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Final Report

Reorganization for Revitalization : Issues and Perspectives

Report on Reorganization of
Indian Council Of Agricultural Research Headquarters

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Usual disclaimers apply. Study Team alone is responsible for the views expressed.

Study Team

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Terms of Reference wise Summary of Recommendations

Terms of Reference No: 1 & 2

1. Modifications required in the Organizational Set up of the ICAR Headquarters., including changes required in office procedures.
2. Distribution of work between Technical and Administrative wings at the Headquarters.

Recommendations:¹

- R.1. The structural changes in any organization can survive and be useful only when appropriate changes in the processes and work culture take place. The changes in culture may require clear definition of missions and strategies to achieve these missions periodically. We recommend therefore that a consensus is achieved regarding issues raised in the main report² under point 2.0 and policy issues enumerated under point 2.1 to 2.6 given below. It is in the light of the new policy thrust that changes in structure outlined below will become meaningful.

Main report includes discussion on the following strategic functions that we recommend, are given renewed emphasis in the reorganized structure and functions of the ICAR headquarters.

2.1.1 Macro-economic changes in domestic and global environment:

How do we keep track of the changes in the domestic and global environment so that ICAR does not only adapt and respond but also influence these changes.

2.1.2 International cooperation:

It has been well recognized that one can not extract the best terms in an international technological market unless one had an upto date data base on the areas in which we have comparative advantage vis-a-vis the ones in which we are weak or we need certain skills, resources, equipments etc. Today such an information base does not seem to exist. It has implications for thinking about future role of ICAR vis-a-vis CGIAR system.

2.1.3 Long Range Planning:

This is an area which has remained grossly under developed. The consequence is that in times of resource squeeze, one is unable to prioritize. Also the long term needs of human resource development in terms of demand and supply of specific scientific skills remain undefined. The support of ICAR to SAUs thus is not used adequately to steer SAU's education and research programs towards emerging areas of national importance in the long term. The scenario building is another aspect of the long range planning which needs greater emphasis. And this can not be done through outside help always.

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1. All statements preceded by R-Number imply recommendation number.
 2. Main report refers to the document entitled "Reorganization for Revitalization" enclosed with this summary note. All references to the main report are followed by MR.

2.1.4 Inter-organizational networking:

What kind of networks need to be forged to enhance efficiency of various investments needs clarification. It is well known that redundancy in resource requirements can acquire serious proportions if every organization aims at having all the resources under its independent command. Networking thus can help in economizing resources and linking with various stakeholders.

2.1.5 Influencing public policies and institutions:

Should not ICAR influence the policies with regard to international trade affecting domestic environment for growth and development of various technologies. Scientists can not treat policies as given. Also this function can't be performed by consultants or international aid agencies or research organizations given the sensitivity involved.

2.2 Information Processing Capacity:

This is an area in which ICAR needs urgent strengthening. Use of new software to design Management Information Systems and better integration of MIS with the decision making are two areas which will improve headquarters efficiency a great deal.

2.3 Managing Policy Environment:

The continuous renewal of the understanding of the people's representatives about technological potential and prospects is necessary for ensuring adequate resource allocation for R & D, generating feedback from the grassroots and creating environment for building people's institutions for sustainable development.

2.4 Institution Building:

Enhancing capacities of ICAR Institutions and SAUs to renew themselves periodically by reviewing their mandates, improving work culture so that ethical and professional values are internalized and strengthening peer culture for scientific scrutiny and support etc, are some of the key challenges ahead.

2.5 Policy planning, Coordination and Advice:

Inter-ministerial coordination in policy planning is a crucial function which needs attention in the time to come. Incorporating external input in policy making process is also vital to provide forward looking perspective.

2.6 Administrative responsiveness:

The response time at the headquarters to various queries from the Institutes has to be improved considerably if the reorganization has to have any meaning. Decentralization suggested here consistent with Review Committee report may help in this regard.

- R.2. The recommendations of the Review Committee³ regarding constitution of a Board comprising DG and DDGs may be a useful one. However, the strategic and operational issues need to be discussed separately. We recommend that following precise roles and functions be accepted for review of strategic functions at top.
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3. The Review Committee refers to GVK Rao committee set up for the review of the working of ICAR.

a. Strategic Policy Planning Committee (SPPC) is the apex body at ICAR Headquarters to do forward thinking and dovetail long term missions and goals with short term operational strategies. It comprises DG/DDGs, Directors of the national institutes, Secretary (ICAR) and Financial Advisor. The functions are outlined in 3.2.1 (b)MR.

b. The Strategic Policy Coordination and Advisory Committee (SPCAC) is essentially an inter-organizational committee comprising DG, DDGs, selected Vice Chancellors, Agricultural Production Commissioners, Secretary (Agriculture) at Central Government as well as State Government level besides a few distinguished scientists and selected Directors of the ICAR Institutes. The functions are defined in 3.2.1 (a)MR. It will meet once in six months and will look at issues that need coordination with other central ministries, central-state relations, support of the state governments for the state agricultural universities, taking over of some of the regional stations of ICAR by state agricultural universities and other related matters.

c. The Administrative Board (AB) comprising DG and DDGs, Secretary and Financial Advisor is an Executive Committee to operationalize the decisions of SPPC and monitor these on week to week basis in the beginning and on monthly basis later on. The SPPC may meet once in three months and Administrative Board more frequently as mentioned earlier.

d. The Senior Officers Meeting (SOM) essentially is an internal consultative forum in which apart from DG and DDGs, Secretary and Financial Advisor, various officers and ADGs and Senior Officers like Director Personnel, Director Finance, Director-Works also join. This provides opportunity for periodic assessment of the coordination between administrative and technical wings as also other issues on which DG may like to have the advice of larger number of colleagues at ICAR Headquarters. The policy issues would be referred to SPPC. This committee may meet as and when required but at least twice a year.

R.3. The reorganization of Headquarters would be effective only if a major decision regarding decentralization of the power to the Institutes is taken. We recommend that following decisions be taken urgently(see 3.2.1.MR).

a. The Management Committee of the Institute should be empowered to take most of the decisions within the declared policy without making reference to the headquarters.

b. On an experimental basis, Management Committees and Research Advisory Committees of a few institutes may be headed by the eminent scientists outside the ICAR. If the experience is positive, it may be extended to other institutes as well. In the national institutes and other big institutes, the Management Committee may be headed by the Director, but Research Advisory Committee may be headed by an outsider, if considered feasible(see 3.1.1.MR).

c. A system of block grants need to be developed by which the funds for approved ongoing schemes and projects are disbursed once in a year and quarterly monitoring may be done by the Management Committees of the Institute. With strengthening of internal audit system, delegation should be expected to improve the effectiveness and accountability of the Institute (see 6.0,b. MR).

d. Regular meetings of the Board of Management or Management Committee should be held every quarter with well defined agenda and minutes. The agenda should be sent in advance to the ICAR headquarters. The minutes will be sent to headquarters only for information. On issues where decisions require headquarters' approval, institute would wait for fourteen days from the date of receipt of the minutes from headquarters. If nothing is

heard, approval should be assumed and decision be implemented. Management Committees should not be allowed to increase the staff strengths or transfer of research funds for infrastructure except with prior approval. The representative of the headquarters is expected to attend the Management Committee Meetings and bring headquarters' reactions to the agenda items. Under no circumstance, should lack of authorization from the headquarters be allowed to come in the way of decision making in the Management Committees.

e. More strong internal audit system will need to be developed. A time bound action plan will be prepared for the training of the administrative and financial staff of the institute. The Management Committee would monitor this function separately.

f. **The director of the Institute should be empowered to recruit scientists even at the entry level once the competence of the scientists has been certified by the ASRB as is the case with the UGC.** The Selection Committees would include head of the division needing the scientists and at least two outside members. The concept of inter institute transfer will have to be done away with (see 3.1.2MR).

g. Similar norms may have to be set up for recruitment of administrative staff. However, the administrative staff may have a common cadre so that mobility from headquarters to the institutes and vice versa can be ensured.

h. The mandate of different institutes will be reviewed once in five years. The chairman of the Research Advisory Committee and Director of the Institute may review the research at the headquarters with the concerned DDG if some major thrust has to be planned or changed.

i. The decentralization of powers from the Headquarters to the Institute would be extended not only to the Management Committee and the Director, but also to the head of the divisions, principal investigators, project coordinators, etc. Within one year of decentralization a report on the status of actual decentralization be presented to the governing body of ICAR and also circulated to all the Directors of the Institutes. This report may be discussed in the Management Committee of various institutes so that governing body of ICAR looks at the reactions of the institutes to the actual progress achieved in regard to decentralization.

- R.4. The organizational set up of the headquarter has been shown in figure 1 & 2. The committee's style of governance is emphasized because given the complexity of the headquarter's functions, collective thinking is considered crucial for generating creative solutions. It is also recognized that so called dichotomy between the technical and administrative wings can be removed only by having convergence of various functions at the apex level. Once decisions are made in these committees, these will be implemented by the concerned administrative functionaries. Periodic monitoring of these decisions by DG or Administrative Board would ensure that this convergence is allowed to work.

The role of DG has been outlined in point 3.1.3 of the main report. It has to be essentially futuristic and global in its outlook. Given the economic crisis in the country and continued scarcity of budgetary resources, one of the major functions of DG would be to mobilize opportunities for resource generation within and outside the country. He would provide leadership to ICAR-a science organization through ideas that 'stimulate and support rather than censure and control'.

- R.5. Apart from the Strategic Policy Coordination and Advisory Committee (SPCAC), Strategic Policy Planning Committee (SPPC) and Administrative Board and Senior Officers meeting (SOM) already discussed, we suggest a Personnel/Human Resource Development Committee (Personnel/HRD Committee), Financial Management and Budgeting Committee

(FMC) and sub committees on International Cooperation, Technology Alert and Assessment, Technology Transfer and Institution Building. The functions of each of these committee are outlined in the main report.

a. The question of distribution of work between technical and administrative wings has to be seen differently as outlined here. Since policy decisions will be taken by these committees the administration would implement and report progress to these committees. It is important that the ethos of a science organization pervades in all spheres of decision making. Once decision to decentralise and reorganise the HQs is taken, it may be useful to reiterate the missions of the organization and ensure the participation of staff at all levels in reorientation of work culture. Changes are required in the organization of the sections so that file movement is rationalised. There is expected to be a single file for a matter concerning each institute. With the delegation of authority to the DDGs in their role as chairperson of functional committees and in-charge of technical committees or institutes, the contradiction in their staff and line function would have been eliminated. Simultaneously, the involvement of the Directors of the national institutes in the strategic decision making at ICAR HQs, the consultative culture is going to be promoted. The result oriented style of governance is expected to ensure that administration is not seen as a separate decision making wing of ICAR but instead is viewed as the operational wing. The trust and mutual respect are vital but can not be legislated. It is here that the leadership of the DG and his/her priorities would make a difference.

b. All communications on functional matters requiring policy direction would be signed by the Chairperson of the relevant committees. The administrative communications would be sent by the Secretary ICAR, keeping the concerned Chairperson of the committee and DDGs in-charge of the institute informed. DG would not entertain files or references on the matters for which delegated authority rests with DDGs or ADGs.

c. In view of the decentralization, it is not expected that many references to the headquarters have to be made. However, it will be desirable if all the communications from the Institute are addressed on functional matters to the chairpersons of these committees and on technical matters to the DDGs or DG in case of national institutes.

d. There should be no case where the difference of opinion between technical and administrative wing would arise at the implementation stage because the concerned administrative officers would be the Member Secretaries of various functional committees. For instance, posting of various scientists would be decided in the Personnel/HRD Committee and subsequently the Director Personnel will issue the letters. The agenda on posting will be submitted to this committee through the concerned DDGs in-charge of the Institute. While it will be preferred if the DDG concerned attends the meeting of each committee, it would be possible for the DDGs to delegate the authority to ADGs for this purpose as long as the decisions making in these meetings is not hampered on this account.

e. Director General would delegate powers to chairpersons of the functional committees for administrative functions and to DDGs for technical functions. DG would ensure that matters regarding various functional areas such as personnel, finance or works concerning the Institute are routed through the DDGs. All the information about the institutes would be available to the DDGs and they can service the Institutes with the help of administration appropriately. The matters regarding pay fixation, seniority or other such purely administrative activities will be processed by the concerned administrative sections. However, since delay in such matters could also affect the morale of the scientists adversely, we recommend that the functional committees on HRD would monitor the efficiency of decision making in all such matters from time to time on sample basis till system is geared up adequately.

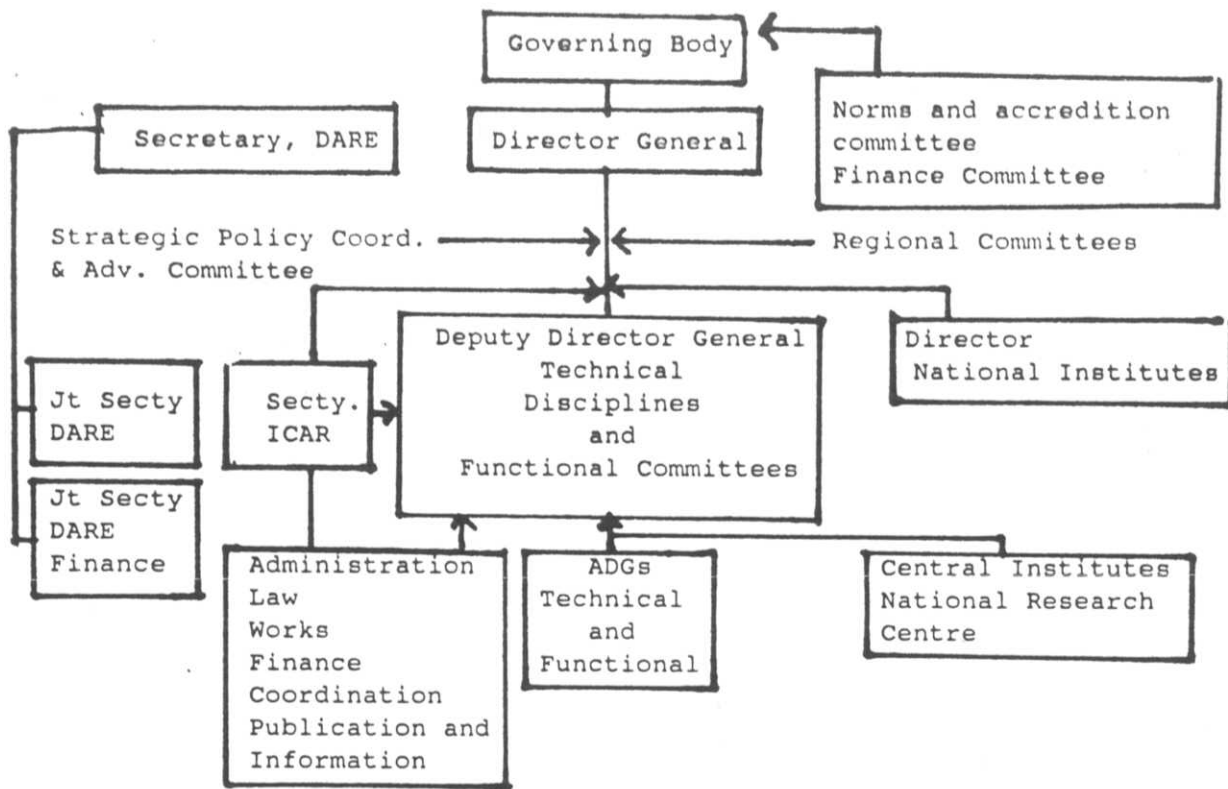


Figure-one

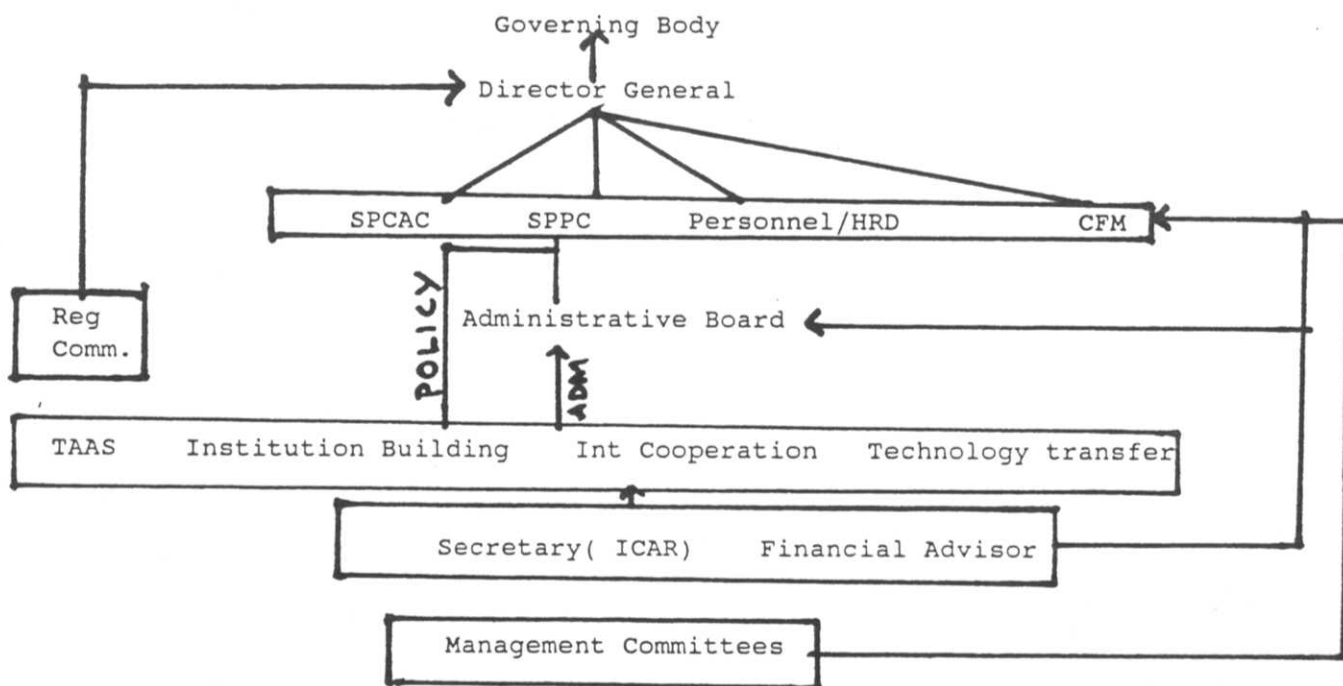


Figure-Two

f. Both the functional committees dealing with human resource development and financial management and budgeting would provide basis for integrating technical and administrative lines of performance. The Administrative Board would ensure that administrative reforms take place continually to improve working environment for the scientists. Reports of specially commissioned management reviews of various institutes may be discussed in AB's meeting to take policy decisions.

g. Pendency report of the matters lying in various administrative sections will be presented to Administrative Board every month so as to generate accountability and overcome bottlenecks if any.

h. The role of different functionaries may be redefined as mentioned in point 3, 4, 5 & 6(MR).

i. The role of ADGs is very crucial for the effective functioning of Headquarters. They have played very active role in not only generating new project proposals often at short notice but in representing ICAR in numerous meetings at central and state level (and sometimes at international level also). With change in the headquarter functions, we recommend the following options to enhance the role of ADGs.

(i) Purely administrative tasks may be delegated to the administrative section which may have to be strengthened through professional staff.

(ii) Headquarters ADGs may have to support both the functional and technical role of DDG and DG. This may be done through specific responsibilities such as review of QRT reports, processing of Institute's management committee reports, review of annual reports of the Institutes, review of project completion reports, synthesis of research findings of large programmes which have continued for a long time.

(iii) Some of the ADGs may have to be moved to the regions to strengthen Regional Committees. This is an option which is aimed at enhancing their role and improve the ICAR Headquarters to have direct feedback from the field. These ADGs may be designated as Regional Directors and may contribute agenda items for Headquarter decision on inter-organizational matter to SPCAC and on intra-organizational matters to SPPC. Issues concerning administrative reforms may be submitted to Adm. Board and technical matters to the concerned DDG or Director of the Institute.

j. The role of the secretary gets redefined in the light of earlier recommendations regarding constitution of various functional committees and administrative board. Implementations and monitoring of actions of policy decisions taken in these committees will be the responsibility of the secretary. Whatever opinion secretary may have to give on a matter may be expressed in these committees personally or through agenda items. The reorganized HQs structure will work effectively only if DG strengthens the framework recommended here. We recommend that DG should refer any opinion received from secretary or other administrative functionaries to the Chairpersons of the functional committees, or the concerned DDGs if the matter concerns functioning of any institute.

k. The problem of multiple communications from headquarters to the Institutes on technical and administrative matter may be overcome by using the channels classified earlier (A Chairperson of functional committee or DDG concerned on technical matters). Since DDGs are accountable for the performance of research institutes for which they are responsible, it is only natural that they also are responsible for servicing the Institutes with the help of ADGs.

l. The ICAR should in due course have a full time secretary on its own staff and Joint Secretary (DARE) should restrict to the functions relating to the coordination with other ministries.

m. Once in two or three years, Secretary (ICAR), Financial Advisor, concerned DDG should visit different institutes together to learn about the existing administrative problems if any and study the strengths or innovations for possible replication elsewhere.

n. The role of Financial Advisor acquires added importance in the current totally anticipatable context of resource squeeze. There is a need for ICAR to upgrade the positions of Director (Finance) so that administrative support within ICAR Headquarters can be strengthened. With enhanced responsibility, suitable Management Information System will need to be devised to serve various requirements of decision making. Most of the recommendations of Chandrashekhar Singh Committee (1982) are still valid and remain to be implemented. Some of the important functions of FA, we recommend should be:

(i) Aiding DG and the Chairperson of CFM (FA may also chair the CFM by rotation) in mobilizing resources for the ICAR so that within next five years, ICAR may aim at generating at least 33 per cent of its revenue expenditure from non-budgetary sources. This may have to be done by raising fees for various testing facilities, levying discriminating charges for various facilities from Multinational Corporation, Indian large and small companies and entrepreneurs; raising resources from user organizations like National Seeds Corporation, agri-input companies etc. The A.P.Cess may have to be increased both in coverage of commodities (at present, perhaps only 25 commodities are taxed) and also rate per commodity. The consultancy services for national and international clients may have to be started. This is crucial for enhancing the autonomy of the ICAR also.

(ii) F.A. will help DG to close all the redundant regional research stations and develop methods for sale of assets, manpower and other resources to SAUs or even private sector (with proven commitment to agricultural research).

(iii) The cost effectiveness in the research requires using innovative ways of developing accountable and result oriented instruments. For instance, ICAR may float companies for raising capital in stock market as well as debentures from interested client organizations for new technologies. F.A will help organize relevant management and financial expertise to promote new companies.

(iv) In some cases, venture capital support may have to be mobilized for the scientists having promising technologies through royalty sharing mechanisms. This may be necessary if such scientists have not to be lost to the public R & D institutions. Given increasing global competition and entry of MNCs in Indian markets, providing incentives and safeguards to Indian scientists is an urgent concern. ICAR may like to collaborate with Technology Development and Information Company of India (TDICI), a subsidiary of ICICI to expand the process of scaling up the new technologies which can be commercialized.

(v) Financial Advisor will ensure that ICAR strengthen Financial Management system by developing appropriate manuals, checklists and guidelines for processing requests for schemes, works or manpower. The current system of raising queries not all at one time has costed the ICAR a great deal by facing delays etc. In this regard Chandrashekhar Singh Committee observed that, "Scrutiny of schemes at two stages by Finance (one by internal finance and again by FA, DARE) should be done away with (1982:8). This committee recommended that status of Director (Finance) should be raised to that of joint secretary. He was supposed to function

as the "Integrated Financial Advisor in DARE and full time Financial Advisor of ICAR Under Secretary, DARE/DG, ICAR". It was suggested that Member (Finance) could consider delegating some of his powers to the Integrated Financial Advisor as was done in CSIR. We recommend that till this option is operationalised, the role of present Financial Advisor should be to strengthen the internal systems of financial, management, budgeting and control with ICAR Institutes and Headquarters. One time processing of various proposal may be initiated immediately so as to achieve economy of time and resources. This will also help in removing dichotomy between technical and administrative wing to some extent. No technical programme can deliver results unless timely availability of necessary resources is ensured. F.A as member of CFM will ensure that various checklists and guidelines are not only developed but also used before proposals come up for discussion in CFM/SPPC as the case may be.

Terms of Reference No.3

The strength of the staff including scientific, technical, administrative and other categories at the ICAR Headquarters.

R.6. The staff strength is directly related to the nature of function, quality of manpower and degree of efficiency expected in the performance of tasks. We recommend that after delegations of power has been finalized, an internal working group is set up within ICAR which should work out the staff strength. Some general principles could be:⁴

- a. No officer below S4 or S3 (Principal Scientist) should be retained at Headquarters.
- b. The reduction in work load consequent to delegation of financial and technical powers to the Institutes should be matched with the reduction in work force.
- c. Relative growth of various kind of support staff particularly in administrative section vis-a-vis the increase in number of schemes, institutes and functions has been highly uneven. We recommend that part of the work load can be reduced by modernizing the information processing system (TOR No.10) and part by upgrading the skills. In a few cases, professional staff will need to be hired for running MIS., managing Human Resource Development Cell, for using modern concepts of strategic financial management and control system, etc.
- d. DDGs, Directors and ADGs must be empowered to hire short term research assistance for specific tasks to be completed in time bound manner. None of these ad hoc staff be given extension beyond a year or two. The contractual terms of such staff should clearly specify that project/task related appointments will not entitle the staff so hired for permanent placement in ICAR. This is necessary to enable senior scientists to get periodic help for updating themselves through literature survey or synthesizing reports or data processing, etc.

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4. In Manpower planning the ASRB's role needs change. It is beyond our terms of reference and thus we refrain from commenting in detail. It would suffice to state that at the entire manpower planning system of ICAR needs urgent reappraisal.

- e. The ratio of Support staff to scientific staff in ICAR is said to be about 4.5:1 against the norm of about 2:1. Various mechanisms have to be devised for making redundancy and redeployment schemes functional and responsive to the concerns of the affected staff. The exact details of these mechanisms are beyond our terms of reference.

Terms of Reference No.4

Extent of financial and Administrative Powers that should be delegated to the various levels of officers including administrative and scientific personnel at the ICAR Headquarters.

- R.7. DG should delegate substantial powers to DDG for sanctioning of schemes, projects and ad hoc activities such as workshops/seminars by following peer review process. Since the new work culture has to be result-oriented, the capacity of the DG and DDGs to commission studies, hire short term research staff and contract services for word processing, data processing, etc., has to be increased. We recommend that DG should have the power up to Rs.50 lacs, DDGs and Director of the National Institutions should have power delegated up to Rs.20 lacs within an agreed framework of research and support services. ADGs if posted in regions as Regional Directors should also have financial powers for commissioning specific studies within agreed framework and work plan up to Rs.5 lacs. The Director of the Central Institute should have power delegated up to Rs.5 lacs which is in addition to the block grants to the institutes to be implemented through Management Committees.

The contingency funds for meeting various kinds of expenses for organizing meetings, entertaining visitors and travel should be available to DDGs and ADGs on the need basis. The budget anticipating various kinds of requirements should be got approved from the Director General and then operationalized by the concerned executives. In so far as the administrative powers are concerned, the recruitment of ad hoc staff for short terms ranging from a few weeks to a couple of months may be permitted for clearing backlog of the work at the level of administrative directors for personnel works or finance. Ad hoc appointments of administrative staff of more than two months and up to one year should be approved by the secretary, ICAR. Any appointment beyond this has to be cleared by the HRD/Personnel Committee.

Terms of Reference No.5

The pattern of working at the ICAR HQs vis-a-vis DARE.

- R.8. The DARE was supposed to help the Director General ICAR and Secretary, DARE to deal with Parliament, other ministries, international cooperation and foreign exchange requirements for fulfilling the mandate of ICAR. We recommend that in view of the international cooperation being made as a function within ICAR, DARE's role should merely be of working as an integrated wing of ICAR. No further scrutiny or processing of proposals should be expected to take place once the processes within ICAR had been followed. The allocation of administrative staff consequent to this suggestion will need to be rationalized at different levels in DARE vis-a-vis ICAR. The tendency for unnecessary questions being raised would only continue and increase if the staff strength continues to be beyond the work requirement. The functions of DARE should in fact be delegated to ICAR functionaries and no separate staff actually would be needed to perform the statutory functions of DARE. The minimum skeleton staff only be maintained in DARE.

Terms of Reference No.6.

Reorganization and strengthening of Management Boards/Committees specifying powers and responsibilities with regard to administrative and financial matters concerning the Institute.

R.9. The recommendation of GVK Rao committee with regard to constitution of the management committee/Board of Management of the Institute as recommended by the Review Committee vide point 22.58, 23.59, 24.60, and 25.67 seen entirely in order.

a. The Management Committees must meet at least once in three months with well defined agenda and minutes.

b. The management Committee will monitor the block grants delegated by the ICAR Headquarters within the framework of memorandum of understanding. The delegated budget will have two components - one dealing with core expenditures and another dealing with new schemes, works, equipments, etc. Every research scientist should have a well defined responsibility with precisely stated research goals. The progress of various scientific divisions/programmes should be presented to Management Committee periodically.

c. Just the way provision has been made for contracting studies to outsiders under NARP, the Director of the Institute will have delegated powers for the purpose and the Management Committee will annually review the status of studies so commissioned by the Director. If any proposal submitted for HQ approval remains pending for more than fifteen days, Director should be empowered to take the concurrence of the Executive Committee for the concerned purpose. The three Executive Committees for finance, personnel and works may be set up by the Management Committee to help the Director in using delegated powers as well as for implementing suggestions on which headquarters has not taken a decision within the stipulated period.

d. The Management Committee will review programme budgets once in five years and projects or scheme budgets once in a year. To ensure that imbalances in the resource supply and work requirements don't exist, the tendency to initiate new schemes when resources for existing schemes are not sufficient will need to be tempered.

e. The research priorities of the Institute will be presented to the Management Committee at the time of budget finalization so that in case of financial crisis or resource squeeze, the general practice of applying uniform cuts across the board is not followed. It should be clearly distinguished as to which projects would remain totally unaffected given their strategic importance for the country, which one would receive substantial or marginal cuts and which one would not be started at all⁵. This is one of most important functions equally applicable to the budgeting and planning at the Headquarters itself.

f. Management Committees would also help the Institute for developing a revolving fund out of the income received by the Institute within reasonable limit so ⁶that budget does not lapse and also greater flexibility and autonomy becomes available to the Institute. In several organizations of the Government, such non-lapsable funds are allowed to be accrued.

5. It seems that in CSIR, an ABC system of prioritization of each project is followed which is done by the research council.

6. In CSIR ninety percent of the revenue so raised reportedly remains with the Institute.

g. The recruitment and promotions would be planned and monitored by the Management Committee through its Executive Committee on personnel/HRD.⁷

h. While scrutinizing the budget proposals, the Management Committees would review the efficiency in the use of resources, skills and equipments. The tendency for lack of sharing of resources as well as proper maintenance of the same has to be curbed through development of performance or effectiveness and efficiency norms.

i. The power and responsibility of Project Coordinators attached to the institute should be separately monitored by the Management Committees to avoid any dysfunctional tensions emerging in the relationship of Project Coordinators and Director of the Institute.

j. The Management Committees should review periodically delegation of powers by the Director to the Head of the Division, Principal Investigator and other scientists. The recruitment system for ad hoc staff should be simplified.⁸

k. The Headquarters Representative should bring back any reference from the Director of the Institute to the Headquarters which falls within the power of Management Committee or the Director. This will help in ensuring that decentralization does not fail because of the unwillingness of some of the Directors to use delegated powers. Under no circumstance, we strongly recommend should the Headquarters take decision on such matters.

l. If in the view of Management Committee or on the basis of the recommendation of the Research Advisory Committee⁹ of the Institute, some new thrust area of research has to be initiated, the committee should invite distinguished scientists for commenting on such new areas. The QRT reports should also be taken into account while discussing such major departures. Linkage with other institutes within ICAR, CSIR or other bodies, private sectors, SAUs, etc., should also be monitored by the Management Committee periodically through well defined agenda items.

It may be useful for the SPPC at the Headquarters to devise precise agenda items which need to be discussed by each Management Committee or board periodically for generating feedback and guidance for the Headquarters.

m. The audit reports as well as the project completion reports will be distributed to the members of Management Committee so that if they wished they could suggest discussion on any particular item in light of the reports. The minutes of the Management Committee would be regularly sent to the concerned DDG who would share the relevant portions with the other functional committees.

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7. The recruitment levels should be such that up to S2 level i.e senior scientist, the selections should be made by the selections committee constituted by ASRB but the orders can be issued by the Director. The committee can be chaired up to the level of scientist by the Director and senior scientist by ASRB nominee.
8. Institute may have to hire project investigators of the two kinds one for internally funded and the other for externally funded projects. For external funded projects the project incharge will have full authority for recruitment through a committee constituted in consultation with the Head of the division. Likewise, the purchase of the equipment would be processed through the systems developed by the Institute. The division would get 25% overhead in lieu of various facilities provided for the purpose. For internally funded projects, the normal procedure of the institute would be followed.
9. This committee is now called Research Council. It should have representatives of the farmers, corporate sector, consumer organizations and other stake holders.

n. The Management Committees are empowered to enable Director of Institute to use delegated powers and resources efficiently and also to raise additional resources to reduce dependence of the institutes on the Headquarters. Therefore, Director of an institute should be encouraged to co-opt permanent invitees from various client organizations including farmers organizations or corporate sector. The interactions with the private sector should also be encouraged within well defined norms of accountability and responsibility. Joint ventures and leasing of equipments and services in the interest of efficiency in resource utilization should be permitted at the level of Director/Management Committees.

Terms of Reference No.7

The procedure for exchange of administrative, technical and scientific staff between institute and the ICAR Headquarters .

- R.10. We strongly recommend that the eligibility conditions for various positions at the Headquarters as well as Institutes should be such that both way movement of the staff in administration as well as scientific fields takes place. The promotional avenues for the administrative staff in the institutes as well as Headquarters should be rationalized by looking at the job requirements and efficiency of performance. It is possible that some of the staff at Headquarters given their advanced age may be hesitant in moving to the institutes and vice versa. However, once a policy is developed taking into account the individual difficulties to the extent possible, it should be allowed to be implemented.

A common cadre of the staff of the administrative staff should be followed and transfer should take place at par i.e. at the same level.

In our view, there is no need for any technical staff at the Headquarters as well as scientific staff below S4 i.e., the Principal Scientists. All such staff should be moved to the Institutes with well defined responsibilities. While implementing the policy regarding the movement of staff, the concern of both administrative and scientific staff working in remote areas should be adequately taken into account. Some criteria will have to be developed for giving weightage for the posting in the hardship areas.

Terms of Reference No.8

Formulation of revised procedures for preparation, sanctioning (including creation of posts, purchase of vehicles), monitoring of plan schemes and sanctioning of ad hoc schemes under AP Cess funds.

- R.11. We have gone through the revised general guidelines prepared by ICAR (1991) for the purpose. These guidelines need substantial revision in the light of new economic policy of the government and demands of an efficient and vibrant research organization. In view of the fact that Review Committee has already made a recommendation for making the scientific panels compact and restricted only for certain areas the procedures for scrutiny and evaluation will need to be modified.

a. The process of generating research proposals has to be competitive and scrutiny has to be quick and comprehensive. We suggest that ICAR; should have well laid out priorities within which the proposals should be invited. Under exceptional circumstances, proposals can also be entertained in non-priority areas. In view of the recommendation made earlier regarding delegation of powers, to DDGs and the Management Committees the process of scrutiny and review should be modified. Every proposal could be sent to at least three to

five reviewers with the stipulation that decision could be made on the receipt of any two comments, if other comments are delayed. No proposal of less than Rs.1 lac rupees should take more than one month, up to Rs.5 lacs not more than one and half months, up to Rs.20 lacs not more than three months and above Rs.20 lacs not more than six months. Depending upon the nature of distribution of proposals according to size and subjects, a system of seminar presentation after proposals have been revised in the light of comments of the reviewers, should be explored. These seminars should preferably be presented in the national institutes or at the headquarters. In the latter case, Director of the National Institutes along with some distinguished scientists could be invited.

b. The proposals should be sent to concerned DDGs in-charge of the technical subject and after these have been reviewed and revised should be submitted to the DG for approval (if it is beyond the power of DDG). The proposals which are within the power of Director of institute should be submitted to the Management Committees every quarter for the information and review. We do not think that scientific panels need to be involved in this process given the high cost and unsatisfactory results in past. All sanctions will be ratified in the CFM and therefore, separate reference to Financial Advisor (DARE) will not be necessary. The Governing Body of the ICAR would be informed periodically. The question of modification or disagreement by the finance should not arise since they would have been consulted in the CFM. No such matter therefore, need to be referred to GB. Director General should be empowered to overrule any dissenting opinion if he is so convinced. The recommendation of Management Committee of the institute would be crucial for termination or substantial modification of any scheme. The restrictions on the creation of posts and vehicles may have to be followed strictly so that only in exceptional circumstances are new positions created in the areas where existing skills are considered inadequate.

c. The present guidelines provide considerable weightage to the advice of finance and GB for approving the schemes. This might have been necessary in past but is considered no more necessary in the revised organizational structure recommended in our report. We also suggest that the economic squeeze should not be interpreted in the sense of withdrawing the delegated powers. With strong norms of accountability, peer reviews and periodic monitoring, a delegated and flexible structure is likely to generate higher rate of return and thereby help in overcoming resource crisis.

d. We recommend that the policy of funding research need not be restricted to only demand driven proposals. In areas of strategic importance DG, DDG and the Director of the Institute should encourage the potential collaborators outside the ICAR system in public or private or NGO sector including professional societies to submit research proposals. Small seed money grants can be sanctioned for even preparing proposals up to the extent of Rs.20000/=. This would encourage the potential collaborators to spend adequate time in preparing the proposals and at the same time improve the competitiveness in funding of research. Exceptionally bright fresh Ph.Ds should also be encouraged to apply for large grants if they can make a strong case for such a freedom and autonomy. It is well known that early years of the scientists are often the most productive ones. It is necessary therefore that some allowance for creative pursuit of research is made for the young scientists. Similarly, some of the eminent scientists should be given programme support instead of schematic/project wise support so that they could attract good students and offer them attractive working conditions. This will help in developing a school of thought. The continuity in research is extremely crucial. Given the past experience when delays were rule than exception, DG and DDGs may like to make extra efforts in popularizing the concept of programmatic support.

e. Since many research problems may not be amenable to systematic analysis by any one or two scientists the inter-organizational and/or inter-disciplinary proposals developed by a team of scientists should be given special consideration. This will ensure better utili-

zation of resources, skills and also motivate the scientists. In specific cases where conditions are required specific MOU may be signed either at the headquarters level or at the institute level (Network approach, perhaps, was a step in this direction).

f. All the clarifications regarding creation of posts or purchase of vehicles or equipments should be sought only once. In fact it may be useful to send prototype proposals as sample to the potential collaborators who have not submitted the schemes or projects in the past.

g. Each of these scheme should be monitored by the concerned DDG with the help of ADGs and Director of the relevant institutes. It should be possible to transfer the monitoring function of certain schemes to the nearby institutes or SAUs in the region from where the proposal has emanated rather than keeping the control at Headquarters. A designated scientist at this Institute or SAU can help in the monitoring. This will not only improve the quality of monitoring, but also reduce the cost of the same.

h. The project completion reports should be reviewed by the referees, one of whom should be the one who appraised the proposal. The summary of the findings should be published in the ICAR journals (and other reputed journals) and circulated among the concerned senior scientists for comments and scrutiny.

i. The extension of the proposal should be considered only under certain circumstances and after careful monitoring and evolution of the interim results. The norms for evaluating the basic and applied research should be slightly different. In the first case publication in good refereed journals must be considered necessity whereas in second case this should only be desirable. Greater importance in applied research should be on problem solving. Parameters of evaluation should be clearly mentioned in the proposal itself to ensure proper accountability.

Terms of Reference No.9

The procedure for monitoring administrative and technical activities of Institutes by ICAR Headquarters, enforcing accountability in financial and administrative matters and the degree of flexibility commensurate with accountability required in financial administration.

R.12. Much of the monitoring will have to be done by the Management Committees of the Institute. In view of the fact that QRT report as well as annual report of the institute did not receive adequate feed back in the past any new monitoring system will have to contend with the load of historical skepticism. We recommend that instead of taking a control oriented approach to monitoring a value adding approach should be preferred. Thus, providing feed back, relaxing constraints, extending contacts with the knowledgeable peers within or outside the country and acknowledging good contribution wherever relevant are some ways in which the change in the work culture and performance criteria can be institutionalized. Some specific recommendations in addition to the one enumerated above are:

a. While allocating funds the plan and non-plan allocation for an institute are known but the investment in different projects, crops, sectors, etc., is not known. While making budgetary choices the trade off or strategic choice are not spelt out. It has been rightly observed that the present costing methods obscure the actual requirements for different schemes or projects. We recommend that to ensure that monitoring helps in improving the efficiency in resource allocation ICAR may have to adopt a very different strategic budgeting and financial management system. A multi digit classification system needs to be devised so that within each division different dimension or discipline commodities and regions can be identified by looking at the code number of any given scheme. Planning Commission

had devised a similar multi digit code numbers for monitoring purposes and many other government departments follow a similar system.

b. Subsequent to the pay revision the ratio of establishment, plan and equipment, maintenance and contingency items have changed drastically. The obsolescence of capital equipments, buildings and other support system is well recognized. A time bound plan for this purpose was recommended in Eighth Five Year Plan working group report. We strongly endorse it.

c. A strong Management Information System (MIS) needs to be developed. It would enable not only the headquarters to ascertain the working of ongoing schemes but also help the scientists in one institute to know about other schemes going on in rest of the system on same or similar subjects.

d. ICAR should be able to frame its own rules and by-laws which enable flexibility and resource allocation and monitoring of results. For instance, the system of acquisition of materials or purchase of other items should be simplified so that projects do not suffer for want of adequate supplies, even though financial resources might have been delegated. This is particularly true in case of chemicals, equipments or spares which have to be imported from abroad. Bottlenecks of this kind should be thrown up by the MIS so that severity of the problem can be understood at any point of time to generate solutions at appropriate levels. The statement of project leader should be accepted by the accounts department.

e. The members of the Research Advisory Committee at the institute level should be encouraged to spend a few days every year at the concerned institute with the team of the scientists working on the problem of their interest. The informal feedback may contribute far more to the improvement of quality of research than just the formal feedback.

f. DDGs and Directors of the Institute may like to organize traveling seminars on issues of strategic importance particularly involving young scientists so that a team of scientists looks at each other's experience collectively. Since the critical feedback is likely to be received more easily and appreciatively in such a framework, it may help in improving the quality and accountability. Similarly, the project coordinators may be encouraged every year to pick up a few stations in a given region for similar purpose. Even though these approaches would call for additional expenditure, the benefits might far outweigh the cost.

g. With the closure or handing over the regional research stations of the National or Central Institute, it is expected that monitoring load will go down. In some of the divisions, several stations have already been closed although the legal formalities about handing over the assets are perhaps yet to be completed. We recommend therefore, that addition of qualitative monitoring and other responsibilities should be accompanied with subtraction of some of the ongoing responsibilities at all the supervisory levels.

h. The mandate of the Institutes should be reviewed once in ten years and missions once in fifteen - twenty years. Apart from the technical reviews, we recommend that management reviews of the institute should also be conducted so that strengths and weakness of the organizational processes can also be highlighted.

i. In certain institutes the institution building process may need particular attention because of various historical reasons. It will be useful to develop a health code of the institutes on the basis of performance in research, quality of audit report and ability to mobilize non-budgetary resources. The institutes which have a high health code need to be monitored differently than the institutes which have a lower health code. The kind of nurturing the institute will require also vary on this account. The health codes once developed will be updated periodically and also used to determine the delegation of power. We recommend

that tendency to develop rules and procedures to prevent mistake in one institute is a proven way of increasing the bureaucratic complexity. In the current phase of restructuring going on in the country's economy, we recommend that adequate incentives are developed for high performing institutions rather than spending all the energy on preventing misuse of resources by exceptional people.

Terms of Reference No.10.

Modernization of the organizational infrastructure at ICAR Headquarters in terms of aids, including computers, microfilming, photo copy, reprography, slide preparation, printing and binding of documents, etc., should be utilized or introduced in the ICAR System.

R.No.13. We strongly recommend that an urgent action plan is developed to modernize various facilities ranging from computers to printing and binding of documents. Since development of MIS would require LOCAL AREA NETWORKS, it may be useful to invest in one or two high capacity mini or super-mini computers to which all other personal computers are hooked. This will help not only in tracking the movements of papers and files but also in generating reports with far lesser cost and time. This will also relax the time constraint and thereby provide opportunity for more in-depth review of various activities. The MIS would be fully effective if the major national and central institutions are also connected. Till a full-fledged system of networking is established we recommend that an MOU is established with NICNET having its reach in most of the districts of the country for transmission of data and information. Side by side we recommend that communication of report in floppy as well as hard copy is made compulsory so that incorporation of the reports at the Headquarters in various reviews becomes quick and manageable. Standardised software should be purchased/or got developed to ensure data and text compatibility. Even though it is not mentioned in our terms of reference, we may add that the library facilities need considerable improvement. It may be worthwhile to also link up with some of the international databases so that on line search can be made for various scientific purposes.

It may not be necessary to create internal facilities for all kinds of functions since many of these should be got done at far lesser cost by contracting out to private efficient vendors. Therefore, while skeleton facilities may be necessary full fledged facilities need to be established only when their cost effectiveness is proved in comparison with outside contractual services. The availability of desk top publishing facilities linked with a reprographic printers should be organized so that dissemination of reports does not become a bottleneck. This is a matter where standards achieved by elite institutions within the country should provide a frame of reference.

Terms of Reference No.11

The system for periodical training of administrative and Scientific manpower at the ICAR Headquarters.

R.No.14. As mentioned in the point No.3.2.1 CMR, we strongly recommend that personnel - Human Resource Development Committee prepares a systematic time bound plan for technical and managerial training at the institutes of repute. In addition, we recommend the following:

- a. The senior scientists and Director of the institutes should be encouraged to spend some time periodically at various national and international institutes of excellence. The input so achieved may not always be available only to training programmes. A scientific approach to training requires not only prior assistance of training needs, but also participation of the potential trainees in the development and organization of training materials. It

will be a good idea if case studies are developed on various aspects of administrative and technical and scientific management not only at NAARM but also at other management institutes. Some of the cases could be developed by the senior scientists themselves. Case writing workshops can be organized to develop this skill. It should be noted that training and self renewal is important not only for lower level staff but also for the senior most executives. Depending upon the feedback of the participants decision regarding nomination of participations to future programmes of the concerned institute should be taken.

b. Training can sometimes be dysfunctional and demotivating force, if the skill so learnt cannot be utilized on the job. The HRD committee may like to periodically assess from the headquarters about the scope for using their skills in an imaginative and creative manner. As far as the training of scientific manpower is concerned, the experience of the first supervisor in the career of young scientist is often quite important. Therefore, the assignment of scientists during the training as well as placement should be done very carefully. It will be useful if some investment is made in developing a three tier approach for training and institution building. Over next five years people at different levels that is top, medium and bottom level should receive training in managing scientific creativity, R & D system and other functional areas of management. Likewise, a long term plan has to be developed for scientific training within the country and abroad. We recommend that as far as possible, a panel of scientists for technical training should be developed in a manner that every scientist knows in advance when his/her training may fall due. This would help him in managing their continuity in research and disrupt the programme to the minimum extent possible.

The training system for scientists at entry level will have to be totally recast if our recommendation on recruitment is accepted.

The rules for Participation in International meetings, symposia or short term assignments should be so developed that only for assignments, reference needs to be made to the DG and for the rest it is decided by the Director. For the directors, the proposal will come to the DG.

Our suggestions reflect collective understanding that we gained through extremely open and frank discussions we had with the colleagues in ICAR at different level ranging from clerks and assistants to senior scientists. It is understandable that while implementing these recommendations, some minor modifications may have to be made. However, we do suggest that these recommendations are not seen in isolation of each other. Uncoupling these might reduce the effectiveness of even those measures which are implemented. We have no doubt that ICAR is poised to play a very pivotal role in future transformation of our economy and society.

REORGANIZATION FOR REVITALIZATION : ISSUES AND PERSPECTIVES

Indian Council Of Agricultural Research is one of the most strategic organizations of national importance. Research support harnessed by ICAR through its own Institutes and different state agricultural universities has served the country well. As it happens in any process of change, easier opportunities are responded first. The more difficult problems of regionally and ecologically balanced agricultural production and productivity remain to be adequately addressed. Once the organizational goals become more complex (due to the difficult problems ahead) and various user groups more articulate, changes in the decision making culture and organizational structure become necessary¹.

1.0 CONTEXT FOR REORGANIZATION

1.1 Background

GVK Rao Committee (henceforth Review Committee) was set up to review the existing organizational structures, personal policies and functional role of the council in April 1987. Its report was submitted in March 1988. The Review Committee had observed that after the last review by Gajendragadkar Committee in 1972,

The ICAR Headquarters has grown considerably during the last few years. Now that a number of Institutes and Agricultural Universities have come into being, the time has come for a lot of routine work that is now being done to be eliminated. The ICAR Headquarters can now confidently shed many of its routine responsibilities to the Institutes and Agricultural Universities. The ICAR should unshackle itself from trivia, and provide sophisticated and competent leadership. It should continuously study the problems of Indian agriculture in the widest sense of the term, identify the problems for research, education and extension, and guide, stimulate and monitor the work of Institutes and Agricultural Universities towards coordinated and purposive action.

The ICAR must be given full autonomy in its day to day working which it now lacks. There is no reason why it should not function like the Atomic Energy Commission, the Space Commission, the CSIR and other bodies.

The Review Committee recommended that ICAR Institutes should also be similarly vested with all the powers and authority necessary for them to discharge their functions with well defined mandate and accountability. The thrust towards decentralization, accountability and outward and forward looking

1. There has been an old debate in organizational theory that if organizations did not change in an evolutionary process through incremental adaptive changes, these have to change in a revolutionary manner. The sequence, speed and strategy of changes have to be carefully worked out. It is possible that certain changes suggested in this report would cause more stress. But postponement of these changes only on this account would be a sure invitation to a trauma later.

outlook was to be achieved through changes in the intra and inter organizational relations.

1.2 Terms of Reference

In pursuance of the recommendation of the GVK Rao Committee the ICAR approached Indian Institute of Management, Ahmedabad (IIMA) with following terms of reference:

The Study Team should look into the various recommendations of the ICAR Review Committee specially Serial Nos. 7 to 11, 18 to 21, 23 to 27, 29,33 to 37, 38,39,52 to 60,67, 79,83,88,102, 117 and 119 of implementation document² and suggest:

1. Modification required in the organizational set-up of the ICAR Headquarters, including changes required in office procedures;
2. Distribution of work between technical and administrative wings at the Headquarters;
3. The strength of the staff including Scientific, Technical, Administrative and other categories of staff at the ICAR Headquarters;
4. Extent of financial and administrative powers that should be delegated to the various levels of Officers including administrative and Scientific personnel at the ICAR Headquarters;
5. The pattern of working at the ICAR Headquarters vis-a-vis DARE;
6. Reorganization and strengthening of Management Boards/Committees specifying powers and responsibilities with regard to administrative and financial matters concerning the Institutes;
7. The procedure for exchange of administrative, technical and scientific staff between Institutes and the ICAR Headquarters;
8. Formulation of revised procedures for preparation, sanctioning (including creation of posts, purchase of vehicles), monitoring of plan schemes, and sanctioning of ad-hoc schemes under AP Cess Funds;
9. The procedure for monitoring administrative and technical activities of Institutes by ICAR Headquarters, enforcing accountability in financial and administrative matters and the degree of flexibility commensurate with accountability required in financial administration;
10. Modernization of the organisational infrastructure at ICAR Headquarters in terms of aids, including computers, microfilming, photo copy, reprography, slide preparation, printing and binding of documents, etc. should be utilised or introduced in the ICAR System; and

2. See Annexure One for the full draft of the numbered recommendations of the ICAR's implementation document .

11. The system for periodical training of administrative, technical and Scientific manpower at the ICAR Headquarters.

1.3 Delimitation of the study

It is obvious that many of the detailed guidelines for the manpower, financial and infrastructural planning could be better developed within the ICAR once a consensus has been achieved on the major changes recommended here. We can act as a sounding board for the purpose. The procedures for sanction of post, vehicles etc. also can be developed internally by a task force of the scientists and the administrators within the broad framework outlined in the report.

We have therefore concentrated mainly on strategic issues and have referred to operational issues only to illustrate the points. We have assumed that the broad directions of GVK Rao Committee report are considered by the ICAR top level planners as valid and useful.

1.4 Methodology for Exploration

We have reviewed various reports and documents having bearing on the reorganizations in past as well as now. In addition we had meetings with various functionaries in the headquarters of ICAR ranging from DG to the scientists, administrative officers and staff. We also interacted with the Directors and the Scientists of the ICAR Institutes and some Vice Chancellors of Agricultural Universities who attended a Workshop on Management of Research for Rainfed Regions at IIMA (November 1989). We visited some of the institutes and SAUs.

We made an interim presentation to the top management in ICAR in February 1990 at Delhi. We will be happy to elaborate the parts of the report which are less clear or need modification in the light of changes that may have taken place in ICAR in the meanwhile.

We have taken note of some of the reactions on the first draft report. We could not have full fledged discussion with all the executives together but we did have separate interaction in small groups and individually with the senior scientists and decision makers. We have modified the report wherever we were convinced about the need for change. We have also prepared a term of reference wise summary of recommendations. This does not replace the report and can be properly understood in context of the discussion presented in this report.

1.5 Need for Change : The Review of Key Recommendations of the Previous Studies on Reorganization

We have reviewed reports on reorganization of ICAR by Joint Indo-American Team on Agricultural Research and Education(1955), Second Joint Indo-American Team on Agricultural Research and Education(1960), Kamla Chowdhary, Bhattacharya and Gaikwad study team (1971), Gajendragadkar Committee (1972), , Aqueil Ahmed(1980), Panandikar, Malgavkar and Sharma(1987 and Chandrashekhar Singh

Committee(1982)³). We tried to understand whether there was a pattern in the recommendations which were recommended practically by all Committees but somehow were never implemented. For instance the need for Standing Policy Advisory Committee⁴ was felt in 1960, and also later but this Committee became dormant every time it was set up. Was there something in the ICAR structure and processes of decision making which militated against the continuance of certain specific strategic planning functions. In view of the fact that ICAR has already set up a Standing Policy Planning Committee, will the same fate befall this Committee once again⁵.

We have also tried to look into the relationship between the match or mismatch between the need for change in the organizational structure and the willingness to absorb the changes. The purpose of this review is to avoid our report meeting the same fate as many earlier reports met⁶.

1.5.1 The First and the Second Joint Indo-American Team On Agricultural Research and Education

Some of the salient suggestions which have not lost their relevance even today need brief recapitulation. The first Team (1955) suggested: (a) ICAR should have four commissioners of agriculture, veterinary sciences, animal husbandry and dairying and other staff. The first would include chief scientists for field crops, horticultural crops, soils and fertilizers, plant diseases and pests, agricultural engineering, agricultural economics and farm management, agricultural education and home science. The second would include chief of animal and poultry diseases, biological products and veterinary education. The third would include the chief scientists for cattle im-

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3. In addition the Memorandum Submitted To The ICAR Review Committee by The Agricultural Research Service Scientists' Forum and the Report of the CSIR Review Committee(1986) were also studied.

We have also studied the report by World Bank entitled, "Agricultural Research in India: Prologue, performance and prospects", April, 1990.

4. Second Indo-American Joint Study Team on Agricultural Education, Research and Extension(1960) had for instance, recommended that there should be a high level Standing Advisory Committee on Agricultural Research Policy advising to General Body of the ICAR. It was supposed to supplant the then Board Of Research.
5. From some of the preliminary accounts, the confusion about the role of this committee seems have to have persisted from the beginning. The distinction between line and staff functions, between intra-organizational and inter-organizational functions and short and long term has to be appreciated. In the light of our recommendations, we trust this confusion would no more remain.
6. It is nevertheless important to recall some of the ideas articulated in the beginning of ICAR in the post independence period. This will provide some ideas about other areas where changes were expected but the same did not take place :

K M Munshi had expected in his first address to Special General Meeting Of ICAR, Nov 1, 1950 that the ICAR will be located next door to IARI so that its link with research will never be weak. It was also expected that the Objective of 'Land Transformation' will be given major thrust so that land, water and livestock are rationally utilised. Social sciences were to be drawn upon in improving links with the people. Need for long term ecological studies of land, water, livestock and human interactions were expected to be started (Mar 20, 1952). 'The Gospel of Dirty Hand' was suggested as framework for relating science with the needs for what we now call sustainable development(Mar, 1952).

provement, animal nutrition and feeding, dairying, sheep and goat improvement, and poultry improvement. The fourth commissioner would deal with statistical advisor, chief for centre-state relations and advisory and information services. It was suggested that "**Regional Advisors**, who need not be subject matter specialists, may be employed. They should tour the regions frequently and keep the Ministry of Food and Agriculture and agriculture and Central agencies informed of the developmental schemes in the States". They were to be represented on the board of Research and were to be the 'end-use' advisors of the Ministry and the ICAR, (b) The central Institutes **should not** normally establish branch stations and instead should cooperate with the State stations to ensure maximum Centre-State coordination of research, (c) The State should assume the major responsibility for transferring technology to the farmers. State must have adequate field stations for the purpose. The "Centre should not provide stations of such localised application and should support work at such locations only if it is an integrated part of coordinated research on a regional or national basis", (c) A memorandum of understanding should be developed for smooth but accountable relationship between State and the Centre agencies, (d) Head of an Institute was not free to implement a scheme even when it was sanctioned and funds were granted by the appropriate committees of ICAR. Repeated justification had to be given to the finance officers to obtain funds for a scheme or purchase of a scientific equipment. The delegation of authority was not sufficient to the Directors and the scientists below them, (e) Farmers' Forum or organizations which represent the **voice of the farmers must be supported** so that the voice of the people reaches the organization and democratic processes are strengthened.

The Second Team made many modifications and added several new suggestions in the light of emerging situation: (a) Over centralization in research should be avoided and effective decentralization should be achieved through strengthening of the State research programmes, (b) the extension personnel should play a major role in **diagnosing the farmers' problems**⁷ and should be trained in skills relevant for the purpose. Research programmes must be guided by such diagnoses, (c) Agricultural Research Policy Council be established through setting up of Standing Advisory Committee to the Governing Board of the ICAR, (d) Research programmes of the research institutes should be reviewed by ICAR to confirm whether these conformed to the national and regional priorities. However, the direction of research and assignment of the tasks should be left to the Directors of the Institutes, (e) Research installations sponsored by Centre and State within a region were bound to create tensions and avoidable duplication. The scientists of central institutes should share the same facilities as the state scientists and branch stations of the central Institutes must be kept at the minimum. In the interest of harmonious relations, the central scientists working in the regions should be under administrative control of the state authorities, (f) Factors affecting the morale and motivation of the scientists identified by the Agricultural

7. It is rather unfortunate that despite millions of dollars having been spent T & V system, the feedback functions as well as diagnostic functions of the extension personnel have remained weak. ICAR should commission an urgent national consultation on the subject so that these functions can be strengthened. Much of the same stuff is being recycled in the name of FSR by various aid agencies. The pro active role of ICAR in identifying such strategic issues needs underlining. And it was recognised as far back as fifties as is evident in the lectures of K M Munshi (then President of ICAR's governing body) compiled in a Ministry Of Agriculture publication, "The Gospel Of Dirty Hand", 1954.

Administration Committee(1958) were recalled. **Competence rather than the seniority** should guide the reward system, (g) Agro-Climatic regions should be identified and a station should be established in each location.

1.5.2 Kamala Chowdhury, Bhattacharya and Gaikwad Study Team

Report suggested : (a) **DDGs should be scientists generalists and scientist administrators, rather than technical specialists**, (b) a DDG should be in-charge of AICRPs and should provide necessary help and resources rather than technical knowledge. He should be held accountable for the results, (c) DDG should have his own budgetary control and administrative personnel to help him out, (d) there should be a better understanding between ICAR and SAUs, (e) a DDG should be assigned the primary task of dealing with international cooperation and collaboration between agricultural scientists of India and abroad, (f) a documentation division with a person in-charge of storing/retrieval of information using modern methods should be set up towards improving working facilities at the ICAR, (g) ICAR should have a decentralized set up, (h) there should be a **long range planning division** to evaluate the blend required of fundamental and applied research and suggest broad research themes which require a 5 to 10 years' span⁸, (i) there should be capable financial and budget analysts at both the headquarters and at the unit level for providing broad financial control, (j) DDG should take over the task of coordinating centre-state relations, (k) there should be a person specially identified to deal with parliamentary affairs and public relations, (l) personnel/organisational development function should be discharged by a specialist in these fields and should be distinguished from the routine administration, (m) the size of the **governing body should be small** enough for members to interact in a cohesive manner and large enough to bring out the necessary skills, (n) progress of projects in terms of technical and financial matters should be reported from time to time, (n) Recruitment to the posts of Directors of Institutes, ADGs, DDGs and similar posts should be made through the UPSC by open advertisement. Their pay scales should be the same as principal scientists. However, they should be given fringe benefits, (o) Scientists who have distinctly contributed to research should be given authorship of research papers/reports.

1.5.3 Gajendragadkar Committee

The committee recommended among other things the following changes: (a) ICAR should become a department in the Ministry of Agriculture, (b) all sections and divisions of ICAR should be made autonomous. The political interference should be discouraged, (c) besides conferring autonomy, decentralization should be effected to the grassroots level in the ICAR, financially as

8. One of the most serious casualty of the ad hocism in research planning has been the long term experiments. The theory building as well as development of sustainable technologies requires that such experimental research programmes are designed at the local level and monitored at the top level. These programmes should be for 30-40 year time frame with well defined mile stones to maintain accountability.

well as administratively, (f) the high ratio of administrative and supportive staff to scientific (technical) staff is detrimental to the functioning of ICAR and hence, should be reduced, (g) institutes should have **autonomy** in financial and administrative matters, (h) DARE secretary should be the Chairman of ICAR, and be concerned with matters such as determination of priorities for research and administration of AICRPs, Universities and institutes of DARE. The council should have **a scientist at its full time secretary**, (i) DARE should have two executive committees: 1) Executive Committee for agricultural research (ECAR) and 2) Executive Committee for agricultural education (ECAE), (j) A congenial, healthy and inspiring atmosphere conducive to research should prevail in scientific research organizations, (k) All scientist, whether junior or senior, should be regarded as equals. Unhealthy competition should be eradicated, (l) Inter-disciplinary cooperation should be encouraged for the development of agricultural sciences, (m) facilities for scientists (promotion, pay etc.) should be improved, (n) too much power should not be centralized in the hands of the DG. Some of it should be decentralized to the lower levels, (o) Heads of divisions should not be appointed for long terms lest they became strangers to the science.

1.5.4 Aqueil Ahmed Report (1980)

The report suggested many changes based on a seminar preceded by the research study such as (a) the primary division of work at the headquarters should be in terms of specialized management function which cut across an entire spectrum of discipline wise differentiation. The Headquarters should be reorganized on functional lines. There should be **DDG in-charge of Finance and Accounts, Policy Planning, Technology Transfer, Education, Manpower and Personnel**, (b) similar structure should also be created at the institute level where these functions can be performed by the sub committees of management committee, (c) the highly bureaucratized nature of organization should be changed and the changes monitored by taking review of specific case histories after reorganization. The pattern of noting and the trajectory of its movement would reveal the intricacies of bureaucratic web, (d) the senior administrators should be exposed to the management concepts through periodic training programmes and seminars, (e) there should be significant decentralization, (f) the post of DDGs and ADGs should not be permanent and **people should move between the headquarters and the institutes and universities**, (g) the management committees of the institutes should not merely be the Advisory Bodies but also have executives powers, (h) excessive centralization of power in the hands of the Director of the institutes should be done away with, (i) the ICAR should start the scheme whereby all its Scientists, probationers and others spend some period of time every year in rural areas working in Agriculture Development Schemes, not just as researchers and advisors but as co-workers of farmers and leaders, (j) the authoritarian style of leadership should be changed into a participative style by involving lower levels in higher decision making, by discouraging the status seeking behaviour of Indian Scientist by delinking rewards from status and system of evaluation and reward must be changed to honour groups and institutes.

1.5.5 Panandiker, Malgavkar, Sharma Report, (1987)

Changes suggested included : (a) The ICAR Society general body should confine itself to broad policy issues before the ICAR and should not deal with administrative, personnel or other matters which can and should be handled by the governing body (GB), (b) the size of the GB should be reduced to 12-15 members. It need not have MPs, farmers or rural area representatives. Position of Member (Finance) in GB can be dispensed with, (c) ICAR Headquarters should be a tall, slim group, (d) ICAR should introduce flexibility in administration and autonomy in execution of its research programmes, (e) the basic structure of headquarters should be recognized in keeping with the principal functions of ICAR, (f) **ICAR should stop using administrative and financial rules of the Government of India**, (g) the need for DARE is perhaps unnecessary, (h) more care should be given for the welfare of personnel (financially, academically etc.), (i) AICRPs, ad hoc schemes, regional research stations and single crop institutes should be transferred to or managed with appropriate local agencies, (j) extension programmes being operated through ICAR, institutes should be handed over to local agencies including the SAUs so as to induce a greater degree of coordination and accountability in them, (k) ICAR should play a major role in technology development and assessment, (l) **ICAR should mobilize funds by means of activation of consultancy services**, (m) ICAR should confer full financial and operational autonomy on its institutes, universities as well as scientists, within their budgets and approved projects.

SAUs should be allowed to reappropriate funds within and in between the projects within the overall sanctions and keep ICAR informed.

1.5.6 Lessons of Previous Reorganizations

It is obvious that certain recommendations have remained unimplemented despite repeated recognition of the need for implementing the same. Decentralization⁹, role clarification at all levels, strategic and long range planning, research assessment and evaluation, delegation of administrative and financial powers from DG to DDGs and below, support facilities to the scientists at the headquarters and the institutes, high ratio of administrative to scientific staff, professional handling of human resource functions, reorganization of governing bodies and management committees and need for ICAR to develop its own administrative and financial rules distinct

9. Almost all the committees suggested that the tendency to build huge structures in the regions must be curtailed and instead the agencies of the State government created for the purpose must be strengthened. However, not only the recommendations of the Review Committee with regard to closure of the regional stations of the central Institutes have not yet been implemented but the tendency to set up new Institutions continues. The problem of decentralization is closely linked with this tendency to add on the responsibilities which with the passage of time State Institutions can better handle in most cases. In the anxiety to guide such Central Institutions from the top, the ability of the lower level functionaries further goes down. Once they can not make their decisions locally, their performance deteriorates and their dependence on the top level bosses increases further. It becomes a vicious circle. The only solution seems to be to accept the Review Committee report and ruthlessly prune the regional establishments of the central Institutes in the areas where sufficient capabilities exist at the State level.

from government rules¹⁰ are some of the areas where action has been tardy.

Many of our suggestions echo the thoughts expressed in various reviews since 1960s. Since our report is supposed to provide operational framework for the changes suggested by Review Committee, we have mentioned the steps to be taken for the purpose. It does not have to be mentioned that not implementing certain basic changes recommended by so many committees and reviews in past has increased the cost of making these changes now. But ICAR may like to make these changes at least now given the environment for reforms all over in the central government.

We recommend caution only in one respect. And that is postponing change in the name of hiring yet another consultant¹¹ and often advised by donors may not be helpful. Even though we do see a trend in the last few years that the more and more reliance is being placed on bilateral or multi-lateral aid agencies for advice which ICAR can easily garner with in national system or its own network.

Perhaps it was not appreciated enough that ICAR should begin to subtract¹² some of its existing functions so that it could add¹³ suitable approaches of strategic management, long range planning and creative working environment for the scientists and the support staff. Will these additions require reconceptualizing the relationship between technical and administrative functions at the head quarter was a question asked but never answered. New functions at the headquarters are unlikely to be sustained unless some of the old functions are shed. Is it possible to take an institution building approach so that the organization has mechanisms for self renewal with a culture of mutual accountability ? The diminution in the role of social sciences and weakening of strategic

10. The CSIR review Committee (1986) also observed that CSIR should exercise its autonomy available to it as a society and frame its own rules and regulations.

11. We may reiterate here that IIM-A took up this study on non-consultancy basis because of the strategic importance of ICAR and need for wider discussion and debate on the changes recommended.

12. Khandwalla (1988:300) referring to Drucker observes in the context of creating an innovative organization,

"Organizations are quick to add and slow to junk. As a consequence, they get saddled with a great variety of roles, rules, procedures, policies etc., that may have made sense once but no longer do in the changed circumstances."

He suggests periodic spring cleaning so that such a mass of dysfunctional roles and rules do not accumulate.

13. To illustrate what we mean by addition and subtraction, we do not think that ICAR should take upon itself responsibility for rural development(which includes many more functions than just the technology) as suggested in the Review Committee as well as Eighth Five Year Plan working group on agricultural research and education. We agree however, with the advice that ICAR should not undertake any field level extension work and instead strengthen the capacity of state departments, SAUs and other developmental intermediaries.

policy analysis over time may be in some sense even related. The role of the statistical service for informed decision making was well identified in the mid fifties but a viable information system did not come about. Why should organizational need for precise technical and other information be not expressed through robust organizational arrangements?

Could it provide some clue to the endemic problem of large bureaucratic organizations, that with the passage of time the error detection mechanisms become weak and organizational responsiveness to its own employees and the society at large becomes slow?

The very fact that shifting of ICAR headquarters was suggested closer to a body of research (Like IARI) rather than administration (as at present near the ministry) indicates the importance given to the issue of culture of research oriented environment. If it could not be achieved, it might itself provide a clue to the sources of legitimacy and power.

It may be added that several changes suggested by the Review Committee require simultaneous interventions in different sub sets of headquarter organization. **Decoupling these recommendations may make each of the implemented recommendation ineffective.** The study of the minutes of the meeting of General Body of ICAR, in which many of these recommendations have been discussed, does give an idea that interrelationship among these recommendations of the Review Committee have not been appreciated adequately.

2.0 STRATEGIC STRUCTURES AND DYNAMIC CULTURE FOR FUTURE CHALLENGES

Conceptual Approach: Head Quarter functions need to be defined clearly. Several colleagues with whom we discussed the issue of **strategic planning and implementations** did not feel too uncomfortable with the present state of affairs. There were others who agreed that this function must be strengthened but gave it a lower priority than the issue of resolving dichotomy or 'turf tensions' between administration and technical wings of ICAR. It was probably not appreciated enough that **part of the problem relating to coordination between technical and administrative wings can be traced to the lack of clarity on strategic missions of the ICAR.**

For instance, a strategic planning approach would require that the different levels in the organization design and monitor research programme of varying importance. It is also necessary that research plans clearly distinguish such sub-programmes which are of considerable national importance as distinct from others which can be deferred if the circumstances so demand¹⁴. Generally, at the time of a budget cut or resource squeeze, almost all programmes suffer uniformly.

14. Working Group on Agricultural Research and Education For The Formulation of Eighth Five-Year Plan (1990-1995), August, 1989, (hereafter Working Group) observed as did the Review Committee that the ICAR should restrict its involvement to 'basic and strategic research or other problems of national importance' (1989:107). While the Working Group also suggested that the mandate of ICAR should be widened to include broader areas of rural development, we do not think it is advisable or even consistent with its other observations. It in fact suggested and rightly so that "ICAR should not undertake any field level extension research; for this the infrastructure of the development departments of the states should be utilised (1989:108).

The implication of strategic missions with well laid out priorities is that the accountability of the leaders of programmes is total. To enforce accountability, decentralization and deconcentration would become inevitable. Some of the functions being performed at higher level would move downwards¹⁵. The administrative interactions necessary for performing such functions which are no more relevant at headquarters would also become redundant. Some functions being envisaged in various documents need not be performed by ICAR at all¹⁶. The administrative wing of the ICAR would thus have to redefine its role in achievement of strategic missions.

Strategic apex organizations of the future will have to deal with global knowledge systems. Thus information processing capacity will determine the extent to which such organizations can maintain their relevance and presence on the frontiers of ever expanding knowledge. Knowledge requires reflection, challenge, debate and of course a creative and stimulating thinking environment. All of this requires a peer culture where mutual expertise is acknowledged and power is derived from problem solving role and not from formal authority or just expertise. Young scientists can and should be enabled to challenge senior scientists on technical issues. It should be possible for a talented scientist to head a committee including many senior scientists but evidently less capable than the leader. In another team, the same leader may become a member and accept directions from another scientist. The headquarter thus is to be seen a system of facilitating such knowledge intensive interactions and not only a source of guidelines on every subject. This will call for change in attitudes, perception and role definition. It will also call for diagonal training programmes (i.e. including scientists and administrators from all the levels) to reinforce an appropriate decision making culture in the institutes and the headquarters.

Organic Management(Burns and Stalker, 1961:120-121, Khandwalla 1977: 399, 411, 436-437) requires continual redefinition of tasks through active interaction among members, "authority based on expertise rather than position, and reliance on lateral rather than vertical channels of communication and control"(Kerr and Slocum, 1981:128). Such a system has high information processing capacity. Information search, analysis, validation, use etc., may depend upon the learning environment in an organization. 'Lateral learning'(Gupta, 1985) shall be the guiding spirit rather than the vertical learning. The requirements of a learning organization requires institutionalization of what is called a 'double loop' (Argyris,1980¹⁷) feedback system. A thermostat in a refrigerator switches off and on

15. There are several thoughts with regard to making decentralization more meaningful. One suggestion is that ICAR undertakes Memorandum of Understanding (MoU) with different Institutes so that not only mutual accountability is made clear but also the time schedule for resource flow and completion of activities is worked out. It is possible that MoU will include arrangements for short, medium and long term obligations. This approach may avoid continuance of research schemes which have outlived their utility. The situation of several Institutes not preparing even their annual reports and yet continuing to receive resources from the HQ will not be then witnessed.

16. The recommendation of the Working Group to ask each SAU to adopt a district for linking with employment, TRYSEM and wasteland development programme seems misplaced for a research body. It is this approach of diluting the main missions of ICAR and SAUs which may generate misplaced expectations in public mind. We support the ideas of rural systems research requiring linkage among farm and non-farm aspects of livelihood strategies of small farmers and the labourers. But we do not think research institutes should get involved in taking the 'responsibility' of implementing JRY or other employment programmes. Their strength lies in generating technological options and pilot testing them in real life conditions. For this linkages can be forged but just that.

17. Chris Argyris, 1980, Making The Undiscussable and its Undiscussable Discussable, Public Administration Review, May/June, 205-213

at the pre-set level of temperature. It is a case of single loop system where the people do what they are told. One can increase efficiency in such system but only up to a point. The double loop system would result if the thermostat can set itself automatically every time the contents of the refrigerator are changed. It would work out the mean temperature requirement by studying the contents and set itself afresh continually on every major change of the contents. This would be a case of double loop learning.

Metaphorically, When organizations gain capacity at different levels to readjust their working rules or heuristics by questioning the basic assumptions of an unit, they are engaged in 'double loop' learning. They do not regard a tight coupling with the top management as necessary. Such organizations are fine tuned to their environment not because the top management is issuing guidelines or circular whenever the environment changes (that in any case can not be done) but because people in the organizations at each level recognise their responsibility and accordingly adjust the operating rules or culture.

The boundary spanning function becomes not only important but also is performed at various levels with alacrity. The dependence on headquarters goes down and in the process top management can concentrate on more important strategic issues, long range planning, improving the system design capability over time, setting high performance goals and gearing the organization to achieve these single mindedly. The relations with different stakeholders including various social groups are reviewed on a proactive basis. Thus one does not complain about the so called political interference in democratic society. Instead one tries to educate the political leaders about their responsibility in the matter and involve them in generating social consensus about the major missions of the organization.

The ethical basis of intra and inter-organizational relationships is periodically reviewed and mechanisms for 'whistle blowing' are created so that moral boundaries are respected by each role player. Politics in the organization get transformed in favour of missions and strategic goals rather than individual's concerns about empire or turf tensions.

We expect such a change in the organizational culture to be brought about through the following means:

- * Identification of areas of strategic strengths and weaknesses so that new responsibilities are created for improving the effectiveness of the top management of ICAR,
- * Decentralization of most of the decisions about research program planning to the Institutes and their management committees
- * Adoption of Committee or collective style of policy level decision making
- * Taking a long term view of organizational goals with clearer definition of landmarks and priorities
- * Clarifying the roles of the administrative and the technical functionaries so that mutual respect and accountability increases
- * Strengthening the institution building role of the ICAR headquarters so that the capacity of the Institutes and other collaborating systems for learning improves and they become more mission oriented, and

- * Giving a renewed impetus to human resource development.

It should be appreciated that various recommendations given here should be implemented as a total package. Inter-relationship between different changes suggested in this report if ignored may defeat the entire purpose. Piecemeal implementation may do more harm than good.

Some of the policy areas which need clarification are:

2.1 Environmental Scanning and Response: Domestic and International

2.1.1 Macro-economic changes in domestic and global environment:

The context of a reorganization in the '90s is quite different from the one in the 70s. The recent changes in the global political and economical arrangements impinge directly on the options for future research and its management. We have to recognize that increasing atomization of land holdings, diversification of agriculture, regional imbalances, need for stepping up exports together with declining or stagnating food availability in backward regions pose unprecedented technological and managerial challenges. The boundary spanning function in such a context becomes all the more critical when we have to contend with extremely serious balance of payments position and limitations on imports. The external input oriented, energy intensive model of agriculture did solve food problems in the short run but was unlikely to be sustainable in the long run.

It would be a good idea if with the help of National Academy of Agricultural Research Management (NAARM) and other social science institutions, the ICAR organised every five years or so a major workshop or conference on macro-economic changes in the global agricultural and food environment to widen the thinking horizon of the top scientists. The global competitiveness of Indian agro exports or the implications of international negotiations on trade and tariff policies on the development of indigenous technologies, or changes in the domestic demand patterns due to changes income distribution or tastes or urbanization etc., will need to be discussed threadbare.

2.1.2 International cooperation:

Despite extraordinary strengths in several fields of scientific knowledge we have not been able to emerge as a leader in extending our know-how to other developing countries. Should Indian systems remain only in a subordinate role to the CGIAR (Consultative Group Of International Agricultural Research) Centres or should we even compete in certain areas, is an issue to be discussed.

Do we know what technologies, equipments or skills are required by our institutions from different countries. If not, can we really extract the best advantage from bilateral and multilateral international exchanges? Can ICAR take a proactive view of the matter and develop its strategies for international collaboration?

2.1.3 Long Range Planning :

Long range planning implies looking deep into future so that we do not keep on aiming at merely incremental changes. Several options become viable only when appraised in the long term. How do we generate capacity in the headquarters not only to keep abreast of the latest trends in the technology but also to do scenario building for the future? Should we let international 'experts' do the strategic thinking for us because we are too busy taking care of day to day affairs?

The theory building and the task of developing deeper understanding of the sustainable ecological systems would require not only inter-disciplinary research but also long term research programme. This is an area where new institutional innovations are called for.

2.1.4 Inter-organizational networking:

Different stake holders exist at the central and state levels and among private , public and multi-national corporate sector. The dispersed, small, unarticulated peasantry in rainfed regions and articulated, organized and politically well represented farming communities in the irrigated regions have different stakes and voice in the policy making process of the ICAR. How should ICAR headquarters deal with these different stake holders?

This is a time consuming task and the results show up only with a lag. It can also become an important means of problem solving by pooling resources and skills across institutions when providing all these resources under single roof becomes impossible due to budgetary and other constraints.

There is also a need for stronger links with venture capital organizations like Technology Development Information Corporation of India (TDICI, a subsidiary of ICICI) for encouraging commercial exploitation of biotechnological and other similar breakthroughs.

2.1.5 Influencing public policies and institutions:

Will future technological choices require a closer study and synthesis of public policies? To what extent can ICAR influence these policies proactively without taking institutions and structures as given? Who in ICAR will work out the implications of a changing agrarian structure in different agro-climatic regions on the demand for technologies of various types. Should ICAR not be able to influence the price policy for inputs and outputs as it did during the seventies which contributed to a major technological change. What will be the implications of over capitalization on small farms in well endowed regions? What should be Government of India's policy towards chemical pesticides or other inputs given the global concern for environmental and health implications? How should import and export policies for various agricultural commodities be developed on year to year basis so that the interests of the small producers do not conflict with the objectives of restoring the ecological balance in high risk environments.

How should government evolve its policies for post-harvest technologies so that efficient technologies are adopted by farmers, traders, millers and other industrial units using agricultural outputs? Not every problem has to be assessed internally. But should not ICAR have a system so that national policies are not taken as exogenous variables but are influenced for getting a right mix of technologies for use by various users.

2.2 Information Processing Capacity

Various dimensions of the environment after being scanned would pose complex decision choices at the headquarters as well as the institute level. The capacity to process complex information about domestic and international interactions of ICAR will require (a) shedding many of the current functions, (b) acquiring new skills, equipments (with software support) and perspectives and (c) redefining the culture so that colleagues pool their individual insights as well as fears, anxieties and hopes without any inhibition. Information processing capacities grow when ability to take decisions also grows. In absence of well defined roles and clear delegation of powers, senior research managers may deliberately shun new information lest it increases their feeling of helplessness or inadequacy. Knowledge intensive management requires modernization of systems and improvement in the data base, documentation support and flexibility to commission specific reviews, studies and scouting missions about new technologies at the higher level.

2.3 Managing Policy Environment

The data base on Parliamentary and State Legislative debates having bearing on scientific and technological issues is a necessary tool for top level decision makers. This helps to anticipate demands from the people's representatives and also to educate them so that they make demands which help the cause of sustainable development. While some analysis of the legislative debates has been done by individual researchers no system perhaps exists to keep track of it as an ongoing organizational function. It is also true that a constituency for agricultural sciences can not be created merely by organizing demonstrations of new technology at the farms of the these representatives. Though such interactions has a great merit in cases where major technological change is required (and support of local non-official leaders is essential). However, if budgetary and other support for the scientific research has to be increased then education of people's representatives regarding new frontiers and long term commitment is most necessary. How will this interaction be regulated such that instead of transferring just the technological innovations, ICAR also communicates with non-officials about the need for institutional innovations¹⁸.

18. The institutional innovations may be needed for common property resource management, in situ and decentralized Gene banks, biological and cultural pest control, preventing soil and water mining, watershed and other group based sustainable technologies, policy support for decentralized agro processing and value addition, organization of farmers for cost effective use of new technologies, improvement in the conditions of rural workers and farm women affected adversely by technological and economic changes, getting private and public sectors besides NGOs to attend to more difficult problems of hand tools, crop-livestock interactions in rainfed regions, management of range lands etc.

It will be difficult to keep on generating technological solutions for various problems created by market and institutional failure.

2.4 Institution Building

When the values of an organization are shared widely at all the levels, the recourse to rules and regulations becomes redundant. Internal codes of behaviour guide the actions of the organizational members rather than external commands or directions¹⁹. The peer culture of shared vision and mutual accountability is then supposed to have been institutionalized. This also requires proper norms for inducting new colleagues, building up their career paths, providing opportunities for self renewal at all levels(through sabbatical or other means), and above all generating confidence in the minds of external stake holders that their voice and concerns are given due weightage in the internal priority setting system. The relevant client groups including disadvantaged and well off social groups at large thus begin to share the vision of the organization and help in mobilising the support and counteracting the opposition.

The process of institution building (IB) involves strengthening the decision making processes at the HQ as well as in the Institutes by reviewing the mandates of the Institutes periodically, ensuring that various subsets of the institutes get enough opportunity to participate in the institutional processes of decision making and the research directions are aligned with the mandates. This is a full time job and can not be expected to take place at the lower levels if it does not attract attention at the higher levels. The Human Resource Development (HRD) functions are closely linked with Institution building but need not be performed by the same person. The reason is that regulatory and disciplinary functions may not mesh with the developmental functions. One of the greatest ironies of big bureaucracies is that the systems in the effort to match with the expectations of the majority become highly frustrating for the bright fews. The result is that only such leaders are often tolerated who keep the standards of performance pitched to the capacity of the mediocre. The excellence suffers. The situation in ICAR may not be so bad but if IB and HRD functions will continue to be neglected, situation indeed may become bad.

2.5 Policy planning , Coordination and Advice

Creation of an organizational environment conducive to nurture scientific investigations requires a context in which scientific considerations over weigh all other considerations in decision making. Scientists like all other managers need and allocate resources. Administration helps in resource mobilization as well utilization as per the norms. Norm setting in an autonomous organization should be guided by the task and technological compulsions besides social purpose and member competence. Greater the internal cohesion and accountability, higher may be the autonomy an organization enjoys. Dominance of administrative ethos noted in each Review Report since 1966 partly owes its continuance to closer proximity to government systems and partly to the ambivalence about the standards of internal accountability. To some extent it may also have been a convenient way of exercising control by the successive DGs.

Strategic planning, we feel reduces the zone of ambivalence, provides long term goals, and facilitates conversion of organizational missions and goals into an operational framework. **The policy planning**

19. In such an organization people do not wait to be told about what is to be done. They take initiative on the basis of their realization that it is their responsibility to identify a role and opportunity for performance. The roles are respected and not the rules.

committee as constituted now may not serve the purpose of strategic planning which is an intra-organizational function.

The coordination in the policies of different ministries may not come about to foster environment for sustainable technological change unless ICAR evolves mechanisms to pursue that goal. Policy coordination may also be necessary at international level in debates on intellectual property rights and other similar issues of strategic importance.

2.6 Administrative Planning and Responsiveness

Undeniably the purpose of administration in ICAR is to improve the efficiency of the scientific organization²⁰.

World over the strain in the relationship between administrative and scientists is well recognized.

It is admitted that scientists responsible for directing research and those conducting the research proper have been trained to prefer the academic way of life, with its autonomy and its antipathy for administrative restraints. Scientists resent control even if it is from the hierarchy based on scientific competence. (Arnon, 1989: 511).

Tracing the root of dichotomy between administrative and scientists, Arnon further observes:

A factor that contributes to inter-group tension is the low esteem in which scientists hold administrators and administrative activities. Cleveland (1960) writes: 'in faculty folklore, the administration is the lowest form of sub-professional endeavour on the campus. The administrators create nothing, initiate nothing, they exist to serve the faculty, and since they keep forgetting that this is their primary role, they must be periodically reminded of it on public occasions by exquisitely worded shafts of faculty wit.' This attitude is too frequently carried over from the faculty to the research organization. (p.513).

It may appear to be an extreme view. But if this view is shared by so many technical leaders world over, we believe it is so because the role of the administration has not been properly appreciated. Contempt for any functionary is bound to generate hostility. No policy can come out unscathed through such an administrative incubator. There is a need for fundamental rethinking on this subject. This will require redefinition of the role of the DG, DDG, FA, Secretary, Management committees of the Institutes and various committee at the Head Quarters. This redefinition can take place only if the major recommendation of Review Committee about major decentralization to the Institutes is accepted and implemented.

20. Several studies have shown that scientist do not prefer to work as subservient members of organisation. The scientists claim authority on the basis of knowledge and not necessarily status. This is the basic difference in scientific and other organisations. Lambright and Teich, (1981;307) observed that the scientists need resources and yet crave for freedom to investigate the problem they think worthwhile. Scientific leadership can generate mutuality of interests so that in the larger social interest individual choices are modified, if necessary, to pursue organisational goals. Such modification of choices is likely to take place on scientific advice more easily rather than on the basis of administrative direction.

Once most of the decisions are decentralized the HQ functions undergoes basic metamorphosis.

3.0 RECOMMENDATIONS FOR CHANGE

3.1 Headquarters Functions

3.1.1 The Review Committee had defined the headquarters functions quite appropriately except that some of the functions in the light of the above discussion need further elaboration. The Review Committee observed that Director General being the Chief Executive of ICAR managed all the affairs of the ICAR with the assistance of the technical and the administrative wings at the headquarters. The technical wing included DDGs, ADGs, and Senior Scientists. The administrative wing included the Secretary, ICAR, Financial Advisor and the other secretarial staff. The Institute's were reviewed, guided and serviced by the headquarters on all the matters. The headquarters, it was suggested,

should act as a 'think-tank'. The Deputy Director General should be leaders in their area of responsibility to conceptualize the research needs, identify priorities, and allocated resources. They should be responsible for planning, evaluation, monitoring and coordination of research programmes in the ICAR Institutes, under the AICRPs, AP Cess Fund, programmes supported from the US-India funds, and bilateral cooperative and foreign aided projects. Considering the size of the organization and diversity of activities, it will not be possible for the Director General to handle all the affairs of the ICAR without proper assistance. The senior level specialists will have to do critical study of the research, educational and extension educational programmes in their areas of responsibility. The DG and the DDGs should constitute a Board to discuss all important technical and organizational matters and take decisions for which regular meetings should be held. The DDGs may be vested with proper authority to discharge their responsibilities.

3.1.2 Decentralisation to the Institutes:

The headquarters functions can be redefined only after a major decision regarding decentralisation of powers (administrative as well as financial) to the Institutes is taken.

The Management Committees of the Institutes should be empowered to take most of the decisions within the declared policy without making reference to the headquarters. Since DDGs/ADGs will be represented on the Managing Committees it is expected that the broad guidelines are followed. It would be desirable if the Management Committee as well as the Research Advisory Committee are headed by the eminent scientists outside the ICAR on experimental basis in some of the institutes. This will forge closer relationships between the Institutes and SAUs as well as other related science and technology institutions. Further it will avoid the possibilities of inhibited or muted participation by the scientists of the Institutes. The review mechanisms will also need to be strengthened at the Institute level so that resource utilisation is optimal and the accountability of the scientists to the professional peer groups is

maximised.

Regular meetings of the Board of Management or Management Committee should be held every quarter with well defined agenda and minutes. The agenda should be sent in advance to the ICAR headquarters. The minutes will be sent to headquarters only for information. On issues where decisions require headquarters' approval, institute would wait for fourteen days from the date of receipt of the minutes from headquarters. If nothing is heard, approval should be assumed and decision be implemented. Management Committees should not be allowed to increase the staff strengths or transfer of research funds for infrastructure except with prior approval. The representative of the headquarters is expected to attend the Management Committee Meetings and bring headquarters' reactions to the agenda items. Under no circumstance, should lack of authorization from the headquarters be allowed to come in the way of decision making in the Management Committees.

The decentralization of powers from the Headquarters to the Institute would be extended not only to the Management Committee and the Director, but also to the head of the divisions, principal investigators, project coordinators, etc. Within one year of decentralization a report on the status of actual decentralization be presented to the governing body of ICAR and also circulated to all the Directors of the Institute. This report may be discussed in the Management Committee of various institutes so that governing body of ICAR looks at the reactions of the institute to the actual progress achieved in regard to decentralization.

By having joint QRTs of the related Institutions the overlap in research or lack of linkages can also be looked into.

The Director of the Institute should be empowered to commission research or reviews by outside scientists in areas where either adequate capacity (manpower or infrastructural) does not exist or the internal capacity is already constrained. The accountability of the Director and the scientists in the Institute can be ensured only when need for frequent references to the headquarters is done away with.

We also recommend that Director of the Institutes should be empowered to recruit scientists even at entry level once the competence of the scientists has been certified by the ASRB as is the case with UGC. The Selection Committees would include head of the division in which vacancy exists and at least two outside members. The concept of inter-Institute transfer of scientific manpower will have to be done away with. If scientists have to move to different Institutions, they apply for a position and after selection move. The provident fund and other benefits can be maintained. The idea that scientists can grow without committing themselves long enough to a particular research direction has perhaps contributed to a large number of interpersonal and output problems.

The mandate of different institutes will be reviewed once in five years. The chairman of the Research Advisory Committee and Director of the Institute may review the research at the headquarters with the concerned DDG if some major thrust has to be planned or changed.

Various other mechanisms should be set into motion to ensure that scientists in the Institutes remain up to date, do not spend most of the time for non-scientific administration on an ongoing basis and do not continue with research which is not clearly focussed.

The Financial Advisor and the Secretary, ICAR would undertake orientation programmes for the Institutes administrative staff so that efficiency in resource use is maintained. They will also try to catalogue administrative innovations tried by different Institutes so that **lateral learning** takes place. The tendency to budget extra staff or vehicles in every project will have to be severely curtailed by developing guidelines and norms rather than through administrative objections. The decision making culture at the Institutes would need lot of strengthening so that scientific environment for research becomes stimulating and supportive.

3.1.3 Role of DG:

DG being the head of the organization is concerned with the maintenance of highest standards of scientific excellence. He has to perform some of the boundary spanning functions, maintain links with the sponsors, raise resources, and provide overall guidance and leadership in a futuristic and global perspective. Rarest of the administrative matters should reach him. Once the financial powers are delegated, only the strategic issues will remain DG's preoccupation. The quality consciousness, efficiency in human and other resources, recognizing and nurturing talent and above all influencing national policies such that technological backup for national growth receives adequate attention and support, are some of the key challenges before DG. There is a need for complete break with some of the past traditions in this regard.

DG could use a variety of ways for influencing the organizational culture. Consultative processes are likely to become stronger if the decisions taken through various committees are respected even if some of these are not to the personal liking of DG. He or she should take back the issue to these fora rather than arbitrarily changing the decisions. Likewise whenever a reference is made from lower level be it in the HQ or from the Institutes about a matter which lies in their domain, the matter must be referred back to the senders. By taking action on such matters, the DG may only weaken the process of the decentralization.

DG being a leader has also to motivate the scientists. One way is to recognise the good workers and make exceptions so that resource flow is seen to be biased in favour of performers. **A sense of false equity among efficient and not so efficient scientists could be a serious source of discontent.** At times, the DG had to arbitrate between the administration and the scientists in the past. We hope that such occasions will not arise in future because no dichotomy is expected to exist after the committee style of governance and policy making is accepted. Once the policies are laid out, the administration would implement the same. DG would ensure that any difference of views should either be taken up in the respective policy forum or be resolved in the Administrative Board (see below).

DG may have to give particular attention to the points 2.1 to 2.6 which need special attention in the short term. These areas will also be incorporated in the functions of the respective DDGs.

3.2 Functions of the DDGs

We have identified eight major functions for the headquarters to be performed by DDGs in addition to the function of disciplinary leadership. These functions are: a) technology forecasting and assessment, b) transfer of technology domestically and internationally, c) international cooperation for technological acquisition, upgradation, and collaborative research, d) resource mobilization and financial management, e) institution building and human resource development, f) education planning, coordination, curriculum reform and policy, g) policy planning and coordination and h) administrative policy and review.

A strong management information system shall have to be established if DDGs have to perform the new functions identified here. They should also be provided with research assistance with flexibility of recruitment of ad hoc project staff so that they can keep abreast of latest trends in the respective disciplinary field. They should also be encouraged to review the global trends with the help of proper documentation system.

3.2.1 These functions would be essentially performed by DDGs but reviewed through several committees as suggested below.

- a) Strategic Policy Coordination and Advisory Committee (SPCAC)
- b) Strategic Policy Planning Committee (SPPC)
- c) Personnel/HRD Committee
- d) Financial Management and Budgeting Committee (CFM)
- e) Administrative Board
- f) Policy Sub Committees for International Cooperation, Technology Alert and Assessment, Technology Transfer and Institution Building

Earlier, there was a Standing Advisory Planning Committee, which was suitable under the given circumstances when coordination with other government departments for achieving breakthrough in agricultural production in mid sixties was very necessary. If there is a need for such a policy coordination with CSIR, ICMR, ICSSR, DAE, BARC, various ministries and corporations etc., (we feel, there is), then the existing policy planning committee should be converted into Policy Coordination and Advisory Committee. A separate Strategic Policy Planning Committee has to be internally set up in ICAR comprising DDGs and some other eminent scientists. This has different functions from the Senior Officers Meeting (SOM) which includes senior administrative officers as well. We suggest a clear distinction between **Policy Planning function** which is internal to the organization and **Policy Coordination and Advisory Function** which incorporates other stake holders in the governance and is an inter-organizational function. Both of these are different from policy administration function which Administrative Board is supposed to oversee.

It is worth noting that the Advisory Committee recommended in 1960, 1969 and also later in 1973 somehow never got properly institutionalized. The discussions in the first meeting of the Standing Policy Planning Committee (Feb, 1990) also indicate some confusion which exist with regard to its role. To expect such a committee to review the work of various other committees gives it a line function. In administrative parlance it becomes superior committee to which power may gravitate²¹.

a) The Strategic Policy Coordination and Advisory Committee (SPCAC)

SPCAC can be headed by an outstanding scientist outside ICAR. The purpose of this Committee is to help plan research thrust requiring collaboration with outside Institutions and ensure policy coordination with other ministries. It will help in generating policy alternatives that need to be pro-actively pursued with various ministries in the Central government. The central-state relations will also be reviewed in this Committee so that bottlenecks in the way of better research environment can be overcome. No administrative matter would be put up to this Committee except if it lies in the inter-organizational domain. The review of macro policy environment, influencing political interactions and strategy for proper feedback to the people's representatives will also be attended by this committee.

A system can be developed for participation of a few Vice Chancellors, Agricultural production commissioners, state agricultural secretaries etc., by rotation in this committee.

b) The Strategic Policy Planning Committee (SPPC)

It is an internal forward looking Committee which will lay down the guidelines and review important issues relating to national priorities. DDGs, Directors of the national institutes, FA and Secretary(ICAR) would be the members and some of the Directors of the central Institutes will be special invitees to this Committee. If a particular sectoral policy issue is to be discussed in a meeting for which the most knowledgeable scientist is not a Director, he or she should be specially invited(even if the scientist belongs to a SAU or private sector) . The DG would chair and report to the Committee action taken on various policy decisions periodically. Agenda notes for this Committee can be submitted by any Management Committee of the Institutes. However, the criteria for including such an issue would be that it has general implications for the entire ICAR and Agricultural research. No issue relating to specific Institute or individual would be brought to this Committee. The interactions between National Economic and Technological Policies would be reviewed so that likely problems in the way of research or technology transfer can be anticipated. The issues identified by various other Committees or sub-Committees can be brought to this Committee by the DG or the concerned DDG in case of a need for policy modification. The collective decision making in policy planning is the only alternative for highly factionalised polity of ICAR to be modified in favour of a collegial team.

21. In fact, a senior scientist went to the extent of saying that this committee is above DDGs and therefore can issue 'directions' to them. In our view, such an use of the committee is not only counter-productive but also detrimental to the work environment at the headquarters.

c) Personnel/HRD Committee

The major task of this committee is to help develop policies for career development of the scientists and the administrative staff, generate a participative culture so that individual creativity is properly unfolded and ensure periodic renewal of the technical and managerial skills through appropriate training inputs. There is a need for a systematic time bound plan for technical and managerial training at the reputed Institutions. It has to be appreciated that some of the characteristics of Institutions of Excellence can not be transmitted through training programme alone. Senior scientists and the Directors of the Institutes should be encouraged to spend some time periodically at various national and international Institutes of excellence so that ICAR's own systems can be renewed. Motivation through pursuit of excellence is one of the most enduring changes in any organization. The induction of the young scientists should receive particular attention. The training should involve development of lab or field orientation rather than the desk orientation as some colleagues reported to be the case.

The dignity of labour and 'The Gospel of Dirty Hand' (Munshi, 1952) must be ingrained through total change in their induction system. Once the recruitment is decentralized, the training function of NAARM will also undergo recast. The initial training is best given on the job with reputed scientists. Only later should the scientists be exposed to managerial functions. This aspect of the induction of new scientists is recognised world over. In the light of our suggestion about decentralising recruitment at the entry level to the Institutes, the training and manpower function would in any case need to be thought through again.

The policies for posting of the scientists will be laid out by this committee and implemented by the personnel officer.

This Committee will lay down the norms for recruitment, training, evaluation and recognition of both the scientists as well as the administrative staff. Committee will be chaired by one of the DDGs and Director-Personnel would be the Member Secretary. This Committee will have both the Financial Advisor and the Secretary, ICAR as members besides two or three other DDGs and one or two Director of the Institutes and the Manager (HRD). The Committee would lay down the policies and review their implementation periodically with the help of proper data or case studies. The administrative translation of these policies will be done by the Director - Personnel. The Secretary, ICAR will provide advice in the Committee if any problems are anticipated in implementing a policy. Once a policy is made it will be implemented by the administration. Any change in the policy can be made only by this Committee.

A trained Manager (HRD) may be appointed reporting to the DDG in-charge of Personnel/HRD committee, for implementing various policies laid out by this committee in a time bound manner. He should be supported by a HRD cell responsible for evolving and sharing the training policies and plans. It may be necessary that the scientists know well in advance when their turn for training in the country or abroad is due so that they could make arrangements for maintaining the continuity of the research programmes. The Manager(HRD) will have nothing

to do with the cases of administrative enquiries, or initiating disciplinary actions and other such matters. Such functions will be managed by the Director(personnel) under the policies laid out by this committee. DDG in-charge of the committee could ask for information on the patterns found in the implementation of any particular personnel policy. For instance if delays are found to be a rule in concluding certain type of enquiries, the Committee could provide a time bound action plan which the administration should try to accomplish.

We strongly recommend that personnel - Human Resource Development Committee prepares a systematic time bound plan for technical and managerial training at the institutes of repute. In addition, we recommend the following:

a. The senior scientists and Director of the institutes should be encouraged to spend some time periodically at various national and international institutes of excellence. The input so achieved may not always be available only to training programmes. A scientific approach to training requires not only prior assistance of training needs, but also participation of the potential trainees in the development and organization of training materials. It will be a good idea if case studies are developed on various aspects of administrative and technical and scientific management not only at NAARM but also at other management institutes. Some of the cases could be developed by the senior scientists themselves. Case writing workshops can be organized to develop the skill. It should be noted that training and self renewal is important not only for lower level staff but also for the senior most executives. Depending upon the feedback of the participants decision regarding nomination of participations to future programmes of the concerned institute should be taken.

b. Training can sometimes be dysfunctional and demotivating force, if the skill so learnt cannot be utilized on the job. The HRD committee may like to periodically assess from the headquarters stock about the scope for using their skills in an imaginative and creative manner. As far as the training of scientific manpower is concerned, the experience of the first supervisor in the career of young scientist is often quite important. Therefore, the assignment of scientists during the training as well as placement should be done very carefully. It will be useful if some investment is made in developing a three tier approach is developed for training and institution building. Over next five years people at different levels that is top, medium and bottom level should receive training in managing scientific creativity, R & D system and other functional areas of management. Likewise, a long term plan has to be developed for scientific training within the country and abroad. We recommend that as far as possible, a panel of scientists for technical training should be developed in a manner that every scientist knows in advance when his/her training may fall due. This would help him in managing their continuity in research and disrupt the programme to the minimum extent possible.

The rules for Participation in International meetings, symposia or short term assignments should be so developed that only for assignments matters need to be sent to the DG and for the rest it is decided by the Director. For the directors, the proposal will come to the DG.

d) Committee on Financial Management, Budgeting and Resource Mobilization (CFM):

Majority of the conflicts in the implementation of the financial policies emerged primarily regarding the release of budget for manpower and vehicle. The concern of the finance section has been that the scientists while submitting budget requests have not tried to exhaust the possibility of improving the returns from existing investments. There is some truth in it. However, much of the confusion arises because not all queries are raised at a time leading scientists to feel hassled. This Committee should urgently develop very clear formats for budgeting and programme planning so that this problem can be totally avoided. As discussed under point 6.0 later, many of the recommendations of Chandrashekhar Singh Committee(1982) are still valid and deserve to be implemented.

The other problem arises from lack of detailed scrutiny at the time of making budgetary allocations. This Committee headed by DDG with Financial Advisor, Director - Personnel, Director - Works and Secretary, ICAR besides two other DDGs and/ or Directors would deal with planning and policy issues. The Chairpersonship of this committee can rotate and FA can also chair the meeting. The budgetary allocations can be made by the Strategic Policy Planning Committee and the details about its headwise decomposition will be worked out by the Finance Section as per the proposals approved by the Strategic Policy Planning Committee. Any case of deviation from the allocation made by the SPPC would be discussed in this Committee (CFM) and the recommendation would be made to SPPC. The need for DG to overrule Financial Advisor or vice versa will not arise because Financial Advisor would not only be part of the policy planning process but would also be involved in its implementation. The financial disbursements will be made by the Finance Section as per the guidelines. In case there are any problems the same will be reviewed by CFM. The DDGs or other scientists would not have to bother about the day-to-day details of financial and accounting matters. The audit report of the Institutes and other programmes will also be discussed in the CFM before putting up the policy issues to SPPC. If there are administrative problems reference will be made by CFM directly to DG. In case DG so desires he can bring such a matter to the Administrative Board.

The Committee should devise model budget documents and circulate these to all the Institutes and the SAUs so that the quality of information at the submission stage itself is improved. Training of the finance officers of the Institutes and the SAUs will also need to be organised.

Once the idea of block grants to the Institutes is accepted, the need for management audit to strengthen the systems of the Institutes will increase. The sharing of the information within the Institute should also be improved so that the scientists have a clearer idea about the resource availability and consequent implications for their research programmes.

The Resource Mobilisation from non budgetary sources is going to be an extremely important challenge before ICAR. It may be worthwhile if this Committee could aim at, say, a target of 33 per cent of the resources to be mobilised from the non budgetary sources in the next five

years²². Differentiated strategy will have to be developed for raising such resources from private, cooperative and public corporate sector, trading houses and other agencies. The Financial Advisor had shared with us some definite ideas in this regard and we think that this is one area where this Committee should draw upon the rich experience of the financial Advisor and other agencies such as TDICI(Technology Development and Information Company of India). More details are provided on this issue under point 6.0.

A cell needs to be established to pursue the Management Audit. Excessive emphasis on only the financial audit has not helped in assessing the systems and procedures. Many of the suggestions of the QRTs do not receive adequate attention because there is not any institutional mechanisms to see whether technical performance is suffering because management systems have not been renewed from time to time. Outside institutions can also be involved in this process in the short term. Though in the long run this capacity has to be generated internally. NAARM may be strengthened to provide this support.

e) Administrative Board(AB):

This is a working committee comprising of DG, DDGs, Secretary and the Financial Advisor meeting in the beginning of reorganization once in a week or fortnight and later every month to review various administrative matters. The present Senior Officers Meeting (SOM) actually is too unwieldy for the purposes of decision making. Secretary(ICAR) would be member secretary of the AB.

The purpose of Administrative Board is to act like an Executive Committee of the SPPC. Whenever matters concerning administration or finance are involved the concerned officials could be invited if necessary. The DDG in-charge of Institution Building would have a task force comprising Secretary, ICAR and Director - Personnel and Finance any body else he or she may deem fit for specific discussion and duration. The role of this task force will be to put up proposals for administrative reforms on an on-going basis to the Administrative Board. The suggestions emanating from the management committees or the boards of the institutes would be put up to AB by the task force. It is important that policy issues are distinguished from the administrative issues. The decisions on administrative issue should not be kept pending by the DG for more than a few days.

Any issue not responded by the DG with in seven days could be put up to the Administrative Board. The assumption here is that most of the matters which occupy DG's time now would have been decentralized to these committees. In that sense these committees would have well defined powers and DG should avoid encroaching upon these powers. At the same time con-

22. We do not deny the need for government to enhance its allocations for agricultural research because rate of return to such resources are one of the highest among all the sectors. In India, the allocations for this purpose unfortunately have come down over the last few FYs. But the advantage of raising resources from non budgetary sources is that greater autonomy can be enjoyed and also client pressure may improve the efficiency also.

veners of the various committees and sub-committees should avoid encroaching upon the powers of the Institutes and National Research Centres.

f) Sub-Committees on International Cooperation, Technology Alert and Assessment System, Technology Transfer and Institution Building:

i) Sub-Committee on International Cooperation (IC):

The functions mentioned under item 2.1.2 would be performed by this Committee headed by one of the DDGs. Dy. Secty. incharge for the purpose in DARE would implement these policies and ensure the required follow up. This function can also be performed by a manager(IC) hired by ICAR with training in Foreign Exchange management, Import and Export laws etc., holding additional charge in DARE. The Director (IC) would implement these policies and bring any case for policy change to this committee comprising two DDGs, Secretary, ICAR, Director (IC, DARE) and Director-Finance. Director (IC) should be the member secretary of the committee.

The Committee should develop guidelines for preparing long-term plans for cooperation with different countries. The detailed plans can be prepared by separate task forces and monitored by the SPPC. The formats and structure of the reports will be proposed by this committee. Likewise the nomination of scientists for different conferences, delegations, training programmes etc., should be processed by this committee.

This committee would circulate data about the foreign visits by different category of scientists to the scientific community so that peer pressure for proper representation to disciplines and categories is generated. This committee should also commission internal confidential reviews of internationally aided projects so that ICAR does not continue projects which have not served their purposes. This is necessary because in the reviews commissioned by the aid agencies the objectivity required for the purpose may not always be there. The collaborative projects which have involved visits of poor quality of experts from abroad or from which no strategic national interest is being served, should be closed. The agreements should provide for such termination.

The Committee will encourage the Institutes to build linkages with different international centres keeping the Headquarters informed only on major issues of policy.

The framework for international collaboration will be developed by this committee. The increasing role of donors in areas where indigenous capacities exist would be carefully reviewed by this committee. All the MOUs to be signed by ICAR with any international organization would be finalized by this committee after the same have been vetted by the respective technical divisions. This would avoid duplication and inefficiencies in this regard. The policy with regard to constitution of delegations or

expert teams for visiting various countries would also be developed by this committee. The participation of young scientists of ICAR, SAUs and even NGOs or Private sector in these delegations wherever appropriate would be ensured so that they get wide exposure and greater collegiality develops.

It should also ensure that the reports prepared by various delegations sent abroad are processed and policy issues put up to SPPC. The reports of various study visits should be widely circulated among the concerned scientific peers.

The scientific attaches in various missions abroad would be enabled to strengthen the research intelligence function besides helping in scouting opportunities for marketing technological services. The policies for Study visits sponsored by ICAR in special strategic areas should be developed so that ICAR takes a proactive attitude towards the International cooperation. A time bound plan may have to be developed for strengthening our links with different regions and geo-political groupings like ASEAN, SAARC, EEC etc.

ii) Sub-Committee on Technology Alert and Assessment System (TAAS):

The Review Committee suggested that headquarters should be divided into three teams so far as scientific disciplines are concerned viz: Crop Science, Animal Science and Human Resource Development including Social Sciences. The first two groups were supposed to be served by Research Planning Team and Technology Assessment and Development Team. We have looked at the functions of all the three groups and two teams and feel that the same would be well served by SPPC, SPCA, and other arrangements discussed here.

The sub-committee on TAAS would essentially lay down the system and routine for assessment. A DDG would coordinate this committee and have Directors of the National Institutes and other Scientists as its members. The chairpersonship can rotate among members. This committee would commission stripe reviews on important topics and invite comments from the eminent scientists on the recommendations of these reviews. The policy proposals on intellectual property rights, environmental and ethical implications of research, changes in the domestic and international trade policies and other matters related to technology development in future would be deliberated by this committee. The committee would have budgetary resources like all other committees to implement various proposals. Committee could invite proposals through competitive processes and provide research awards to outstanding scientific teams and groups outside the ICAR system to forge symbiotic linkages.

The committee may develop a new system of special hearings. On issues of strategic importance, it may invite various interest groups and experts to give presentation. In such meetings, the representative of various ministries may also be invited so that ICAR can get their input well in time before finalizing their policies on the matter

concerned.

The inter-disciplinary research has not been easy to foster. Similar programmes may not have linkages at higher level as is evident in Farming Systems research/Cropping systems research under three different divisions at ICAR HQs. TAAS would periodically take up such programmes for review and explore the possibility of designing collaborative research programmes. The committee would also ensure that the national conferences of different coordinated programmes or meetings of professional associations include sessions on interdisciplinary perspectives. For instance it would be useful if national meeting of coordinators of say, sorghum programme also invite the coordinators of various livestock and other related programmes.

iii) Sub-Committee on Technology Transfer:

The transfer of technology within the country and outside needs policy support and constant innovations to deal with emerging complexities. We agree with the recommendations of the Review Committee that ICAR should concentrate more on the research on technology transfer rather than on the field based technology transfer projects. All such projects should be handed over to SAUs so that no feeling of competition exists among ICAR, its Institutes and SAUs. In many states the recommendations for the same crops or enterprises emerge differently depending upon the sources. The attempt of ICAR to have zonal coordinators is in the right direction. It would be useful if such coordination and planning functions are strengthened in future. This committee headed by a DDG should have a few Development Commissioners, Vice Chancellors, representatives of NGOs and some other client organizations, and one or two DDGs as members. The purpose of the committee is to devise policies for building inter-organisational linkages between private and public sector, encourage corporate sector to increase its investments in R&D and technology transfer and propose a time bound plan for closing down the field extension activities. It is obvious that no organization finds it comfortable to close any field of activity. At the same time by scaling it down one can generate opportunities for further strengthening the qualitative basis of technology transfer systems.

Despite the fact that India has comparative advantage in several areas of technological development ICAR has not considered trade in its technical services. It should try to compete with the international centers in certain areas and collaborate in others so that India can emerge as a major source of technical know-how in the Third World. The Global technology marketing is a new field and would require high quality cross cultural research.

Given increasing emphasis on farming systems research which Eighth Five Year Plan working group has rightly termed as rural systems research(to include the non-farm aspect), the development of methodology and framework for collaborative research with farmers are urgent tasks. This committee in collaboration with DDG Crops and

Soils and Livestock initiate steps in this direction. Likewise linkage with financial institutions and other science and technology institutions, NGOs, farmers' and labourers' associations will have to be forged at the level of Institutes. The committee would identify other areas where policies for technology transfer have to be modified within or outside the country. Increasing influence of international agencies in modifying national policies will need to be tampered by this committee as well.

It is important to mention that in various coordination forum such as high level coordination committee on rural credit, state, district and block level committees, there is no participation of locally available scientists. Thus the entire developmental programs particularly of banks remain delinked with technology systematically. Committee would up policy note on such matters involving inter-organizational linkages to SPCAC.

iv) Institution Building:

As mentioned earlier(2.4), this is one of the most vital headquarters function. The sub-committee for this purpose will commission management audit of various Institutes so that their decision making systems and organisational culture is conducive for scientific research. It would through a task force on administrative reforms, process suggestions coming from various management committees and boards, QRTs and other sources and put up proposals on administrative reforms to Administrative Board. It can also announce prizes for efficiency enhancing suggestions.

Helping scientists who have been used to taking directions from the above for so long to take decisions themselves in future would require a major effort. Generation of accountability and peer culture in the Institutes may become easier if DG and the DDGs would set examples themselves. Highly authoritarian atmosphere that exists in most Institutes is certainly not conducive to creation of a stimulating environment for research. At the same time DDGs can not strengthen the hands of the Directors through too close a monitoring. Perhaps, management audit of one institute by a team of scientists from another institute may help. The responsibility for results may have to enforced through internal peer reviews and seminars rather than just through reports to the Headquarters. Management committees of the Institutes may have to play an active role in this process.

The Institution Building processes at the headquarters would require investing in the interactive processes so that the committee style of governance gains foot hold. Policy seminars, research debates and reviews and multidisciplinary assessment of major technology missions may become the point of corridor talk rather than the matters of different kind as at present.

Various headquarters functions discussed under 2.1 to 2.6 will be performed by different DDGs through various enabling committees so that headquarters acquires a dynamic pro-active culture. It is obvious that a DDG who is a coordinator of a committee will be guided by the coordinator of another committee

where he is just a member. The fact that every DDG will have to negotiate with each other implies that no role is seen as more important or powerful than others. It is also important to note that functional roles of the DDGs would dominate to some extent the disciplinary roles. The purpose is that disciplinary research can best be guided by the Directors and their Management and Research Advisory Committees. The QRTs which have become more of a ritual would then acquire far more importance in guiding research directions of the Institutes. All the major financial and administrative decisions within the allocated budget (manpower and financial) would be taken by the Director of the Institutes through similar committees at the Institute level. The size of the Institute would influence the extent of differentiation that would be necessary while setting up these committees. There is no doubt that Directors would not decentralize powers to various committees or head of the divisions if DG did not decentralize power to DDGs and DDGs to the ADGs.

We envisage that all positions in ICAR would be tenure positions and the scientists like DDGs and DG would revert back to active research after finishing their term. The salary should be protected so that there is no loss to any scientist due to such changes. The DDGs are expected to organize research grants for their research programmes so that on their return they would have unhindered access to facilities for research. Such scientists could even be given greater autonomy and freedom so that they can contribute creatively towards their long term research goals.

4.0 THE ROLE OF ADGS AND REGIONAL COMMITTEE

4.1 Redefining the functions of ADG

The role of ADGs is very crucial for the effective functioning of Headquarters. They have played very active role in not only generating new project proposals often at short notice but in representing ICAR in numerous meetings at central and state level (and sometimes at international level also). With change in the headquarter functions, we recommend the following options to enhance the role of ADGs.

Purely administrative tasks may be delegated to the administrative section which may have to be strengthened through professional staff.

Headquarters ADGs may have to support both the roles of the DDGs and DG i.e. functional and technical. This may be done through specific responsibilities such as review of QRT reports, processing of Institute's management committee reports, review of annual reports of the Institutes, review of project completion reports, synthesis of research findings of large programmes which have continued for a long time.

New functions can be taken up only when some of the old functions are shed. We understand uneasiness likely to arise on this account at various levels. But we have no doubt that the limits on human capacity to process information efficiently and with excellence have to be recognised. All the functionaries at HQs such as DDGs and ADGs can be effective only if the scientists in the field see their facilitative role.

Just as the new functions have been identified for the headquarters and the DDGs there is a need for redefining the functions of the ADGs. In view of the Review Committee recommendations, the headquarters can become tall and slim only when certain functions move closer to the field without in any sense losing their importance. We envisage a major role to be played by the ADGs by way of strengthening the regional committees. This experiment may deserve a serious trial for strengthening the linkages particularly in high-risk prone and less developed eastern and central regions. Though the importance of this function remains in all the regions.

The ADGs posted in the regions redesignated as Regional Directors (see 4.2.4 below for details) could attend to following functions:

- a) To identify gaps in the research particularly of the inter-disciplinary nature and commission feasibility studies to prepare new projects either to be pursued at the Institute or SAU level. In some cases research may have to be commissioned to the private sector or NGOs. This will be a boundary spanning function. The Regional Directors (RD) would essentially try to spot ideas emerging from extension or other channels and add value to these by providing quick seed money grants for further development. In some cases, due to their proximity to the field, they may be able to identify genuine and accountable NGOs and other people's organizations who can be involved in applied research in close consultation with the SAUs/ ICAR institutes. We do not expect any KVK to be run by ICAR any further. All the KVKs would be handed over to SAUs or collaborating NGOs. The RD in collaboration with zonal coordinators would strengthen the linkage function. While zonal coordinators would concentrate on on-farm trial and other innovative attempts to target group technologies, the RDs would emphasize on on-farm research and industry or user participation in research process.
- b) To follow up the actions on the recommendations of the QRT of the Institutes and various other research reviews having inter-organizational implications. They would propose agenda items on such issues to SPCAC. On the issues dealing with intra-ICAR matters, they would submit agenda items to SPPC or Administrative Board as the case may be.
- c) To prepare policy agenda for regional committee as well as for other committees at the headquarters on the basis of the feedback from the field.
- d) To advocate for certain resources or policy changes on behalf of the Institutes and SAUs.
- e) To act as the Member Secretary of the regional committee and member of the Management Committees of the Institute and Zonal Coordination Committees of the technology transfer programme. In the case of national institutes, DDGs would attend the management board meetings.
- f) To liaise with the state governments, chambers of commerce, NGOs and other such networks

which have a bearing on either provision of resources or utilisation of the same for research.

It is obvious that most of these functions would require decentralisation of financial and administrative powers without in any way reducing the role and functions of the Director of the Institutes. Since the Review Committee has rightly recommended that ICAR should withdraw or wind up its activities in the regions where strong parallel facilities have come up in the SAUs, the Regional Directors would help achieve this purpose in an amiable and functional manner. Time bound plans for this purpose would emerge only through prolonged negotiations and discussions with the SAUs and the concerned Institutes. In our view, implementation of these changes should be accomplished within one year. The Review Committee has rightly argued that the functions of the ICAR in '60s, '70s, '80s and '90s cannot remain same. If they do certain important functions are bound to suffer.

Just like DDGs, the ADGs should also have fixed tenure and not remain away from active research for more than five years(under exceptional circumstances for two terms of five years each). Otherwise the HQ will lose its ability to nurture research and sustain quality and the ADGs will lose the respect of the profession. Flow of scientists to and from the field should take place. We have taken note of the views expressed by many ADGs on the earlier draft. We are convinced that an organization can acquire the ethos of a scientific organization if the science remains the major obsession of the scientists. The finance and administration are the tasks best left to respective sections. The ADGs can play a very meaningful role in evolution of scientist friendly policies at the headquarters given their rich experience. However, no useful purpose would be served to have one more hierarchical level in the management of research. Given the complexity of tasks, we do not think that HQs can have a specialist in each discipline. Such a knowledge can always be harnessed from the respective institutes or the SAUs. The functional role of ADGs is quite important if the quality of decision making at the HQs has to improve.

4.2 Role Clarification : making ADGs more effective:

4.2.1 Scheme Preparation and monitoring

There were several suggestions about the number of ADGs and differences in the perception of DDGs and ADGs about the mutual role and relevance. ADGs felt that for preparing new schemes or extending the existing ones major burden was born by them²³. A suggestion was made that financial powers available with the project coordinator should be passed on to the ADG. Resource allocation, project evaluation and monitoring should also be done by the ADGs. Such a change would nullify various measures aimed at decentralization. We do not suggest any upward flow of powers or functions as are available with the project coordinators. On the contrary, there is a case for strengthening the role of project coordinators even more so

23. Some suggested that the monitoring of a subject discipline should be done by the ADG and that of the division by the DDG. We do not think this is a workable proposition in the light of other suggestions made here about the changes in the role of ADGs.

that they could take over some of the functions currently performed by the ADGs such as financial monitoring, planning and budgeting etc²⁴.

4.2.2 Review and Monitoring :

With greater decentralization at all levels the need for detailed monitoring whether financial or physical would go down at HQs. ADGs deputing for DDGs on the management committees may perform particularly a liaison function. They may follow up the action on QRT recommendations, suggestions emerging from other reviews (such as the Stripe reviews recommended by Review Committee), and other directions from HQ. They should also pursue action on the pending matters of the Institute on the management committee of which they serve with the HQs. Major role of HQs ADGs should be technical monitoring and functional support to DDGs rather than administrative review, budget release and other such tasks.

4.2.3 Parity between Principal Scientists and ADGs and Reduction in Number of ADGs at HQ:

Given the fact that all the principal scientists perform the similar functions as ADGs there was no need to continue with the different nomenclatures. We suggest that principal scientists are also designated as ADGs. But instead of 37 ADGs at present there should be no more than 18 ADGs two for each division and one each for various functional and technical committees, MIS section and international cooperation. The remaining ADGs and the principal scientists should be encouraged either to move to the projects in the Institutes or SAUs to take up active research responsibilities or to move to the regional centres to strengthen the regional committee meetings. There could be more than one Regional director in one region depending upon the work load and complexity of tasks.

Another possibility is that the senior scientists at the headquarters not performing functional responsibilities are designated as **science advisors** rather than as ADGs or principle scientists. They should have well defined scientific tasks and should revert to their scientific positions after completion of the tasks.

4.2.4 Strengthening Regional Committees:

Given the focus on agro climatic zone based planning the role of ADGs in strengthening regional or zonal level coordination has become extremely important. Instead of concentrating all the functions at the headquarters, moving senior officers to the field will help in decentralization of the functions. Feedback from the scientists in Universities or Institutes would also become smoother. The Extension division already has zonal coordinators for various extension programmes. In some of the states zonal coordinators have already proved their worth. This is

24. Coordination without any control over the resources does make the task of the project coordinators very difficult. Although, it is true that mere availability of control can never generate sufficient cooperation in a team. However, control over certain resources can help the coordinators in facilitating the tasks of the coordinating scientists.

an experience worth building upon while moving ADGs to the regions. The regional centres are not supposed to be the controlling or fund disbursing officers. In addition to providing support in regional committee meetings they would also visit different institutions and identify bottlenecks in the implementation of various projects and schemes.

It is important to recall that the need for such functionaries was felt as far back as in sixties(see point 1.5.1.).

Directors of the Institutes should not mark copies of all the letters to the Headquarters to the Regional Office. Only such references need to be marked to them which have a bearing on the inter-organizational coordination.

It was noted in one of the regional committee meeting that too much of information was supposed to be processed in too little time. The result was that lot of scientists coming from different states went back without any strategic thinking or value addition in their programmes. The host agricultural universities provided all the support but the agenda was supposed to be prepared by the ICAR and it often appeared to be very diffused. Above arrangement is supposed to take care of this inadequacy.

5.0 ROLE OF THE SECRETARY:

The Secretary today services the institute, coordinates with the Ministry of Agriculture and other organisations, ensures the protocol for international cooperation, looks after the headquarters establishment and provides support to the DG.

We recommend that an executive assistant is recruited with training in management sciences to provide secretarial and MIS support to the DG. The Secretary (ICAR) should concentrate more on improving the systems and procedures so that the response time of the headquarters reduces and efficiency increases.

Given the resource squeeze, reducing the size of the establishment may be another major responsibility of the Secretary.

The Review Committee has recommended that with the trimming of the headquarters and decentralisation, the functions of the secretary should be modified. The idea of the Review Committee that he should advise DG and DDGs/Directors when requested may not be entirely functional. If an administrator has to implement any decision, it must have its full commitment towards that. If all the files go through the secretary, he may be required to either submit to DG his opinion wherever he is in disagreement with the suggestions given by DDGs or just put forward to DG whichever file comes to him. Such an action would not create problem if DG would use his discretion to overrule the advise of DDGs or the secretary as the case may be. The problem would arise when the scientists would question the competence of the secretary to give advice on certain matters on which they think their views are more considered. Under the present system enough room exists for misunderstandings to arise.

We recommend that all the decisions of functional or technical committee would be forwarded directly to DG by the concerned Chairperson of the functional committees. The secretary would implement the decisions. As member secretary or member of different committees, he/she would provide the relevant administrative advice when an issue is being discussed. But once the decision is made, it would be implemented as efficiently as possible.

Perhaps the suggestion that secretary should be a full time employee on the strength of the ICAR has merit. At the same time one must keep in mind that joint secretary, DARE will deal with the DG, ICAR and Secretary, DARE and perform the functions specified in the business rules. As long as the existence of DARE is accepted as a functional arrangement the present system can be improved only with better definition of the boundaries.

If the administrative and financial powers are delegated to various committees, secretary would then implement directions of these committees in the exercise of such powers. Only in cases where dispute about the powers of these committees exists, rather than reversing a decision or delaying it secretary would be obliged to put up a note to the SPPC for either revision of the delegated powers or for changing a policy. DG should avoid making reference to the other Ministries including finance in this regard. All the powers of the DG could be exercised by the DDGs with proper authorization. In many cases, such authorization may have to be given post facto. The touch stone would be the organizational requirements and not administrative decencies.

Secretary should spend more time in ensuring adequate follow up of the decisions taken in various organs of the ICAR besides toning up the information system at the headquarters. With computerization of information it should be possible for the Secretary to keep a tab on important decisions and help overcome the bottlenecks.

There should not be any ambiguity about the fact that the Secretary or DDG can consider their job well done only if the scientists in the laboratory and fields find a change in the working environment. The cutting edge of ICAR today is highly blunted. The younger scientists do not feel that the top management is necessarily concerned with the results. In many institutes the power delegated by the headquarters to the institute has remained concentrated in the hands of the Director. Further decentralization of power to the head of the divisions, project coordinators and other scientists has not taken place. Reorganization of the headquarters and redefinition of the role of the administration would serve little purpose if the decision making culture remains same in the institute.

A senior scientist should accompany the Secretary and Financial Advisor on visits to different institutes to strengthen the administrative systems. Many scientists particularly the junior ones end up spending lot of time on the non-scientific administrative activities. The style of governance in many of the institute is highly personalized, with the result development of systems has not taken place adequately. The strengthening of administrative system at the headquarters must thus be accompanied with the strength-

ening of the systems at the institute level also.

Secretary aided by upgraded position of Director-Finance, Personnel, Works, and Manager-MIS(a new position which may be necessary for strengthening MIS cell) will help in bringing about a result oriented culture. The framing of own rules of ICAR is an urgent task which should be completed in time bound manner. A science organization can no more be continued with government rules essentially regulatory in nature and premised on assumptions which are no more valid. Transformation of work culture, we have suggested takes place through new functions and reordered decision making culture.

6.0 THE ROLE OF FINANCIAL ADVISOR AND IMPROVEMENT IN FINANCIAL MANAGEMENT

In an economy vulnerable to various domestic and international pressures the need for a very high degree of financial prudence in prioritization of research goals cannot be overemphasized. Whenever budget cut is applied all projects are made to suffer equally. The Eight Five Year Plan Working Group Report was no exception in this regard. On one hand the scientists grudge the attitude of the staff in Finance Section and on the other, by not providing clear priorities they leave the matter to the judgment of administrative staff. Financial Advisor at one stage had suggested that the role of mobilizing resources from non-budgetary sources could also be one of the functions of the FA. There are instances where to meet unplanned expenditures the Finance Section helps the top management. In the process the top management may become dependent for such favours and neglect the system building aspects.

The Financial Advisor has a well defined role in terms of budgeting and expenditure control. If this role appears too constraining to the scientists it may be so, as mentioned above, because of lack of prioritization and financial delegation by the DG to the DDGs.

In the new role of DDGs they should have flexibility to commission studies, hire short term research staff for specific tasks and contract services (word processing, data processing etc.). FA would reorganize the budgeting mechanisms so that more and more decisions are taken at the Institute level. Also the new role of DDGs and ADGs should become meaningful by appropriate financial resources.

Some of the functions reiterated or now emphasised to be performed by F.A. are:

a) Aiding DG and the Chairperson of CFM (FA may also chair the CFM by rotation) in mobilizing resources for the ICAR so that with in next five years, ICAR may aim at generating at least 33 per cent of its revenue expenditure from non-budgetary sources. This may have to be done by raising fees for various testing facilities, levying discriminating charges for various facilities from Multinational Corporation, Indian large and small companies and entrepreneurs; raising resources from user organizations like National Seeds Corporation, agri-input companies etc. The A.P.Cess may have to be increased both in coverage of commodities (at present, perhaps only 25 commodities are taxed) and also rate per commodity. The consultancy services for national and international clients may have to be started. This is crucial for enhancing the autonomy of the ICAR also.

b) F.A. will help DG to close all the redundant regional research stations and develop methods for sale of assets, manpower and other resources to SAUs or even private sector(with proven commitment to

agricultural research).

c) The cost effectiveness in the research requires using innovative ways of developing accountable and result oriented instruments. For instance, ICAR may float companies for raising capital in stock market as well as debentures from interested client organizations for new technologies. F.A will help organize relevant management and financial expertise to promote new companies.

d) In some cases, venture capital support may have to be mobilized for the scientists having promising technologies through royalty sharing mechanisms. This may be necessary if such scientists have not to be lost to the public R & D institutions. Given increasing global competition and entry of MNCs in Indian markets, providing incentives and safeguards to Indian scientists is an urgent concern. ICAR should establish links with Technology Development and Information Company of India (TDICI)- a subsidiary of Industrial Credit and Investment Corporation of India (ICICI). TDICI provides venture capital to entrepreneurs using new technologies. It also provides an information service about new technologies and changes in some of the existing ones with the help of a global data base. It has already funded more than 100 projects worth about Rs. 60 crores since 1988 involving new industrial technologies. ICAR may have to think about similar structural options for promoting new technology based enterprises among scientists or other entrepreneurs. Even in the field of specialized technological knowledge, ICAR should promote or encourage farmers' organizations to build up their own knowledge assimilation and dissemination system. FA can help the DDG, Chairperson of CFM, Institution Building and TAAS to think through these ideas.

e) Financial Advisor will ensure that ICAR strengthen Financial Management system by developing appropriate manuals, checklists and guidelines for processing requests for schemes, works or manpower. The current system of raising queries not all at one time has costed the ICAR a great deal by facing delays etc. In this regard Chandrashekhar Singh Committee observed that, "Scrutiny of schemes at two stages by Finance (one by internal finance and again by FA, DARE) should be done away with (1982:8). This committee recommended that status of Director (Finance) should be raised to that of joint secretary. He was supposed to function as the "Integrated Financial Advisor in DARE and full time Financial Advisor of ICAR Under Secretary, DARE/DG, ICAR". It was suggested that Member (Finance) could consider delegating some of his powers to the Integrated Financial Advisor as was done in CSIR. We recommend that till this option is operationalised, the role of present Financial Advisor should be to strengthen the internal systems of financial, management, budgeting and control with ICAR Institutes and Headquarters. One time processing of various proposal may be initiated immediately so as to achieve economy of time and resources. This will also help in removing dichotomy between technical and administrative wing to some extent. No technical programme can deliver results unless timely availability of necessary resources is ensured. F.A as member of CFM will ensure that various checklists and guidelines are not only developed but also used before proposals come up for discussion in CFM/SPPC as the case may be.

Several issues have been raised in the discussions which require further thought at the ICAR headquarters.

a) Why should the state governments not make adequate allocation of budget for R & D purposes through SAUs and otherwise so that reliance on ICAR for maintenance research goes down. ICAR should allocate funds only for strategic research and for launching new courses or making other pedagogical reforms. The role of finance in bringing about such reordering of the priorities can be very important. Unless clear criteria for evaluation are laid down, finance would per force of circumstances look at the data they are used to handle.

b) The concept of block grants to the Institutes with well laid out priorities and a Memorandum of Understanding (MOU) may help in reducing the work load at the headquarters.

c) Recently the budgeting guidelines for NARP have been considerably modified. The provision of funds for contracting studies to outsiders has been made. If proposals for infrastructural development were delayed more than thirty days at the headquarters, the Vice Chancellors of the universities could consider the budget as approved. Against the firm orders for construction, fifty percent of the budget could be reimbursed by the headquarters. Similar flexibility needs to be achieved with regard to other programmes.

d) The programme budgeting skills and methods need considerable improvement. There is a critical value of a resource below which any allocation would not lead to any worthwhile performance. Such critical limits should be inquired from each Project Coordinator and the Director of the Institutes so that some optimal budget allocations are not made. The CFM should be empowered to transfer money from one Institute to another so as to ensure higher productivity and better utilisation of resources if there are major bottlenecks.

e) The budget provision should exist for commissioning ad hoc studies at the level of Regional Directors, Director of the Institutes, DDGs and DG within well defined guidelines and criteria to avoid duplication and wastage.

f) The procedures for preparation of budget proposals should be strengthened and model proposals should be circulated to the Institutes so that once the proposals were received in that format, further processing on file after approval by the Estimates Finance Committee or CFM would not be necessary.

g) The culture of pooling and sharing of resources has to be encouraged and due recognition is necessary for such efforts by the Directors of the Institutes. The figures on financial efficiency across the Institutes must be periodically circulated. Likewise the availability of budget for research vis-a-vis other purposes should also be brought out. The competitive spirit will have to be built upon for generating accountability and efficiency. Before sanctioning budget for any new equipment, the status of existing equipments must be ascertained. While it is true that for want of efficiency on somebody's part other scientists should not suffer. At the same time need for collective responsibility in this regard does not need to be

stressed.

Procedurally, as mentioned separately, what is most important is that all the queries are raised at one time. Once CFM approves the budget with all the details, there should be no need for further processing of these proposals. Chandrashekhar Singh Committee (1982) had made many of these suggestions. And we recommend that these be implemented.

h) In some of the universities the support for the centres of the coordinated project has been highly inadequate. The headquarters have to take decision about closing such centres if the undertaking given by the university at the time of sanction was not honoured.

i) The recent modifications in the procedures for PIC (Project Implementation Committees) are extremely appreciable. Likewise the budget proposals should be sent at least a month in advance to the EFC so that thorough scrutiny could take place before the same came up for approval in EFC.

j) The procedures for the sanctioning of the projects can be modified on the basis of the size of the budget. For instance up to 50 lacs the DG should be empowered to sanction on the advise of CFM. Project between 50 lacs to five crores could be sanctioned by the empowered CFM with larger participation and projects beyond five crores need only be sent to the EFC.

k) The discretionary powers of the Project Coordinators should be enhanced. Use of these powers should not require Director's permission within a specified limit.

l) There is no reason to assume that the estimates of the works even if approved in the budget would be processed better if reviewed by the Director (works) at the headquarter. There are many examples where the budget provided in the aided projects remains under utilized for want of timely sanctions. However, care may be necessary if the maintenance expenditure on such infrastructure is going to be beyond the benefit expected. The system of getting all construction done through CPWD must be discontinued. Through competitive bidding, the orders for various works should be executed without getting bogged down with the priorities and quality standards of CPWD. The construction cost may also come down in the process.

m) While the contingency grants for research have been revised to Rs. 20,000 per scientist, these should serve as only norms. The CFM should generate deviation in this regard depending upon the nature of research and past performance. The FA can help the CFM in developing range of norms rather than just an average value.

n) The contingency expenditure at the level of Director or Head of the division should be provided explicitly to take care of entertainment expenses for the guests(including visiting headquarter scientists). Otherwise the manipulation of accounts takes place and such a practice can never be considered healthy. This weakness of the budgetary system is well known and if no action is taken the implication would be that the manipulation for such purposes is considered acceptable.

o) There is a need for a task force to be set up to visit various Institutes of national importance so that the flexibility available there could be provided to the scientists in the ICAR as well.

p) In some of the institutes, accounts officers when in disagreement with the Director, referred the matter to the headquarters. This would stop in the new arrangement. Matter can only go upto the management committee of the institute when a major dispute arises. Alternatively, the institutes's finance committee should resolve such matters.

7.0 IMPROVING FUNCTIONAL PROCESSES AND WORK ENVIRONMENT

Our view is that once there is a consensus on the major headquarters functions the systems and procedures can be easily worked out. In general we feel that in light of the proposed structure the headquarters will have to become knowledge intensive instead of file or paper intensive. This knowledge is unlikely to emerge from the study of past precedences. It will require interactions with knowledgeable scientists within the country and outside, policy makers, political and other stake holders including disadvantaged social groups. We have mentioned below some of the steps that may aid movement towards such an environment.

7.1. Autonomy and Decentralization:

The leadership of ICAR seems to have followed what some have called the style of 'censure and control' rather than 'stimulate and support' (Singh 1989). The autonomy of ICAR has to be seen in terms of the autonomy of Institutes, National Research Centres and various other units in ICAR. Perhaps the historical legacy of having been a department of government still persists.

7.1.1 Framing Own Rules:

Questions were raised in '60s, '70s and again are raised in the Review Committee about the logic of ICAR following government rules. There was a feeling that depending upon the convenience reference sometimes was made to the Government of India rules and to rules of ICAR on other occasions. This led to ad hocism in administration. Colleagues in the finance department felt that existing rules were fairly precise. However, there is a feeling that with complexity of tasks and multiplication of institutions people at various levels will be able to use the decentralized powers only if rationalization of rules and regulations follows. Ambiguity in rules and lack of autonomy becomes apparent when on certain matters long delays take place and Institutes keep pushing the matters to the Headquarters. Framing of rules should be taken up on urgent basis notwithstanding the earlier observations of Governing Body in this regard.

7.1.2 Attachment to Department of Science and Technology vis-a-vis Agriculture

While some have suggested attachment of ICAR to the department of Science and Technology in order to encourage 'Blue Sky Research', in our view attachment with Ministry of Agriculture serves a greater purpose. However, DG, ICAR and Secretary, DARE should be a member of

committees of Secretaries on Science and Technology²⁵.

Even though an earlier government had announced that Prime Minister would be the President of ICAR, subsequently no action seems to have taken place on this issue. There is no doubt that if Prime Minister headed the ICAR, autonomy of the organization and its insulation from political interference would be achieved to a great extent. DG may pursue this issue afresh.

7.1.3 Financial Autonomy to Institutes

An earlier study (Aqueil Ahmed, 1980) had also pointed out that financial and budgetary matters remain one of the greatest sources of the strain in the headquarters-Institute relationship. However, with regard to NARP we were told that agriculture universities had been given considerable freedom to use the resources. The norms of advancing funds against approved budget have also been made very liberal.

The norms regarding the powers of Directors needed to be clarified. It is true that in some of the Institutes large scale diversion of budget from one head to another may have taken place without proper planning or authorization. If financial and management audit makes a case for lowering the health code rating, the withdrawal or reduction in Directors powers and such other circumstances would make sense. However, on account of a few instances it would be improper to constrain all the Institutions. If the budgets approval follows a MOU between the headquarters and the Institutes this problem may become less serious. There is a suggestion that Block Grants be given to the Institutes with considerable freedom to reallocate the funds. Our view is that the objective of reducing public expenditure on manpower and transport and auditing expenditure through committees or other mechanisms should be well laid out at the Institute level.

We have gone through the revised general guidelines prepared by ICAR (1991) for the purpose. These guidelines need substantial revision in the light of new economic policy of the government and demands of an efficient and vibrant research organization. In view of the fact that Review Committee has already made a recommendation for making the scientific panels compact and restricted only for certain areas the procedures for scrutiny and evaluation will need to be modified.

The process of generating research proposals has to be competitive and scrutiny has to be quick and comprehensive. We suggest that ICAR; should have well laid out priorities within which the proposals should be invited. Under exceptional circumstances, proposals can also be entertained in non-priority areas. In view of the recommendation made earlier regarding delegation of powers, two DDGs and the Management Committees the process of scrutiny and review

25. It is regrettable that DG,ICAR and Secty, DARE were not invited to be the member of a committee of secretaries on Drought policy in 1987. Likewise there were some other instances when the committee of Secretaries on Science and Technology in Government of India did not include Secretary ,DARE. This is an issue on which Cabinet Secretariat need to be sensitized.

should be modified. Every proposal could be sent to the at least three to five reviewers with the stipulation that decision could be made on the receipt of any two comments, if other comments are delayed. No proposal of less than 1 Lakh rupees should take more than one month up to five lacs not more than one and half months, up to 20 lacs nor more than three months and above 20 lacs not more than six months. Depending upon the nature of distribution of proposals according to size and subjects a system of seminar presentation after proposals have been revised in the light of comments of the reviewers should be explored. These seminars should preferably be presented in the national institutes or at the headquarters. In the latter case, Director of the National Institutes along with some distinguished scientists could be invited.

7.1.4 Enforcing Decentralization

One of the important reasons, we were told, for perceived lack of decentralization was the hesitance of many Directors in using their powers. There were many cases in which matters lying within the Directors' purview were referred to the headquarters. Some people felt that Directors of the Institutes deliberately sent the weak cases to headquarters so that blame for the rejection was passed on upwards. This was an extremely dysfunctional practice. Headquarters should refuse to give any advice on matters which lie within directors domain. Taking action but advising the Director to avoid doing that in future was not very helpful. Directors must be enabled to take full responsibility for pleasant or unpleasant decisions. The delegation of power from DG to DDG as mentioned earlier and from headquarters to the Institutes should go hand in hand.

8.0 WORK CULTURE AT THE HEADQUARTERS:

Earlier full time Director General, we were told, spent 90 per cent of his time on administration. A desirable system would be one in which he spends 90 per cent time on strategic planning, institution building, policy and performance review and inter organizational networking.

The functional rather than the hierarchical arrangements have to be given importance. Accountability should not merely be between the administration and the scientists but also between the junior and senior scientists. It would be useful if DG as well as DDGs would meet in the office of the concerned scientists once in a while. This would not work if it was done for cosmetic reasons. This will require some attitudinal change and self criticism by the senior scientists. Once they set the trend, the administration in our view would certainly reciprocate. Another advantage of DDGs visiting the administrative section could be that they would come to know of the problems that the administrative staff faced. It was disappointing that not many senior scientists talked about the problems that staff faced. Unless the top management owned responsibility towards various subsets at the headquarters and in the Institutes, it is difficult to imagine how mutual antipathy between administration and the scientists would go down.

Some of the scientists had very limited and cramped office space. The constraints in the case of administrative staff were even more intense. In some of the sections it was understandable that retrieving files would be so difficult because there was no way by which 4 to 5 staff sitting in a small room would keep

an order in the records. Part of the problem arose because status linked requirements of space rather than functional arrangements dominated the mood of the scientists. The administrative sections could not serve the scientists if the present arrangement of record keeping and handling were not urgently improved. Once the decision regarding movement of some of the ADGs, principal scientists and other lower level scientific and technical staff was taken enough space should be available for reorganizing the administrative and scientific sections. The administrative staff would also be moved or exchanged with the staff in the institutes.

We strongly recommend that the eligibility conditions for various positions at the Headquarters as well as Institutes should be such that both way movement of the staff in administration as well as scientific fields takes place. The promotional avenues for the administrative staff in the institutes as well as Headquarters should be rationalized by looking at the job requirements and efficiency of performance. It is possible that some of the staff at Headquarters given their advanced age may be hesitant in moving to the institutes and vice versa. However, once a policy is developed taking into account the individual difficulties to the extent possible, it should be allowed to be implemented.

A common cadre of the staff of the administrative staff should be followed and transfer should take place at par i.e. at the same level.

In our view, there is no need for any technical staff at the Headquarters as well as scientific staff below S3. All such staff should be moved to the Institutes with well defined responsibilities. While implementing the policy regarding the movement of staff, the concern of both administrative and scientific staff working in remote areas should be adequately taken into account. Some criteria will have to be developed for giving weightage for the posting in the hardship areas.

In light of the recommendations about centralizing administrative and technical wings of the headquarters at the level of DDG, the layout of the offices would in any case need to be modified. Perhaps the answer lies in moving the entire Headquarters away from the present premises in more spacious building.

The culture of interactions would also improve if there were small committee rooms where executives could hold meetings. Many times the unhindered access to various executives in the headquarters, several meetings continued simultaneously. The result not only was a confusion but also frustration for some of the participants. The concerned executives also felt distracted by the present arrangement. The system of individual scientists lobbying for their cases of whatever nature must stop. There should be strict protocol and discipline in this regard. At the same time the response time at the headquarters has to be shortened and response efficiency improved. By 'response efficiency' we refer to the satisfaction

of the appealing scientists or administrative staff whether in the headquarters or in the Institutes²⁶.

Many of the directors of the Institutes addressed the letters to the DG in view of the general feeling that administration would not respond if letters were written to DDGs or ADGs. In any modern organization letters are written to the section where the matter could be decided. The practice of addressing communications to the Director General²⁷ except in the extraordinary cases should be stopped. The levels and functions once made clear should be adhered to by the scientists. This would happen if scientists could find functional culture instead of hierarchical culture at the headquarters.

We recommend that every five years, a review of the internal work environment should be undertaken so that dysfunctional processes are weeded out and the innovative and creative systems incorporated.

9.0 MONITORING THE IMPLEMENTATION OF REORGANIZATION:

9.1 There was a suggestion that DARE should have two executive committees on education, and research and extension. These committees comprising DDGs, secretary and financial adviser in addition to concerned ADGs should meet once a month after reorganization to follow up the decisions and problems faced if any in the process of implementation²⁸. We have suggested a very minimal role for DARE and that too through ICAR functionaries performing dual role. The monitoring of the implementation will have to be done by the SPPC.

10.0 REORGANIZATION OF ADMINISTRATIVE SUPPORT SECTIONS

The reorganization of the administrative support system hinges closely on the reorganization of the culture at the headquarters. The personnel department felt that certain functions should be handled by only one administrative section to avoid confusion. An example was given that counting of previous service, fixation of pay or seniority if done in different technical sections may create more problems than solve it. In our view the uniform policies are being mixed up with uniform implementation.

In the reorganized structure, the DDGs would not have to bother about service conditions of the scien-

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26. We heard from some of the scientists in the south that ICAR HQ attached far too much of importance to what they call PHD phenomenon (i.e. Punjab, Haryana and Delhi). Some of them regretted that notification for the meetings often reached them after the meeting. Such feelings even if imaginary did not generate collegiality and harmony in the organization. We suggest that special care should be taken while constituting committees or delegations that proper representation is given to various disciplinary and institutional backgrounds no matter what the administrative expediency is.
27. We do not question the practice followed in some corporate offices that all the letters are addressed by the branches or constituent units to the Managing Director or the head of the organization. Here the section to which the matter pertains is also mentioned so that it is dealt with by relevant staff.
28. Members of the IIM-A study team will be happy to attend some of the meetings for first few months so as to generate concurrent feedback on the system of planning and review.

tists or other administrative matters. They would lay down the policies and monitor their implementation. The day-to-day implementation would be the responsibility of concerned administrative officials. In view of the new responsibilities of DDGs and ADGs there is no scope for burdening them with the mundane matters. It will be useful if guidelines for various personnel and other matters will be developed by the HRD/Personnel Committee and communicated to all the Institutes after approval by SPPC. No policy guideline will be issued without making reference to SPPC.

We strongly recommend that an urgent action plan is developed to modernize various facilities ranging from computers to printing and binding of documents. Since development of MIS would require LOCAL AREA NETWORKS. It may be useful to invest in one or two high capacity mini or super-mini computers to which all other personal computers become the terminals. This will help not only in tracking the movements of papers and files but also in generating reports with far lesser cost and time. This will also relax the time constraint and thereby provide opportunity for more in-depth review of various activities. The MIS would be fully effective if the major national and central institutions are also connected. Till a full-fledged system of networking is established we recommend that an MOU is established with NICNET having its reach in most of the districts of the country for transmission of data and information. Side by side we recommend that communication of report from floppy as well as hard copy is made compulsory so that incorporation of the reports at the Headquarters in various reviews becomes quick and manageable. Even though it is not mentioned in our terms of reference, we may add that the library facilities need considerable improvement. It may be worthwhile to also link up the sum of international databases so that on line search can be made for various scientific purposes.

It may not be necessary to create internal facilities for all kinds of functions since many of these should be got done at far lesser cost by contacting out to private efficient vendors. Therefore, while skeleton facilities may be necessary full fledged facilities need to be established only when their cost effectiveness is proved in comparison with outside contractual services. The availability of desk top publishing facilities linked with a reprographic printers should be organized so that dissemination of reports does not become a bottleneck. This is a matter where standards achieved by elite institutions within the country should provide a frame of reference.

11.0 SUMMING UP

Our contention in this report is that ICAR headquarters should be seen as a collegial team concerned with long term as well as short term thinking about emerging technological frontiers. Since most of the upcoming problems in difficult regions or sectors require inter-disciplinary research the team spirit at the headquarters is most necessary.

Various committees suggested in this report would provide policy guidelines and perform monitoring and evaluation function. It is through this monitoring that the culture of implementation is sought to be modified. The DDGs would give greater importance to their functional roles and allow disciplinary roles to be expanded through strengthening of Institutes as centres of excellence of research. This will help the disciplinary roles of the Director of the Institutes and other senior scientists (who may not have authority but may have competence) become

important. The dichotomy between administration and the technical wing is sought to be dissolved through (a) decentralisation, (b) redefinition of the roles and (c) committee style of governance. We do not think that simply changing the reporting relationships will make much difference if the culture of decision making does not change.

ICAR is poised to play a pivotal role in the national march towards a truly self reliant future. Its revitalization through reorganization is a historic necessity. However, the change this time must not only be expected in the structure of roles and relationships but also in the spirit of scientific enquiry. The pursuit of excellence requires an environment of trust, support, creativity and commitment towards larger social purposes. The top management of ICAR is indeed competent to provide the leadership for a cultural break from the past. We hope that this report will help in ushering in an era of greater flexibility and support for the scientists at the grass roots level committed to long term sustainable development of Indian economy.

Annexure one

Additional Terms of reference for the Study on Reorganization of ICAR Headquarters

Sl. Recomm.

No. No.

1. 7 to 10

The four paras bring out the following major recommendations:-

 - i) ICAR should develop modern information network computerised satellite-based information network (ICARNET) - for Institutes and SAUs.

For this the Division of Information and Publication and ARIC be merged and converted into Directorate.. PR Unit be removed. Directorate be suitably strengthened.

 - ii) There is an urgent need for scientifically organised information, storage and retrieval system in ICAR Institute.
 - iii) Modern-day gadgets like computers should invariably be used by the ICAR.
2. 11

Research costs in agriculture, as in other areas, are increasing due to the rise in prices of books, journals, equipment, chemicals and other inputs. Increase in emoluments due to higher cost of living is an ever-increasing burden. It may be increasingly difficult for the Government to increase the funding for R & D at the rate required. It is, therefore, imperative that R & D funds are used judiciously to maximize the output of R & D investments.
3. 18

The financial structure chosen for an Institution should be such as to permit flexibility in operation and full autonomy consistent with the required degree of accountability to ensure a good return on the investments made on the Institution. It is, therefore, necessary for the ICAR to develop its own Service and Financial Rules and also to simplify its working procedures on the CSIR, DAE, etc.
4. 19

In the above background, we recommend that following operational changes be made in the financial management systems of the ICAR:

 - a) The post of Director (F) of the ICAR should be upgraded to the pay-scale of Joint Secretary and designated as Internal Financial Adviser (IFA).
 - b) The IFA should be a whole-time employee of the ICAR and should be responsible for control of Finance/Budget of the ICAR, maintenance of accounts and internal audit.
 - c) The practice of single-file system in dealing with Finance and others outside the ICAR should be discontinued (except exceptional situations with the prior knowledge and approval of the Director-General, ICAR).
 - d) Only Secretary (Expenditure) in the Ministry of Finance should be associated as Member (Finance) on the Governing Body of ICAR as in the case of the Governing Body of CSIR. The concurrence of the Member (Finance) should generally be sought only to be considered and decided in the course of formal

meetings of the Standing Finance Committee/Governing Body, for which adequate notice should be given to the Member (Finance).

e) Consequent to the upgradation of the status of Director (Finance), FA (DARE) should have no role to play in the internal affairs of the ICAR. The role of FA (DARE) should be limited exclusively to financial matters relating to the DARE and the Budgetary affairs of the ICAR at the appropriate stage.

f) The Finance Wing of the ICAR Headquarters should be reorganised separating the audit from accounts under the charge of two separate Directors, and greater emphasis be laid on internal audit of the ICAR Institutes to ensure uniformity in financial procedures and proper accountability at all levels. The working of the Finance Wing of the ICAR should be reviewed, particularly relating to the existing procedures of releases of grants.

5. 20

As in the case of the CSIR, the PIC/EFC procedure should not apply to the ICAR while sanctioning Plan schemes. Once the Plan outlay and the budget of the ICAR have been approved, the DARE or its PIC/EFC should not involve itself in the sanctioning of Plan schemes. The individual Plan schemes should be scrutinised by the Divisional Committee of the ICAR on which the representatives of the Planning Commission and others considered appropriate as Appraising Agencies should be associated. Thereafter the Director-General, ICAR/Governing Body should be competent to sanction the Plan schemes.

6. 21

The sanction of additional posts, purchase of vehicles and works programmes, wherever these are a part of the Plan schemes should also be looked into by the ICAR itself and finalised with the approval of the Governing Body without any reference to Finance, for which a working procedure may be evolved by the ICAR in consultation with member (Finance) on the lines of the CSIR to take an overall view of the existing vacancies in the entire system for their deployment in areas/Institutes where additional posts are required for new schemes or before releasing the vacancies in the on-going schemes for being filled in relaxation of current ban orders. Once this procedure is settled, it should not be necessary for the ICAR to go to Finance in each case of sanction of additional posts or for releasing the vacant posts for being filled in relaxation of the ban orders. This should be totally within the powers of the Director-General, ICAR. The Governing Body, in addition, should act as a 'think tank' providing leadership and guidance in all matters relating to agricultural research and education.

7. 23

The committee feels that with the participation of Ministers of Agriculture, Animal Husbandry, Fisheries, etc., as at present, a lot of time is spent on formal inauguration; there is also little participation from the Development Departments from the States in the region and the Centre. The interaction is confined primarily to the ICAR and the SAUs in the region. The Committee is of the view that considering the importance of the Regional Committees, there is a need for improving their functioning. This will require changes in their composition and methods of functioning. The Regional Committees may comprise a Chairman, a small number of senior technical personnel representing Central and State Development Departments related to Agriculture, Animal Husbandry, Fisheries, etc., a few representatives of the SAUs, ICAR Institutes in the region and the ICAR Headquarters. The agenda of the Committee should be brief and related to discussion on location-specific problems of Agricultural Research

and Education and the proposed solutions. The Committee should meet at least twice a year prior to the rabi and kharif seasons. The Director-General who is the Chairman of the Regional committees, may nominate a Deputy Director General to chair, if necessary. One of the Directors of the Institutes in the region by rotation, should function as Member-Secretary of the Committee. He should be assisted by a Scientist, to be designated as Joint Director, who should be provided by the ICAR Headquarters from within the existing scientific strength, without resorting to the creation of additional post. He should be provided with a small nucleus of administrative and technical support. This unit should deal exclusively with the work of the Committee and, in addition to organising the meetings, will follow up action on each of the recommendations with the SAUs, ICAR Institutes and the State Development Departments. The proceedings of the Committee should be brief and should only indicate the action points. The Joint Director will also act as a Liaison Officer between the Council's Headquarters, ICAR Institutes, the SAUs and the State Development Department in the region.

8. 24

The Scientific Panels in different disciplines advise the ICAR on technical matters related to agricultural research, education and extension education. At present these Panels only scrutinize the technical soundness and feasibility of project proposals submitted for funding out of the AP Cess Fund. Now that we are instituting the media of Research Advisory Committees at the Institute level and a Standing Policy Planning Committee at the Headquarter's level, the Scientific Panels should assume the responsibility of assisting the above Committees of the ICAR with their recommendations on areas within their purview. The involvement of Scientific Panels in the appraisal and evaluation of all the Scientific Research Programmes of the ICAR will bring in an overall improvement in the research functions of the ICAR. With the introduction of this process, the Director-General, ICAR could sanction the research schemes and implement other recommendations of the Policy Planning Committee with a degree of better satisfaction about the merits of each proposal.

9. 25

The Director-General, who is the Chief Executive of the ICAR, manages all the affairs of the ICAR with the assistance of the Technical Divisions and the Administrative Wing at the Headquarters. On the technical side, the Director-General is assisted by the DDGs, ADGs, and senior scientists; on the administrative side, he is assisted by the Secretary, ICAR, and other secretarial staff. The Institutes are reviewed, guided and serviced by the Headquarters on all matters. During our discussions with a number of scientists and others, we noticed a general feeling that the present dichotomous structure at the Headquarters has resulted in delays and sometimes even inconsistency in directions, thus affecting adversely the smooth working of the Institutes. We have carefully looked into this aspect and feel that such a structure does not exist in any of the similarly placed research organizations. Further, any technical proposal does involve an element of administrative and financial consideration and cannot be dealt with in isolation. Such a clear distinction between the administrative and technical wings is bound to give rise to two distinct lines of command at the ICAR Headquarters, as far as the functioning of the Institutes is concerned. We, therefore, recommend that this dichotomous structure should be dispensed with. We also recommend that there should be a complete integration of the technical and administrative wings at the Headquarters.

10. 26

It has also been noticed that the Headquarters is currently dealing with trivial matters concerning administration and accounts, many of which are of a routine nature. The Institutes should be provided with sufficient autonomy of function-

ing so that only very few cases need be handled at the Headquarters level.

11. 27

We also recommend that the ICAR should adopt modernization in its office procedures and equipments that will cut down delays and improve efficiency. For this, the ICAR should immediately introduce officer-oriented system of working at all levels with adequate provision for level-jumping, as also Desk-Officer system in place of the existing conventional Sections.

12. 29

The ICAR Headquarters act as a 'think-tank'. The Deputy Directors General should be leaders in their area of responsibility to conceptualize the research needs, identify priorities, and allocate resources. They should be responsible for planning, evaluation, monitoring and co-ordination of research programmes in the ICAR Institutes, under the AICRPs, AP Cess Fund programmes supported from the US-India funds, and bilateral co-operative and foreign aided projects. Considering the size of the organization and diversity of activities, it will not be possible for the Director-General to handle all the affairs of the ICAR without proper assistance. The senior-level specialists will have to do critical study of the research, educational and extension educational programmes in their areas of responsibility. The D.G. and DDGs should constitute a Board to discuss all important technical and organizational matters and take decisions for which regular meeting should be held. The DDGs may be vested with proper authority to discharge their responsibilities.

13. 33 to 37

The present structure of the Headquarters divided into subject-matter divisions dealing with crop sciences, animal sciences, fisheries, horticulture, soils and agronomy, and agricultural engineering, transfer of technology, and agricultural education needs a review as agricultural research is more than an application of a wide variety of sciences. A revised organisational structure is suggested. It is basically consists of three groups dealing with (a) Crop Sciences, comprising crops, soils, agronomy, engineering and horticulture, (b) Animal Sciences, comprising animal sciences and fisheries; (c) Human Resources Development, including social sciences, education and training. Transfer of technology should form a part of all the three groups. The Crop and Animal Sciences Groups would be assisted by two Teams, namely, (i) Research Planning Team; and (ii) Technology Assessment and Development Team.

The Groups and Teams have to be multi-disciplinary, collegial and fluid so that based on the necessities of work and expertise, individual members of the Team could work in different Teams. The members would be chosen for their expertise in the specific fields and would have equal voice in decision-making. Each Team would have a coordinator if possible by rotation who would be responsible for the work agenda, meetings and for channelling the decisions of the Team to the concerned agencies. The functions of each Team are indicated below. Besides, these main teams, some modest organisation on similar pattern may be needed to deal with general management and administration, the University System etc.

This Team will :

(a) Keep abreast of technology developments in agriculture and allied field to see how best these could be used for furthering the objectives of the ICAR.

(b) Decide whether these technologies could be developed in the ICAR Network, fostered in outside agencies, or only taken advantage of for furthering its objectives (e.g. tissue culture, monoclonal antibodies, remote-sensing).

- (c) Assess the impact of technology on crops, environment, human life, and society; its mode of development and diffusion through Institutes, Universities, Governmental agencies, co-operatives, voluntary agencies and private business, its demands on manpower skills, knowledge, raw materials, finance and space, its impact on production, productivity, soils, water and competing crops.
- (d) Study legal patent, licensing procedures and formalities.
- (e) Build organizational and institutional aspect of decision-making.
- (f) Consider areas of basic research which should be promoted by the ICAR either within its Institutes or outside to be in the vanguard to take advantages emanating from such research as also to avoid the possibilities of being barred from it because of legal and patent formalities.

This Team will :

- I (a) Arrive at concrete and monitorable objectives in line with the socio-economic, technological and ecological environment keeping in view the organisational strength and weaknesses as well as the expectations of the recipients.
- (b) Communicate the objectives to all the Institutes, Universities, other agencies, scientists and the general public.
- (c) Evaluate alternative courses of action to achieve the objectives.
- (d) Plan strategies to achieve the objectives.
- (e) Where projects go astray from the proposals, examine the justification.
- (f) See if help can be given to projects falling behind schedule.
- (g) Examine whether projects should be redefined in altered circumstances or should be closed.

This Team will :

- (a) Recruit, select and allocate personnel and create a pool of scientists from which the Institutes should draw their personnel.
- (b) Institute on-line performance-review system coupled with increments/promotion or training programmes.
- (c) Impart training so that the fresh entrant is familiar with objectives and is oriented to research culture, training to upgrade knowledge and skills of personnel, training to overcome specific weaknesses of personnel brought out in their performance assessment; training to enable growth and development of personnel; training for new technologies development.
- (e) Develop technical plans for each of the strategies.

(f) Integrate technical plans.

II (a) Develop research project evaluation and rating guidelines in consultation with Institutes and Universities.

(b) Communicate the evaluation guidelines to Institutes, Universities and scientists.

(c) Get proposals from Institutes, Universities and other agencies.

(d) Prescribe and grade the proposals on the basis of the guidelines developed in II (a).

(e) Convey the go-ahead signal to the concerned agencies within the availability of the resources, manpower and equipment.

III (a) Monitor the progress of the projects on the on-line terminals every quarter.

(b) Help Institutes, Universities and agencies to decide on key areas of performance for completing the projects on schedule within the budget.

(c) Develop scientists Data Bank

(d) Arrange periodically attitude-surveys to assess the morale of the scientists.

(e) Look into social sciences research with specific reference to Agricultural Economics and Statistics. The creation and functioning of the Human Resources Development Team should be decided by the Council keeping in view of this committee's observations on the role of ASRB as contained in Chapter 7.

14. 38

More decentralization of power at the ICAR Headquarters for making timely decisions will go a long way in improving the efficiency of operations. We recommend that the Director-General should not be over-burdened with responsibilities which may interfere in his timely decision-making. He should be involved only in decision-making. He should be involved only in decision-making at the policy level. The ICAR should identify areas where the Director-General could delegate powers to the Technical Division Heads for making timely decisions by providing necessary administrative support. A Professional management information system should be developed to ensure that decisions taken consequent on the delegation of authority are not at variance with the policies laid down, while making monitoring easier at various decentralized levels.

15. 39

We recommend that the Headquarters should decentralise the decision making process by giving more powers to the Institute Directors in specific areas. Each Institute, in turn, must involve the working scientists in its management process and stimulate creativity with a sense of responsibility. This will require decentralization of authority to the project level within the Institutes. This arrangement will reduce the administrative burden on the ICAR Headquarters and the Directors of the Institutes; it will also eliminate unnecessary file work and speed up the total process of research and development.

16. 52

Defining research priorities, continuous involvement in planning, evaluation and monitoring of research programmes, and the strategies for their implementation, instead of the five-yearly ritual of getting a stream of proposals from the Institutes and Universities and other bodies, should be the work culture of the Headquarters. The main emphasis at the Headquarters should be allocate priorities to the research proposals on the basis of objectives and strategy and within the overall limits of the availability of funds. As stress has to be laid on encouraging scientists to develop innovative areas, the proposals should be examined primarily in keeping with the objectives and strategies and not on the basis of methodology or the requirements of personnel and equipments. The Headquarters should provide assistance to the projects approved by suggesting inputs from other disciplines and agencies, by having continuous six-monthly audit of scientists and equipment to know their deployment, activities and utilisation, and by constant monitoring of the progress of the projects based on targets through computerized programmes. PERT charts and reports which should be available on live terminals.

17. 53

When the Institutes receive a multichannel communication from the Headquarters, one on administrative matters, and another on technical matters, it becomes difficult for the Institutes to maintain a proper follow-up of their correspondence with the Headquarters. The delay experienced by the Institutes on matters requiring timely action by the Headquarters lead to the Institutes' losing confidence in the Headquarters. We recommend that the ICAR Headquarters has to ensure timely action on all matters related to the Institutes by effecting necessary modifications in the current operational procedures at the Headquarters. The Institutes attach more importance to administrative, personnel and financial matters than to technical matters, it does not reflect their scientific image. We suggest that the Institutes should reverse this trend and send all their technical reports to the Headquarters in time so that proper monitoring is possible. Such reports should be critically reviewed by the Headquarters and not be treated as a formality. We have recommended earlier that the dichotomous structure at the Headquarters should be removed and the administrative and technical streams merged.

18. 54

We strongly feel that the recommendations made by the Institute Management Committees and Quinquennial Review Teams should be given due importance. necessary authority be given to the Management Committees for a more meaningful functioning. A mechanism should also be worked out at the Headquarters to maintain a proper follow-up on these recommendations towards building up confidence of the Institutes.

19. 55

Both the ICAR Headquarters as well as the Institutes should shed bureaucratic ways of functioning and outmoded methods of file keeping, which it has probably inherited by its long association with the Government secretarial system. Modernization of office procedures is a must, and more effective ways of functioning without extensive notings in files should develop. We strongly recommend the use of modern electronic equipments, including computer systems, microfilming of records, etc., to be introduced immediately at both the Headquarters and Institutes. All service records of employees can be effectively data bases can be maintained more effectively. Software packages for many of these operations are readily available and can be used with appropriate modifications. This will introduce qualitative strengthening of the work and quantitative reduction in staff.

20. 56

There is a need for the ICAR to clearly redefine the responsibilities and powers of the Headquarters as well as its Institutes. We suggest that the ICAR should consider more decentralisation of administrative by giving autonomy to the Institutes specially in the technical, financial and operational matters. The Institutes serve as the repository of information on all technical matters related to agricultural research, and necessary technical expertise to perform research also lies in the Institutes. Therefore, we recommend that they should be endowed with adequate technical autonomy in terms of freedom for planning, implementation and monitoring within the priorities allocated to the Institute. To exercise such technical autonomy, it is necessary to provide the required financial and operational autonomy to the Institutes. Once the budget is sanctioned and programmes are decided, the Institutes should have operational freedom in utilising the funds within the broad guidelines provided by the Headquarters. Once the Institutes are provided with this kind of autonomy, the ICAR can enforce accountability and the Institutes can develop into Centres of Excellence.

21. 57

Autonomy of functioning is to be linked with accountability. It is necessary for the Directors to be aware of the financial, administrative and human resources management. The Committee recommends that a workshop or training programme covering these aspects may be periodically organised by the NAARM for the Directors wherein inputs from other scientific organizations may also be included.

22. 58

To make the Management Committee more effective we recommend the following composition:

- i) Director of the Institute - Chairman
- ii) Two experts from outside the ICAR system - Members
- iii) Three Heads of the Division of the concerned Institutes (by rotation) - Members.
- iv) One Project Coordinator - Member.
- v) One representative of the Internal Financial Adviser, ICAR - Member.
- vi) One representative of the Director-General, ICAR - Member.
- vii) One representative of the State Government concerned - Member.
- viii) One representative from another associated ICAR Institute - Member.
- ix) Two representatives from user agencies. In case of NDRI, NDDDB should be represented on the Management Committee. In other cases, the Development Boards/Corporations and Co-operative Federations could be considered - Members.
- x) Senior-most Officer in the Administrative Cadre of the Institute - Member-Secretary.

23. 59

The Management Committee should meet regularly and should have full responsibility with authority to deal with all operational and management matters and be accountable for its actions. We recommend that necessary technical, financial and executive powers should be vested with the Institute Management Committees. Once the budget is allotted for its operation without much interference by the Headquarters. Most of the decision-making processes in the Institutes should end at the level of the Management Committee itself. We recommend that the ICAR should give enough authority to the Management Committees of the Institutes and their recommendations be given the required attention. These Committees, in effect, should function like the Governing Body of the ICAR or the Management Boards of Agricultural Universities.

24. 60

Powers may be delegated to the Management Committees in the following specific areas:

- (a) To finalise the budget proposals;
- (b) To approve the work programme of the Institute on the recommendations of the Research Committee and within the overall Research Policy of the Council.
- (c) To approve the constitution of Selection Committees/Boards;
- (d) To sanction the execution of works programmes within the sanctioned budgetary limits;
- (e) To finalise proposals for import of foreign equipment and opening letters of credit;
- (f) To finalize proposals for customs clearance and release of foreign exchange;
- (g) To approve proposals for acceptance of external assistance;
- (h) To approve proposals for consultancy services to be undertaken by Institute or its staff members;
- (i) To approve purchase proposals of the Institute in respect of major items of materials and equipment and to consider other financial proposals beyond the purview of the Director.
- (j) To consider all other matters expedient in the interest of the Institute and to make suitable recommendations to the Director-General.

25. 67

In order to assist the Institute Director in the discharge of his technical responsibilities, we recommend the appointment of a Joint Director of Resident Research, only in the major Institutes. This can be done by designating one of the existing positions of senior scientists in the Institute. We also recommend the appointment of senior-level administrative and accounting staff at least in the larger Institutes to provide the needed support in administration and accounts, particularly in the context of enhanced delegation of powers to the Directors and the Management Committees, as recommended by us.

26. 79

The Quinquennial Review Teams (QRTs) through the peer group review play

an important role in projecting the Institute's programmes and functions in accordance with national policies and priorities. These Teams can play an effective and significant role in giving proper direction to the Institutes from the national perspective. The QRTs should be constituted with eminent persons should be constituted with eminent persons in the area, and a senior scientist from the Headquarters must act as member-secretary. They should discuss with the Director and scientists in the Institutes, and consider the Management Committee's recommendations before finalising their reports. We suggest that the ICAR should ensure that review and evaluation by these Teams are carried out at regular intervals and their recommendations implemented.

27. 83

Within the ICAR system, there are about 6,000 scientific positions, of which about 2,000 are vacant. There is pressure for filling them up soon. For rapid agricultural growth, diversification and capitalisation on the frontier areas of research is important. A careful examination of the available scientists and their specialisations and experience could lead to redeployment of a substantial number to other innovative applied research projects. The existing vacancies and other positions released could be redeployed for newer areas and newer Institutes and units to the extent that is possible without affecting the on-going programmes. The Committee is strongly of the view that if the ICAR research system has to be effective, redeployment and restructuring of the existing cadre strength and its proper management are essential pre-requisites. This needs continuous analysis and monitoring to make adjustments. It is also necessary to develop a cadre-management policy at the Institute level with emphasis on disciplines and sub-disciplines to promote excellence. An appropriate structure should be designed to reflect the sub-disciplines with suitably designated scientists of appropriate rank. Guidance from the Headquarters would be needed in this regard to some of the Institutes.

28. 88

After the selection of candidates through the examination the scientists are required to undergo an orientation training at the NAARM. Over the years, the training programme conducted by the NAARM has been reviewed and improved upon, making it more appropriate to the needs. After training, the scientists receive on-the-job training in their special subjects and exposure to the broad research activities of the particular Institute or Centre of their posting. The Committee would like to recommend that the scientists should at initial stages be posted in developed Institutes under senior-scientists so as to enable them to gain experience and expertise in their own area. Further, since the ICAR is allowing a large number of persons with post-graduate degree in basic sciences to be recruited to the ARS even in applied disciplines, it will be necessary that they are given proper orientation and training so that they are in a position to discharge the research responsibilities assigned to them.

29. 102

The ASRB should not remain just a recruitment board. It should assume the responsibility for the overall human resources development in the ICAR. It is, therefore, necessary for the ASRB to maintain contact with the career of the scientists selected for the ICAR system. By this feedback the ASRB would be in a position to make refinement in the operation of the Agricultural Research Service and the personnel policies. The ASRB should be charged with the overall human resources development in the ICAR. It is recommended that a research and analysis wing be set up in the ASRB so that research on human capital development in agricultural sciences could be done to help evolve policies for personnel management in the ICAR system. The ASRB should also, using the experience of the last ten years, develop a set of operative procedures

which may become healthy conventions.

30. 117

Due to its past linkages, the administrative set-up at the headquarters is based on the pattern of the Central Secretariat, both in the matter of service conditions as well as the working procedures. In the Central Secretariat, however, because of its larger size, the staff have more avenues of advancement. In order to motivate the administrative staff of the ICAR for giving excellent administrative support to scientists and to become a part of the scientific culture, the Committee would like to recommend that these personnel may be given adequate opportunities for promotion to higher grades. To begin with, the Committee recommends that a few Selection Grade posts may be created at different levels to facilitate advancement of at least those personnel who might be stagnating in their existing grades. In the category of Stenographers, in particular, the chances of advancement are less than those in the normal administrative line. The Committee would, therefore, recommend that the Stenographers may be provided training in administrative and accounts procedures through short courses which may be specially designed and organised for this purpose. The Stenographers could then be considered for absorption in the administrative stream at appropriate levels on the basis of a certain fixed proportion.

31. 119

The Committee has noted that at present there is little interaction or mobility between the administrative staff at the headquarters and those working at the Institutes. As a result, a feeling has grown that the problems referred to by the Institutes to the Headquarters are not fully appreciated in a proper perspective. The Committee would, therefore, recommend that a scheme may be evolved by the ICAR whereby the administrative staff of the level of Section Officer and above at the ICAR Headquarters and Assistant Administrative Officer and above at the Institutes are exchanged on a systematic and regular basis.