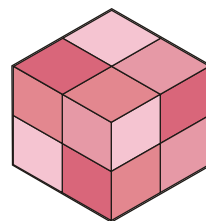


Meeting Report

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Sustainable Agriculture: Role of the Professional Associations in Agricultural Sciences

13 April, 2005



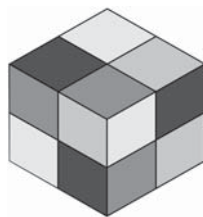
**Centre for Advancement of
Sustainable Agriculture**

Meeting Report

Sustainable Agriculture: Role of the Professional Associations in Agricultural Sciences

13 April, 2005

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This report is based on a one-day discussion jointly organized by the Centre for Advancement of Sustainable Agriculture and the National Academy of Agricultural Sciences.

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FOREWORD

Over the past four decades, the number of Professional Associations in the field of Agricultural Sciences has grown manifold. These Associations usually share a common objective of promoting the cause of their respective discipline/fields and they achieve this objective through several ways such as publishing a journal(s), organizing conference, meetings, recognizing achievement of scientists, etc. Management of Professional Associations is taken up largely on a voluntary basis and the scientists contribute significantly to the activities in an informal manner and by paying membership fees, etc. Building a complementarity among the agricultural research/education institutions and the Professional Associations provides an excellent opportunity and ability to the scientific community to discuss and find possible solutions to increasingly complex problems facing Indian agriculture.

I am happy that the Centre for Advancement of Sustainable Agriculture together with National Academy of Agricultural Sciences organized a meeting on “Sustainable Agriculture: Role of the Professional Associations in Agricultural Sciences” to deliberate on the issues of changing role of scientists. The discussions have thrown up several suggestions as to how we might go about encouraging the Associations to play a new and a responsible role in enhancing institutional capacity, thus enabling us to achieve sustained improvement in quality of research and education for development of agricultural sector.



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May 2, 2006

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Meeting Report

Sustainable Agriculture: Role of the Professional Associations in Agricultural Sciences

BACKGROUND

The new policy goals of sustainable agricultural development, which seek food and nutritional security, improved livelihoods for our people, safe ecosystems, and sustainable economies of agriculture, are wider and demand more from the agricultural sciences. The Professional Associations (PAs) have a key role to play in this context in contributing to achieve the goals of sustainable agriculture. In defining and pursuing their role, PAs in the past, tailored their respective objectives and activities to meeting the overall goals of agricultural science, which was to increase foodgrains production in the shortest possible time. With the changing scenarios and to achieve the broadened developmental goals of sustainable agriculture PAs have a larger and a changing role to play than what they have played in the past in meeting the emerging challenges. Scientific and technological innovations as well as innovations in processes or ways of working will be crucial for the PAs to meet the challenges by bringing in excellence and relevance in their conduct. The new goals of sustainability have become more focussed and broader, and will require different knowledge dimensions and horizons to achieve these goals.

PAs are an important component of the R&D system. Their stated objectives often relate to promoting the cause of their respective scientific disciplines/areas. They play a crucial role in furthering the interests of their own profession. This is true whether the association is that of dentists, cardiologists, soil scientists, lawyers, economists or plant breeders. In the field of agricultural sciences, the emergence of PAs is relatively a recent phenomenon. Their respective basic sciences or disciplines, claim a much longer history. Over the past decades there has been a proliferation of PAs, their journals, and meetings/conferences in agricultural sciences in India. There are about eighty PAs in agricultural sciences. It is time to review and ponder about why these discipline-based PAs were founded and what role they have played in furthering the interests of their respective professions, as defined by the disciplines and the research endeavour they represent.

The Centre for Advancement of Sustainable Agriculture (CASA), in collaboration with National Academy of Agricultural Sciences (NAAS) organized a one-day discussion to initiate a dialogue as to how the body of PAs can contribute to the “change” process and assume a role, which is commensurate with the emerging challenges of agricultural sciences to pave a way for transition to sustainable agriculture.

Meeting objectives

In view of the emerging challenges before the community of agricultural scientists the objectives of this one-day discussions were to:

1. Review the role that PAs have played in the past and identify the new role that they are expected to play. Here the discussion focused on identification of the new role by the main PAs and the strategies required for evolution of the new role.
2. Discuss the mechanisms that should be in place to enable PAs to play the enlarged and new roles to advance sustainable agriculture. The questions here will be about tactical issues- say, how do we stay connected? How do we learn and relate the challenges that 'sustainability' poses to our disciplines or professions? Do we need an umbrella organization? Are existing funding mechanisms adequate to permit us to play this emerging role? What institutional arrangements would permit us to play the new role effectively?
3. Define a few priority themes/activities, which the bodies like National Academy of Agricultural Sciences and the other PAs can promote in a systems perspective and as a way to refine and fulfill our new role and widen the scope for issues like networks and partnerships in professions, ethics, scientific standards etc.

The main purpose of the discussion was to bring out clarity as to the new role that PAs can play, the requirements for fulfilling this role and activities that could be taken up to play this role to achieve the ultimate goals of sustainable agriculture. This meeting was in recognition of the potential and an opportunity for PAs to play a role, which matches the dimensions of the challenges that, the system faces now. The discussions during the workshop were structured broadly around the above points.

Organization and Participation

The meeting was sponsored and organized by CASA along with NAAS. The meeting involved participants from different disciplinary and professional backgrounds representing range of national level PAs. Nearly 35 participants belonging to a variety of PAs attended (Annexure I) and contributed to the discussions and formulation of recommendations of the conference. The purpose of this one-day discussion was to initiate a dialogue as to how the body of PAs can contribute to the "change" process and assume a role, which is commensurate with the emerging challenges of agricultural sciences to pave a way for transition to sustainable agriculture. To achieve these objectives and to give a direction and structure to the discussions a brief agenda was circulated in advance amongst all the participants.

Meeting programme

The meeting was scheduled for one day (Annexure II). In his opening remarks Prof. V.L. Chopra, Member, Planning Commission reviewed traditional establishment of learning societies in the overall development scenario and conceded that these PAs have been playing a rather negligible role in influencing the policy process. However, he reiterated that these societies can and must play a more active role to influence the system. This will provide a two-way benefit, to the system and to the agriculture. Dr. I.P. Abrol, Director CASA initiated the discussion on the evolution of PAs, their organization, structure and the role they have played in the past by clearly stating the objectives of the meeting in the first session of the meeting.

The second session was aimed to discuss the new role and opportunities for PAs in the changing scenarios. The introduction to this session was provided by Dr. Rajeswari S. Raina, Scientist, NISTADS. She explained the basic features of professional authority and asserted the need for de-bureaucratization in order to increase the professional authority. She highlighted the major institutional and S&T reasons that challenge the professional authority and suggested new or modified roles that PAs could play to enable the professions to meet the goals of sustainable agriculture. In the following discussion participants actively responded to the major questions flagged and highlighted to suggest means and ways (what and how to go about) to respond to these challenges. This open discussion with active responses from the participants contributed to some common recommendations and a framework for a way forward.

Professional Associations: Current role and status

PAs have emerged through voluntary action largely with a view to establish identity of increasingly specialized groups to promote the subject/discipline/ in which these groups have a common interest. PAs are largely self-supported and carry out their activities with funds raised through subscription/membership fee, voluntary contribution of time by office bearers etc. These associations are often eligible to receive small grants which enable them organize minimal activities. The members of PAs are largely active /retired employees of research institutes, university departments or students and their participation in societal activities is voluntary and driven by desire to promote professional interest and personal recognition.

There are several scientific and institutional reasons, which challenge the professional authority of the scientists in the present scenario in India. These are new development goals, ambivalent autonomy granted to agricultural science, dichotomy in technical and administrative decision-making, centralization of research decision-making, weak evaluation and more of conventional way of doing research, which mostly sought discipline-based solutions to the problem.

New paradigm of sustainable agriculture seeks to understand the problems in the dynamic matrix of agriculture, the ecology, the economy and social and political context in which it is located. It considers science as part of the value-laden (political and cultural) society and not as an objective entity pursued by the scientists. Several actors/organizations play crucial roles in understanding and promoting sustainable agriculture. Sustainable agriculture provides the context for a broader role that PAs can play. Major issues or challenges in the agricultural sciences/technologies adopted/generated are often directed to scientists as experts in their respective organizations, disciplines or departments. Often organizational mandates (ranging from policy directives to vision/mission statements), disciplinary construct or limits, regional or location-specific issues constrain these changes demanded from science for sustainable agriculture. Scientists are also part of PAs and have an opinion about the sciences they work with, the societies and ecosystems they inhabit, which are not coloured by the above organizational and disciplinary constraints.

PAs, unlike the organizations of R&D, have a central concern about furthering the interests of the profession and are not tied to any patron (State/private/civil/legal entity). They can

legitimately reflect upon the status/evolution of the profession in order to strengthen their professional identity and future. In the past decades there has been a proliferation of PAs, their journals/meetings/conferences in agricultural sciences in India. These PAs can now play a major role in institutional reform in agricultural sciences. They can orient the agricultural sciences towards the dynamic role that science can and is expected to play as one of the critical inputs for achieving sustainable agriculture goals.

Professional associations: New and larger role

PA is an important forum for discussing and resolving intra-disciplinary boundaries as well as a platform for interaction with other stakeholders. It presents an opportunity for each institutionally entrenched discipline to think 'professionally' about sustainable agriculture, outside their typical organizational mandates. Now with the changed paradigm and sustainability as a goal there is a scope and an urgent need for PAs to assume a much wider role and not to restrict themselves within the disciplinary boundaries only.

PAs can now play a major role in institutional reform in agricultural sciences. They can orient agricultural sciences towards the dynamic role that science can play as one of the critical inputs to meet the goals of sustainable agriculture. To achieve this, PAs must gear up to new demands, new/modified intra-professional boundaries, membership and behaviour of PAs. Keeping in view the above goals following new and larger roles could be envisaged for PAs:

Table 1. New and larger roles for Professional Associations

<i>Demands on science</i>	Role currently played by PAs	Envisaged roles, PAs can play
<i>Directions to research</i>	PAs are not directly asked for participation in the processes that drive the direction of research in the country	PAs can help in the evolution of new research areas, approaches and prioritizing agenda for future research
<i>Professional authority</i>	PAs as pools of S&T information and their multidisciplinary role as institutions of high caliber for implementation of development programmes is not recognized at the national level	PAs to have socially sanctioned expertise require the existence of a pool of trained manpower in specific profession.
<i>Professional excellence</i>	PAs are hardly sought after for services as specialists or as consultants for their excellence in the discipline. Disciplinary excellence is hardly demanded for from PAs.	PAs mostly comprise of a reservoir of individual scientists and technologists with specialized knowledge, experience and expertise that could be mobilized for specific tasks. Promoting professional excellence of its members in the respective research areas

(Contd.)

Sustainable Agriculture: Role of the Professional Associations in Agricultural Sciences

<i>Demands on science</i>	Role currently played by PAs	Envisaged roles, PAs can play
		is crucial to achieve excellence in the respective research areas.
<i>Research prioritization</i>	Limited and indirect role played as of now. Only individuals from PAs are used in their personnel capacity and contributions are not directly referred to that of PAs	Evolution of new research areas and approaches and prioritizing agenda for future research by responding to the new development needs PAs can help and protect the discipline from repetitive and ritualistic research through their inputs.
<i>Integrated approaches to research</i>	Mostly work in strict disciplinary modes with little integration with other disciplines	PAs need to think beyond their disciplinary modes of working and enhance integration with other disciplines while maintaining the relevance and professional ethics of their own disciplines. Integration would imply different disciplines to work in a systems perspective
<i>Response to changing scenarios</i>	PAs are hardly proactive in responding to the changing demands. Their roles have hardly been defined or guided by a common vision	There is a need for a common vision as a guiding principle for PAs with flexibility to respond to the ongoing changing scenario and charting out their agenda and action plan accordingly. This would call for ability of PAs to shift resources from one endeavor to another in a timely manner
<i>Linkages among various PAs</i>	There are hardly any linkages among or common projects /activities linking various PAs	PAs could provide a forum for members for exchange of professional ideas, knowledge and experience and by building need-based complementarities between disciplines. This could be achieved by forging linkages with other PAs to solve the grassroots problems. There appears a need for an umbrella PA for promoting networks among PAs
<i>As pool of S &T information services</i>	PAs in the country are hardly equipped to do so.	Through better linkages and information exchange among PAs and a wide range of clients who benefit from these societies and their technologies or services, PAs can become a pool of information.
<i>Participation in research and policymaking</i>	Participation at all levels of S&T activities from research to policy making is negligible.	PAs must endeavour to become an integral part of S&T system in the country and participate at all levels of S&T activities from research to policy making. They can act as a referral point to the government on policy and development issues.

(Contd.)

<i>Demands on science</i>	Role currently played by PAs	Envisaged roles, PAs can play
<i>Societal relevance and public understanding of agricultural science</i>	Public understanding of agricultural sciences is at a very low level.PAs hardly communicate with the public on scientific issues	PAs should seek to build professionals with ability to communicate complex concepts clearly and in a simple way to a non-specialist public. Educating general public the importance of S&T through media.
<i>Improving quality and relevance of education</i>	Negligible role being played in the continuing matters related to education in the respective subjects	Can contribute to educational development by assisting in curriculum formulation and publication of educational materials etc.
<i>Accountability/self regulation</i>	There are practically no mechanisms in place for professional self-regulation	Bringing stringent evaluation processes, accountability and self –regulation can strengthen the features of expertise and credentialism and help to confer professional authority and usefulness
<i>Codes of ethics among PAs</i>	Practically little or no role	PAs can provide a forum for exchange of information and discussion of issues related to ethical conduct in scientific communities.
<i>Bringing good quality publications</i>	Proliferation of PAs and scientific journals published by them has resulted in poor quality publications (journals) which do not get desired respect/recognition.	Self imposition of evaluation standards will help bring about improvement in quality of publications.
<i>New funding mechanism</i>	PAs are always under the resource crunch. Most of the financial assistance comes through holding of conference/seminar/workshops/ symposia etc. They do not generally have specific programmes that bring excellence to the discipline and its association with other disciplines (other PAs)	Bringing in more funding and new ways of funding.Identifying activities that allow PAs to work together in a complementary way for achieving wider goals.
<i>Umbrella professional association</i>	None of PAs is playing this role	This could facilitate networking among PAs and other relevant stakeholders and provide a shared vision that helps better decisions concerning the allocation of scarce or shared resources, forum for the exchange of professional ideas, knowledge and experience, and data base
<i>Institutional learning</i>	Little effort to understand the past and present role played and institutional arrangements that govern PAs in agricultural sciences	Institutional analysis would help better understand the constraints and thus help bringing about a change to address emerging goals more effectively

Recommendations: Operationalizing the new roles

Discussion among the participants led to some of the following recommendations aimed at defining and promoting a new role for PAs:

- ***Need for a common vision***

There is a strong need for PAs to build up a shared vision of their role in the context of overall agricultural research and education. This vision, in turn must draw upon the overall vision of agricultural development, which is dynamic, changing with changing needs and changing local and global scenarios. With agricultural research and education system increasingly being challenged to respond to much broader goals of sustainable agriculture, PAs have a larger, changing and a more critical role to play than they have played in the past. Developing a shared vision as a basis for defining a new role would be an important first step.

- ***Defining the new role***

In the past growth of PAs was largely in response to the need for strengthening discipline-based research as a way to find solutions to emerging problems. While growth of discipline-based research has contributed to achieving self-sufficiency goals in foodgrains production there is an increasing realization that the challenges of sustainable agricultural development will call for more and more inter and multidisciplinary approaches as a way to increasingly draw from a shared vision to the development of which they have contributed actively.

- ***Strive for excellence and professional authority***

Striving for excellence in their respective fields will continue to be the major goal of PAs. Professionalism leading to scientific excellence is the key to professional authority. At present PAs are hardly sought for their excellence and professional authority (i.e. socially sanctioned expertise). PAs with the reservoir of individual scientists and technologists with specialized knowledge, experience and expertise can be mobilized to accomplish specific tasks. These discipline-based PAs must have professional authority in the respective discipline/s. PAs are also in a unique position of facilitating expertise requiring integration among disciplines.

- ***Raising public awareness and understanding***

Creating awareness of the role played by respective disciplines individually and collectively in developing and promoting strategies for sustainable agriculture is important if the PAs are to get adequate support for their activities. PAs have the required freedom, flexibility and expertise to play this role. What is needed is to establish effective communication strategies as an integral part of any major scientific program. It is essential that programs undertaken in the public interest have adequate means to communicate their findings to the public on whose behalf these were carried out. Fullest possible use of new information and communication media must be made.

- **Role in education**

Addressing concerns of sustainable agricultural development calls for reorientation of agricultural education. It should be recognized that traditional compartmentalized ways of educating and thinking are inadequate to address the complex system-based problems. PAs are well placed to play an active role in reorienting education programs drawing from a shared vision of research and education for sustainability. They can play this role by developing conceptual framework for evolving a new education focus consistent with emerging economic, social and ecological consideration. They are particularly well placed to guide/development of new course curricula recognizing that strengthening education for sustainable development will more likely come through interdisciplinary or multidisciplinary focus.

- **Developing and promoting linkages, partnerships and networks**

This is an area where PAs can play a critical role. Lack of success of many technological initiatives can be attributed to our inability to adapt and promote integrated approaches in finding solutions to problems. The answers to many problems do not look for solutions through one discipline but, would seek an interdisciplinary approach to solve it. This calls for researchers to work together with a variety of stakeholders and in a variety of ways. PAs can contribute significantly in the emergence of purposeful partnerships and networks- an area which has been grossly neglected thus far.

- **Funding avenues**

In order to play a new and enlarged role in the face of new challenges of sustainable development it is obvious that PAs will need to be encouraged and nurtured in a proper perspective. This will require appropriate allocation of resources and evolution of a new culture where the PAs can mobilize their science pool to become effective partners in the change process.

- **Need for an umbrella association**

A key constraint in assuming a new and an enlarged role in the face of new challenges is the lack of a forum or an umbrella organization which can articulate a new vision and of which PAs are an integral part. This prevents PAs to look beyond their limited discipline based focus and activities. There is a strong need for the emergence of such an umbrella association which can work in partnership with discipline or region-based associations, and facilitate a coordinated thinking to build and realize a shared vision.

- **Research prioritization and new areas of research**

Resources being always limited it is important to prioritize research agenda. Thus far the tasks of prioritizing research have been largely left to hierarchy in the public research system. With changing and expanded demands from scientific community it is important that they are involved in defining agenda, which they are to implement. PAs are uniquely placed to evolve ways of involving scientific community in prioritizing

and giving new directions to research, which are embedded in the ground realities on the one hand, and a vision of the future on the other hand.

- ***Promoting regional and international cooperation***

India is a country with a large scientific community compared to several countries of the region. At the same time the problems awaiting solutions often cut across the boundaries. Forging cooperative links with countries of the region around critical issues can contribute significantly to enhanced capacity and ability to solve problems by sharing knowledge and experience. Similarly, over the past decades global agriculture research systems are evolving aimed at linking local and regional actions and strategies to global issues and strategies. PAs can play a critical role in contributing to the process of building linkages through informal process.

- ***Developing codes of ethics***

There appears a general consensus that there is a need to strengthen the ethics (the science of morals, professional standards of conduct) in the way we do science and research. PAs are in a unique position to promote a dialogue towards evolving an accepted code of conduct and raising ethical standards.

- ***Evaluation culture among PAs***

Bringing stringent evaluation process can strengthen the features of expertise and credentialism and help to confer professional authority and greater autonomy to PAs. Opening to professional and stakeholder scrutiny will bring more credibility, transparency professional authority, usefulness and sustainability to achieve broader goals of agricultural development. Also developing mechanisms for professional self-regulation will foster a commitment to high standards of research and professional ethics.

Identifying the institutional constraints in the system to foster PAs play this new role is crucial to think and plan for long-term horizon of PAs. There is a need for institutional and policy analyses to understand how PAs can integrate with other associations/organizations/ individuals or other stakeholders. Institutional mechanisms are required to ensure that PAs can play their broad role more effectively to meet broad development goals. To be able to play these new roles, PAs must change and change in a manner, which integrates very well with the ongoing disciplinary as well as broader agricultural development goals. PAs have to play this composite role of contributing both to the discipline and to the major goals of agricultural development by bringing small institutional changes like, more transparency and willingness to change based on the learning from the past.

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ANNEXURE II

Baisakhi – Harvest Day Seminar

**Sustainable Agriculture – Role of the Professional Associations
– A Discussion –**

Programme

Moderators : Dr. V.L. Chopra, Dr. Mangala Rai

13 April, 2005

0930-0950	Opening Remarks <ul style="list-style-type: none">• V.L. Chopra
0950-1000	Objectives <ul style="list-style-type: none">• I.P. Abrol
1000-1100	Evolution of Professional Association: Organization, structure and the role they have played.
1100-1115	New role and opportunities (Introduction – Rajeshwari S. Raina)
1115-1145	Tea
1145-1300	Discussions – Contd.
1300-1400	Lunch
1400-1530	How do we change to respond? What are the priorities / activities we should undertake?
1530-1600	Tea
1600-1700	Framework for a way forward : Conclusion

