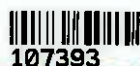


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# Decision-makers, a factor in the change to IPM



**Analysis of different groups of specialists and decision-makers involved with CATIE IPM/AF (NORAD) Program in Nicaragua and the changes that occurred as results of the interactions.**

## What is this leaflet about?

This leaflet presents a brief analysis of the diversity of specialists and decision-makers who worked with the CATIE IPM/AF (NORAD) Regional Program and how their different characteristics influenced the results of the Program.

## What was the objective of this study?

Integrated Pest Management (IPM) programmes do not usually consider that there might be differences between different specialists or decision-makers, so any effects that these differences may have on the Program's work are consequently not considered either. This study tries to present the diversity of specialists and decision-makers involved in the Program and how this diversity has influenced the changes the Program aimed to bring about. Our goal is to draw attention to this diversity and to the need to take it into account when designing and evaluating extension programmes, in order to make our work more effective.

## How was the study conducted?

We visited 15 specialists and 20 decision-makers<sup>1</sup> in their organisations, we observed their work environment, and we conducted semi-structured interviews, spending a total of about half a day with each one. As a result, we found different styles of intervention and different goals among the specialists, which allowed us to characterize them into three groups. We divided the decision-makers, on the other hand, into two groups, according to their styles of administration and their goals with respect to the Program.

Analysis of our observations and interviews suggests that the specialists had different goals according to their different principal work environments. An important element in the process of achieving change was the contact between different specialists and organisations and the direct contact with problems in the field. Decision-makers, on the other hand, had different goals according to their different administrative responsibilities, and in some cases had closer contact with farmers than in others. Change was achieved as a result of their organisation's participation in regional multi-institutional groups.

<sup>1</sup> Of the 20 decision-makers we visited and interviewed, 6 were also specialists. That is to say 6 people were interviewed as specialists and, at the same time, as decision-makers, and only 14 people were interviewed as decision-makers alone.



## What were the different groups of specialists that we found?

We divided the specialists according to their principle target group, their style of intervention and their objectives within the Program, into the following groups: *methodology*, *research* and *teaching specialists*.

### **Methodology specialists**

The specialists we refer to as *methodologists* had usually had a career as extensionists, or were working in extension as directors or coordinators, and in general had professional qualifications at BSc (i.e. *ingeniería*) or MSc level. As a result of their work in extension, methodology specialists tended to focus on development and on applying methodologies, not only for training extensionists, but in particular, for training farmers.

According to one *methodology* specialist:

*"It is very important to adapt methodologies, because working in coffee is not the same as working in vegetables. Some aspects of the methodology are the same, but the curriculum needs to be developed according to the areas in which the extensionists are weak. If a session is not interesting, people will just leave."*

*Methodology specialists* had different perceptions of the other actors in the Program. However, their points of view generally revolved around what use these actors made of the methodologies, or how they should benefit from them.

The main goal of the *methodology specialists* within their work in the Program can be summed up as "*learning about and adapting methodologies*" which could be used in extensionists' work and to help improve farmers' adoption of technologies.



## Research specialists

The specialists which we refer to as *research specialists* tended to work in universities or in non governmental organisations (NGOs) which did collaborative research with universities. Most of the *research specialists* had BSc (i.e. *ingeniería*) or MSc qualifications, and several of those interviewed had a long history of collaborating with the Program. Research was of personal interest to this group of specialists - "*specialists like us need to be doing research all the time*" - and they defined it as a fundamental aspect of professional improvement (i.e. the process of gaining knowledge or prestige) and of resolving field-level problems in order to improve farmers' productivity.

A *research specialist* spoke about the importance of research:

*"Doing research helps you a great deal. It provides you with more tools to explain much of what goes on in crops to extensionists and to farmers. Setting up experiments in the field and validating the results is important because it tells you what the problems in the field are. People who have done more experiments tend to know more and to become better known in the region ..."*

*Research specialists'* perceptions of the other actors in the Program revolved around how these actors conducted their research, or how they benefited from research.

*Research specialists'* had different goals in terms of their work with the Program: these included accessing resources to do research, developing contacts with other specialists and with farmers to exchange ideas and experience, doing applied research and learning how to do participative research and how to train extensionists and farmers. Belonging to a research group and looking for alternatives to enable farmers to implement IPM and to diversify their crops was important for this group of specialists.



## Teaching specialists

The **teaching specialists** that we interviewed had done postgraduate or specialist studies as well as having BSc (i.e. *ingeniería*) or MSc qualifications. They were university professors, and in many cases they also did research as a secondary activity, and had been working with the Program for several years. For this group of specialists, education was a way of influencing agricultural change within the country and in general, and they evinced a strong interest in improving their students' education.

The importance of education for a **teaching specialist**:

*"Our output is students' education – working with inert material is not the same as working with people who think ... Who are the people who will change the country's agriculture? Those who are in the classroom or the lecture hall right now and who learn to respect nature."*

**Teaching specialists** viewed other actors in the Program according to how they used or benefited from education.

The **teaching specialists** had different goals, but these can be synthesised by saying that they felt their principal role was that of contributing to the formation of professionals with open minds.

*"The most important aspect of our work is to form professionals with minds which are open to change. We want them to be more aware of the reality of agriculture, and we want them to carry out practices which do not damage the environment or health and which improve diets."*

These specialists also wanted to get to know farmers and the reality of their lives, to provide feedback to the work of extensionists and to train farmers in ecology and biology.

# What changes took place in the specialists' styles of intervention?

## The methodology specialists

The *methodology specialists* went from having access to "few or no methodologies" to having various options which allowed them to "graft different methodologies on to one another", adapting them to the needs of their organisation. This took place as a result of the free access the specialists had to the regional groups and to CATIE's methodologies, as well as those of other organisations.

### The methodology specialists felt that:

*"One of the most important changes has been getting out of the classroom and into the field where we are putting lots of options into practice."*

*"The workshops were more theoretical before, now they are more practical: we don't make papers with us any more."*

*"I am applying the training methodology in other areas, for example, the use of live material."*

## The research specialists

The *research specialists* told us that the most important aspect of the changes they had experienced was that of working in regional and crop groups. This gave them access to research and field collaborators. Examples of lines of research which were followed up include: management of disease curves, setting up experimental plots and coffee berry borer management. These lines of research were conducted collaboratively by various organisations both in experimental plots belonging to some of the organisations (universities or research centres) and in farmers' fields.



The **research specialists** said:

*"Through our contact with other specialists and with the extensionists that we have trained we have managed to get good support for farmers (for research). We have also managed to get funds for us in the University to do research with people who work in NGOs."*

*"I have changed how I do my training and my research is now more participative. The most innovative change has been in the area of bio-ecology, because this is the basis for decision-making."*

### **Teaching specialists**

The **teaching specialists** emphasised that the most important change that had come out of their participation in the Program had been their move away from **"teaching from books"** to teaching based on **"examples taken directly from the field"**. One of the aspects that had contributed most towards the changes mentioned by this group was the inter-institutional work in the regional groups.

The **teaching specialists** told us:

*"Personally, I have more methodological tools. I have learned to coordinate with other institutions – because the truth is that it isn't easy, but you gain a lot."*

*"The regional group is a great help in understanding what our regional problems are. As a teacher, this puts me in contact with reality and helps us tell our students what they are going to meet when they leave the university."*



## What different groups of decision-makers did we find?

We defined two groups of decision-makers according to their styles of administration and their goals in terms of the Program: *executive decision-makers* and *political decision-makers*.

### *Executive decision-makers*

Within their organisations, *executive decision-makers'* role was to provide follow-up to the technical teams and to ensure the quality of work in the field with farmers. This meant that *executive decision-makers* maintained direct contact with farmers and extensionists as part of the way in which they worked. Several *executive decision-makers* had worked as extensionists and were interested in agricultural extension.

*Executive decision-makers'* views of the different actors involved in the Program's work revolved around the characteristics that were, in their opinion, necessary in order to improve the work in the field. For example, one *executive decision-maker* described how he decided which farmers his organisation would work with in the following way: *"It's important to work with farmer leaders because they are the smartest, the most intelligent, they have good leadership qualities and you can communicate through them."*

The main goal of *executive decision-makers* can be summed up as *"training the staff"* in their organisations in order to get farmers to adopt technologies and improve their standard of living. Specifically, *executive decision-makers* were interested in training their technical staff, through the widened information networks and networks of contacts, through emphasizing how to manage process, by teaching them not to use scientific or technical words when talking to farmers and to make recommendations based on farmers' results, and finally, by encouraging respect for farm families.

The principal aim of *executive decision-makers* was:

*"The most important thing for us is that extensionists should manage to encourage farm families to join farmer organisations, since [farmers] groups can manage to achieve goals but not get anywhere in terms of how their group functions and what it can do for them. So, we emphasize managing process rather than achieving goals per se."*





## Political decision-makers

The role of *Political decision-makers* was to represent their organisation to the public, to oversee planning, to locate funding for their projects and to sign agreements with other organisations. *Political decision-makers* did not, therefore, always have direct contact with farmers or extensionists.

*Political decision-makers'* view of the other actors in the Program tended to be more administrative in nature, and revolved around, for example, the characteristics of individual actors which made the organisations' work easier (punctual delivery of reports, accessibility of communities). For example, a *political decision-maker* described how he identified which farmers his organisation would work with, in the following way: *"We choose groups according to the production potential in the area and according to how accessible they are."*

The *political decision-makers'* goals can be summed up as *"getting their organisation better known"* regionally and at national level, as well as raising their degree of influence and their representation with similar organisations. They were also interested in publicising their experiments and results and in providing a better service in the region. Another important goal was to reduce the gap between men and women by teaching women to negotiate and take over their own space in terms of their own farming, and in terms of them forming their own organisations.

The main goal of *political decision-makers* was:

*"For us, it is important to project ourselves. [We want] to find networks where we can develop our education and research components, and make our institution better known."*

## Overlap between specialists and decision-makers

There was an overlap between specialists and decision-makers. Several specialists assumed the functional responsibility of decision-makers, taking immediate decisions and promoting the changes they were aiming for within their organisations. On several occasions, for example, specialists gave extensionists permission to attend training sessions held by the Program. On other occasions they provided follow-up to agreements with CATIE or with the regional groups, or coordinated joint events.



## How did decision-makers' administration styles change?

### *Executive decision-makers*

In general, *executive decision-makers* said that one of the most relevant changes had been the implementation of regionally integrated projects, since previously, organisations had undertaken isolated projects. This and other changes had been made possible due to the work with the regional groups and with the National IPM Committee.

The *executive decision-makers* said:

*"Training offered to our staff has enabled us to submit plans for new projects and has given us more prestige. At the same time, given that the training has cost the organisation both time and money, we try to keep changes in our staff members to a minimum."*

*"Our specialists have gained facilitation skills and more IPM experience through the fieldwork. Nobody works with groups of specialists in the way that CAYE does. Nobody else does what they call capacity strengthening."*

*"We have seen that information is better distributed and that there are meetings with farmers so that they let us know if things were useful to them or not, because everyone adapts [what they learn] to their own situation."*

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## Political decision-makers

The main changes mentioned by *political decision-makers* were those changes which had contributed to the organisation they belonged to. The changes can basically be summarised as moving from bilateral alliances to multi-lateral alliances. The *political decision-makers'* goal of making their organisation better known was therefore achieved insofar as their organisation became involved in the inter-institutional groups' activities.

The *political decision-makers* said:

*"How we work more through multiple alliances. Before, those alliances that we made were bilateral because we didn't have contact with as many organisations as we do now that we work in a group."*

*"The work has been advantageous, we have made progress. Before we hadn't really taken the term IPM on board in our organisation. We used it, but not with this much enthusiasm."*

*"There has been incredible progress from the house, to the home gardens and to farmers' fields. Together with our gender work, this has meant that the power relations within farm families have changed."*

*"The process of certifying our farmers' organic coffee is the most important change which has come out of the IPM training. This has enabled us to organise our own cooperative for storing organic coffee and we are improving our image in the region."*



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## What factors influenced the changes, according to the specialists and decision-makers?

### Factors relating to the **market** for agricultural produce

The decision-makers felt that the influence of the market on changes towards IPM depended on the type of crop and on its market demand. Using IPM in coffee and in basic grains, for example, turned out to be much easier than using IPM in vegetables. In coffee, the low price of coffee motivated many farmers to maintain their crop with little use of agrochemicals. In the case of basic grains, which were less susceptible to pests, IPM was not only easy to apply, but was also more cost-effective. However, in the case of vegetables, their short growing cycle and the variations in the market price limited the use of IPM, especially for those farmers who had sufficient resources to produce vegetables commercially.

The decision-makers said that an important aspect of the market which motivated farmers to implement IPM was getting several products certified organically, especially coffee. They also said that one factor which caused a loss of motivation for many farmers who were in the process of obtaining organic certification, was the low price for products whilst the farms were in transition.

### Factors relating to the **conditions in the field.**

Some specialists said that one aspect which limited the implementation of IPM technologies was the huge economic power wielded by agrochemical distribution companies, compared to that of IPM research projects. There was no national policy of support for IPM research or extension to set against this. Compared with the economic autonomy of agricultural distribution companies and their sales policies (publicity, subsidies, etc.), this was a clear political disadvantage in terms of promoting the widescale adoption of IPM.

Decision-makers from organisations which promoted organic farming said that policies of searching out organic or alternative markets could be a more efficient means of promoting IPM than fighting against policies encouraging pesticide sales and distribution at national level.

In terms of education, decision-makers felt that it was necessary to create educational policies which produced professionals who would focus on more sustainable agriculture.

### Factors relating to IPM inputs

The specialists told us that there was not currently a large market providing the necessary inputs for certain IPM practices, such as net to cover seedbeds, the materials required to make a brew of sulphur and calcium, natural enemies for biological control etc...

Other specialists felt that there was too much emphasis on introduced natural enemies, which meant that the potential for encouraging native natural enemies and increasing their numbers was being ignored.

### Factors relating to organisations promoting IPM

The decision-makers said that it was very important to have a clear decision at organisation level not to encourage the use of prohibited pesticides. There was a consensus that IPM did not necessarily mean eliminating all chemicals, but rather using chemicals in a rational manner.

### Factors relating to national IPM policies

Some decision-makers suggested that the government should have a body which would govern policy on pesticide use, and that this body could be the National IPM Committee (CN-MIP). The CN-MIP was therefore seen as a committee which could support the government in the task of formulating policies, or as an organism which could control policies.

One thing common to all the decision-makers was the view that the next stage of the Program ought to be to influence the creation of laws and decrees promoting IPM and agroforestry.



## What does this study tell us?

The results of this study show that the specialists and decision-makers who participated in the Program were not homogenous groups. After participating in the Program, specialists from different groups valued the strengthening of their organisations differently, depending on their respective areas of work, whether this was training (*teachers*), research (*researchers*) or education (*teachers*). The decision-makers identified the achievements as far as their organisations were concerned according to the administrative role they had to fulfil: achievements related to the work that their organisation did (*executive decision-makers*) or those related to their organisation's profile in the inter-institutional groups (*political decision-makers*).

Both the specialists and the decision-makers felt that future work needed to focus more on how to overcome political and market-related obstacles limiting the adoption of IPM, and on creating laws promoting IPM and agroforestry.

## Why gather this sort of information, and how can we use it?

Once we understand the goals, knowledge and experience of the actors involved in a project – that is, their social diversity – we are in a better position to understand what factors encouraged or limited change. This therefore gives us a clearer picture of the Program's impacts than we would have had from quantitative studies alone, as well as providing information to guide future work. Amongst other things, therefore, social diversity studies allow us to:

- ◆ Conduct baseline studies which try to understand the different levels of knowledge and experience, as well as the different expectations and degrees of power of the different actors.
- ◆ Design programmes which aim to reach different social groups within one community.
- ◆ Conduct impact evaluations which provide information about the nature and potential duration of the impacts achieved.

## The Wider Lessons Studies

This leaflet forms part of the Wider Lessons Studies (WLS) which consist of:

- A qualitative study on how and why the CATIE IPM/AF (NORAD) Regional Program has had an impact on the different levels of participants who were involved in the Program's work and
- An economic analysis of the costs and benefits of the Program.

The main focus of the research into the process of change has been on explaining and understanding why the changes observed have taken place, and so the research has been qualitative, not quantitative, in nature. This depth of understanding has also fed important information into the assumptions made in connection with the calculations of economic efficiency, since economic efficiency is only one of the indicators of the impact of IPM projects. The WLS were conducted by CABI Bioscience and the University of Hannover in collaboration with Program members.

The following publications are available in connection with the WLS:

### The following short illustrated leaflets are available in hardcopy:

- Different families: different IPM
- Not all extensionists are the same
- Decision-makers: a factor in the change to IPM
- Economic cost-effectiveness: an important criterion in IPM

### The following longer documents are also available in electronic form by e-mail:

- Social diversity and differentiated impacts on stakeholders of CATIE IPM/AF (NORAD) Program
- An economic cost benefit analysis of CATIE IPM/AF (NORAD) Program.

### To obtain copies of these please contact

**CABI Bioscience** (glopez@cabi.org) or **CATIE** (catienic@mipafcatie.org.ni)

A version of the economic cost-benefit study will also be available in English, as a Pesticide Policy Project publication, from the **University of Hannover**. (contact: waibel@ifgb.uni-hannover.de)



## The Regional CATIE IPM/AF (NORAD) Program

The Regional CATIE IPM/AF (NORAD) Program is an initiative which began in 1989 to strengthen national Integrated Pest Management (IPM) capacity in Nicaragua. The Program consisted of three phases. In the third phase, which began in 1999, the Program worked in IPM and agroforestry with around 7,000 farm families, 300 extensionists, 60 specialists and 70 decision-makers from about 70 Nicaraguan organisations.

The Program's methodology consisted of simultaneous linked cycles of workshops for groups of specialists, extensionists and farmers, who participated in training based on crop growth stages, aimed at improving their decision-making capacity in pest, crop and tree management.

In order to carry out and coordinate the training activities at a national level, the Program encouraged the formation of regional groups organised by theme or by crop, which were made up of members of organisations working in each region, and of groups of national-level specialists. These groups formed the central pillar of the Program's work, and were in their turn coordinated by a committee known as the National IPM Committee (CN-MIP).