Self-Examination of the Regional Advisory Council of the National Agricultural Research Institute (INIA) of Uruguay.

Ernesto Restaino Galup

(M.S.), Ph.D. Candidate Michigan State University, ANR Education and Communication System. Head of INIA La Estanzuela Technology Transfer Unit (Uruguay). Address: Andes 1365 p12, CP 1100 Montevideo-Uruguay. Ph: 598 2 9020550, Fax: 598 2 902 3633. e-mail: restaino@msu.edu

Abstract

The National Agricultural Research Institute (INIA) is a public, agricultural research institution located in Uruguay. Regional Advisory Councils (RAC) were created in 1990 as a participatory and collaborative mechanism to involve stakeholders in the planning and prioritization of the agricultural research agenda. This study was conducted to assess RAC members’ perception as about their participation in agriculture research policy making.

This research used a combination of mail survey and personal interviews. Questions were developed to ascertain the perceptions of RAC members about their selection process, representation, linkages with farmer organization, major barriers for appropriate functioning, areas of responsibilities, and relevance of the councils.

Findings indicate that the RAC are relevant mechanisms in guiding research and in providing linkages between research staff and stakeholders. Although almost half (46%) of the members were selected by INIA, there was a genuine representation of the major farmer and agricultural organizations at the councils. Lack of prior knowledge of RAC meeting purposes, lack of timely communication, and extended length of council members’ services were reported as major procedural barriers. Respondents also indicated as important barriers for a better performance the low renovation of council members and involvement of young people.
Introduction

This research is about the study of institutions called “Regional Advisory Councils” (RAC) of the National Agricultural Research Institute (INIA) of Uruguay. RAC are considered as important mechanism to assess agricultural demands and as a customer linkage by national agricultural research organizations. More specifically, this study examined the factors and the relationships that affect the performance of the “Consejos Asesores Regionales” (Regional Advisory Councils) at the INIA La Estanzuela Research Station of the National Agricultural Research Institute of Uruguay.

Assessment, evaluation, and prioritization of need of the clientele are the primary objectives for demand-driven agricultural research models (Allegri, 1999). The major challenge for the agricultural research organizations is to develop accurate methodologies that allow to collects needs from their clientele and update these needs periodically. Moreover, generally resources are limited; therefore those needs also should be prioritized in order to fit the needs and resources in research programs.

The National Agriculture Research Institute of Uruguay (INIA) is the main applied agricultural research institution in the country. INIA is a paraestatal institution created in 1989 over the existing base of the previous agricultural research institution, the “Centro de Investigaciones Agrícolas Alberto Boerger” (CIAAB). The CIAAB was reorganized in 1989 by a congressional law (Law 16,065, December, 1989), which transferred the entire CIAAB’s patrimony and responsibilities to this new organization.

The four major changes in this new organization were: a) the farmers participation in the INIA Board, b) the funding sources, c) the new management style, and d) the mandate to create Regional Advisory Councils, which serve as instruments for need assessments and customer linkages.

The Consejos Asesores Regionales are considered by INIA as an important instrument to assess farmers’ needs and to prioritize its applied research programs. Allegri (1999) stated that,

“Regional Advisory Councils at each Experiment Station provide an important forum for regular exchange of views and close contacts between farmers and INIA staff. They are the places where actual exchanges and participation occur.”

(p.p. 115)

Farmers’ participation in the Regional Advisory Councils has been emphasized for the last ten years. No studies have been made to assess the performance of the councils, yet there appears to be several limitations in their performance. Therefore, it has been felt that a study on the contribution of the Regional Advisory Councils would be helpful to INIA and to strengthen the Regional Advisory Councils.

The objectives addressed by this research are: a) to identify the perceptions of INIA Regional Advisory Council members regarding the selection process of members and their contributions to INIA with respect to research needs assessment, b) to identify the perceptions of INIA research and programmatic staff regarding the Regional Advisory Council members, their selection, contributions, and performance, c) to compare and contrast the perceptions of the Regional Advisory Council members and
INIA Staff, and d) to develop recommendations for INIA to improve the operation and performance of the Regional Advisory Councils.

Theoretical Framework

Overview of Uruguay

Uruguay is one of the smallest countries in South America (176,215 Km²). In comparison with the United States, its area is about the size of the state of Florida. The total population of Uruguay is 3,400,000 (INE, 2002), 90.8% is urban and 9.2% is rural. The general literacy rate is 96.9% (rural 93.8%) (Presidencia de la Republica del Uruguay, 2002). Life expectancy at birth is 74 years, and the infant mortality rate is 15 per 1,000 live births (World Bank, 2001), which represents some of the higher social indicators in South America.

Uruguay does not have important mineral sources. The economy of Uruguay depends on its agricultural sector. This sector has contributed an average of 9% to the gross national product (GNP) in the last ten years. Uruguay has traditionally been an exporter of agricultural products. In fact, agricultural production in Uruguay accounts for about 60 to 70% of exports revenues, and more than 90% of the food consumed by its population (OPYPA, 2002). Approximately 65% of the Agricultural Gross National Product comes from animal production (meats, wool, and milk) and 35% comes from crop production.

Today there are about 57,000 farmers, due to the loss of small-scale farms (DIEA, 2002). Fifty-one percent of the farms are less than 50 hectares, 35% are between 50 and 500 hectares and the remainder (14%) are larger than 2,500 hectares (DIEA, 2002).

The National Agricultural Research Institute (INIA)

The National Agricultural Research Institute of Uruguay (INIA) is a relatively new national research institution oriented by a clientele demand model. In 1989, the Congress approved a government proposal based on ideas of some researchers, farmer organizations, professional associations and the scientific community. Accordingly, an autonomous, non-public, non-profit organization was created (Delpiazzo, 1993, 1996).

This new institution was created over the basis of the existent public research organization. The main objectives of this new institution are, a) to promote and execute applied agricultural research activities in order to contribute to sustainable development of the agricultural sector, and b) to articulate an effective transfer of technology generated through the technical assistance and extension organizations belonging to the public or private system. INIA is a decentralized institution, public non-governmental, and non-profit organization co-funded by farmers and government. Moreover, according to the actual research-technology transfer-extension system in Uruguay, INIA is responsible for 90% of the agricultural research (Allegri, 1999). INIA’s status and structure allow it to act under private administrative regulations and as a private organization.

With INIA’s creation, farmers were involved formally, for the first time, in the management of the INIA organization through two representatives appointed by farmer
organizations to the INIA Board. In addition, the Consejos Asesores Regionales (Regional Advisory Councils) were created as broad-based vehicles for gaining additional farmer involvement. The INIA’s Law creation also determines a farm tax (0.4%) to support the research operation, representing about 41% of the total budget of INIA. The total basic budget is derived from this tax, and similar amount is matched by Government funds.

### The Regional Advisory Councils

*Regional Advisory Councils (RAC)*, are composed of representatives of public and private institutions linked with the more significant agricultural activities developed in the region of the each research station. In addition, outstanding and well-recognized agricultural professionals with experience in extension will be included in the council. Consequently, farmers, technicians, and representatives from the main professional associations comprise those advisory councils. The major areas of concern are technological problems, research priority setting, and the identification of possible educational activities (such as field days, seminars, farmer visits, etc).

RAC members are not remunerated by INIA. Permanent members could reach fifteen in number in each RAC. Alternative members are invited to participate when their contribution is deemed appropriate according to the agenda (Delpiazzo, 1996).

INIA’s rules indicate a basic composition of these RAC, determining that each council should include: a) one or two members for each major commodity products produced under the research station area, b) three members with outstanding regional development and involvement representing the farmers community working in the area, c) one outstanding member representing the university, and d) one outstanding member representing the scientific agricultural community. One member of the group must be elected by the council as a president of the Regional Advisory Council (RAC).

The Board of INIA, understanding that the Regional Advisory Councils do not have sufficient members base to provide a broad-based opinion from the clientele, requires the creation of commodity groups or *Working Groups (WGs)*. There is no limitation to the number of WGs associated with each research station, nor in the number of participants. The linkage between a WG and within a RAC is due to the participation of the president and/or vice-president of the WG within the RAC as a permanent member. In the first year of INIA’s work (1990-1991), 24 WG were installed according to the major commodity products or productive systems. According to Albicette (2000), 26 WGs are actually operative due to some changes occurring according to the increment in the relative importance of some goods and/or the closing or merging of some of them.

These two institutions, the RAC and the WG, are one of the most important elements used by INIA to address the clientele’s needs. Moreover, they represent an important linkage with farmers and relevant agricultural actors.

### Problem Statement

Profound and permanent global changes are affecting the characteristics and the variability of problems. Market globalization and market protection increase the complexity of those problems and challenge farmers to obtain new technology in order to
solve technological problems and to become efficient in the art of food production. These two previous statements are more important yet for a country like Uruguay, where the agricultural sector plays a substantial role in the general economy.

Agricultural research institutions are increasingly affected by global changes and the complexity of the external context, which increases the interdependence of economic sectors, higher technological requirements, and environmental and sustainable issues (Allegri, 1999).

Participation and involvement requires the implementation of tools and skills to drive and internalize the resulting inputs. Resources are limited, which requires the necessity of prioritizing.

The RAC and WG are considered by INIA as important ways to assess clientele needs. They work as “antennas” prospecting technological demands and at the same time, informing other external actors about research activities, assuring importance of INIA’s decisions, and facilitating the communication flow process in both directions (Allegri, 1999).

The problem addressed by this study is to identify and analyze the factors that affect the stakeholders’ participation and functioning of the Regional Advisory Councils (RAC and WG). RACs and WGs suffer from low motivation, participation and lack of trust (Albicette, 2000; Allegri, 1999; Restaino, 1998). Besides, researchers feel that the feedback and inputs from RACs and GTs are feeble, and are affected by current problems

Johnson, (1998) examines the experience of a stakeholder advisory group’s attempt to guide a land grant’s research priorities. This author states that the failure of a broad-based, statewide advisory group raises serious concerns for proponents of stakeholder involvement in research priority making. Hoefner, (1998), argues that there is little published on stakeholder advisory processes and, therefore, little is known about which methods are useful and which are not.

The objectives addressed by this research are: a) to identify the perceptions of INIA La Estanzuela research station Regional Advisory Councils (RAC and WGs) members regarding the selection process of members and their contributions to INIA with respect to research needs, b) to identify major barriers affecting the functioning of the RACs and WGs, c) to develop recommendations to improve the operation and performance of the Regional Advisory Councils of INIA La Estanzuela research station.

Methodology

This study was conducted at La Estanzuela research station of the National Agricultural Research Institute (INIA) of Uruguay between June and September 2002.

This research has the format of a case study of INIA La Estanzuela research station, of the National Agricultural Research Institute of Uruguay. Data collection was conducted in Uruguay, between June and September 2002.

This study utilized both qualitative and quantitative methods. This combination was used to obtain a more complete picture in order to understand the complexity of internal and external human relationships under the framework of the organization.
Research Questions

This study intended to answer the following research questions:
1. How were Regional Advisory Councils members selected?
2. What are the linkages between the Regional Advisory Councils participants and the major farmer organizations in Uruguay?
3. What do Regional Advisory Councils members perceive as barriers, if any, in the functioning of the advisory councils?
4. What is the relevance that Regional Advisory Councils members give to RAC and WGs in terms of identifying farmer research needs, farmer linkages, and farmer educational programs?

Population

All participants of Regional Advisory Councils (RAC) and Work Groups (WG) listed in the database of INIA La Estanzuela since December 1998 were included in this study. According to this, 131 council members were identified as the target population. After the first mail contact, four persons responded who had never participated in the system. Therefore, the researcher considered this as a database error and eliminated these records from the population. Consequently, 127 council members were included as the survey population for the RAC and WG population.

Survey questions were developed following the research questions established for this study, taking into consideration the suggestions and topic of interest proposed by the Technology Transfer and Marketing Unit of INIA, and taking into consideration the experience that the researcher has after having been working with the councils for a period of ten years.

Survey implementation

Pre-letter and cover letter were developed to establish the first contact with survey participants and to introduce the necessary information of the study, respectively. The pre-letter was sent by public or private mail (depending on the best choice regarding the participant address) on June 20, 2002 (ten days before mailing the survey questionnaire).

The survey packets were assembled including the cover letter, the survey questionnaire (with a unique generated code inserted at the bottom of the first page), and a self-addressed prepaid return envelope. RAC/WG survey packets were mailed using both a private and a public mail company from Colonia City (Uruguay) on July 3, 2002. A confidentiality statement, in agreement with the University Committee on Research Involving Human Subjects (UCRIHS) of Michigan State University, was included assuring survey participants of privacy protection.

Completed questionnaires were carefully checked upon return. Date of return and respondent code were annotated in the database to identify early and late respondents. Early and late RAC/WG respondents were compared in order to identify
some possible differences. t-tests were run to explore possible differences in the perceptions from earlier and late RAC/WG respondents. All usable questionnaires were given a new identification number following the order of processing (data entry). By the closing date, August 15 2002, 81 usable questionnaires were received from the RAC/WG members (64% response rate).

Semi-structured interviews

Interviews were conducted as part of the qualitative data collection. A total of six interviews were conducted to RAC/WG council members. Interviews were conducted in a very informal environment and were not tape-recorded to increase the free-flow of ideas and the confidentiality of the interviewees. Notes were taken after the researcher finished the interviews. The notes were analyzed, clustered into common topics and reported together with the open-ended questions over the same topics as were asked in the survey questionnaires.

Data Analysis

A continuous and interactive process from the beginning of the research study was followed to collect and analyze qualitative data (INIA documents, council meeting minutes, interviews, and open-ended questions included at the survey questionnaires). These data were classified, organized systematically and analyzed identifying common patterns.

Quantitative data were coded, entered and analyzed using the Statistical Package for Social Science (SPSS) software between September and November 2002. Data were first checked for data entry errors. Corrections were made in the database and errors or inconsistencies were checked by tracking the code number for each survey questionnaire.

Results

Demographic information of RAC and WG councils indicate that the average age of members (mean) was 48 years with a standard deviation of 9 years. Approximately two-thirds of respondents were between 39 and 57 years. Almost all of council members are male (96.3%). One-fourth of the RAC/WG members (24.7%) were farmers, about one-fifth (19.8%) were farm advisors, and about 26% were “professionals working for an institution” as his/her major occupation. However, 24 of the 81 members indicated some combination of the above options. Four out of five (81.5%) have more than 13 years of education, representing a bachelor level or University degree. Almost one out of ten (9%) indicated High School education, and the same number (9.8%) indicated less than 10 years of formal education.

Council member’s (RAC/WG) living location (Urban, Suburban or Rural) is an important characteristic in order to understand how available some services could be for members. Three out of five (58%) came from an “urban” living location and Montevideo the capital of Uruguay. The “rural” living location (member that lives on a farm) was indicated by one-fourth of the members.
Council members could participate as Regional Advisory Council member (RAC), Working Group member (WG), or participated in both councils as Working Group member and group representative at the RAC (RAC/WG). To explore the membership status from participants, council members were asked to identify themselves as Regional Advisory Council (RAC) member, Working Group (WG) member, Working Group member and RAC representative (RAC/WG), “not sure” about his/her position and if he/she is no longer participating at the council system. Results shows that 1.3% indicated that they were RAC members, about 34% indicated Work Group membership position, and one out of ten (10%) mentioned participation in both councils as WG member and RAC representative. In addition, a significant percentage of respondents (32.5%) indicated that there were “not sure” about what his/her membership is. Similarly, about one out five respondents (22.5%) indicated that they were no longer participating in any council (neither RAC, nor WG).

From those members participating in the survey and responding that they are no longer participating (22.5% of the respondents) or not sure about his/her status (32.5%), about 8% mentioned that they lost interest in continued participation. Similarly, almost 8% mentioned they found some kind of conflict with other activities, 5% indicated that they found the system complex, and about 79% mentioned other reasons, of which the most frequent (22 out of 38) was the fact that they had not received new invitations to participate.

Almost 29% of respondents started their participation in 1990, the year when the councils were established by INIA. In addition, one-half (50%) of the members have been working for at least 5 years in the RAC/WG, and almost one out of three (30%) has ten years of experience working at the councils.

Selection of council members is an important first-step to the functioning and representation of a participatory process. Findings show that “direct invitation from INIA” and “direct designation by farmer’s organization” are the two major means in which members are invited to participate in the RAC and/or the WG councils. Therefore, INIA is directly responsible for the selection of about half (46%) of RAC/WG members. Similarly, two-fifths (40%) of the INIA LA Estanzuela RAC / WG members were designated to participate by major farmers organizations operating in the country. Fewer respondents (2.5%) expressed that they were self involved by personal interest, and one out of ten (10%) were invited by others members of RAC and WG who were already participating in the advisory councils. Participants were asked to offer suggestions about how members should be selected in the future. Members felt that future council members should have a wide experience in the field for what they are expected to represent. Moreover, actual council members indicated that selection should be done from a wide spectrum, including independent members, members representing regional organizations, national organizations, and others farmers and/or agricultural organizations. Similarly, members pointed out the following values as remarkable and necessary characteristics for any council member: innovative, positive, vision, leadership, and motivation. The quotation below indicates the spirit of what participants indicated as desirable:

“Select people motivated, innovative with positive attitude and directly linked with the production,... with mud on the shoes”
Regional Advisory Council members were asked to indicate their actual representation status (linkage with farmers organization). Almost four-fifths (80%) of the RAC and WG members represent an organization or a group of farmers. More than 60% of the RAC and WG members represent some agricultural or major farmer organization/association, and about 2 out of ten members (19%) indicate they are independent members.

Besides identifying the real representation that each member has at the councils, RAC and WG members were asked to indicate what perception they have about the overall representation of the major stakeholders groups. Respondents were asked to indicate their perceptions on a five point Likert-type scale. The values for each statement were averaged to determine a value for each statement based on the overall opinion of the RAC/WG members. Perception of RAC/WG members about farmers’ representation is fair (mean: 2.82, Std. Dev.: .976). Their perception about University representation was poor (2.44, Std. Dev.: 1.089). Similarly, members indicated a poor (2.56, Std. Dev.: .979) perception for the agri-industry representation and for the agri-business representation (2.59, Std. Dev.: 1.023) at the councils. University and agri-business representation were the statements where members expressed major dispersion in their opinion indicated by a high standard deviation. “Organization representation” at the councils was rated higher (Mean: 3.17, Std. Dev.: .828). There was no significant differences in perception of representation at the RAC/WG according to their membership status.

**Major weakness in meetings**

Analysis of the opinions from RAC/WG members reveals that meetings are very bureaucratic with a wide and extensive program, and consequently lack available time for discussion and interaction.

Another set of statements could be related to the available information that members can have previous to the meetings. Members indicated that previous information is very poor or nonexistent, therefore meetings show lack of preparation from members resulting in uninformed members.

Methodological aspects of the meetings were also indicated as responsible for poor meetings. In this sense members indicated that the methodology used regularly lacks opportunity to interact with INIA’s researchers. Moreover, it was pointed out that meeting times are not for discussion, but mainly to inform about what INIA researchers are doing. Finally, members indicated as an additional weakness the domination that old and experienced council members exert over the rest of the members.

**Council Members Opinion about Perceived Barriers**

RAC/WG members rated with a mean of 2.68 (Std. Dev= 1.016) in a 1-5 scale their opinion about received “adequate guidelines about the RAC and WG councils. When asked about if they received adequate information prior to the meeting, a mean of 2.60 (Std. Dev.= .990) was founded according to their opinion (based on a 1-5 Likert-
type scale: 1=Strongly disagree, 2= Disagree, 3= Neutral, 4= Agree, and 5= Strongly disagree).

Qualitative data regarding the major barriers showed that 11 statements out of 26 were related to the utility and the importance given to council members’ opinion by INIA. Council members felt that INIA shared information about closed or approved research programs. Lack of feedback from INIA regarding council suggestions, recommendation or possible implementation of council opinions seem to support the previous idea about the importance that INIA is given to this systems to RAC/WG members.

Another important group of opinions is related to the economy in which Uruguay, and in particular the agricultural sector, is living since the end of year 2000. Members indicated that the recession does not allow them to see the technological needs of the future. Furthermore, they do not feel motivated to participate because they have many economic and financial problems to resolve at the present time as a consequence of the recession.

The third most important issue indicated is related to the economic cost that members have to pay to participate. Members indicated that participation at the councils is not remunerated by INIA. As a consequence, members have a direct cost of travel and expenses in order to assist to attend the meeting and a more important indirect cost is the loss of the day in their personal activities.

Finally, a miscellaneous group of minor comments were related to: a) members’ low level of commitment, b) membership renewal renovation, c) regulation of members participation, and d) lack of coordination between major farmers organizations.

Responsibilities of the RAC councils

Participants were asked to answer a set of statements regarding the relevance of the RAC for a selected given group of major responsibilities according to analyzed agendas of these RAC and WG councils since 1990. To prioritize research programs (mean = 4.08), farmer needs identification (mean = 3.87), to maintain strong linkages with the major farmer organizations (mean = 3.74), to identify regional educational activities (mean = 3.46), and to give advice about operative INIA’s budget” (mean of 3.40), were identified by participants as the most important responsibilities for these institutions.

Conclusions

Leholm, Hamm, Suvedi, Gray, & Poston, (1999) and Leholm, Suvedi, & Vlasin, (1998) have indicated that establishing the linkage between research, extension, and stakeholders has been a considerable challenge. As the authors argue, many research stations have been criticized for not including formally stakeholders’ opinions. This is especially true in many developing countries. In this sense, the system established by INIA represents a good example of both points: a) developing an instrument in an innovative system that allows farmers and other stakeholders to participate and collaborate in the decision-making process of the institution, and b) creating an
instrument of linkage for the major agricultural actors working in the agricultural sector of Uruguay.

RAC members indicated a substantial relevance of this instrument for identifying technological needs and educational activities, prioritizing research and extension programs, and as using a linkage tool with stakeholders.

Findings showed that major barriers for an efficient functioning were lack of guidelines, poor definition and communication of objective/purpose of council meetings, low council members’ renovation, were identified as the major limitations for the councils’ performance. Although almost half (46%) of the members were selected by INIA, there was a genuine representation of the major farmer and agricultural organizations at the councils. According to Mainzer, (1958) it is very important for the life and accuracy of the advisory council to have a good balance represented by geographical locations, age, gender, actor’s major role, and commodity. Lacy, (1996) and Johnson (1998), indicate the importance of having a broad-based composition and appropriate membership as a key factor for building successful advisory councils.

Council members also indicated that meetings are very broad in their programs, that many reports are presented and that there is not enough time for discussion. In addition, council members complained that they receive low feedback from INIA regarding their opinions and participation. The conducting of “open-agenda” meetings appears to be important in order to ascertain new topics and to give the opportunity to RAC members to freely discuss problems or issues that would otherwise be missed or be outside of the agenda. The socio-demographic information of RAC council members shows low participation of young people, and an extended length of service of council members at the RAC and WG. These findings are in agreement with the major issues affecting advisory councils as reported by Johnson (1998) in a similar study conducted at the Michigan Agricultural Experiment Station of Michigan State University.

A significant percentage of respondents (32.5%) indicated that there were “not sure” about his/her membership. This illustrates a problem in the follow up procedure or communication process between INIA and the council members. It is important to remark that many of the problems reported in this study were identified as common problems by other researchers for other advisory councils, and represent mostly organizational problems, rather than structural problems. As Axinn & Axinn, (1997) pointed out, participation and collaboration does not occur without cost; that cost includes the investment of time, energy, and appropriate communication, “including long hours of patient listening” (p. 93).

INIA, and the Regional Advisory Councils (RAC and WG) instrumented by INIA are remarkable examples of participation, collaboration, and integration with stakeholders, and could be extended to others situations around the world. This study has identified some key elements to improve the methodology.

References


---

1 The researcher of this study has been member of the team responsible to work with six Regional Advisory Councils at the INIA Research Station “INIA La Estanzuela”, for ten years (1990-2000).

ii UCRIHS, University Committee on Research Involving Human Subjects

Survey questionnaires, pre-letters, cover letters and interview consent forms were submitted to UCRIHS for approval on May 27 6, 2002. Approval and authorization to conduct the study (Category 1-2 Exempt, ID # 02-441) was received on June 06, 2002.