomplishing these tasks did not meet even once since June, 1989. The Committee were not convinced with the Department's reply that the Research Council of IARI could not be formally constituted since 1989 as the ICAR was considering the proposal of modifying the mode of monitoring research activities of the Institute in consultation with the Indian Institute of Management. The Committee also expressed surprise when they were informed that the Research Advisory Committee constituted in September 1995 in place of the Research Council had only met twice since then. Taking note of the prevailing state of affairs, the Committee strongly emphasized the need for suitably revamping the existing monitoring mechanism.

8. In their action taken replies, the Ministry have stated that the Institute has revamped the monitoring and evaluation system of research programmes.

9. In this connection, the Ministry have informed that Divisional Budget and Research Committee of IARI finalises the research project proposal before sending to the competent authority for approval. In its meeting, new projects are

formulated as per the mandate, priority and resources available with the Institute. Annual progress of each project is also discussed year-wise and the final report of the project is also evaluated on completion of the project. This Committee meets on quarterly basis to review the progress of the projects, their financial aspect and also the formulation of external funded projects. If required, the meeting is also organized on monthly basis. The Joint Director (Research)/ Director visits the Divisions/experimental fields to discuss with the scientists concerned and suggest improvement, if any, from time to time. The problems being faced by various scientists in the execution of experiments is solved by them on the spot.

10. As regards evaluation of research programme, the Committee have been informed that the Institute has constituted its Staff Research Council(SRC), Director IARI as its Chairman and DDG(Crop Science) ICAR, Joint Director (Research), all the Project Directors, Head of the Divisions, Project Coordinator, Project Investigators as other members of SRC, Since 1997 onwards, SRC has been meeting to evaluate research programme and their comments are being implemented to improve the research programmes of the Institute. SRC meets once in a year to review the progress of projects of all the disciplines at one go. The detailed reply filed by the Ministry is reproduced under Chapter III, para 60.

11. The Committee note that in pursuance to their recommendations, a number of steps have been taken by the Department for streamlining and revamping of monitoring/evaluation mechanism of the Institute. The Committee, however, find that the reply of the Ministry is silent about the result achieved after such revamping of the monitoring mechanism. The Committee note that the periodic meetings of the various Committees have not been held regularly as mandated. Obviously, in the absence of regular meetings of the monitor Committees, the evaluation of the on going projects and the quality of research is bound to suffer. The Committee feel that holding of regular meetings of the monitors Committees as per the requirement will not only strengthen the existing monitoring the evaluation mechanism of the Institute but also enable the Institute to keep a constant watch on the progress of ongoing projects. The Committee, therefore, expect the Ministry to look into this vital area to ensure that the meetings of the SRC and RAC take place regularly as mandated for effective monitoring and evaluation of research projects.

In-House Projects (Sl. No. 4, Para 61)

12. The Committee were surprised to find that 230 projects started between 1986—88 and to be implemented by IARI during 1990—95, were terminated on 31 March 1994 without their critical appraisal, contrary to ICAR's instructions. The Committee were also dismayed to find inordinate delay even in execution of 40 projects ranging from 1 to 3 years and 3 to 5 years in respect of 48 projects. The Committee expressed their unhappiness over the fact that there was no procedure of keeping record of cost overrun in case of in-house projects. Taking note of the assurance given by the Institute for developing a procedure for keeping track of cost-overrun for in-house projects, the Committee emphasised the need

to evolve this procedure expeditiously. The Committee were, however, not convinced by the argument advanced by the Ministry that these projects were closed in view of the fact that the Institute took up a decision to move into institutional programmes rather than individual projects, oriented around the Scientists. The Committee had desired the Ministry to apprise them of the total expenditure incurred on the execution of these projects and the concrete benefits derived and achievements made therefrom.

13. In their action taken reply, the Ministry have stated that many of the in-house projects yield results only a long term basis after sustained research by trial and error and as such, the targeted goals in certain projects could not be achieved during the stipulated period. However, sizeable volume of material of knowledge was generated during this period in these projects and some of the findings/research projects were under extensive evaluation under the coordinated programmes. Hence, such projects were to be continued beyond their stipulated period to finally achieve the objectives/targets. The Funds are allocated to various units based on their requirements. Excepting salary of the staff, there is no clear-cut demarcation for plan and non-plan research programmes with regard to the source of funding. While preparing the research projects, each scientist projects the funds requirement, manpower to be involved, but only essential funding is provided. The research programmes are run/operated within the limited grants received from various sources. Further, the divisions get funding support from other funding agencies for the external funded project running in the Division. Thus, funding received by the Institute is utilized on research projects as many projects are complementary to each other. During the extended period, the Project Leaders/Associate Leader emphasize to provide additional information based on the observation generated during the periodicity of the projects, which is required to have the logical conclusion of the projects. Hence, research projects are not to be treated like completion of a project on construction of building/bridge etc. which are planned in advance and completed strictly following the plan with in stipulated period. However, it is being ensured now to complete all the projects/programme within the stipulated/sanctioned time frame. This process will eliminate the possible factor of cost over run.

14. The grant received under Non-plan and Plan head from the ICAR is distributed to all the Centres/Division/Regional Stations to run their research activities since project based budgeting is not in operation. Hence, Project-wise allocation was not made. Certain expenses were met centrally and grant of research contingencies, procurement of equipments etc. were provided to various Centres/Divisions/Regional Stations. Hence, the details of project-wise expenditure was not maintained by the Institute. The norms decided by the ICAR for Research Contingency per scientist (*i.e.* Rs. 40,000 per scientist) were decided in 1997-98 and accordingly the same has been implemented in 1997-98. All efforts are being made to maintain the project based budgeting in the institute. In this regard, one Centre (Nuclear Research Laboratory) and one Division (Genetics) have been selected as a test case for implementation of the project based budgeting. All possible efforts would be made to ensure that the projects are implemented in due time. The Ministry has however furnished the following statement showing the total plan and non-plan allocation and expenditure

incurred on in house projects during 1990—95 received from the council:

	(Figures in lakhs)	
	Non Plan	Plan (1990—95)
Total allocation	13478.17	3415.00
Expenditure	13466.63	3372.52

15. The Ministry have also furnished major achievements of the Institute during 1990—95 in the field of crop improvement, Resource management, Plant protection, Multidisciplinary research, Agricultural Extensions, Agricultural economies and Human Resource Development (Annexure).

16. Audit has however pointed out that no project wise budget and Expenditure has been maintained even in the selected two Divisions Viz. Genetics and Nuclear Research laboratory. In this connection the Ministry have stated that although the Institute decided to do preliminary exercise on project based budgeting taking example of one big Division like Genetics and one National Centre (NRL), but the same could not be finalized. It is worth mentioning that project based budgeting has not started yet in ICAR Institutes. The Non-Plan and Plan funds are allocated to the laboratory on yearly basis on the basis of norms set by the Council and are not received separately for in-house projects. As such, no separate expenditure account for different projects is maintained.

17. The Committee find an apparent dichotomy in the reply of the Ministry that “research project are not to be treated like construction of a building/bridge” and the assurance that “however, it is being ensured now to complete all the projects/programmes within the stipulated time frame”. Since the time frame for such projects are stipulated by the experienced scientists and experts taking into consideration all relevant factors, the Committee believe that with proper planning and regular performance evaluation research projects can be completed within the stipulated time frame by and large. The argument of the Department is rather specious that the project based budgeting has not yet been started by the IARI as the preliminary exercise undertaken by them in this behalf could not be finalised. The Committee, therefore, like the Ministry to give their thoughtful and early consideration to the need for maintaining project based budgeting and expenditure data for proper monitoring and evaluation of projects and for effecting mid-stream corrections where desirable.

Financial Matters
Deposit Schemes
(Sl. No. 8 Paragraph 65)

18. The Committee were informed that IARI implemented schemes sponsored by other departments in various fields of agricultural research. The Committee had found that as on 31 March 1995 a total amount of Rs. 30.42 lakhs spent on 15 Schemes in excess of the deposits was outstanding from the sponsoring departments for period ranging from one to four years which was revealed by Audit in their scrutiny. The Committee were further informed that the Ministry of Environment refused to reimburse the excess expenditure of Rs .10.96 lakhs as it was not covered under the terms and conditions of the scheme. The

Committee had also found that in respect of the 92 sponsored project executed during the years 1991-92 to 1995-96 the excess expenditure to the tune of Rs. 123.60 lakhs was due to misclassification in accounts. The Committee had expressed their unhappiness over this situation and desired that the matter of realization of outstanding expenditure from the sponsoring departments should be pursued vigorously with them.

19. The Ministry in their Action Taken replies have stated that the issue of excess expenditure in respect of deposit scheme was verified further. It was found that the figure of excess expenditure of Rs. 123.60 lakhs was not correct. This has been thoroughly verified and figures reconciled with the Annual Accounts for 1994-95. The progressive excess expenditure upto end of March 95 was only Rs. 19.06 lakhs. In four schemes the Ministry have recouped the excess expenditure amounting to Rs. 9,01,520 and in 7 schemes the excess expenditure was due to misclassification while booking the expenditure in the accounts. The position has been verified from the Cash Book/Expenditure Register and it has been revealed that these schemes have credit balances. As regards other 5 schemes full details of remittances sanctioned budget were not readily available. The sponsoring agencies were being approached to provide the required details for further verification and for submitting reply accordingly.

20. The Audit has pointed out that in four schemes the excess expenditure was recouped. In rest of the schemes the excess expenditure was not recouped. In other four schemes the excess expenditure has increased by Rs. 2 lakh to Rs. 3.50 lakh. In response to this observation Department of AR&E in their further reply has stated that in addition to the four schemes in respect of which the excess expenditure has already been recouped as mentioned by Audit in their further comments, accounts of other seven schemes were scrutinized and it could be observed that the minus balances as reflected in the Annual Accounts for the year 1994-95 were on account of mis-classification made earlier in the accounts Deposits received in these cases were inadvertently misclassification under other miscellaneous deposits which have not been transferred to the respective schemes in the monthly accounts of August 2001. Thus there is no excess expenditure in respect of these schemes. In respect of remaining five schemes listed the position is being further verified and respective funding agencies are being addressed for remittance of the balance amount due from them.

Outstanding Advances

(Sl. No. 9 Para 66)

21. The Committee had found that in 1995 accumulated balance of Rs. 388.44 lakhs against advances given to the employees towards TA/LTC/contingency and to various Govt. Departments for procurement of equipment etc. was pending for adjustment/recovery and they therefore expressed their displeasure after noticing that a staggering amount of Rs. 286.15 lakhs was pending for adjustment/recovery. The Committee were, however, informed that a special team, with Joint director Admn. and Chief Finance & Accounts Officer as members, was constituted to monitor the settlement of advances and steps were initiated to recover the amount from the individuals who failed to submit

the settlement account. The Committee had therefore desired to be apprised of the latest position in this regard.

22. The Department of Agricultural Research and Education in their action taken Reply have stated that due to special efforts, they have been able to settle the outstanding advances amounting to Rs. 240.66 lakhs out of the total amount of advances of Rs. 388.44 lakhs as on 31.12.1995, the Department is also giving top priority to settle the remaining advances amounting to Rs. 147.78 lakhs. So far as personal advances (TA/LTC/Contingencies) are concerned out of Rs. 255.48 lakhs advances for Rs. 234.02 lakhs have since been adjusted. Efforts were being made to settle the remaining amount of Rs. 21.46 lakhs failing which action would be taken to recover the same from the persons concerned with penal interest.

23. Audit, however, in their vetting remarks stated that the clearance against CPWD and other departments were still pending from the year 1964-65 onwards for clearance. The Ministry in their further reply have stated that further efforts were made to clear the outstanding advances/deposits reported in para as on 31.3.95 and substantial clearance could be made upto 31.03.2002 and balance outstanding as on 1.04.2002 is only Rs. 74.66 lakhs against Rs. 388.44 lakhs as on 31.3.95. The outstanding advances reported as on 1.9.2001 in earlier reply has now been reduced to Rs. 74.66 lakhs. Further efforts are also being made to settle all such outstanding amounts.

Bank Reconciliation Work
(Sl. No. 10 Para 67)

24. The Committee had found lack of seriousness and purposive approach in the matter of Bank reconciliation work. The cheques issued upto 1979 for Rs. 7 lakh and for Rs. 1027 lakh from 1985-86 to March 1995 remained uncashed and were not debited in the Bank account as revealed by Audit in their scrutiny. Even the time barred cheques had not been cancelled and credited in the cash book. Similarly, accounts credited by the bank were not taken into the cash books. The position furnished by the Department reflected that the position in this regard was far from satisfactory and concerted efforts were required to be made to improve the situation. It was further revealed that un-cashed cheques upto March, 1995 and credits given by bank were not taken in Cash Book upto January, 1995. The Committee were astonished to note that debits made by bank were not taken in cash book upto March 1995 and credits in Cash Book not given by Bank upto 11-10-1994, were of the order of Rs. 105341.20, Rs. 20,300.00, Rs. 1351914.37 and Rs. 127985.23 respectively. The Committee had recommended that the Department to enquire into these lapses seriously and desired to be apprised of the outcome of the enquiry.

25. In their action taken notes furnished to the Committee, the Ministry have stated that special efforts have been made by the Institute to reconcile the differences between the balances as per the bank account and the Cash Book. As a sequence of the time barred cheques upto Rs. 25000/- have been cancelled and taken in credit side of cash book. Matter has also been taken up with the Bank for providing the outstanding debit and credited advices. Bank has informed that they are maintaining records for a limited period and hence not in a position

to provide old records. In view of this, the matter is being taken up with higher authorities to settle the issue and efforts would continue to resolve the issue on priority basis. A Committee has been constituted with the approval of the Director to inquire into the whole aspects relating to this issue. Final reply would be submitted in due course as soon as the Committee complete the inquiry and submit their Report. The Ministry have further informed the Committee that further progress in clearing the very old items in the Bank Reconciliation could not be made for want of details/documents. Efforts are being made in consultation with the Bank for ascertaining the details relating to these amounts. Progress will be reported. The report of the Committee looking into the aspects of Bank Reconciliation is awaited.

26. The Committee are not inclined to accept any explanation whatsoever for non settlement of advances pending for four decades and above. Though the Department has instituted an enquiry pursuant to the recommendation of the Committee to go into the irregularities of Bank reconciliation work, the Committee would like the enquiry to be expedited and also apprised of the corrective and penal action taken in the matter. The Committee would specifically like the Government to strengthen the internal finance of autonomous bodies so as to ensure that while the autonomy and independence of scientific and research bodies is protected, they scrupulously follow the financial rules and prescribed procedure. The Committee would like to be apprised of the conclusive corrective action taken on both the courts. The Committee would also like the statutory Audit to consider undertaking a special Audit of ICAR and its premier research bodies in due course, if found necessary.

CHAPTER II
RECOMMENDATIONS/OBSERVATIONS THAT HAVE BEEN
ACCEPTED BY THE GOVERNMENT

Recommendation

58. The Committee note that Indian Agricultural Research Institute (IARI), New Delhi, established in 1905, is a premier Institution of Indian Council of Agricultural Research, with deemed University status for research and higher education in agriculture. The Institute is headed by a Director and managed by a Board of Management. It has 18 divisions, four multidisciplinary centres and two off-Season nurseries. The Board of Management is assisted by an Academic Council, a Research Council, an Executive Council and an Extension Council to guide and monitor the functions of the Institute. It is financed mainly through grants released by the Department of Agricultural Research (ICAR). It also receives funds from the Agricultural Produce Cess Fund, foreign agencies and other departments/Ministries for specific schemes. The Committee are distressed to find that despite existence of such a comprehensive monitoring mechanism, their examination has revealed numerous pitfalls and instances of imprudent planning in financial and administrative matters. The glaring deficiencies found have been dealt with in the succeeding paragraphs with suitable remedial suggestions to eliminate them.

[(Sl. No. 58 of Appendix II) Para of 19th Report of PAC
(13th Lok Sabha)]

Action Taken

These are general comments and does not require specific reply. However, point-wise reply has been provided against each succeeding paragraph.

Sd/-

Signature of Additional Secretary
Department of Agricultural Research & Education
OM No. 8-1/2001-IU dated 18-04-2002

Recommendation

59. Monitoring of research projects undertaken by the Institute was to be conducted at divisional level and reviewed by the Research Council. Research Project Files (RPF) are required to be maintained in three parts, namely: RPF-I for basic information, RPF-II for annual progress and RPF-III for final report to facilitate periodic monitoring of research projects five yearly assessment of the Scientists. These Research Project Files meant to contain extensive feedback of the Projects were not properly maintained in the major divisions of the Institute in respect of their projects. Further, even annual RPFs required to be sent to Indian Council of Agricultural Research were not sent during the years 1990—95. Consequently, the work of monitoring of these projects was totally jeopardized. Secretary, Department of Agricultural Research and Education conceded this

lapse during evidence. However, the system of maintaining RPFs has now been revived and is stated to be in practice. The Committee deprecate this lapse and emphasize the need for proper maintenance of such important records about the research projects so that these projects are not only properly maintained but their utility is also correctly and timely assessed.

[(Sl. No. 59 of Appendix II) Para of 19th Report of PAC
(13th Lok Sabha)]

Action Taken

The RPFs are being maintained properly. Also the annual RPFs are being sent to Council regularly. Even the backlog has been completed and RPF are up to date for each of the projects. The annual research findings are being screened/evaluated by the Staff Research Council. Hence, it is being ensured that the records of the research projects of Institute are maintained properly and the utility of these research projects is correctly and timely assessed.

Vetting Comments of Audit

Research Project Files (RPFs) for total 41 projects implemented during 1990-95, were not maintained properly in the major divisions like Genetics, Plant Bio-Technology Centre, Water Technology Centre Agricultural Engineering, Regional Station at Indore etc.

Reply to Vetting Comments

Research Project Files (RPFs) for Genetics, NRCPB, WTC, Agricultural Engineering and Regional Station Indore have been maintained.

Signature of Additional Secretary
Department of Agricultural Research & Education
OM No. 8-1/2001-IU dated 18-04-2002

Recommendation

62. The Committee note that IARI is financed mainly through grants released by the Department of Agricultural Research and Education to the Indian Council of Agricultural Research (ICAR). It also receives funds from the Agricultural Produce Cess Fund, foreign agencies and other Departments/Ministeries for specific Schemes. The Institute received Rs. 10.70 crores during 1990-95 for the execution of the schemes funded by ICAR, Agricultural Produce Cess Fund and World Bank. The Committee are unhappy to note that as much as 40% of this amount (Rs. 3.92 crores) remained unutilised as on 31 March, 1995. This amply proves the lack of seriousness on the part of the Institute to execute their projects meant to benefit the country through agricultural research. The Committee do not accept that the amount remained unutilised due to reasons like non-filling up of posts, and observance of prescribed procedure for purchase of equipment and construction activities. The Committee would like to know the steps taken to fill the vacancies and to streamline the procedure.

[(Sl. No. 62 of Appendix II) Para 5 of 19th Report of PAC
(13th Lok Sabha)]

Action Taken

As regards the filling up of vacancies of scientists, the requisitions are sent to ICAR as soon as the vacancies occur or the advance anticipating the vacancy due to retirement. After filling up the vacancies by ICAR through ASRB, the scientists are posted in respective Division. The recruitment procedure takes quite some time resulting in large backlog of vacant posts. All the scientific posts are under the Scientists' cadre and their salaries are met from the Non-Plan budget. There are normally no separate sanctioned posts for the outside funded projects/schemes. Where such projects/schemes functions, the salary of the scientist working in the project is debited against the funds of the projects/schemes, if there is provision of funds in the scheme/project under salary head. The procedure has been streamlined and vacancy register have been maintained properly. As soon as a vacancy occurs, the requisition is processed and sent to ICAR for filling up. At present requisitions to fill-up 113 vacant posts in Scientific category have been sent to ICAR for necessary action by ASRB. Out of 113 posts, 51 posts have already been advertised by the ASRB. For remaining posts, the matter is also being pursued.

For purchase of equipments, prescribed procedure is strictly followed by the Institute. The construction work is normally got done through CPWD. The CPWD takes its own time and sometimes the works are delayed. However, all out efforts are being made to ensure filling up of vacant posts, purchase of equipments and completion of construction works.

Vetting Comments of Audit

Requisitions were sent to ICAR regularly to fill up the vacant posts.

Reply to Vetting Comments

The matter is under active pursuasion.

Signature of Additional Secretary
Department of Agricultural Research & Education
OM No. 8-1/2001-IU dated 18-04-2002

Recommendation

64. The Committee have noticed similar instances of delays in the execution of World Bank aided Schemes. In one such instance, the Committee find that two equipment costing Rs. 13.95 lakhs, procured during July-September, 1994 for identification and characterization of plant virus for a project to be completed between October 1992 and September 1995, were not installed as of March 1995, simply for want of helium gas and provision of computer facilities. Similarly, against the sanction of Rs. 89.70 lakhs for development of off-season nurseries at regional station of IARI at Wellington only Rs. 44.86 lakhs were spent till January, 1996. In this case, even the World Bank authorities had also expressed concern about non-utilisation of funds. The Committee stress the need for obviating such lapses in future.

[(SI. No. 64 of Appendix II) Para 7 of 19th Report of PAC
(13th Lok Sabha)]

Action Taken

The equipments (DNA synthesizer automatic and DNA Sequencer) were procured during July-September, 1994 under NARP sub-project entitled "Biotechnology for the management of biotic stresses caused by plant viruses and bacteria" were installed and put to use in November, 1995 after procurement of computer and helium gas. These equipments were used for the work of the project which was extended upon June, 1996. These equipments were required for the Project for molecular characterization of plant viruses. The work on biological and physical characteristics of viruses was a pre-requisite for molecular characterization of viruses, which took two years to complete the study. The molecular characterization was taken up only after biological and physical characterization were completed. Therefore, the delay in actual use of equipment in question did not adversely effect the project activities. Moreover, the work which is envisaged in the project is of a continuing nature and these equipments are being extensively used at the Advanced Centre of Plant Virology of the Division of Plant Pathology for molecular characterization of plant viruses such as sequencing of viral genome of potato virus Y, mungbean yellow mosaic virus and cotton leaf curl virus. The results obtained in the project have been published in the reputed Journals. However, it will be ensured in future that such lapses do not occur.

Vetting Comments of Audit

The equipment in question is presently kept idle for about four months as some parts are needed to be replaced to make the same functional. No records were produced for the comments relating to development of off season nurseries at regional station of IARI at Wellington.

Reply to Vetting Comments

Records relating to development of off season nursery at Regional Station of IARI at Wellington is attached as per Annexure-III, mentioning the reasons for delay in execution of works on Lab. Building, Glasshouse and seed store, implement shed, threshing shed, providing external service, guest house, fencing, staff quarter, etc.

Signature of Additional Secretary
Department of Agricultural Research & Education
OM No.8-1/2001-IU dated

Recommendation

65. The Committee note that IARI implements schemes sponsored by other departments in various fields of agricultural research. The test check conducted by Audit revealed that as on 31 March, 1995, a total amount of Rs. 30.42 lakhs spent on 15 Schemes in excess of the deposits was outstanding from the sponsoring departments for period ranging from one to four years. Surprisingly, in one such case, the sponsoring agency, the Ministry of Environment, refused to reimburse the excess expenditure of Rs. 10.96 lakhs as it was not covered under the terms and conditions of the scheme. Further, the committee found from the

details furnished by the Department that in respect of the 92 sponsored projects executed during the years 1991-92 to 1995-96, the excess expenditure has been to the tune of Rs. 123.60 lakhs. According to the Department, the excess is mainly owing to misclassification in accounts. The Committee are unhappy about this situation the Committee desire that the matter of realisation of outstanding expenditure from the sponsoring departments should be pursued vigorously with them. The Committee would like to know the progress made in this regard.

[(SI. No. 65 of Appendix II) Para 8 of 19th Report of PAC
(13th Lok Sabha)]

Action Taken

The issue of excess expenditure in respect of deposit scheme was verified further. It has been observed that the figure of excess expenditure of Rs. 123.60 lakhs was not correct. This has been thoroughly verified and figures reconciled with the Annual Accounts for 1994-95. The progressive excess expenditure upon end of March, 95 was only Rs. 19.06 lakhs as per details given below:-

S.No.	Scheme Code No	Balance(Rs.)
	80-01	(-) 100415
2.	80-05	(-) 195961
3.	80-07	(-) 24175
4.	80-09	(-) 43444
5.	80-12	(-) 276126
6.	80-15	(-) 93708
7.	80-17	(-) 179761
8.	80-19	(-) 186211
9.	80-20	(-) 701
10.	80-21	(-) 425383
11.	80-26	(-) 31705
12.	80-62	(-) 62
13.	80-67	(-) 17673
14.	80-86	(-) 140367
	80-94	(-) 41893
	80-95	(-) 148592
	<u>Total</u>	<u>(-) 1906177</u>

The present position of the case is as under:—

- In 4 schemes, we have recouped the excess expenditure amounting to Rs. 9,01,520/-.
- In 7 schemes, the excess expenditure was due to misclassification while booking the expenditure in the accounts. The position has been verified from the Cash Book/Expenditure Register and it has been revealed that these schemes have credit balances.

In 5 schemes, full details of remittances/sanctioned budget are not readily available. The sponsoring agencies are being approached to provide the required details for further verification and for submitting reply accordingly.

Vetting Comments of Audit

In four schemes the excess expenditure was recouped. In rest of the schemes the excess expenditure was not recouped. In other four schemes the excess expenditure has increased by Rs. 2 lakh to Rs. 3.50 lakhs.

Reply to the Vetting Comments

In addition to the four schemes in respect of which the excess expenditure has already been recouped as mentioned by Audit in their further comments, accounts of further seven schemes were scrutinised and it could be observed that the minus balances as selected in the Annual Accounts for the year 1994-95 were on account of mis-classification made earlier in the accounts. Deposits received in these cases were inadvertently misclassified under other miscellaneous deposits which have now been transferred to the respective schemes in the monthly accounts of August, 2001. Thus there is no excess expenditure in respect of the scheme. In respect of remaining five schemes listed below the position is being further verified and respective funding agencies are being addressed for remittance of the balance amount due from them.

- (1) 80-15 Treatment of Agriculture application of pesticides in quality of rain & river water—Gant Project (SS&AC).
- (2) 80-19 Effect of land treatment of savage on crop production & soil environment (SS&AC)
- (3) 80-67 Organisation of Experts metting of Brain Storming Session on senescence on 7.5.1993 (WTC)
- (4) 80-94 Evaluation of drip irrigation technology for various crops by the Central Water Commission (WTC)
- (5) 80-95 Grant in Aid for Research & Development Schemes under INCID-Development & Evaluation of Micro Irrigation Technology (WTC)

Signature of Additional Secretary
Department of Agricultural Research & Education
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Recommendation

66. The Audit para also reveals that as on 31st March, 1995 accumulated balance of Rs. 388.44 lakhs against advances given to the employees towards TA/LTC/Contingency and to various Govt. Departments for procurement of equipment etc. was pending for adjustment/recovery. The Committee are distressed to find from the latest position furnished to them by the Department that a staggering amount of Rs. 286.15 lakhs is still pending for adjustment/recovery. The Committee have been informed that a special team with Joint Director (Admn.) and Chief Finance & Accounts Officer as members has been constituted to monitor the settlement of advances and steps are being initiated to recover the amount from the individuals who have failed to submit the settlement account. The Committee would like to know the latest position in this regard.

[(Sl. No. 66 of Appendix II) Para 9 of 19th Report of PAC
(13th Lok Sabha)]

Action Taken

Due to special efforts, we have been able to settle the outstanding advances amounting to Rs. 240.66 lakhs out of the total amount of advances of Rs. 388.44 lakhs as on 31.12.1995. We are also giving top priority to settle the remaining advances amounting to Rs. 147.78 lakhs. The position as on 31.3.2001 of the advances paid upto 31.12.1995, is given below:—

(Rs. in lakh)

Particulars of advance	Balances shown in the report	Clearance up to 31.3.2001	Balance
TA	6.62	6.26	0.36
LTC	14.57	14.39	0.18
DAVP	3.53	3.53	Nil
DGS&D	16.91	2.53	14.38
CPS	6.24	—	6.24
Other Deptts.	106.28	0.58	105.70
Contingencies	234.29	213.37	20.92
Total	388.44	240.66	147.78

So far as personal advances (TA/LTC/Contingencies) are concerned, out of Rs. 255.48 lakhs, advances for Rs. 234.02 lakhs have since been adjusted. Efforts are being made to settle the remaining amount of Rs. 21.46 lakhs, failing which action will be taken to recover the same from the persons concerned with penal interest.

Vetting Comments of Audit

The clearance of Rs. 2.41 crore has since been verified and found correct. However, advances against CPWD and other departments are still pending from the year 1964-65 onwards for clearance.

Reply to the Vetting Comments

Further efforts were made to clear the outstanding advances/deposits reported in Para as on 31.3.95 and substantial clearance could be made upto 31.03.2002 and balance outstanding as on 1.04.2002 is only Rs. 74.66 lakhs against Rs. 388.44 lakhs as on 31.3.95. Break-up details of the outstanding amounts are given below:—

(Rs. in lakhs)

Particulars of advance	Balances shown in the report	Clearance up to 31.3.2001	Balance
TA	6.62	6.41	0.21
LTC	14.57	14.39	0.18
DAVP	3.53	3.53	Nil
DGS&D	16.91	3.26	13.65
CPS	6.24	—	6.24
Other Deptts.	106.28	58.91	47.37
Contingencies	234.29	227.28	7.01
Total	388.44	313.78	74.66

The outstanding advances reported as on 1.9.2001 in earlier reply has now been reduced to Rs. 74.66 lakhs. Further efforts are also being made to settle all such outstanding amounts.

Signature of Additional Secretary
Department of Agricultural Research & Education
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Recommendation

67. Similar lack of seriousness and purposive approach is noticed in the matter of Bank reconciliation work. Test check conducted by Audit reveals that the cheques issued upto 1979 for Rs. 7 lakh and for Rs. 1027 lakhs from 1985-86 to March 1995 remained uncashed and were not debited in the Bank account. Further, even the time barred cheques had not been cancelled and credited in the cash Book. Similarly, accounts credited by the bank were not taken into the cash books. The latest position furnished by the Department still reflects that the position in this regard is far from satisfactory and concerted efforts are required to be made to improve the situation. It is further revealed that un-cashed cheques upto March, 1995 and credits given by bank were not taken in Cash Book upto January, 1995. The Committee are surprised to note that debits made by bank were not taken in cash book upto March 1995 and credits in Cash Book not given by Bank upto 11-10-1994, were of the order of Rs. 105341.20, Rs. 20300.00, Rs. 1351914.37 and Rs. 127985.23, respectively. The Committee would like the Daprtment to enquire into these lapses seriously. They would also like to be apprised of the outcome of the enquiry in due course.

[(SI. No. 67 of Appendix II) Para 10 of 19th Report of PAC
(13th Lok Sabha)]

Action Taken

Special efforts have been made by the Institute to reconcile the difference between the balances as per the Bank account and the cash book. As a sequence of it, time barred cheques upto Rs. 25000/- have been cancelled and taken in credit side of Cash Book. Moreover, matter has also been taken up with the bank for providing the outstanding debit and credit advices. Bank has informed *vide* their letter No. 587/9029/IARI-CA/CM/2000 dated 26.12.2000 that they are maintaining the records for a limited period and hence not in a position to provide the old records. In view of this, the matter is being taken up with higher authorities to settle the issue. The lastest position in respect of Bank Account No. CA-49 is indicated below:—

Item-wise details of the pending amount upto 31.3.1995

Statement "A" Uncashed cheques		
upto 1979		787311.01
upto 1984-85		2365.20
March 1995		
425795	31.3.95	33726.00
425324	-	41250.00
426373	-	28000.00

Statement "B" Credits given by bank not taken in Cash Book	
upto 1979	442657.77
Sept. 1985	822.00
Statement "C" Debits given by bank not taken in Cash Book	
upto 1979	574897.37
June 1990	1568.00
March 1994	9423.00
May, 1994	5343.00
July, 1994	12550.00
	919.00
	5135.00
August 1994	670390.00
September 1994	6360.00
	3811.00
November 1995	813.00
January 1995	6316.00
	829.00
	2000.00
March 1995	51560.00
	56939.00
	6475.00
Statement "D" Credits in Cash Book not given by Bank	
upto 1979	124485.23
October, 1994	1000.00
	2500.00

Efforts will continue to resolve the issue on priority basis.

A Committee has been constituted with the approval of the Director to inquire into the whole aspects relating to this issue. Final reply will be submitted in due course as soon as the Committee complete the inquiry and submit their report.

Vetting Comments of Audit

A Committee has been constituted in March 2001 for inquiring into all aspects relating to the long pending bank reconciliation works. The Committee report is still awaited.

Reply to the Vetting Comments

Further progress in clearing the very old items in the Bank Reconciliation could not be made for want of details/documents. Efforts are being made in consultation with the Bank for ascertaining the details relating to these amounts. Progress will be reported. The report of the Committee looking into the aspects of Bank Reconciliation is awaited.

Signature of Additional Secretary

Department of Agricultural Research & Education
OM No. 8-I/2001-IU dated 18-04-2002

Recommendation

The Committee are unhappy to note the delay of more than three years in the construction of Lal Bahadur Centre for Advance Research in Bio-Technology and Crop Protection. Unfortunately, this delay and changes in specifications from time to time, necessitated revision in estimates and huge extra expenditure. The construction of the Centre which was expected to cost Rs. 6.88 crores according to the preliminary estimates was finally completed in July, 1994 at a total cost of Rs. 15.70 crores. This Committee note with concern the fact that delay was due to difficulties in co-ordination between many agencies involved in demolishing of the existing structure for clearing the site for construction.

[(Sl. No. 68 of Appendix II) Para 11 of 19th Report of PAC
(13th Lok Sabha)]

Action Taken

As already reported to the committee the delay in completing the building by due date was attributed to lack of coordination between various agencies involved in demolishing of the existing structure for clearing the site for construction. In future, all care will be taken to ensure that such problems do not interfere with the construction schedules.

Vetting Comments of Audit

No documentary evidences were produced in support of steps taken to avoid such construction delay in future.

Reply to the Vetting Comments

As already explained the delay was due to procedural difficulties like non-coordination between several agencies involved in demolishing existing building (Post Office), clearing the site for construction, taking permission from Forest Department for cutting the trees and several other Municipal Departments of the Union Territory of Delhi. In future sufficient time will be allocated for such type of activities while framing the construction schedule of any new building.

Signature of Additional Secretary
Department of Agricultural Research & Education
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Recommendation

Similar lack of planning is noticed in yet another case for construction of Glass House. In this case, the original estimate sanctioned for Rs. 49.29 lakhs in February, 1988 did not include requirement of electric fittings and air-conditioning. Failure to initially include these basic requirements in the original estimates, led to delay in construction of Glass House and revision of the estimate from Rs. 49.29 lakhs to Rs. 98.58 lakhs. The Glass house which was expected to be constructed by December, 1988, was handed over in November, 1995.

[(Sl. No. 69 of Appendix II) Para 12 of 19th Report of PAC
(13th Lok Sabha)]

Action Taken

The detailed position has already been considered by the Committee. The Glass houses are in operation and being used for research. All steps will be taken to ensure that such delays do not occur in future. The construction works will be monitored very closely and effectively to ensure their completion in time.

Vetting Comments of Audit

Out of ten Glass houses, five Glass houses were not utilized.

Reply to the Vetting Comments

All the ten Glass houses have been handed over by CPWD and allotted to concerned divisions for optimum utilisation for research activities.

Signature of Additional Secretary
Department of Agricultural Research & Education
OM No. 8-I/2001-IU dated 18-04-2002

Recommendation

70. The Committee note that IARI is doing quite a good work in the field of agricultural research thereby helping the country to benefit from the fruits of green revolution. However, the preceding paragraphs have proved that such a premier Institute has neglected the financial and administrative aspects of its working. Consequently, there have not only been inordinate delays but also tremendous cost overruns. There has even been failure in properly maintaining the records of research projects. The Committee express its strong dissatisfaction on this state of affairs. The Committee would like the Department of Agricultural Research and Education to seriously look into these drawbacks in the light of the concern expressed and remedial steps recommended by the Committee in this report and revamp the necessary procedure so as to obviate such financial and administrative irregularities and omissions and commissions in future. The Committee would like to know the detailed remedial steps taken in this regard.

[(Sl. No. 70 of Appendix II) Para 13 of 19th Report of PAC
(13th Lok Sabha)]

Action Taken

The Institute is grateful to the Committee for noting the good work done by IARI in field of Agricultural Research. However, the administrative and financial lapses as reported by the Committee are highly regretted. The point-wise recommendations of the Committee have been noted and will be effectively implemented to ensure that such lapses do not occur in future. The remedial measures taken by the Institute in this regard have been indicated in the preceding paragraphs.

Vetting Comments of Audit

All the R&D activities of IARI including financial management should be strengthened in an appropriate manner by giving more emphasis to follow the rules and bye-laws of the ICAR Society in order to achieve its goal.

Reply to the Vetting Comments

Institute has appropriate mechanism to look after R&D and financial management aspects. However, these will be further strengthened as per ICAR guidelines.

Signature of Additional Secretary

Department of Agricultural Research & Education
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CHAPTER III

RECOMMENDATIONS/OBSERVATIONS WHICH THE COMMITTEE DO NOT DESIRE TO PURSUE IN VIEW OF THE REPLIES RECEIVED FROM THE GOVT.

Recommendation

63. The Committee are extremely unhappy over the inordinate delay in the execution of the project for creation of National Phytotron Facility, an externally aided project. A vital project like this meant to provide controlled environment for study of response of plants to climatic condition was delayed due to delay of more than five years in the construction of the main building for housing the said facility. From the scrutiny of the facts placed before it the Committee concluded that this delay in the execution of such an important externally aided project could have been avoided. The Committee emphasize that steps should be taken to obviate such delays in future.

[(Sl. No. 63 of Appendix II) Para 6 of 19th Report of PAC
(13th Lok Sabha)]

Action Taken

The delay in the execution of the Phytotron project could have been avoided had the construction and other related formalities been within the control of the project authorities. The new building was originally planned to be completed by July 1995. However, it could be put in operation fully by November 1998 due to a number of factors which were beyond the control of IARI. First of all, the design of the Phytotron facility itself took time since a project of this nature was being built for the first time in India and none of the construction agencies had any experience. After vigorous exercise with the speciality and budget allocation in consideration a public sector enterprise, RPNN (Rashtriya Pariyojana Nirman Nigam, now, National Projects Construction Corporation) was appointed to construct the building. The necessary approvals from MCD and DVAC were received after prolonged periods of delay. A sequence of such approvals or certificates is a pre-requisite before formal commissioning of the building, energizing with power communication etc. Consequently the Delhi Vidyut Board could make the power supply available to the Project only in November 1998 although the building was inaugurated on May 7, 1997. Ever since November 1998 the facility has been fully functional and research projects are in operation in the areas identified in the Project. Thus, the delay is for a period of about less than three years. Necessary care will be taken to obviate such delays in future.

Vetting Comments of Audit

Documents relating to steps taken to obviate such delays in future were not produced for verification. Further the National Phytotron facility was not effectively utilized.

Reply to the Vetting Comments

The delay was regarding the construction of the building and establishment of the facility which occurred due to the reasons explained earlier. Regarding steps taken for obviating such delays, it is assured that since the project is completed and the National Phytotron Facility is working to its full capacity after its establishment in 1998, there is no cause for any delay owing to building related aspects in future.

Since its establishment in 1998 and its subsequent testing to prescribed standards by the Chief Consultant of FAO/UNDP in February 1999. The National Phytotron Facility has been effectively utilized within the resources and has been meeting the needs of different researchers. At present, the Phytotron Facility is being utilized by the scientists of IARI and other Agricultural Research Institutions to its full capacity.

**Signature of Additional Secretary
Department of Agricultural Research & Education
OM No. 8-1/2001-IU dated 18-04-2002**

CHAPTER IV

RECOMMENDATIONS/OBSERVATIONS REPLIES TO WHICH HAVE NOT BEEN ACCEPTED BY THE COMMITTEE AND WHICH REQUIRE REITERATION

Recommendation

60. The Committee find that the Research Council was required to meet once in each quarter to consider the merits of fresh research projects, conduct periodic appraisals of ongoing Research projects and evaluate completion reports for accomplishing these tasks. Surprisingly, the Research Council which was assigned such a comprehensive and important tasks did not meet even once since June, 1989. The Committee cannot but deplore this failure. The Committee are not convinced with the Department's reply that the Research Council of IARI could not be formally constituted since 1989 as the ICAR was considering the proposal of modifying the mode of monitoring research activities of its Institutes in consultation with the Indian Institute of Management. The Committee are further unhappy to find that the Research Advisory Committee constituted in September 1995 in place of the Research Council has only met twice since then. The Committee strongly recommend the need for suitably revamping the monitoring mechanism. They would like to be informed of the steps taken in this regard.

[(Sl. No. 60 of Appendix II) Para 3 of 19th Report of PAC
(13th Lok Sabha)]

Action Taken

The Institute has revamped the monitoring and evaluation system of research programmes. The monitoring of the Institute base projects is being done as detailed below:—

1. **Monitoring by Divisional Budget and Research Committee/Joint Director (Research)/Director**
 - (a) **Divisional Budget and Research Committee**—is the key committee in finalizing the research project proposal before sending to the competent authority for approval. In its meeting new projects are formulated as per the mandate priority and resources available with the Institute. Annual progress of each project is also discussed year-wise and the final report of the project is also evaluated on completion of the project. The Committee meets on quarterly basis to review the progress of the projects, their financial aspect and also the formulation of external funded projects. If required the meeting is also organized on monthly basis.
 - (b) **Monitoring by the JD(R)/Director**—The Joint Director (Research)/Director visits the Divisions/experimental fields to discuss with the scientists

concerned and suggest improvement, if any from time to time. The problems being faced by various scientists in the execution of experiments is solved by them on the spot.

2. Evaluation

- (a) **Evaluation under Staff Research Council**—Institute has constituted its Staff Research Council. Director IARI is its Chairman, DDG (Crop. Science) ICAR, Joint Director (Research) all the Project Directors, Head of the Divisions, Project Coordinator, Project Investigators are the member of SRC. Since 1997 onwards, SRC is meeting to evaluate research programme and their comments are being implemented to improve the research programmes of the Institute. SRC meet once in a year to review the progress of projects of all the disciplines at one go. The recent meeting of SRC have been held during April/May, 2001.
- (b) **Evaluation by the Research Advisory Committee**—Research Advisory Committee of IARI has started advising the research work to be carried out based on the need of the nation/region since 1996 once in a year. Four meetings of RAC have been held. Two in 1996, one in 1998 and the most recent meeting of RAC was held in July 2000. In 1999, Institute could not held RAC due to non availability of the Chairman, Dr. M.S. Swaminathan. The proceedings of the Staff Research Council are presented in RAC meeting and RAC reviews the work done by the Institute and give suggestions for improvement in future research.
- (c) **Evaluation by Quinquennial Review Team**—QRT is being reconstituted by the ICAR to review the research work of the Institute for the period 1990-2000. This will start functioning soon and its recommendations will be implemented.

Vetting Comments of Audit

- 1(a) Overall progress of the division was mentioned in general only, Progress of each projects was not included.
- (b) Verified and found correct.
- 2(a) As per the orders of ICAR, SRC is required to meet twice in a year to review the annual progress of each project in RPF II and not once in a year as stated in the reply. It met only three times against the mandate of 12 times during 1995-2001. Further, the minutes of SRC meetings revealed that only achievements of the divisions were discussed and not the progress report of each project.
- 2(b) The Research Advisory Committee (RAC) met only three times against the mandate of six times during 1995-2001.
- (c) QRT, to review the activities of IARI for the period 1990 to 2000 has since been reconstituted by ICAR only on 8.8.2001.

Reply to the Vetting Comments

- 1(a) In SRC/RAC over all progress of each project of the division is briefly mentioned in the proceedings. To conduct SRC of such a big Institute, takes more than one month where each and every project of each divisions are discussed.
- (b) Not applicable.
- 2(a) First SRC of IARI was held five times once for each school in the year 1997. But this created technical problem like hamper in research activities of the Institute as all the Heads of Divisions, Project Directors, Project Coordinators and Principal Investigators are the members of the SRC. Therefore, it was decided to hold SRC meeting school-wise at different dates in a month.

The achievements indicated in proceedings means important observations/progress of the projects of preceding year made by the Division.

- (b) Research Advisory Committee met four times during 1995-2001 twice in 1996, once each in 1998 and 2000. The meeting could not be held during 1997 and 1999 due to non-availability of the Chairman. As the term of 2nd RAC expired in June, 2001, hence no meeting could be held during year 2001. The 3rd RAC has been constituted vide ICAR's letter No. 16-23/2001-IA IV dated 27.9.2001. The next meeting of RAC will be held shortly. It is ensured that in future RAC meetings will be held as per schedule.
- (c) Five meetings of QRT to review the activities of IARI for the period 1990-2000 have already been held during the period from 22.9.2001 to 23.3.2002. Two visits of the QRT members to Regional Stations have also been arranged. The final meeting of QRT is scheduled to be held on 3rd and 4th May, 2002 at New Delhi. The review will be completed by QRT shortly.

Signature of Additional Secretary
Department of Agricultural Research & Education
OM No. 8-1/2001-IU dated 18-04-2003

Recommendation

61. The Committee find that during 1990-95, IARI implemented 230 projects which were started between 1986-88. Surprisingly, all these projects were terminated on 31 March, 1994 without their critical appraisal, contrary to ICAR instructions. Further, there was inordinate delay even in the execution of a number of projects ranging from 1-3 years in respect of 40 projects and 3-5 years in respect of 48 projects. The Committee are unhappy to note that there was no procedure of keeping record of cost overrun in case of in-house projects. The Committee have, however, been assured that the Institute is now developing the

procedure to keep track of cost-overrun for in-house projects. The Committee emphasize that this should be done expeditiously. The Committee are not convinced by the argument advanced by the Ministry that these projects were closed in view of the fact that the Institute took up a decision to move into institutional programme rather than individual projects oriented around Scientist. The Committee would like to be apprised of the total expenditure incurred on the execution of these project and the concrete benefit derived and achievements made therefrom.

[(Sl. No. 61 of Appendix II) Para of 19th Report of PAC
(13th Lok Sabha)]

Action Taken

Many of the in-house projects yield results only on a long term basis after sustained research by trial and error and as such the targeted goals in certain projects could not be achieved during the stipulated period. However, Sizeable volume of material of knowledge was generated during this period in these projects and some of the findings/research projects were under extensive evaluation under the coordinated programs. Hence, such projects were to be continued beyond their stipulated period to finally achieve the objectives/targets. The funds are allocated to various units based on their requirements. Excepting salary of the staff, there is no clear-cut demarcation for plan and non-plan research programmes with regard to the source of funding. While preparing the research projects, each scientist projects the funds requirement, manpower to be involved, but only essential funding is provided. The research programmes are run/operated within the limited grants received from various sources. Further, the divisions get funding support from other funding agencies for the external funded project running in the Division. Thus funding received by the Institute and through other funding agencies is utilized in research projects as many projects are complementary to each other. During the extended period, the Project Leaders/Associate Leader emphasize to provide additional information based on the observation generated during the periodicity of the projects, which is required to have the logical conclusion of the projects. Hence, reserach projects are not to be treated the completion of a project on construction of building/bridge etc. which are planned in advance and completed strictly following the plan within stipulated period. However, it is being ensured now to complete all the projects/programme within the stipulated/sanctioned time frame. This process will eliminate the possible factor of cost over run.

The grant received under Non-Plan and Plan from the ICAR is distributed to all the Centres/Divisions/Stations to run their research activities since project based budgeting is not in operation. Hence, Project-wise allocation was not made. Certain expenses were met centrally and grant of research contingencies, procurement of equipments, etc. were provided to various Centres/Divisions/Regional Stations. Hence, the details of project-wise expenditure was not maintained by the Institute. The norms decided by the ICAR for Research Contingency per scientist (*i.e.* Rs. 40,000 per scientist) were decided in 1997-98 and accordingly the same has been implemented in 1997-98. All efforts are being made to maintain the project based budgeting in the Institute. In this

regard, one Centre (Nuclear Research Laboratory) and one Division (Genetics) have been selected as a test case for implementation of the project based budgeting. All possible efforts are being made to ensure that the projects are implemented in due time. However, a statement of expenditure for in-house research projects for the period for 1990-95 is enclosed as **Annexure-I**. The concrete benefits derived and achievement made therefrom are given in **Annexure-II**.

Vetting Comments of Audit

No project wise budget and expenditure has been maintained even in the selected two divisions namely Genetics and Nuclear Research Laboratory. Annexure I and II were verified and found correct.

Reply to the Vetting Comments

Although Institute decided to do preliminary exercise on project based budgeting taking example of one big Division like Genetics and one National Centre (NRL), but the same could not be finalized. It is worth mentioning that project based budgeting has not started yet in ICAR Institutes.

The Non-Plan and Plan funds are allocated to the laboratory on yearly basis on the basis of norms set by the Council and are not received separately for in-house projects. As such no separate expenditure account for different projects is maintained.

Sd/-

Additional Secretary
Department of Agricultural Research & Education
OM No. 8-1/2001-IU dated 18-04-2003

ANNEXURE II

Significant Achievements-1990-95

The major achievements of the Institute during 1990-95 are highlighted below.

Crop Improvement

Biotechnology

Important contribution related to fungal cell wall hydrolyzing enzymes chitinase and glucanase shown to be involved in chickpea defence against *Ascochyta blight*, cloning and characterisation of chitinase and osmotin genes; isolation and purification of a phytotoxin from *Ascochyta rabiet*; production and characterization of somatic hybrids between *Sinapis alba* + *Brassica juncea*; transfer of Ogu cytoplasmic male sterility to *B. juncea* and correction of chlorosis; development of recombinant doubled haploids in rice, photoplast culture in *Basmati* rice; RTBV and transformation of rice; construction of RFLP linkage map of mustrad (*Brassica Juncea*); tagging of seed coat colour locus(r) in mustard; quantitative trait-RFLP marker association in mustard; and molecular tagging of quality traits in rice.

ANNEXURE-I

**Statement showing the Allotment in the year (1990 to 1995)
received from the Council in r/o Plan/Non Plan under various sub-head**

S.No. Sub-head	1990-91		1991-92		1992-93		1993-94		1994-95		Total(1990-95)	
	Plan	NP	Plan	NP	Plan	NP	Plan	NP	Plan	NP		
Estt. Charges	16.00	1533.00	16.00	1590.08	25.00	1980.00	10.15	2190.98	10.00	2583.28	77.15	9877.37
OTA			—	10.92		10.92		10.92		10.92		43.68
2. T.A.	1.00	13.00	2.00	12.00	2.00	12.00	2.50	10.80	6.00	10.80	13.50	58.60
3. Other-charges	128.00	427.00	150.00	417.00	110.00	355.08	487.35	401.87	320.00	209.00	1195.35	1809.95
	432.00	210.00	332.00	200.00	391.00	277.00	350.00	338.60	621.00	110.00	2126.00	1135.60
5. Other items/Fellowship		118.00		120.00	3.00	121.00		98.00		96.00	3.00	553.00
	577.00	2301.00	500.00	2350.00	531.00	2756.00	850.00	3051.17	957.00	3020.00	3415.00	13478.17
Expenditure	534.99	2289.06	499.72	2349.42	530.60	2756.71	849.96	3051.116	957.25	3020.28	3372.52	13466.63

Total Allocation	Non Plan	Plan
	(1990-95)	(1990-95)
	(Figure in lakhs)	(Figures in lakhs)
Expenditure	13478.17	3415.00
	13466.63	3372.52

Crop Varieties

Wheat: Efforts were made to meet the challenges for sustaining production as well as the future strategies of enhancing the yield potential. Many varieties were released for different agroclimatic conditions of the country. The wheat variety Sonali (HP 1633) developed by the Institute's Regional Station, Pusa was released for general cultivation in north-eastern India comprising parts of eastern U.P., Bihar, West Bengal, Assam and far eastern states. This variety is expected to serve as a substitute for the popular cultivar Sonalika which has become susceptible to leaf rusts.

HD 2501, having medium bold, amber and lustrous grains with good *chapati* making quality, was released for irrigated, good fertility and late sown conditions in the Peninsular Zone. HP 1493 developed by the Institute's Regional Station at Pusa was released for cultivation under rainfed and timely sown conditions in the State of Bihar. HS 277 and HS 295 developed at the Institute's Regional Station at Shimla were identified for the Northern Hills Zone. Three Institute's varieties, namely, HD 2285, HD 2329 and HD 2189 occupied first three ranks for the country as a whole for breeder seed requirement emphasizing the popularity of IARI wheat varieties among Indian farmers. Another Institute variety HD 2172, released as *Debeira* in Sudan, is revolutionizing wheat production in that country.

A semi-dwarf variety of bread wheat, Kanchan (DL 803-3) was released for timely sown irrigated conditions in the Central Zone. The average yield of this variety is 47.6 q/ha. Another wheat variety HP1731 developed at the Institute's Regional Station, Pusa was identified for timely sown irrigated situations of North Eastern Plains Zone.

Genetic make up of a large number of Indian wheats and a few selected introduced varieties and germplasm was analysed for their resistance to rusts. This was extremely helpful in transferring desirable genes in new varieties and deploying appropriate resistance genes carrying varieties in different tracts of the country. The IARI variety Kanchan was found to be the slowest rusting type and an excellent agronomic base for future varietal development.

In triticale, an amber grained variety DT46 was released for general cultivation in Northern Hills Zone under timely sown and rainfed conditions, the first triticale variety for human consumption in the world.

Rice: High yielding dwarf *basmati* rice variety, Pusa Basmati 1 has been gaining popularity and has been instrumental in enhancing export of *basmati* rice substantially.

Six CMS lines were developed in the background of Pusa 33, Pusa Basmati 1, Pusa 615-4 and Pusa 150. In medium duration group, a non-lodging rice variety Pusa 44-33 was released for cultivation in the States of Karnataka and Kerala. An early maturing rice culture Pusa 74 was recommended by the All India Rice Workshop for Tamil Nadu, while Pusa 682 was recommended for Orissa, West Bengal and Eastern U.P. by virtue of their superior performance in coordinated trials. A dual-purpose rice variety PNR 381, maturing in 80-105 days, was released for rainfed uplands. Another early maturing variety PNR 162 with superfine grain and multiple resistance to pests and diseases was released

by U.P. Government for irrigated areas. Similarly, a rice variety Jaldi Dhan-3 maturing in 60–70 days was recommended by the Annual Rice Workshop for on-farm trials. This variety has the potential to boost production in drought prone uplands of Orissa and Madhya Pradesh.

A high yielding, a semi-dwarf and early maturing variety Pusa 834 was released which is suitable for both transplanted and direct seeded conditions in Karnataka, Andhra Pradesh, Gujarat, Assam and Eastern Uttar Pradesh. This variety possesses high resistance to leaf blast, neck blast, brown spot and RTV and moderate tolerance to stem borer, leaf folder and gall midge. The additional advantage of this variety is its suitability for sodic soils prone to zinc deficiency as it is very efficient in zinc uptake. Four other rice cultures, namely Pusa 682, Pusa 835-5 and Pusa 677 were identified for variable sowing conditions in different zones.

With the discovery of wide compatibility genes (WC), it has become possible to combine desirable traits of indica and japonica rices. A land race, Gharbharan was identified as a new and effective source of WC genes. Another line derived from Pusa 743-1-1x Pusa 33 also possesses WC gene.

Maize: In maize, two high haploidy inducer lines, namely, 6728B and 6760F, carrying C-1 marker, were identified. These lines are constantly giving more than 5% haploids in different females. Haploidy potential was also found in some ACR marked families which were used as the female parents. In experimental haploid production, five families (6763, 6741, 6744C, 6744E.1 and 6745) produced haploids yields ranging from 5.60 to 8.3% over a large number of C-1 male families. These lines can also be used as the inducer male parents to extract haploids from breeding populations.

Five composites, namely, Comp. A2, Comp. A9, Comp. A11, Comp. A12 and Comp. A15 showed significant superiority over various checks in different zones. An early maturing composite A13 showed consistent superiority (12.32 to 26.98%) over the check Kiran in both irrigated and rainfed situations of various zones.

Bajra: In *Bajra*, an early maturing (75-80 days) hybrid Pusa 444 (MS189A xPPMI-301) with medium height (155-160 cm) and 22-23 q/ha average grain yield was released for general cultivation. It has wide adaptability and hence can be grown under irrigated for rainfed and high or low soil fertility conditions.

A *bajra* hybrid Pusa 23 developed earlier is, at present, the most popular hybrid. The Institute's hybrids accounted for 56.4 and 44.7% area under certified hybrid seed production and total area under high yielding varieties and hybrids in the country, respectively.

Downy mildew resistance was incorporated into the good general combining male sterile lines MS5141 and Tift 23A. A *bajra* hybrid Pusa 322, resistant to downy mildew disease, was released as a dual purpose (for both grain and fodder yield) hybrid for entire country.

Pulses: In chickpea, a bold seeded variety Pusa 362, suitable for late and normal planting was released for general cultivation in northern India. Its average yield ranges from 25 to 30 q/ha.

In pigeonpea, genetic male sterility was introduced in the released variety Pusa 33 which is high yielding and a good combiner.

In mungbean, a high yielding variety Pusa 9072 was released for cultivation between two consecutive paddy crops under residual moisture in the coastal areas of southern and south eastern zones during *rabi* season. Its yield ranges from 9 to 11 q/ha. It has field tolerance to powdery mildew and mungbean yellow mosaic virus.

In field peas, a tall and powdery mildew resistant variety Swastik was recommended for cultivation in all field pea growing areas of the country.

Another variety Alankar was developed from a cross 6587xL 116 and released for cultivation in North Western Plains Zone. This variety gives 18.2% more yield than the best check.

P28, a low toxin *Lathyrus* line performed extremely well in All India Coordinated Varietal Trials in Central and North Eastern Plain Zones. It gave 20-30% higher yield than checks in NEPZ and 10% higher yield by LSD 3 in Central Zone. In Raipur, under upland conditions, P28 showed a seed toxin content as low as 0.096% as against 0.170% of P24, 0.156% of LSD 3 and 0.155% of P 90-2.

In lentil, a bold seeded variety Shivalik and in cowpea, a colour seeded variety Rambha was released by the Central sub-Committee in Crop Standards, Notification and Released of Varieties.

Mustard: Pusa Bahar and a high yielding bold seeded variety Pusa Jai Kisan were released for commercial cultivation in the States of Gujarat, Rajasthan and Maharashtra.

Sunflower: The institute introduced sunflower as its research mandate with the objective of developing varieties for sole and inter-cropping under rainfed and irrigated conditions and suited to mechanical harvesting.

Cotton: In cotton, hybrid Pusa HB-15 was the highest yielder in three out of four locations in the North Zone under interspecific Hybrid Trial with an average yield of 16.30 q/ha as against 15.87 q/ha of *Ghirsutum check* (II -777)

Vegetables

Several varieties were developed by the Institute in different vegetables. In cauliflower, work on the development of varieties for spring sowing/planting resulted in the identification of Sel 23000-7. It gives curd in May-June when the mean temperature is plus 30° C (20° -40° C). At IARI Regional Station, Katrain a promising selection RSK 1301, resistant to Sclerotinia rot, was developed. Selection Kt 4 also showed high degree of tolerance to this disease.

In cauliflower, Pusa Hybrid 2 in November maturity group was released.

In tomato, an F1 hybrid Pusa hybrid No.4 was identified for semi-arid and central highlands. This hybrid gave the highest ever yield of 110 t/ha at Rahuri centre. It possesses excellent qualities for long distance transportation and tolerance to nematodes.

An indeterminate tomato hybrid Kt 4 developed at IARI Regional Station,

Katrain by crossing closed anther mutant (with potato leaf as marker) having Long style with Roma, was identified for release.

In tomato, determinate hybrid, Pusa Hybrid 2 was released. This hybrid yielded 570 q/ha fruit in 123 days.

In brinjal, a long fruited, glossy dark purple variety Pusa Hybrid 5 was released. It yielded 484 q/ha fruits giving first picking in 90 days and weighing 10 fruits per kg. In okra, a promising breeder line A 4 was released as Pusa A 4 by IARI Variety Release Committee.

In pumpkin, Pusa Hybrid No. 1 gave an yield of 508.8 q/ha. It showed 36.7 per cent heterosis over Pusa Vishwas, a newly released commercial variety of pumpkin.

In a trial, conducted by South Asia Vegetable Research Network Project, an onion variety Pusa Madhvi developed by the Institute gave the highest yield of 38.6 t/ha.

At the Institute's Regional Station, Katrain, screening of pea against powdery mildew resulted in the selection of four resistant varieties, viz., Rachna, PMR 4, JP 71 and PRS 18-6. The variety Afila Long was highly resistant to *Ascochyta blight*.

In spong gourd, S-99 was identified for release for cultivation.

In paprika, a breeding line Kt P1-19 developed at the Regional Station, Katrain was released by IARI Variety Release Committee for its high oleresin content and colour. In sweet pepper; the hybrid Kt 1 was identified for release as Pusa Deepti.

Fruits

In fruits, the main thrust was on selection of superior clones of mango; improvement of plant type in lime and lemon; high density planting and micropropagation. Studies were also conducted for post-harvest technology of horticultural crops which included antimicrobial activity of species, residual analysis of CIPC in potato, etc.

In fruits, a promising mango hybrid AxS 13-1 having desirable attributes of red skin, regularity in bearing and good fruit quality for export purposes was identified. A grape hybrid BA x BS 71-50 showed promise for making raisin. Under high density orcharding, Kinnow with a density of 1200 plants per acre produced fruits for the fourth consecutive year at the rate of 75 fruits per plant. The fruit colour and fruit quality were found to be excellent by the end of November. Rootstock studies in citrus showed that Kinnow on *Troyer citrange* produced relatively more and better quality fruits per plant compared with other rootstocks. Dormex (49% aqueous solution of hydrogen cyanamide) applied with 1.5% a.i. concentration on dormant buds after pruning hastened bud burst by 25-29 days in cultivars Pusa Seedless, Beauty Seedless and Perlette and ripened the grapes earlier by 15, 14 and 9 days, respectively. This has resulted in capturing early market and extending harvest season for a better return. It also saves ripening grapes from damage by early monsoon showers.

Flowers

Rose varieties, namely, Chitra, Dr. S.S. Bhatnagar, Dr. Benjamin Pal and Mother Terasa were released. Chitra is a striped and spotted bud sport of the popular and floriferous hybrid tea rose variety Janina. It has creamish white, white and golden yellow coloured prominent stripes and spots on the vermilion orange base of the petals. Dr. S.S. Bhatnagar is a flouribunda rose raised from a cross between Oklahoma and White Christmas which produces bright velvety red coloured, medium sized and long lasting flowers in bunches of 5 to 8.

In gladiolus, two varieties (Neemal and Suryakiran) were released for commercial cultivation.

In narcissus, two spontaneous mutants—one in daffodil cv. Trumpet and another in nargis cv. Cheerfulness were identified.

The research on seed at the Institute continued to be on different aspects of production, quality control and storage.

Physiology

The physiologists of the Institute conducted studies on basis aspects, which include: physiological basis of crop yield in different environments, investigations on physiological and molecular mechanism of abiotic stresses in crop plants, UV-B enhancement and CO₂ enrichment effects on crop growth, physiology of fruit ripening and effect of soil solarization on germination of weed seed.

Biochemistry

In biochemistry, studies were conducted on genetic engineering of *Lathyrus sativus* to obtain an Ox-DAPRO neurotoxin free cultivar on sym and hug genes of *Sesbania rostrata* stem, molecular biology of blackgram mottle virus, molecular biology of storage proteins of wheat in relation to *chapati* making quality, and biochemical and molecular studies on cytochrome oxidase insensitivity to CO in cereals and millets.

Resource Management

The soil fertility studies and agronomic management of cropping systems along with transfer of technology programmes continued. Some of the important studies include: cropping systems research, 15 N studies on contribution of residual fertilizer nitrogen to mineral nitrogen pool in soil, tracer studies on integrated nitrogen management for rice, effectiveness of NED in enhancing nitrogen use efficiency by rice, development of a kinetic model for release of non-labile P, nutrient mobilization in rice-wheat cropping through intervention of VAM, enhancing the efficiency of single superphosphate through amendments, differential tolerance of wheat cultivars to zinc-deficiency stress, effect of land treatment of sewage effluent on crop production and soil environment, accumulation of cadmium and lead under long term manuring and fertilization, bio-detoxification of herbicides, soil test based fertilizer recommendations for specific yield goals of maize and wheat, crop yield and nutrient uptake under long term fertilizer experiment, rice residue and tillage management in rice-wheat cropping system, soil related constraint of rice-wheat rotation in Moradabad district and influence of agro-energy plantations on soil properties.

Plant Protection

A high degree of resistance to *Helminthosporium maydis* was identified in maize lines Eto 182, Poza Rica 86-MBR, HI 55 and TK 977/80xb. Resistance to sheath blight of rice (*Rhizoctonia solani*) was proved to be monogenic in nature. A culture of *Gossypium barbadense* (17-6-1) was demonstrated to be immune to race 32 of the *Xanthomonas campestris* pv. *malvacearum* which can neutralize five B genes namely, Bu, Bn, B7, B4 and B2. This is the first culture of *G. barbadense* demonstrated to be immune in the last 25 years. Some of the other important studies include: biosystematic studies on insects and mites of agricultural importance; insect growth regulator activities of semiochemicals; insect nutrition studies including development of artificial diets and symbiont of insects; toxicological studies including development of artificial diets and symbiont of insects; toxicological studies including residues, formulations and insecticidal resistance; integrated pest management; storage entomology; apiculture and its relation to crop production; nematode management; and development of new agro-chemicals and their safety aspects.

Multidisciplinary Research

Under the multidisciplinary research, studies were conducted on relationship between leaf water T1 and physiological water status parameters in three *Kharif* cereals; detection of malformation of mangoes through NMR relaxation measurements, grain filling in wheat; effect of moisture regime, organic matter and phosphorus levels on the uptake of some nutrients by *mung*, and characteristics of clay-organic matter complexes in some red and lateritic soils. Important studies were also conducted on computer aided design of sprinkler irrigation systems; technology for irrigation water application; and water management of crops.

A new division namely, Division of Environmental Sciences was established in 1993 at the Institute with the initial mandate for research on the use of microbes in resource management, greenhouse gases, recycling of organic wastes, effective utilization of industrial wastes for crop productivity and development of simulation models for the effect of climate change on crop productivity. Some of the important research activities pursued by this division include: effect of mycorrhiza on plant health; microbe activating technology; methane emission from rice fields; effective utilisation of industrial wastes for crop productivity; impact of post methanation waste water from distilleries on agricultural crops; and wheat growth simulator (WTGROWS).

Agricultural Extension

Some of the transfer of technology programmes pursued include: mobilising hill farmers of Uttarkashi for socio-economic development and integrated approach for land use and tribal development in Mandla district of Madhya Pradesh. Other extension studies include: technology forecasting with reference to planning and management of agricultural extension system, work environment in scientific research, impact of modernisation in agriculture on farm women and role of women in *panchayats*.

Outcome of Outreach Programmes

More than one lakh farm families from about two thousand villages spread over 100 blocks covering six states were benefited in the outreach programme. High yielding varieties of crops covered include: wheat, mustard, gram, paddy, arhar, sesamum, sorghum, cowpea, cotton, *urd*, potato and lentil. There was 2-3 times increase in yield from demonstration plots as compared to local seed of the farmers.

Training to about fifty thousand farmers was given in the villages on crop production technology.

Annual *Pusa Krishi Vigyan Mela* organised at IARI benefited 25,000 to 30,000 farmers from different parts of the country during the period.

Agricultural Economics

The economic studies conducted include: total factor productivity, fertilizer use patterns, allocation of research resources, returns to investment in rice research, demand for food in India, impact of liberalization on exports of horticultural commodities and exports of agricultural commodities.

The Institute established the National Phytotron Facility for studies of crop plants in relation to their environment to raise farm productivity. This facility was established in the Lal Bahadur Shastri Centre for Advanced Research in Biotechnology and Plant Protection. The UNDP funded the international technical assistance component of this project, necessary for planning and designing this facility including imported phytotron equipment as well as training of Indian scientists and engineers in phytotron applications.

Human Resource Development

During the period, 1990—95, 344 students were awarded M. Sc. degree and 611 students were awarded Ph. D. degree. The Institute also organised a number of training programme during this period.

Varieties released/identified during 1990—95

Crop	Name of varieties
1. Foodgrains	
Wheat	Sonali (HP 1633), HD 2501, HP 1493, HS 277, HS 295, Kanchan (DL 803-3), HP 1731
Triticale	DT 46
Rice	Pusa 44-33, PNR 381, PNR 162, Pusa 834, Pusa 682, Pusa835-203 Pusa 835-5, Pusa 677
<i>Bajra</i>	Pusa 444, Pusa 322
Chickpea	Pusa 362
Mungbean	Pusa 9072
Fieldpea	Swastik, Alankar
Lentil	Shivalik
Cowpea	Rambha

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Mungbean	Pusa 9072
Fieldpea	Swastik, Alankar
Lentil	Shivalik
Cowpea	Rambha

Crop	Name of varieties
2. Oilseed crop	
Mustard	Pusa Bahar, Pusa Jai Kisan
3. Vegetable crops	
Cauliflower	Sel. 23000-7, Pusa Hybrid 2
Tomato	Pusa Hybrid 4, Kt 4, Pusa Hybrid 2
Brinjal	Pusa Hybrid 5
Okra	Pusa A 4
Sponge gourd	S 99
Paprika	Kt Pl-19
Sweet pepper	Pusa Deepti
4. Fruit crop	
Mango	Hybrid A x S 13-1
5. Flower crops	
Rose	Chitra, Dr. S.S. Bhatnagar, Dr. Benjamin Pal, Mother Teresa
Gladiolus	Neelam, Suryakiran
Narcissus	
(i) Daffodil	Trumpet
(ii) Nargis	Cheerfulness

Implements/machines developed in Indian Agricultural Research Institute (1990—95)

Sl. No.	Implement/ machine	Utility
	Manual paddy thresher	Useful for small farmers specially in hilly areas
2.	Power operated winnower etc. from foodgrains	Used for clearing/separation of chaff, dust
3.	Power operated rubber roll paddy sheller	Used for shelling of paddy
4.	Wheel hoe labour	Used for weeding and interculture by manual
	Sunflower seed decorticator seeds/grains	Used to remove hull of the sunflower
6.	Pusa fruit harvester	Manually operated device, used for harvesting fruits from the trees like mango
7.	Vegetable-cum-fruit grader	Used for grading/sizing of potato/onion
8.	Oscillating screen grain cleaner	Used for cleaning/grading of foodgrains

Sl. No.	Implement/ machine	Utility
9.	Huller type rice-polisher	Used for making rice from paddy
10.	Mini-dal mill	Used for cleaning/grading and splitting of pulses

Synthetic and botanical pesticides developed and their impact (1990—95)

Power pack DDT

A method for *Antiresistant insecticidal formulations* was developed, patented and handed over to NRDC for onward transmission to M/s Sarup Chemicals Ltd., Bareilly (H.O. Mumbai) for a royalty of Rs. 25,000/- and 2-1/2% of the sales (1990).

Furapiole, a pyrethrum, synergist

Developed technology for synthesis of *furapiole, a pyrethrum synergist* better than piperonyl butoxide, and passed on to M/s Hariher Fertilizer Ltd. Mumbai, for a lumpsum royalty of Rs. 200,000 (1995).

Acephate

A systemic insecticide of moderate persistence, acephate is used for controlling a wide range of chewing and sucking insects. This insecticide was earlier being imported. Therefore, an indigenous technology has been developed and licensed to M/s Vantech Pvt. Ltd. Hyderabad for commercialisation at a lumpsum royalty of Rs. 5.0 Lakhs in 1995.

Neem

Neem is well documented for its medicinal and pesticidal properties. Some of the active principles causing the effect have been identified. A process for neem oil EC was developed and licensed to M/s Jai Chemicals, Faridabad, for commercialisation. The material is available under the name **Jaineem**, (1995).

Neem volatile fraction has also been exploited for its spermicidal activity, and the process along with DRDO, has been released to M/s SIRIS, Hyderabad at a royalty of 20 lakhs (1995).

Major achievements in outreach programmes during 1990—95

Operational locations state/district	No. of demonstrations/ farm families covered	Area (ha)	No. of villages	No. of blocks
	2	3	4	5
Uttar Pradesh				
Sultanpur & Rae Bareli	10851	3801	244	20
Varanasi	2958	2000	234	14
Fatehpur & Banda	46504	17581	994	20

	2	3	4	5
Allahabad	3477	1686	88	
Mirzapur	7939	3411	127	11
Ghaziabad	55	23	2	
Uttarkashi	1930	206	30	2
Bulandshahar	126	130	4	
Madhya Pradesh				
Raigarh	26203	6078	239	14
Mandla	1946	246	20	9
Haryana				
Gurgaon	4006	5675	22	3
Bihar				
Munger	33	13	4	2
Rajasthan				
Sikar	558	120	4	
Delhi	1327	533	6	
Total	1,17,913	41,503	2018	100

Achievements of P.G. School, IARI During 1990—1995

1. Number of degrees awarded

Year	M.Sc.			Ph.D.			Total	Foreign	Female
	Total	Foreign	Female	Total	Foreign	Female			
1990	76		21	91		26	167	2	47
1991	82		15	105	2	20	187	3	35
1992	66	3	13	109	4	14	175	7	27
1993	53	3	6	104	2	25	157	5	31
1994	35	0	2	103	1	14	138		16
1995	32		9	99	4	16	131	4	25

2. Training programmes organised

Year	Regular	Participants	Ad-hoc	Participants
1990				
1991				
1992				
1993				
1994				
1995				

PARA-WISE REPLY

PARA: 4.1 Item No. 64

	Amount Sanctioned Lakh)	Amount utilised up to 1/96 (Lakh)	Balance amount utilised after 1/96 (Lakh)	Reason(s) for delay
(i) Equipments	70	8.53	3.17	Amount spent before expiry of the scheme.
(ii) <i>Recurring Contingencies</i> From 92 to 97 (each year 5.00 lakhs)	25.00	14.15	10.85	92-93 amount could not be utilised due to non receipt of allotment in time.
(iii) Works	53.00	22.18	31.67	**
	89.70	44.86	45.69	(-) 0.85

**The reasons for the delay in execution of the works in time in certain works during 1995-96 is mentioned in the tour report of the Administrative Officer/Works, IARI, New Delhi (copy enclosed). However, the works such as Field Lab., Glass House, Seed Storage, Implement and Threshing sheds, Chain Linked Fencing, Providing external services for water supply, Guest House, Staff Quarters, Septic tank and Water storage tank have already been completed and handed over. The work regarding open well is yet to be completed (The delay was due to collapse of the retaining wall of the well at the earlier site because of faulty constructions). The matter was brought to the notice of the DG, CPWD through our Director. Now the work is progressing satisfactorily at an alternate site.

The main reason for the delay in the start of the project implementation of NSP-III (Part-ii) was due to the change in the administrative control of this station from DWR, Karnal to IARI, New Delhi during 1994-95 and subsequent delay in transfer of head of accounts.

Tour Report

Visit of Pushpender Kumar, A.O. (W) and Sanjive Kochhar, T.O. to R.S. Wellington (T.N.) in connection with ongoing works.

With reference to approval of the Director we visited the Wellington on 18-9-96 to 20-9-96. The details of observations wise after visiting the sites and meeting with C.P.W.D. Engineers are as follows:—

1. C/O field lab. Building at wheat research station Wellington

The work was sanctioned *vide* this office sanction memo no. 108-40/93-W dated 3rd February 95 for a sum of Rs. 7,38,301/— The C.P.W.D. awarded the work with a condition to complete work by Feb. 96. Now till date only structural part of the work is completed and finishing work is still incomplete. Now After the rainy season the work has not so far restarted, discussion with Ex. Engg. C.P.W.D., he informed that he will pressurise the contractor and work will be

completed by May. In this case the layout plan of the bldg. has been changed same floor area. The tendered amount of the work is Rs. 9, which means C.P.W.D. may require a total of Rs. 10,23,146/— 12% D.C. with an increase of Rs. 2,84,845/—. Hence, we may at this moment write to C.P.W.D. to complete the earliest and this office will not be responsible for cost escalation due to delay on there part over all the quality of the work seems to be in order.

2. C/o Glass House at I.A.R.I. R.S. Wellington:-

Sanctioned *vide* sanction memo no. 108-40/93-W dated 23rd March for a sum of Rs. 2,49,480/-

C.P.W.D. awarded the work with tendered amount Rs. 3,27,876 with completion upto 31st, Oct. 1996. The work is in progress and near completion now. The C.P.W.D. has made minor change in the layout as per direction from R.S. The quality of the work is satisfactory. The C.P.W.D. as per their tendered cost may revised cost to the tune of Rs. 3,67,221/- *i.e.* D.C. with an increase Rs. 1,17,741/- No further increase in cost will be come on account of time factor (if any as the delay is on the of C.P.W.D.

3. C/O Seed Store at IARI Regional Station Wellington:-

Sanctioned/*vide* sanction memo no. 108-40/93-W dated 23rd March 95/for a sum of Rs. 2,14,872/-

C.P.W.D. has awarded one work as C/O implement shed and seed store at R.S. However, no-work as seed store has been started so far on going through the details of tender it is observed that quantities of items for seed store have not been taken in the tender. The matter was discussed with Ex. Engg. C.P.W.D who admitted the mistake and informed that he will soon invite the seperate tenders for this work and start the work by end of Nov. 96.

4. Implement shed at R.S. Wellington:-

Sanctioned *vide* sanction memo no. 108-40/93-W dated 23rd March 95 for a sum of Rs. 2,43,712/—

The work has been completed by C.P.W.D. and shed has been taken over. The work is satisfactory and on per size taken in the estimate. There is a saving in this work as the tendered amount of C.P.W.D. is Rs. 1,46,469/-. Hence, the total cost of this work may be Rs. 1,64,075/- *i.e.* 12% D.C. The Ex. Engg. may be requested to furnish the final expenditure statement of this work so that the balance amount can be adjusted in other works and adjustment of funds may be done simultaneously.

5. C/O thrashing shed and platform at IARI R.S. station Wellington:-

Sanctioned *vide* sanction memo no. 108-40/93-W dated 23rd March 95 for a sum of Rs. 1,14,010/-. The work has been completed by the CPWD and the structure has been taken over by R.S. The work is satisfactory.

The tendered cost of work is Rs. 1,52,745/- with total probable revised cost of Rs. 1,71,074/- *i.e.* 12% D.C. Now the C.P.W.D. may be requested to furnish the final revised estimate so that the adjustment of accounts may be made simultaneously. There is an increase of about Rs. 57,064/- in the expenditure.

**6. Providing external services at R.S. Wellington
(SH: C/O open wall, pump house and external pipe lines):**

Sanctioned *vide* sanction memo no. 108-40/93-W dated 22nd March 95 for a sum of Rs. 5,34,352/- The C.P.W.D. has awarded the work with a tendered amount of Rs. 5,10,565/- to complete the work by 31st Dec. 1995. But on visiting the site it has been observed that hardly 10% of the work was been no water in newly built quaters, G.H. lab. etc.

The Ex. Engg. CPWD informed that the contractor is not then turning up on discussions he felt the importance of this work and promised to complete the work by Feb. 97.

Hence, we may write and persue the Ex. Engg. C.P.W.D. to get this work completed by Feb. 96. The total work cost may be Rs. 5,71,833/- *i.e.* 12% D.C. with an increase of Rs. 37,481/- and no furth cost enhancement may be entertained due to dealy in work by the CPWD.

7. C/O Guest House at IARI R.S. Wellington:

Sanctioned *vide* sanction no. 108-40/93-W dated 22nd March 95 for a sum of Rs. 9,20,248/-.

The C.P.W.D. has awarded this work with tendered amount of Rs. 9,64,349/- work with condition to complete the work by May 96. Now the work is in progress and due to rains it has been now delayed for few months. On discussions with CPWD Ex. Engg., he informed that the work will be completed by end of Nov. 96. The work is being done as per estimate & drawings.

The probable cost of this work may be Rs. 10,80,071/- *i.e.* 12% D.C. with an increase of Rs. 1,59,823/-.

8. C/O protective Chain linked fencing around research field at R.S. Wellington:

Sanctioned *vide* sanction memo no. 108-40/93-W dated 22nd Nov. 95 for a sum of Rs. 4,93,864/- The work has been awarded by the CPWD for a tendered amount of Rs. 5,27,480/- with completion date Feb. 1996. However, only 250m fencing work has been done and after that the work is stopped. On enquiry from CPWD engineers, they informed that due to sowing of field it is difficult to carry the material upto the site of work, the L-Iron & chain linked fencing also lying at the station office. On further discussions if has been agreed by the scientific staff and CPWD engineers to sortout the solution for which they agreed and CPWD Ex. Engineer assured that on restart of the work it will be completed within three months period. The total revised expenditure on this work my be Rs. 5,90,778/- with a total increase of Rs. 96,914/-. The quality of work is satisfactory.

9. C/O staff quarters at R.S. Wellington:

Sanctioned *vide* sanction memo no. 108-40/93-W dated 28th April 95 for a sum of Rs. 18,75,700- The work has been awarded by the CPWD for a tendered amount of Rs. 19.73 Nov. end 96.

The quarters are being constructed as per approved design & drawing. The quality of work is satisfactorily. The expected time of completion as per CPWD

is now Dec. end 1996. The expected expenditure may be now Rs. 22,09,760/- with an total increase of Rs. 3,34,060/- . The summary of funds deposited with expected exp. as on today is placed below as annexure I. So that we may take decision at this stage for additional funds as the funding scheme NSP-III is over by now.

On through inspection of the R.S. and discussions with CPWD Engineers and IARI staff the following works/items are also proposed to be taken over at the R.S.

1. C/O a Septic Tank:

At present there is no provision of external sewage disposal system and after C/O staff qtr., GH., Lab. bldg. etc it will be essentially required at station. The probable cost of work at present may be Rs. 2.00 lacks. Hence, keeping in view provision of funds we may write to CPWD to frame an estimate and submit to this office at the earliest, so that this item may be completed with the completion of other works.

2. C/O O.H. water storage tank:

A small O.H. water storage tank is also required at station after completion of these bldgs. Hence, CPWD may also be written for the estimate.

3. C/O internal roads for these newly constructed bldg.:

At present there is no pucca bituminous roads provision for the R.S. After the new bldgs. these will be required. Hence, CPWD may be written to frame the estimate for this also.

4. Pdg. and laying chain linked fencing for the balance length all around research plot:

The chain linked fencing work already in progress is only for 800mts. and the total length of the fencing around this field is 1500mts. Hence the full utilisation of already ongoing fencing work will be when the field is fenced around.

After inspection of fencing work being done now and having discussions with CPWD Engineers and IARI staff it is observed that the height of fencing can be reduced to 4.50 and size of L-Iron L- 40X40X5mm. This will also give some savings and serve the purpose of fence.

Hence, on the lines we may write to CPWD to frame an estimate.

5. A/R & M/O R.S. Wellington:

It is brought to our knowledge that CPWD do not care for day to day maintenance of the R.S. A sum of Rs. 35,000/- was deposited with CPWD for A/R & M/O last year which were not utilised. The Head of the R.S. informed us that they have persuaded Ex. Engg. CPWD to utilise these funds for water proofing of the office bldg. for which he agreed and the work will be taken up soon by CPWD.

6. Day to day problem at R.S. Wellington:

Head, IARI R.S. Wellington informed that the station is facing hardship due to inadequate imprest. He mentioned that the Wellington is far off from Delhi and the recupment of bill takes more than a month. He insisted that the present imprest amount of Rs. 10,000 may be increased to Rs. 20,000 if agreed, we may ascertain the views of CF & AO for providing two imprest of Rs. 10,000 each. We may also request the CF & AO to give special consideration to R.S. Wellington on account of its distance from H.Q. and its difficult therein.

Submitted for information, consideration & necessary orders & approvals on the points recommended above. So that further action may be taken accordingly.

Sd/-
(SANJIVE KOCHHAR)
T.O. (C)

Sd/-
(PUSHPENDER KUMAR)
Admn. Officer (works)

S. No.	Name of work	Amount deposited	Expected Expenditure	Saving	Excess
1.	C/o Field Lab. Building at R.S. Wellington	7,38,301	10,23,146		2,84,845
2.	C/o Glass House at IARI Wellington	2,49,480	3,67,221		1,17,741
3.	*C/o Seed Store at IARI R.S. Wellington	2,14,872	Work not yet awarded		
4.	C/o Implement Shed at IARI R.S. Wellington	2,43,712	1,64,075	79,637	
5.	C/o Thrasing Shed & Platform at IARI R.S. Wellington	14,010	1,71,074		57,064
6.	Providing external services at IARI R.S. Wellington (SH:-C/o Open Well, Pump House and External Pipe-Lines	5,34,352	5,71,833		37,481
7.	C/o Guest House at IARI R.S. Wellington	9,20,248	10,80,071		59,823
8.	C/o Protective chain linked fencing around research field at R.S. Wellington	4,93,864	5,90,778		96,914
9.	C/o Staff quarters at IARI R.S, Wellington	18,75,700	22,09,760		3,34,060
		53,83,539		79,637	10,87,928

* The work of C/O Seed store has not yet been awarded & hence started by C.P.W.D.

Excess expected expenditure = Rs. 10,87,928 — Rs. 79, 637

Rs. 10,08,291

Sd/-
(PUSHPENDER KUMAR)
Admn. Officer (Works)

Sd/-
(SANJIVE KOCHHAR)
Tech. Officer (T-5)

ANNEXURE II

Particulars/ period	As per para 67 of PAC report	Actual Figure on 31-3-95 as per Bank Reconciliation Statement	Present position
I. Uncashed			
Cheques	7,87,311.01	7,58,949.08	Nil
(a) upto 79	2,365.20	2,365.20	Nil
(b) From 80 to March 85	10,26,44,857.87	10,18,55,181.66	Nil
(c) From 85-86 to March 1995		<u>10,26,16,495.94</u>	
II. Credits given by Bank not accounted by us			
(a) upto 1979	4,42,657.00	4,42,657.77	Nil
(b) Jan. 95	20,300.00	20,300.00	Nil
(c) March, 95	Nil	<u>14,31,564.00</u>	Nil
		<u>18,94,521.77</u>	
III. Debit made by bank but not accounted by us			
(a) upto 1979	5,74,874.00	5,74,897.37	5,74,897.37
	222.60		
(b) March 95	7,77,017.00	<u>17,22,015.95</u>	8,83,440.00
		<u>22,96,913.32</u>	14,58,337.37
IV. Credits accounted by us but not given by bank			
(a) upto March 79	1,24,485.23	1,24,485.23	1,24,485.23
(b) April 79 to Oct. 94	3,500.00	<u>,67,93,714.37</u>	4,80,337.00
		1,69,18,199.60	6,04,822.23

Futher efforts are in progress to reconcile the remaining items under III and IV of the statement. In respect of very old transactions, we are experiencing difficulties. However, efforts have been maxmised for settling these old transactions as well.

CHAPTER V
RECOMMENDATIONS/OBSERVATIONS TO WHICH THE GOVT. HAVE
FURNISHED INTERIM REPLIES.

—NIL—

NEW DELHI;
12 March, 2003
21 Phalguna 1924 (*Saka*)

SARDAR BUTA SINGH,
Chairman,
Public Accounts Committee.

APPENDIX

STATEMENT OF CONCLUSIONS AND RECOMMENDATIONS

Sl. No.	Para No.	Ministry/Deptt. concerned	Conclusions and Recommendations
2	3		4
11		Ministry of Agriculture (Deptt. of Agricultural Research & Education)	<p>The Committee note that in pursuance to their recommendations, a number of steps have been taken by the Department for streamlining and revamping of monitoring/evaluation mechanism of the Institute. The Committee, however, find that the reply of the Ministry is silent about the result achieved after such revamping of the monitoring mechanism. The Committee note that the periodic meetings of the various Committees have not been held regularly as mandated. Obviously, in the absence of regular meetings of the monitor Committees, the evaluation of the on going projects and the quality of research is bound to suffer. The Committee feel that holding of regular meetings of the monitor Committees as per the requirement will not only strengthen the existing monitoring and evaluation mechanism of the Institute but also enable the Institute to keep a constant watch on the progress of ongoing projects. The Committee, therefore, expect the Ministry to look into this vital area to ensure that the meetings of the SRC and RAC take place regularly as mandated for effective monitoring and evaluation of research projects.</p>
		-do-	<p>The Committee find an apparent dichotomy in the reply of the Ministry that "research project are not to be treated like construction of a building/bridge" and the assurance that "however, it is being ensured now to complete all the projects/programmes within the stipulated time frame". Since the time frame for such projects are stipulated by the experienced scientists and experts taking into consideration all relevant factors, the Committee believe that with proper planning</p>

2

3

4

and regular performance evaluation research projects can be completed within the stipulated time frame by and large. The argument of the Department is rather specious that the project based budgeting has not yet been started by the IARI as the preliminary exercise undertaken by them in this behalf could not be finalised. The Committee, therefore, like the Ministry to give their thoughtful and early consideration to the need for maintaining project based budgeting and expenditure data for proper monitoring and evaluation of projects and for effecting mid-stream corrections where desirable.

3. 26. Ministry of
Agriculture
(Deptt. of
Agricultural
Research &
Education)

The Committee are not inclined to accept any explanation whatsoever for non settlement of advances pending for four decades and above. Though the Department has instituted an enquiry pursuant to the recommendation of the Committee to go into the irregularities of bank reconciliation work, the Committee would like the enquiry to be expedited and also apprised of the corrective and penal action taken in the matter. The Committee would specifically like the Government to strengthen the internal finance of autonomous bodies so as to ensure that while the autonomy and independence of scientific and research bodies is protected, they scrupulously follow the financial rules and prescribed procedure. The Committee would like to be apprised of the conclusive corrective action taken on both the counts. The Committee would also like the statutory Audit to consider undertaking a special Audit of ICAR and its premier research bodies in due course, if found necessary.

PART - II

MINUTES OF THE TWENTY-FIRST SITTING OF THE PUBLIC ACCOUNTS COMMITTEE (2002-2003) HELD ON 10TH MARCH, 2003

The Committee sat from 1600 hrs. to 1640 hrs. on 10th March, 2003 in Room No. 51, Chairman's Chamber Parliament House, New Delhi.

PRESENT

Shri Chinmayanand Swami — *in the Chair*

MEMBERS

Lok Sabha

2. Shri Haribhai Chaudhary
3. Dr. Madan Prasad Jaiswal
Shri Bhartruhari Mahtab
5. Dr. M.V.V.S. Murthi
6. Shri Rupchand Pal
7. Shri Kirit Somaiya
8. Shri Brij Bhushan Sharan Singh

Rajya Sabha

9. Shri Santosh Bagrodia
10. Shri K. Rahman Khan
Shri Bachani Lekhraj

SECRETARIAT

1. Shri Devender Singh — *Deputy Secretary*
2. Shri R.C. Kakkar — *Under Secretary*

2. In the absence of Chairman the Committee chose Shri Chinmayanand Swami to act as Chairman for the sitting under Rule 258 (3) of Rules of Procedure and Conduct of Business in the House.

3. The Committee then took up for consideration the following draft Reports.

- (i) **** **** ****
- (ii) **** **** ****
- (iii) Action Taken on the recommendations contained in 19th Report of PAC (13th Lok Sabha) relating to Audit Review on "Indian Agricultural Research Institute".

4. The Secretariat briefed the Committee on the draft Reports. The Committee adopted the Reports without any modifications and amendments.

5. The Committee authorised the Chairman to finalise the draft Report at Sl. No. (i) after considering the comments of the Ministry of Defence from the security angle. They also authorised the Chairman to finalise these draft Reports in the light of verbal and consequential changes, if any, arising out of factual verification by Audit and present the same to the Houses in the current session of Parliament.

The Committee then adjourned.

OF AUTHORIS AGENTS FOR THE SALE OF LOK SABHA SECRETARIAI
PUBLICATIONS

Sl. No.	Name of Agent	Sl. No.	Name of Agent
	ANDHRA PRADESH	20.	The International Book Service, Deccan Gymkhana, Pune-4.
1.	M/s. Vijay Book Agency, I.I-1-477, Mylaigadda, Secunderabad-500361.	21.	The Current Book House, Maruti Lane, Raghunath Dadaji Street, Bombay-400001.
2.	M/s. Booklinks Cooperation, 3-4-423/5 & 6, Narayanguda, Hyderabad-500029	22.	M/s. Usha Book Depot, "Law Book Sellers and Publishers" Agents Govt. Publications, 585, Chitra Bazar, Khar House, Bombay-400002.
3.	M/s. Ashok Book Centre, Benz Circle, Vasavya Nagar, Vijayawada-520006. (A.P.)	23.	M & J Services, Publishers Representative Accounts & Law Book Seller, Mohan Kunj, Ground Floor 68, Jyotiba Fule Road, Nalgaum-Dadar, Bombay-400014.
4.	M/s. Labour Law Publications, 873, Kothi Bus Stand, Hyderabad-500001.	24.	The Marathwada Book Distributors, Parmimal Khadkeswar, Aurangabad-431001.
5.	M/s. Law Publico Pvt Ltd., opp. Telegraph Office, 5-1-873, Kothi, Hyderabad-500195.	25.	Messers Pragati Jer Mahal, 432, Kalbadevi Road, Bombay-400002.
6.	Shri V.A.N. Raju, Newspaper Agent, H No. 1-2-58, Rahamath Nagar, Kazipet-506003 (A.P.)	26.	Messers Jaina Book Agency (India), 649-A, Girgaum Road, Dhobi Talao, Bombay-400002.
7.	M/s. Vivekananda Law Publishers, Shop No. 8, opp. Secunderabad Courts, Secunderabad-500010, Hyderabad.	27.	M/s Thosar Granihagar Shabu Lasmi, 201, Samrath Nagar, Aurangabad-431009.
	BIHAR		MANIPUR
8.	Departmental Publications Sales Centre, Vikash Bhawan, New Secretariat, Patna (Bihar).	28.	Messers P.C. Jain & Co., Thangal Bazar, Imphal-795001.
9.	M/s. Progressive Book Centre, Zila School, Pani Tanki Chowk, Ramna, Muzaffarpur-842002 (Bihar).		MEGHALAYA
	GUJARAT	29.	Messers Paul's Agency & Distributors, R.K. Mission Road, Laitumkharh, Shillong-793003.
10.	M/s. Vijay Magazines Agency, Station Road, Anand-388001 (Gujarat)		PONDICHERY
11.	The New Order Book Company, Ellis Bridge, Ahmedabad-380006 (T. No. 79065).	30.	Editor of Debates, Legislative Assembly Department, Pondicherry-605001.
	HARYANA		PUNJAB
12.	Messers Indian Documentation Service, Patel Nagar, Post Box No. 13, Gurgaon-122001 (Haryana)	31.	Messers Lyaal Book Depot, Chaura Bazar, Ludhiana-141008.
13.	Messers Prabhu Book Service, Sadar Bazar, Gurgaon-122001.		RAJASTHAN
14.	Messers Maharishi Dayanand University Book Shop, Rohtak-124001 (Haryana).	32.	Messers Pitaliya Pustak Bhandar, Jaipur-302001.
	JAMMU		TAMIL NADU
15.	Messers Haldia Publishers (India), 128-A, Gandhi Nagar, Jammu-180004.	33.	Messers C. Sitaraman & Co., 37, Royappettah High Road, Madras-600014.
	KARNATAKA	34.	Shri I. Gopalkrishnan, Principal, Salem Sowdeswari College, Salem-636010.
16.	M/s. People's Book Houses, J.M. Palace Road, Mysore-570024.	35.	M/s. M.M. Subscription Agencies, 123, Third Street, Tatabad, Coimbatore-641012.
17.	Messers Geetha Book House, K.R. Circle, Mysore-570001.		UTTAR PRADESH
18.	The Editor, Youth Gazette No. 154, Jyoti Niwas, 4th Cross, 4th Main 2nd Phase, Marjinath Nagar-560010 Karnataka.	36.	Law Publishers, Sardar Patel Marg, P.B. No. 70, Allahabad, (U.P.).
	MAHARASHITRA	37.	Messers International Publicity Service, GPO Box No. 1114, Varanasi-211001 (U.P.).
19.	M/s. Sunderdas Gian Chand, 601, Girgaum Road, Near Princes Street, Bombay-400002.	38.	The Law Book Company (P) Ltd., Sardar Patel Marg, P.B. No. 1004, Allahabad-211001 (U.P.).

Sl. No.	Name of Agent	Sl. No.	Name of Agent
39.	Messers S. Kumar & Associates, Marketing & Sales Division, Information Group, 32, Sarojini Devi Lane, Guru Govind Singh Marg, GPO Box No. 251, Lucknow-226001.	56.	M/s. Grover Book & Stationery Co., 58/109, Sahyog Building, Nehru Place, New Delhi-110019 (T. Nos. 26419877, 26419651, 26440902).
40.	Messers Ram Advani Bookseller, Hazrat Ganj, GPO Box No. 154, Lucknow-226001.	57.	M/s. Biblia Impex Pvt. Ltd., 2/18, Ansari Road, New Delhi-110002.
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42.	Messers Bankura News Paper Agency, Machantola, P.O. & Distt. Bankura-722101.	60.	Messers International Publicity Service, GPO Box No. 1114.
43.	Messers Book Corporation, 4, R.N. Mukerjee Road, Kolkata-700001.	61.	Messers Jain Book Agency (South End) 1, Aurobindo Place, Hauz Khas, New Delhi-110016.
44.	Messers Bolpur Pustakalaya, Rabindra Sarani (Shantiniketan) P.O. Bolpur (W.B.)	62.	Messers Seth & Co., Room No. 31-D, Block-B, Delhi High Court, Sher Shah Road, New Delhi-110003.
DELHI		63.	Messers Dhaowantra Medical & Law House, 592, Lajpat Rai Market, Delhi-110006.
45.	M/s. Jain Book Agency, C-9, Connaught Place, New Delhi-110001 (T. Nos. 23321663 & 23320806)	64.	Messers Oxford Subscription Agency, A-13, Green Park Extension, Delhi-110016.
46.	M/s. J.M. Jaina & Brothers, P. Box 1020, Mori Gate, Delhi-110006 (T. Nos. 291564 & 230936)	65.	Messers K.L. Seth B-55, Shakarpur, Delhi-110092.
47.	M/s. Oxford Book & Stationery Co., Scindia House, Connaught Place, New Delhi-110001 (T. Nos. 23315308 & 23315896)	66.	Messers Jaina Book Depot, Chowk Chhapparwala, Bank Street, Karol Bagh, New Delhi-110005.
48.	M/s. Bookwell, 2/72 Sant Nirankari Colony, Kingsway Camp, Delhi-110009 (T. Nos. 27112309 & 23268786)	67.	Messers Kamal & Co., 27, DDA Shopping Centre, Arjun Nagar, Safdarjung Enclave, New Delhi-110029.
49.	M/s. Rajendra Book Agency, IV-DR-59, Lajpat Nagar Old, Double Storey, New Delhi-110024 (T. Nos. 26412362 & 26412131).	68.	Messers Standard Book Co., 125, Municipal Market, Connaught Place, P.B. No. 708, New Delhi-110001 (T. Nos. 23712828, 23313899).
50.	M/s. Ashok Book Agency, BH-82, Poorvi Shalimar Bagh, Delhi-110033.	69.	Messers Jayale (W) Agency, 1-196, Naraina Vihar, New Delhi-110028.
51.	M/s. Venus Enterprises, B-2/85, Phase-II, Ashok Vihar, Delhi.	70.	Messers Sat Narain & Sons, 40-A, Municipal Market, Babar Road, Behind Modern School, Barakhamba Road, New Delhi-110001.
52.	M/s. Central News Agency Pvt. Ltd., 23/90, Connaught Circus, New Delhi-110001 (T. Nos. 23364448, 23364478).	71.	Messers R.K. Books, 40/21-A, Gautam Nagar, New Delhi-110049.
53.	M/s. Amrit Book Co., N-21, Connaught Circus, New Delhi-110001 (T. No. 23310398).	72.	M/s. D.K. Agencies (P) Ltd., A/15-17, Mohan Garden, Najafgarh Road, New Delhi-110059.
54.	M/s. Books India Corporation, Publishers, Importers & Exporters, L-27, Shastri Nagar, Delhi-110002. (T. Nos. 269631 & 714465).	73.	M/s. Ishwar Chandra Co., Baldev Bhawan, 9986, Ram Behari Road, Sarai Rohella, Delhi-110005.
55.	M/s. Sangam Book Depot, 4378/4B, Murari Lal Street, Ansari Road, Darya Ganj, New Delhi-110002.	74.	M/s. Vijay Book Service C/D/123/C Pitampura, New Delhi-110034.