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THANKS TO:

FARMERS: Ibu Sri, Ibu Purso, Pak R. Purwono, Pak Wardi,
Pak Purwomadi, Pak Slamet,
Pak Pramojo Sumarto,
Pak Ngasem, Pak Sukanya,
Pak Karto, Pak Muchar, Pak Joyo Sumarto,
Pak Jo Setono, Pak Legiman,
Pak Teun, Pak Sugeng HS, Pak Suhartman, and Pak Muh Wazani

FARMER GROUPS (FG):
Barokah FG, Bahagia FG,
Tani Karya FG, Katon Maju FG,
Ngudi Asri FG,
Margo Basuki FG, Nurri FG,
Panti Wicore FG, Sringgo FG,
Sri Basuki FG,
Sedyo Rukun FG,
Tunas Harapan FG,
Wonokoyo FG,
Sidodadi Mulyo FG,
Ngapak Resi FG, Promasan FG,
Cikunyi FG, Kalijaruk FG,
Jurang FG, Dwi FG,
Ngemplak FG, Kalisoko FG,
Semai FG, Margo Rukun FG,
and Gugub FG.

IPM FIELD WORKERS:
Numadi, Dago, Herman, Suhaid, Usoo Supriatna, Sri Sugyanti, Sulaman, Katrian, and Budisanto

IPM FIELD LEADERS
at The SPPO/DPO:
Sudarman, Sri Hartono, Supandi, Masbud, Bambang Yono, Nanang Buciyanto, Gumbor, Sihanady, and Suharjo.

And:
Tri Joko, Dedik, Ning, Zam, Arman, Heru, Alifah, John Pontius and Simon HT.
The development of a community-based IPM program begins with the rice IPM Farmers Field School conducted by IPM Field Workers. Here farmers learn not only the basics of IPM, but also that they, working together as a group, can take steps to improve agricultural practices in their villages. Of equal importance in the development of community-based IPM programs is that these IPM Field Worker-led Field Schools are the source for Farmer Trainers. Farmers who have successfully completed a rice IPM Field School (usually two farmers per Field School) are selected for TOT as Farmer Trainers. They must not only understand basic IPM principles, but also have the capacity to develop as a Field School leader. Farmer Trainers receive a week-long TOT and then two Farmer Trainers working as a team conduct their own Field School for farmers supported by (a) IPM Field Workers who visit their Field Schools and (b) Farmer Trainer Workshops that are conducted at least three times during a season to discuss leadership and Field School issues. In this way a 'Farmer-based Extension System' is developed. The system is supported by the activities described in this book. Farmer Trainers usually represent their local IPM farmers group in the Farmer Planning Meetings and Farmer Technical Meetings. These meetings help to institutionalize the system at the farm community level. The case studies and farmer media provide access for Farmer Trainers and others to information that should help to enrich a community's IPM program. Thus the activities described in this book are one more step in strengthening the process of developing community-based IPM programs.

The three activities described in this compilation constitute a set of activities focused on developing and strengthening the capacities of farmers as organizers. Over the past two years these activities have been conducted in 92 sub-districts in the major Indonesian rice bowls on the islands of Sumatra, Java, and Sulawesi. During these two years, 330 Farmer Planning Meetings, 330 Farmer Technical Meetings, and 51 Case Study/Farmer Media development activities have been conducted. Over the next year there will be 924 Farmer Planning Meetings, 924 Farmer Technical Meetings, and 149 Case Study/Farmer Media development activities conducted in 154 districts in 12 provinces. The almost 200 percent increase in these activities represents the commitment of the present Indonesian IPM Training Project to helping farmers develop their own community-based IPM programs.

This book is a summary drawn from Indonesian materials used in field training plus field cases of the implementation of each activity. Each activity is explained according to the steps involved in conducting the activity followed by examples of how those steps were actually implemented.
The Farmers Planning Meeting Activity

A. Background

The 'Farmers Planning Meeting' is a meeting among IPM trained farmers at the sub-district level. Farmers, representing IPM Field School groups, share their ideas and the plans developed by their group. The purpose is, among other things, to allow farmers the opportunity to provide direction to local IPM project activities based on local needs.

B. Goals

1. To help IPM Field School groups to establish IPM related activity plans for the upcoming season/year.
2. To integrate and facilitate the plans of IPM Field School groups at the sub-district level.
3. To provide a forum for the development of an IPM network among IPM trained farmers at the sub-district level.
4. To enhance local funding support for IPM activities.
5. To actualize the process of project planning beginning at the farmer level.

C. Activity Stages

1. Preparation

1. At a sub-district level, the IPM Field Worker makes an inventory of IPM Field School groups, either those who have already been trained or those presently being trained.

2. The IPM Field Worker meets with each of these Field School groups and explains the purpose and goals of the 'Farmer Planning Meeting'. He asks each Field School group to do two things,
   - develop an IPM activity plan for the upcoming season/year (a shortened form of model previously piloted in 1992-1993),
• identify two farmers to represent their group at a sub-district-wide planning meeting and present their group’s activity plan for the upcoming year

3. The IPM Field Worker selects a setting for the sub-district-wide meeting. He establishes a management group made up of farmers who will be responsible for the meeting.

4. The IPM Field Worker distributes invitations to groups and to local government officials.

2. Conducting the Activity

The Presentation of Plans by Farmers

1. Farmers representing their respective groups, two representatives per group, gather at the sub-district level ready to present the plans of their groups which they have brought with them.

2. The Field Leader or IPM Field Worker opens the meeting and explains why the meeting is taking place and the goals of the meeting.

3. Each team of representatives presents their group’s activity plans.

4. The plans are classified by activity and funding resources are analyzed according to activity.

5. The IPM Field Worker helps participants to set priorities and schedules for the plans presented from a sub-district perspective.

6. The IPM Field Worker facilitates a discussion of likely funding alternatives.

7. The IPM Field Leader at the District Project Office (DPO, district level IPM field management unit) summarizes the results of these meetings in his district and forwards the summary to the Sub-Provincial Project Office (SPPO, the regional coordination unit that coordinates IPM field activities on a sub-provincial level).

8. The SPPO staff uses these plans for the development of their annual workplans.

9. An example of a Farmers Planning Meeting agenda:

   08.00 - 08.30 Opening
   08.30 - 12.00 Presentation of plans, priority setting, classification, etc.
   12.00 - 13.00 Lunch
13.00 - 14.00 Discussion of funding alternatives
14.00 - 14.30 Closing

10. Following the first session there is a second session in which the IPM Field Worker explains the project/governmental planning process and distribution of activities to the participants.

11. The IPM Field Worker facilitates a discussion the goal of which is to determine how activities can be distributed among groups. The amount of activities that will be funded by the National IPM Program is limited. The focus is to determine how activities can be distributed equitably among the local IPM groups.

12. The IPM Field Worker helps farmers to analyze alternative sources of funding for the proposed activity plans.

Agenda:
14.30 - 15.30 Presentation of results of first session and discussion of distribution
15.30 - 16.00 Analysis of alternatives
16.00 - 16.15 Closing
Conducting A Farmers Planning Meeting

The following draws on the experience of several Farmers Planning Meetings and presents how the meetings progressed. Events from five Farmers Planning Meetings conducted in Central Java and Jogyakarta during the rice planting season of 1994-1995 are used to clarify each point about planning and conducting a Farmers Planning Meeting.

A. Preparation

The success of any activity depends on the preparation put into the activity, this includes the Farmers Planning Meeting.

1. Preparations at the SPPO and DPO

Field Leaders at the SPPO in preparing for this activity, make use of the DPO technical meetings to brief IPM Field Worker about the meeting, its process, and its purpose. DPO Field Leaders are responsible for selecting the meeting site and the IPM Field Worker who will be charged with conducting the meeting.

"In our DPO technical meetings we went over what constituted a 'Farmers Planning Meeting', the goals of the meeting, the process to be employed, and we analyzed every detail that needed to be looked after."
(Sunaryo, Field Leader I, SPPO Pekalongan-Banyumas, Central Java)

"We looked for a sub-district that had lots of IPM Field School groups and a IPM Field Worker that was exceptionally active."
(Sudiman, Field Leader II, DPO Purbalingga, Central Java)

2. Sub-district Preparations

There is lots to be done by the IPM Field Worker and extension worker in getting ready for a Farmers Planning Meeting. For example: coordinating local officials, determining who should be invited, preparing and sending out invitations, briefing farmers about the activity, helping farmers prepare their plans, and finding a meeting place.
"We involve three people in preparing the meeting: the extension worker, the sub-district agriculture officer, and the IPM Field Worker. Each person was given a specific task. The sub-district agriculture officer took care of coordinating among villages and the sub-district level along with making invitations for farmers. The IPM Field Worker and extension worker were responsible for delivering the invitations, explaining what the planning meeting was all about, and what they needed to do to prepare for the meeting. Because we had so many groups involved we needed to share this task out between the extension worker and the IPM Field Worker."

(Nurhadi, IPM Field Worker, Pamuran Sub-district, Rembang District, Central Java)

"The invitations had to specify the name of the farmers group so we needed the sub-district agriculture officer so that we had the right name."

(Dargo, IPM Field Worker, Purwodadi Sub-district, Grobogan District, Central Java)

"We went to each SLPHT alumni farmers group and explained why we were meeting and the results we were looking for. We explained the representatives of the group needed to come with a written plan that described why they had developed this plan, the goal of the activity, the schedule of the activity, the process to be carried out, and the proposed budget."

(Hemanto, IPM Field Worker, Seyegan Sub-district, Siemen District, Jogjakarta)

"The site we selected for our Farmers Planning Meeting was easy to reach and centrally located in the sub-district. Coincidentally the farmers of this village had been very active and conducted several post-field school activities so we thought that at the very least if other farmers came here they could learn about the planning process."

(Dargo, IPM Field Worker, Purwodadi Sub-district, Grobogan District, Central Java)
3. Preparations at the Farmers Group

The IPM farmers groups will also find themselves very busy in preparing for the meeting. Groups will need to determine their plan and identify who will represent at the meeting.

"The preparations at the farmer level were carried out by members of the group assisted by the IPM Field Worker when he brought the invitation to the group. We wrote out our plan on newsprint including background, goals, procedure, and budget."

(Pak R. Pujotiyono, Farmer, Seyegan Sub-district, Sleman District, Jogjakarta)

"Members of our group worked together on the plan. We set up a plan for conducting a study that would determine if planting distance had an impact of pests and diseases. We made sure our plan was very detailed including background, procedure, goals, budget, materials."

(Pak Wardi, Farmer, Danyang, Purwodadi Sub-district, Grobogan District, Central Java)

"Our group chose me to represent them, maybe because I am an IPM trainer. We hoped to be able to get funding support from the village for our activity. Maybe being the leader of our neighborhood also favorably influenced my selection."

(Pak Purwadinadi, Siunggo, Imogiri Sub-district, Bantul District, Jogjakarta)
B. Conducting the Activity

1. Place and Time

The Farmer Planning Meeting will take all day, from morning to late afternoon. The meeting should start no later than 9:00 AM and should go until everything has been covered. Some issues are going to use up a lot of discussion time and some people are going to come late and leave early. Just where the meeting can be conducted is highly variable, it can be in a farmers house, at a village meeting center, or some other public meeting place. For a variety of reasons meeting at a farmers house might be the best idea.

"For either the Farmers Planning Meeting or the Farmers Technical Meeting we wanted to meet in a farmers house. In terms of atmosphere a farmers house guarantees farmers will have a voice. Farmers know that when they are meeting in another farmer’s house that this is a meeting of farmers for farmers."

(Dargo, IPM Field Worker, Purwodadi Sub-district, Grobogan District, Central Java)

2. Process

The first section concerning the Farmers Planning Meeting proposed the ideal format for the meeting. The following description of the Farmer Planning Meeting process summarizes the processes that were
followed in several different locations and picks out a few that seemed interesting and useful. In general the process can be divided into several steps: opening and general explanation, presentation of plans, classification of activities and financial resources, and closing. Before the meeting gets started, the Field Leaders, IPM Field Workers, and extension workers get together to reach agreement about what’s going to take place during the meeting.

"You need to reach a final agreement about the agenda, the steps to be followed, how to present the plans of farmers, and what is expected of each member of the facilitation team."

(Sri Hartono, Field Leader II, DPO Rembang, Central Java)

OPENING: After everyone is present, the IPM Field Worker can open the meeting by welcoming everybody and explaining the purpose and goal of the meeting.

"The Farmer Planning Meeting is a forum for farmers, representatives of SLPHT groups, who have come together to plan activities relevant to IPM in this sub-district. The purpose is to involve farmers in the planning of activities. The benefit of this is that farmers get a chance to see that there needs get met by presenting activities that fit their needs, and the National Program learns about what farmers need..."

... If it turns out that a plan here is not appropriate to IPM, there will be a chance to improve the plan during the
meeting. The plan should be complete with schedule, a budget based on activity needs, and an analysis of alternative funding sources. For the group that comes prepared, all they'll have to do is present...

...We'll collect these plans and pass them on the DPO who will then pass them on to the SPPO."

(Dargo, IPM Field Worker, Purwodadi Sub-district, Grobogan District, Central Java)

If the plan is not appropriate to IPM, there will be a chance to improve the plan during the meeting.
Once the IPM Field Worker is finished explaining why the meeting is taking place, he gives the representatives another half hour to review their plans and make sure that their formats are appropriate for presentation.

**PRESENTATION AND DISCUSSION.** The groups take turns making their presentations. After a presentation the group goes right into a question and answer session. The plans are of all sorts, from SLPHTs for crops other than rice, to field studies, to organizing farmers into an IPM movement. **BAROKAH FARMERS GROUP** from Bangunrejo, Pamoan, Rembang, Central Java, want to conduct a soybean SLPHT. One reason they give is that their soils are appropriate to soybeans. But they have a specific purpose and goal in mind.

"Our group wants to learn about pests, diseases, and natural enemies in soybeans, just like we did in the rice SLPHT. We intend to conduct the activity between April and July of 1995 with 12 meetings for about 350,000 Rupiah. We hope the National Program will support our plan."

The Barokah Group goes on to explain how they will implement the SLPHT in soybeans explaining how they will conduct weekly observations of pests and natural enemies, what they will do if there is a pest infestation, what agronomic problems they expect to face,
what post-harvest actions they will take, and what alternatives they have identified for funding resources if they don’t receive funds from the National IPM Program. In talking about agronomic issues, the group mentions that there might be a need to use pesticides. This started a discussion:

Participant: “Why did you include pesticides?”

Barakah Group: “We included pesticides in our budget because we might need them should we have to deal with a pest infestation.”

Participant: “This is an IPM Field School in which you are supposed to be learning? You can’t just make the decision on your own at this point. The decision to spray must come out of your analysis of the agro-ecosystem.”

Barakah Group: “I agree with what you say. So this budget item won’t be expended unless it becomes necessary.”

BAHAGIA FARMERS GROUP of Pamotan, Rembang, Central Java presented a plan for a Field School that would study chili production. The plan would be for the Field School to take place from April to September, 1995 with a budget of Rupiah 525.000. Again there were questions.

Participant: “Why did you decide on Field School for chilies?”

Bahagia Group: “Chilies are a high value crop, they are worth more money than rice. Having learned about pests and natural enemies in rice we want to learn about them in chilies.”

IPM Field Worker: “What if the National IPM Program can’t meet your budget request?”

Bahagia Group: “This is a proposal, but if we have to our group will decide about what to do if we aren’t supported by the National IPM Program.”

So the IPM Field Worker can also ask questions of those making presentations. His or her questions should help the group making a presentation to more carefully evaluate the alternatives.

TANI KARYA GROUP, Purwodadi, Grobogan, Central Java presented a plan for the 1995-1996 planting cycle. Beginning with the first planting season they would conduct three field studies over the following year. The studies to be done are one on planting distances, a second concerning planting time, and the final one would be a variety study.
The planting distance study would be conducted from October 1995 through February of 1996. The budget that would be needed would be 303,000 Rupiahs. The village can contribute 130,000 Rupiahs. 173,000 Rupiahs will have to come from some other source, hopefully the National IPM Program.

The study dealing with planting times and their impact on yield and susceptibility to pests and disease would be conducted from March 1996 through July 1996. Funds totaling 320,000 Rupiah would be needed. The village could provide 120,000 Rupiah, the National IPM Program would need to provide 200,000 Rupiah.

The varietal study would take place from July through October of 1996. Financial support needed would be 270,000 Rupiah with the village contributing 100,000 Rupiah and the National Program contributing 170,000 Rupiah.

"The goal of these studies is to know more about the impact of pests and disease in rice."

Participant: "How would you conduct these activities?"
Tani Karya: "We would meet once a week for 12 weeks during each study."

Participant: "What do you hope to get out of the studies."
Tani Karya: "We should be able to learn a lot about the agronomic principles involved in rice production. This will help us to be better farmers."
THE KATON MAJU GROUP of Seyeian, Sleman, Jogyakarta, presented a plan on using light traps. According to their plan, many insect pests are active at night. Lights could be used to trap them. Materials that would be needed include lanterns, bamboo, enamel basins, soapy water or kerosene, plastic bags, and string. The funds needed for the project will be sought from farmers.

"Our goal is to know about the insects that are active at night and what they are doing, especially in our ricefields."

Participant: "So why would you want to set up light traps?"

Katon Maju: "It would be hard for farmers to do enough observations otherwise."

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CLASSIFYING ACTIVITIES AND ANALYZING ALTERNATIVE FUNDING SOURCES. The IPM Field Worker, working with the farmers, classify activities according to specific categories: Rice Field School, Non-rice Field School, Farmer Field Study, etc.

"We divide up all the plans presented by the farmers so that we know the total of each type of activity. For example: total soybean Field Schools, total chili Field Schools, how many
farmer field studies in this sub-district. We also sort out schedules, funding sources, and how much money is being sought."

(Nurhadi, Pomutan Sub-district, Rembang District, Central Java)

Farmers in Jogjakarta asked:

"When will we know which groups will have funding made available to them? There are plans which would have activities starting up next month."

Analyzing alternative funding sources provides farmers with some ideas about alternatives that they may not have thought of before. The first-funding priority for IPM Program funds is that activities that are connected with IPM. In anticipation that funds might not be made available the analysis is important.

"We forward plans on to the DPO and SPPO, we don't want anybody disappointed and thinking that indeed there are no funds available, so we work with farmers to help them determine what alternatives are available, how much help those sources might be, and how can they work with others in their group to get financial support out of local farmers groups.

(Suhardii, IPM Field Worker, Jogjakarta)"
Farmers thoughts on funding were:

"We hope we’ll be funded by the project, but if we don’t we’ll find another way. We want the activity to go ahead and we’ll fit the activity to the funds that we have."

(Pak Slamet, Bantul District, Jogjakarta)

"We’re farmers. We farm. Whether we get Project funds or not we’ll always be farmers. So the plan we have developed we’ll carry through."

(Pak Purwadyadi, Bantul District, Jogjakarta)

All of the plans get summarized on newsprint by the IPM Field Worker in front of all the participants. These summaries get forwarded on as part of the report from the meeting.

CLOSING THE MEETING. Some things need to be said by either the IPM Field Workers or Field Leaders before the meeting is closed.

"The plans that have been developed by you will go into our reports which we will forward on to the DPO and SPPO. The SPPO will synthesize all the reports from the Jogjakarta region. These plans will then be used with the project administrator to help plan out provincial activities. The
plans presented today will go through a selection process at the provincial level. Some of them will be identified as project activities and be funded by the project. Those that do not receive project support will have to be submitted to other funding sources."

(Sutarsana, Field Leader II, SPPO Jogjakarta, talking to farmers)

Part of the discussion at this point should cover the criteria governing the selection process:

"If, for example, in this district there should be a plan put forth for a soybean Field School and there is a line item in the budget for such a Field School in Gunung Kidul, the Field School would be funded. But we would also have to look to see if the group has ever had IPM training in rice and if the area is of high agricultural potential."

(Mashudi, Field Leader II, DPO Gunungkidul, Jogjakarta)

After these explanations the meeting can be closed.

"We have reached the end of our meeting. Hopefully, the meeting has been of benefit to us. The people here as representatives of their group should return and tell others about this meeting."

(Dargo, IPM Field Worker, Purwodadi Sub-district, Grobogan District, Central Java)
The Farmer's Technical Meeting Activity

A. Background

In the future the IPM Program will be conducted by farmers for farmers. The more farmers there are implementing IPM, the greater the potential there is for a network connecting IPM farmers. One of the purposes of Farmers Technical Meetings is to further the realization of such a network by providing a forum for farmers to discuss technical issues and exchange information about IPM activities in their areas. The IPM activities that have been presented at these meetings included a wide range of issues: the results of studies conducted by farmers, farmers conducting SLPHT's for other farmers, organizing issues, and solving field problems.

B. Goals

1. To provide an opportunity for IPM farmers to share their experience, knowledge and skills.
2. To provide an opportunity for IPM farmers to discuss, analyze, and solve field based problems.
3. To establish a process that will support the realization of an IPM farmers network.

C. Stages of Implementation

1. Preparations
   1. The IPM Field Worker makes an inventory of the all the kinds of IPM activities that have ever been conducted by IPM farmers in his sub-district.
   2. The IPM Field Worker forwards the inventory to the Field Leader at the DPO.
   3. The IPM Field Worker and the DPO Field Leader identify likely groups to make presentations about their the activities at the Farmers Technical Meeting. They determine a schedule for implementing the activity.
   4. The DPO informs the SPPO of when and where the meeting will take place.
2. Preparing the IPM Farmers for the Technical Meeting

The IPM Field Worker, after having determined the date and place of the meeting, visits the IPM farmers groups that appear to have done activities that would be interesting for other farmers to hear about.

1. The IPM Field Worker discusses with these groups the activities that they have been asked to present; helps the farmers determine the information that they want to present; and helps them prepare:
   - An outline, maybe on newsprint, that describes exactly what the group did
   - A list of their results.
   - Materials that will help their presentation such as maps, insect zoos, documentation, etc.
   - Plans for the upcoming season

2. Helps the group determine who should represent the group and make the presentation about their activity at the meeting. This representative should be chosen by the group, not by the extension worker or IPM Field Worker.

3. Offer the group the opportunity to host the Farmers Technical Meeting.

4. If the group accepts the offer, they should form a committee, share out the tasks that have to be completed for the meeting (writing and sending invitations, finding a meeting place, etc.) and begin planning the meeting.

3. Implementation

The technical meeting should be run by farmers at a site that is easy to reach by other farmers and is often used by farmers to gather. The issue here is that farmers feel free to talk. It would also be useful if the meeting site was near a ricefield so that if necessary the field could be used to provide supporting explanations for any presentation.

Participants at the meeting should be either alumni of SLPHTs or presently attending an SLPHT. Because this is meant to be a forum for farmers, any formal speeches by officials would be best delivered after the closing of the farmer forum. The steps involved in the meeting process are as follows:

1. Farmers making presentations should have their presentation ready before the meeting. Their presentations should make use of any materials that will help to make clear the activity about
which they are talking. The presentations could include demonstrations, written papers, display boards, posters, etc.

2. The IPM Field Worker along with the Farmers Technical Meeting Committee should determine the agenda of the meeting beforehand and have it written on newsprint so everyone knows what is going to happen. An example of an agenda would be:

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>08.00 - 08.15</td>
<td>Opening - by a IPM Field Worker or farmer</td>
</tr>
<tr>
<td>08.15 - 13.00</td>
<td>Farmer presentations of technical issues</td>
</tr>
<tr>
<td>13.00 - 13.15</td>
<td>Break</td>
</tr>
<tr>
<td>13.15 - 15.00</td>
<td>Farmer presentations of technical issues</td>
</tr>
<tr>
<td>15.15 - 15.30</td>
<td>Remarks from farmers</td>
</tr>
<tr>
<td>15.30 - 16.00</td>
<td>Closing and speeches</td>
</tr>
</tbody>
</table>

Presentations are made by one or two farmers representing their group.

3. The IPM Field Worker and Field Leader are responsible for providing documentation of the meeting and its results. The documentation should be sent on to the SPPO where it can be used as material for the IPM Case Study/Farmer Media activity.

4. The DPO Field Leader is responsible for writing up the report of the meeting.

NOTE: The Farmers Technical Meeting and the Farmers Planning Meeting are very different from each other. They shouldn’t be conducted at the same time.
Conducting A Farmers Technical Meeting

The Farmers Technical Meeting has two stages: preparation and implementation. The following presents how the preparation and implementation processes were implemented in the field. The following comments and examples were drawn from eight Farmer Technical Meetings conducted in West Java, Central Java, and Jogjakarta during the 1994-1995 rice planting season. Thus this section both explains the processes involved in conducting Farmers Technical Meetings and documents how it was done at various sites in the field.

A. Preparations

Preparations for the meeting need to be made at three levels: the SPPO/DPO or internal level, at the farmer group level, and at the sub-district level where government officials will have to be involved because of the support they can contribute.

1. SPPO/DPO Preparations

The Field Leaders from the SPPO are responsible for making sure that all DPO Field Leaders and IPM Field Worker are aware of and clear about what their tasks are in implementing this activity. DPO Field Leaders and IPM Field Worker need to understand the purpose and goals of the activity, the steps involved in the process of implementation, and how those steps are best carried out. The DPO Field Leader is responsible for determining the kecamatan where the activity will be conducted and the IPM Field Worker who should be the lead person in the activity.

"At the DPO Technical Meeting we explained the background of the Farmers Technical Meeting, its basic premises, and the rules to be used in conducting the activity. We presented the criteria to be used in choosing the sub-district and the coordinating IPM Field Worker and the basic outline describing the process of the meeting."

(Sunaryo, Field Leader I, SPPO Pekalongan-Banyumas, Central Java)
"At this beginning stage we based the choice of sub-district on the total number of Field Schools that have either been conducted or are being conducted in a sub-district. We wanted the sub-district with the most Field Schools or active IPM farmers groups. For a coordinating IPM Field Worker, we selected the most active IPM Field Worker."

(Sudiman, Field Leader II, DPO Purbalingga, Central Java)

2. Sub-district Preparations

The efforts of the IPM Field Workers, extension workers, and local agriculture officials have a great influence on the outcome of the technical meeting. They will be responsible for coordinating local officials, preparation and distribution of invitations, working with farmers to prepare their presentations, and preparing the meeting site. Hence these people need to clearly understand the goals of the meeting and the purpose of process in the technical meeting.

"Those who are involved in this activity besides the IPM Field Worker include: the local agriculture official, the extension worker, and two IPM farmer trainers. Each of these people has a specific role. The sub-district agriculture officer is the coordinator at the sub-district and village level, he is responsible for making invitations for the farmers groups. The IPM Field Worker and Extension Worker distribute the invitations and prepare the farmers. We need to divide up responsibilities because of the many groups that we have to involve."

(Usep Supriatna, IPM Field Worker, Paseh Sub-district, Bandung District, West Java)

"The invitations were made up by the sub-district agriculture officer, he is known to the head of the sub-district and this eased coordination. The invitations were sent to the IPM farmers groups by the extension worker and myself."

(Dargo, IPM Field Worker, Purwodadi, Grobogan, Central Java)

"In our sub-district the invitations for the meeting were made by the farmers coordinating the meeting with the involvement of the village heads."

(Sri Sugiyanti, IPM Field Worker, Sewon Sub-district, Bantul District, Jogjakarta)

"In choosing the site of the meeting, we asked various farmers groups if they were interested in hosting the meeting while we were delivering invitations. Several were interested, we decided on Pak Ngairin and his group because he is a farmer trainer, his house is quite large and easily reached as it is on a main road."

(Sutiman, IPM Field Worker, Kalibawang Sub-district, Kulonprogo District, Jogjakarta)
3. Preparations at the Farmers Group Level

IPM Farmers Groups attending the meeting need to make their own preparations. These are done by the group working alone or, more often, with the assistance of the IPM Field Worker or extension worker.

"In preparing the IPM group for the meeting, I first explained what the goal and purpose of the meeting was. Then I asked them if they had done something related to IPM that they felt would be of interest to others. After they identified several activities, I underlined a couple that would be useful to tell other farmers about. Then I asked them for ideas about how they could present one of the activities so that their presentation would be easy to understand and equally easy to present."

(Katran, IPM Field Worker, Kemangkon Sub-district, Purbalingga District, Central Java)
"After we were invited to the meeting, we prepared what we wanted to present. We wrote up a paper on our activity so that not only did we have a guide for the presentation, but other groups could easily read about what we did."

(Pak Prawiro Sumarto, farmer, Ngagel, Karangono, Sub-district, Gunungkidul District, Jogjakarta)

"After I was asked whether we wanted to host the meeting, we readily agreed, we established a committee and divided up the tasks that needed to be done. Along with Ibu Sri, I helped prepare our presentation. Others arranged for all of the necessary things to make a meeting like this be successful."

(Pak Ngatirin and Ibu Sri, farmers, Ngpipkrejo, Kaliwung Sub-district, Kulonprogo District, Jogjakarta)

B. Conducting the Farmers Technical Meeting

In general the steps involved in the meeting are the opening, presentations and discussions, and the closing. On the day of the meeting, before participants have gathered, the Field Leaders, Extension worker, and IPM Field Worker meet to make sure they are agreed on the process that will be taking place.

"During this brief meeting we agreed to what steps needed to take place, how to manage the information that would be presented, and what our roles would be during the meeting."

(Supardal, Field Leader, DPO Kulonprogo, Jogjakarta)
OPENING. Once everybody is present, the IPM Field Worker opens the meeting by welcoming everyone and providing an explanation of the purpose of the meeting and the schedule of the meeting.

"The Farmers Technical Meeting is an activity that is conducted by and for IPM farmers. In this forum you have a chance to share your experience with other IPM farmers. Each group will have a chance to make a presentation of the materials that they have been working on, a question and answer period will follow each presentation."

(Sutiman, IPM Field Worker, Kalibawang Sub-district, Kulonprogo District, Jogjakarta)

PRESENTATION AND DISCUSSION.
"The Trade Secrets of a Farmer Trainer"

Post-SLPHT activities can be individual in nature. PAK NGATIRIN from Kulon Progo, Jogjakarta, has been a Farmer Trainer since he completed a TOT for IPM Farmer Trainers in 1993. His presentation covered some the things that he has learned from the experience of leading SLPHTs. Issues that he covered included: preparing for the SLPHT, leadership skills in the context of the SLPHT, and using alternative funding sources to expand the SLPHT program. Pak Ngatirin was asked some questions after his presentation:

Participant: "What's the trick for getting farmers to attend Field Schools."
Pak Ngatirin: "This is not an easy thing to do. The evidence is all around us where we can see field schools with less than 50% rates of attendance. I try to informally meet with as many farmers as possible outside of the Field School context and discuss with them the issues around their attendance."

Participant: "It's usually hard to get farmers to meet if there is not some form of compensation. What do you think?

Pak Ngatirin: "Not having an incentive is not the basic issue for them. But you can see that it often becomes the reason that people give. However, they don't mean that. Having looked into it I think that it comes down to folks getting lazy and not knowing any better..."

PAK SUKARYA is from Tempuran, Karawang, West Java. He presented his own experience with IPM starting from participating in a Field School, field testing what he learned in his own fields, and finally teaching other farmers about IPM. He uses a field observation system where he makes observations once every three days rather than once every week. In four seasons he has yet to make any pesticide applications.

"...My yields are the same as the farmers around me who use pesticides. Given that I guess you could say that I have profited."
Lots of people had questions for him.

Participant: "So how do you make your observations every three days?"

Pak Sukarya: "I have three fields. I take three samples in the middle of each plot. Each sample consists of three hills. I look at one plot on the first day, three days later I look at the second plot, after another three days I look at the third plot. I continue this schedule throughout the season."

Participant: "What motivates you to not use any pesticides?"

Pak Sukarya: "I want to put into practice what I learned during the Field School. Evidently I have had good results. Other farmers have watched me and now they are doing the same thing."

Participant: "Why observe every three days?"

Pak Sukarya: "In the SLPHT we make observations once a week. But because I feel I can’t stay away from my fields, I do it every three days, rain or shine."

"Farmer Technology"

Farmer technology is another topic that gets discussed in Technical Meetings. This technology often derives from traditional farmer practices or alternative farmer practices such as presented by PAK PRAWIRO SUMARTO and IBU PUSPO.

Pak Prawiro is from Gunung Kidul, Jogjakarta. During the two years since his IPM group completed their Field School no member of the group has used pesticides. Representing his group he made a presentation about their experience in using traditional methods to control the rice seed bug.

"If you just hang out dead crabs you aren’t going to have much of an impact on the rice seed bug. You need to set the crabs out at the right time. Don’t set the crabs out before you have young bugs or before the milky stage. The seed bug doesn’t feed much on maturing rice before this phase and he’s gone after the phase. So you have to make use of this method at the appropriate time."

Participant: "Our group has already tried this method and we haven’t been very happy with it. How many traps do you set out per .25 Ha?"

Pak Prawiro: "We set them out every 10 meters."
Participant: "Our group has tried the same thing except we have put pesticide on the crabs. We have been very happy with our results. Do you think such a practice conforms with IPM practice?"

Pak Prawiro: "IPM allows for the use of traditional approaches. IPM does not outlaw the use of pesticides, but it does say to be very careful in its use."

Ibu Puspo is from Kalibawang, Kulonprogo, Jogjakarta. She is an IPM farmer trainer. She made a presentation concerning the making and use of traditional pesticides. She talked about several kinds of plants that can be used as pesticides such as tobacco and gourds.
"These recipes have all been field tested in the Field Schools that I have led."

"Farmer Study Results"
Sri Basuki Farmers Group from Purbalingga, Central Java had a Field School in 1990. The group has been active in IPM ever since. They have conducted a series of field trials and studies over the last four years. One reason they have been able to do this is that their village has provided them with a field for their experiments. They use their own fields as the comparative basis for the experiments they conduct in their 'laboratory'. The four studies were presented by PAK KARTOMI:

- Rice Plant Lodging: This study was conducted because rice plants in their area are often hit by heavy winds which blows over the plants. Loss from such damage runs up to 40%.

  "We thought we would try to control this damage by trimming our plants so that our plants would be short. Shorter plants we thought would stand up to the high winds. Well, this practice did not lead to yield loss, in fact we experienced gains. We don't yet know why this is happening, but we are trying to find out."

"Our studies were not set up by a Field Worker. Our group needs to do these studies so we can solve our problems."

Pak Kartomi said.
Nitrogen Efficiency Study: This study was conducted because of the cost of nitrogen and the group's desire to try to save on using chemical nitrogen. They looked at how they could benefit from using the remains of the rice straw in the field.

"We plowed under the rice straw that remained in the field after harvest then flooded the field. The rice straw rots after awhile and is in fact an organic fertilizer. Using this cuts down on the amount of nitrogen that we have to buy. Yield comparisons indicate that this is an effective way to make use of what we normally would burn and it saves us money with no loss in yields."

Other studies conducted by the group dealt with varying planting distances and varying the length of time before transplanting out of the nursery bed.

Participant: "Why did you do these studies?"

Pak Kartomi: "From my own perspective it is because I am a full-time farmer, my only means of livelihood is farming. Higher yields can mean greater returns. By using better farming methods I can get higher yields."

Participant: "Who requested that you do this?"

Pak Kartomi: "We did this on our own initiative. Borrowed land from the village on our own. Used the land as a laboratory on our own."

"The IPM Movement"

The material concerning the "IPM Movement" usually is made up of descriptions of the efforts IPM farmers have made to involve others in IPM including farmers and local officials. The Tani Murni Group of Tahunan, Sale, Rembang, Central Java has been involved in organizing on behalf of the 'IPM Movement'. PAK MUCHARNO presented a written paper about the history of his group's activities.

"Results that we can point at because of our IPM activities include the integration of our activities with those of other village institutions whether those are peoples organizations such as LKMD, government organizations such as LMD, or the village chief."

Participant: "What methods did you use to institutionalize IPM in your village?"
Pak Mucharno: "As I said in the paper, you can make use of various media, the farmers group, monthly meetings, etc. The most effective is through Field Schools."

Participant: "From where did you get the funding support?"

Pak Mucharno: "From government and village funds."

"Discussion of Field Problems"

Farmers implementing IPM face a wide variety of problems. An example is that presented by PAK JOYO SUMARTO, a farmer trainer. He discussed the problems he has faced as the leader of a Field School and asked for ideas from the participants.

"At the beginning we had total participation, everyone was present. Then attendance started to go down. We are now in the sixth week and only eight people were present at the last meeting. So I'd appreciate it if any of you have ideas about how I can improve the situation."

Participant: "What farmers did you select for the field school?"

Pak Joyo: "Why farmers from my village of course."

Participant: "No, were they part-time farmers, renters, owners...?"

"At the beginning we had total participation, everyone was present. Then attendance started to go down. We are now in the sixth week and only eight people were present at the last meeting. So I'd appreciate it if any of you have ideas about how I can improve the situation."
Pak Joyo: "Most of our farmers are land owners."

Participant: "Maybe you aren't sensitive enough to them."

Pak Joyo: "I don't understand how that could be. I visit them at home, I leave messages for them to come and talk to me. But they say, sorry can't make it, I have to go to market, sorry I have a sick friend, sorry I have to go to a wedding."

CLOSING THE MEETING. At the end, a member of the committee needs to thank everyone for coming and close the meeting. This is done by pointing out some of the positive elements of the meeting, making a summary statement or two, asking for comments from the participants, and maybe asking who will host the next meeting.

"The meeting has been useful to increase my knowledge of what is going on. It would be helpful to have written materials to take home with us."

(Pak Jo SETONO)

"Don't wait until it is too late to send out invitations. This would give us enough time to prepare presentations and written materials."

(Pak Legiman)

"I think it important that I tell others about what happened here. I am going to use our group's routine meeting to present what I have learned here."

(Pak Tri Sutrisono)

"Ibu Puspo's presentation was very interesting. I think our group will try to apply some of the same methods."

(Pak Sugeng HS)

"We are at the end of today's activity. Hopefully it's been a useful day for you. I hope we can meet again at the next technical meeting. Thanks for coming."

(Sutiman, IPM Field Worker, Kalibawang Sub-district, Kutonprogo District, Jogjakarta)
A. Background

Thousands of farmer groups that have completed IPM Field Schools. Those who have participated in Field Schools have mentioned several benefits from having done so including they are more creative and innovative. Evidence to the increased creativity and innovativeness of these farmers has been the utility of a wide variety of farmer designed and conducted IPM related field activities. If these activities can be documented then the benefit of these activities can be spread to other farmers. There are three basic classifications of activities to be documented by case studies of farmer media: farmer innovations, farmer group innovations, and IPM movement innovations. The SPPO, filling the function of coordinator, information manager, and supporter of field activities is in a unique position to document farmer activities and use those documents to benefit other farmers. The IPM Case Study and the IPM Farmer Media activities were developed to fill this need for documentation and information sharing.

B. Goals

1. Increase the dynamism of farmer groups.
2. Document innovative activities that have been conducted by IPM groups.
3. Acquire new information that would help to enrich field activities and IPM Field Schools.
4. Support the functioning of the SPPO as coordinator, manager of information, and supporter of field activities.
5. Support the developing farmer IPM network.

The process of developing the IPM Case Study and IPM Farmer Media can be broken down into several stages.
C. Preparation

Steps:

1. SPPO Field Leaders at the monthly IPM technical meetings with IPM Field Worker spread the word about the case study activity.

2. While in the field the IPM Field Worker look for likely IPM farmer groups that are conducting innovative activities. If they find what they consider an appropriate activity they work with the group conducting the activity to develop an outline of the activity for a proposal to be made to field leaders at the DPO and SPPO.

3. The groups proposal is sent to the DPO.

4. The Field Leader at the DPO collects the proposals he has received and sends them on to the SPPO.

5. Field Leaders at the SPPO select the most appropriate proposals for IPM Case Studies based on the innovativeness of the proposals and what they feel to be the needs of farmers in their region.

D. Researching the Case Study

This activity takes place in the field with IPM farmers and their group. The amount of time spent on this stage depends on what has to be done in the field. The Case Study Research Team is made up of one Field Leader from the SPPO, one Field Leader from the DPO, the IPM Field Worker and the Extension Worker involved with the farmers.

1. The research team needs to get together and decide what they are going to do including: what approach will be used to get information; what information is needed; determine the information gathering process; identify the roles of each team member; etc.

2. The research team sets up a meeting with the farmers involved in the case.

3. The goal and purpose of the case study is made clear for everybody at the meeting.

4. Working with the farmers and using an appropriate process the research team should try to determine the following:
   - Where did the idea for the activity come from?
   - When did they start the activity?
   - Where did the funds come from?
- Who has been involved?
- What has been involved in the activity?
- Why this activity - its importance, its purpose, the need in fullfills?

5. Collect background data of the area such as population, maps, field conditions, infrastructure, etc.
6. Conduct a closing meeting with the farmers and before departing the research team should determine what they need to do next and who will do what.

E. Writing the Case Study

The Case Study should be written up by one of the Field Leaders from the SPPO. Its important to try and provide some focus to the information that has been gathered, so the writer may need to first separate out the kinds of information he has.

1. Sort out the data using such classifications as visual data, quantitative data, qualitative data, opinion, process information, and so forth.
2. Determine the perspective the case is going to take (hint: determine who the case is for and what about the case will be interesting to them).
3. Outline the case, for example:
   - **Forward:** content-case outline, when and why it was written, how the information was gathered, etc.
   - **Contents:** determine the logical progression of the activity and how you want to present it.
   - **Closing:** Analysis and suggestions based on the case.
4. Prepare enough copies of the case so those involved in its development can review it and make comment (the farmers, IPM Field Worker, Extension Worker, DPO, SPPO).

F. Preparing the Farmers Media

There are three important issues that have to be considered before developing farmers media. First, determine who the farmers are that will be using the media, what are they like, their perspective, their needs. Second, given these conditions what will need to be done so that information provided will be useful. Third, what is the most appropriate way of delivering that information to these specific farmers.
1. Based on the needs of farmers and your goal determine the kind of media you will use to deliver the information you have in your case study.

2. Translate the information you have in your case study to the media you wish to use.

3. Develop a rough draft of the media you wish to use in order to test it.

G. Trying Out the Media

Before reaching a final stage with the media you have developed, try it out with a group of farmers. One process you can use is the following.

1. Divide the group into small groups.

2. Give the participants the media you wish to try out.

3. Let the participants have a chance to read or use the media in question.

4. Somebody from each group should try to present the contents of the media.

5. Ask relevant questions of the participants based on the media and its content. Try to determine if the content is clear and understood. If not, why not.

6. Ask the participants for their ideas on how the media might be improved.

H. Distribution

1. Finalize the media based on results of the try out. Reproduce enough copies of the media to be used with IPM farmer alumni in your region.

2. Media can be used as special topics in Field Schools, group dynamics exercises, etc.
Conducting The IPM Case Study and Farmer Media Process:
How the Activities Were Implemented in Jogjakarta

The implementation of the IPM Case Study and IPM Farmer Media activities requires a series of steps that includes: preparation, research, writing the case study, creating the farmer media, field testing, and information distribution. This section provides a description of each of these steps.

A. Activity Preparation

There is now a new field operational management structure involving the SPPO, DPO, IPM Field Worker, Extension Worker, and the IPM farmers group that easily facilitates the management of field information. The same goes for the process of preparation for the IPM Case Study/ Farmer Media activity, this structure facilitates the process.

1. Determine Innovative Activities

From the beginning the IPM Field Worker has an important role in the case study activity, he or she knows what’s going on with IPM farmer groups. It is up to the IPM Field Worker to suggest to Field Leaders which farmers groups have innovative activities going on.

"I based my selection of farmers groups on whether or not a group was active and if the group had an activity that I thought was could and should be shown to other groups."
(Sutiman, IPM Field Worker, Kalibawang Sub-district, Kulonprogo District)

"I proposed this group’s activity, formation of an IPM Field School alumni association, because its the first of its kind in Jogjakarta. It is an innovative activity. I made my suggestion at our monthly technical meeting at the DPO because this meeting is attended by Field Leaders from both the DPO and SPPO and the Field Leader from the SPPO is the coordinator of this activity."
(Sri Sugiyanti, IPM Field Worker, Sewon Sub-district, Bantul District)
At the level of the SPPO, all proposals for case studies from the field are compiled and evaluated to determine what should be done next. Because a primary characteristic of the IPM Case Study is that it should concern an innovative activity, the SPPO team of Field Leaders sorted through the proposals looking for activities that reflected ‘innovativeness’. Just what it was that would be considered to be ‘innovative’ had been agreed upon earlier by the Field Leaders at the Jogjakarta SPPO.

“In sorting through the proposals of the IPM Field Worker’s we were looking for activities that were responsive to field problems and provided new insights for farmers.”

(Sri Handoyo, Field Leader II, SPPO Jogjakarta)

An example of the reasoning of SPPO Field Leaders as they made their choices:

“The proposal about the Field School Alumni Association by Sri Sugiyanti we felt to be something entirely new at the level of farmers in Jogjakarta. At the present, the group being led by Sri Sugiyanti, named Tani Ngudi Asri, has its own association of IPM Field School Alumni and they want to expand this association to cover the entire sub-district. Such an association would make the distribution of information related to IPM very easy. Our hope is that this example or case provides a new insight for other groups.”

(Guntoro, Field Leader II, SPPO Jogjakarta)

In many cases the determination of what is innovative doesn’t so much fall on the side of selecting an activity that is completely new, rather it might be something that has been around for awhile but offers a new twist. For example, the choice of traditional pesticides or the ability of a group to organize itself and make their own way:

“There are many traditional approaches to controlling pests, we can see them in many places. However, when you have a farmer trainer working with a group of farmers who want to try out these methods and test their appropriateness using their own funds for the tests. this is innovative. How did this come to be?”

(Nanang Budiyanto, Field Leader II, SPPO Jogjakarta)

“There are lots of farmers groups that are self-sufficient, who have organized themselves into a sustainable group. However, when you have a group which is located in a mountainous area, far from irrigation, without the support of local officials, the case becomes very interesting.”

(Sri Handoyo, Field Leader II, SPPO Jogjakarta)
2. Determine Research Team

Besides determining what cases might be used as IPM Case Studies, the SPPO team also must determine who will make up the research team who will be responsible for developing the case study. The group should involve a Field Leader from the SPPO as well as the Field Leader at the DPO plus the IPM Field Worker and an extension worker.

"The research team has the task of researching the case, organizing and summarizing the data and information that they uncover, taking care of everything up to the writing process which is coordinated by the Field Leader II at the SPPO."

(Nanang Budiyanto, Field Leader II, SPPO Jogja Karta)

B. Researching the Case

1. Time and Place

The research process doesn’t depend completely upon a predetermined time schedule. Whenever members of the research team are in the field they can use the time to learn more about the case that they are researching. However, time should be scheduled for a meeting between the farmers group and other resource people involved in the case and the research team.

"We made use of the meeting day of the IPM Field School because the information we needed involved the group in the Field School. We hoped that attendance at the Field School would be complete so that we could get as much information as possible while involving as many farmers as possible. Besides members of the group, farmers, were very open."

(Suparadi, Field Leader, DPO Kulonprogo)

Thus the reasoning of the Field Leader II regarding the scheduling of opportunities to research information about the self-sufficiency of Tani Margo Basuki Farmers Group in Sub-district Kalibawang, Kulonprogo. There didn’t seem to be any other way to get together given that the group was not receiving any support from local village officials and participants could not afford to get together for interviews. So the research team met with the group at a participant’s house that was near the Field School after their weekly Field School meeting was completed.

The team researching the IPM alumni association of Tani Ngudi Asri Farmers group arranged to meet with people in the evening.

"We wanted to meet with people in the evening. Besides the fact that the group was not involved with a Field School and
was thus not tied to a Field School meeting schedule, we were trying to get as many people as possible to attend, including village officials. We decided to meet at the house of the village head."

(Sri Sugiyanti, IPM Field Worker, Sewon Sub-district, Bantul District)

So meeting times need to be appropriate to the case study topic being researched. In the case of the alumni association, the information that was needed by the team also needed to be known by several others, thus a general and open meeting was thought to be useful. However, if the team feels it necessary to get more in-depth information, it might be useful to schedule specific meetings to do so.

"Because we still had information that we needed after we finished our open meeting, we had a member of the team go back and arrange individual interviews with specific people."

(Istiyuwono, Field Leader II, DPO Bantul)

2. Location of the Research Process

Information related to the case being studied should be sought in the field from the farmers group. This way the IPM Field Worker can be involved in providing information about the innovative activities of the group.

3. Research Process

The following presents a process based on examples from several sites. The process used in Kulonprogo with two farmers groups will be used as a reference point to discuss how information can be sought by the research team.

STEP ONE, the research team arrives at the farmers group. The research team, consisting of the IPM Field Worker, extension worker, and Field Leaders from the DPO and SSPO, arrive at the farmers group at the scheduled time. Before the meeting begins, the research team needs to get together for a quick talk to remind everyone of their roles, the information being sought, and the process to be followed.

"Besides discussing the process to be used and the general agenda to be followed, we determined the specific methods we would use and the specific information we needed. We also talked about the role each of use must take on in the process."

(Supardal, Field Leader II, DPO Kulonprogo)
STEP TWO, the opening. The research team greets the members of the group and introduces itself and the purpose of the meeting. This is done by the IPM Field Worker.

"The reason we have come besides our friendship is that we need some information from you as members of this group. The IPM program has been going on for some time here in Indonesia and it is evident that some boost has been given by program activities to both the progress of agriculture and the
development of farmers organizations. This is especially true of your group here which is well known for its success at becoming a stable and self-sustaining organization. Because of this we would like to conduct a question and answer session with you which we will write up in book form so that other groups can learn of your success and how it happened."

(Sutiman, IPM Field Worker, Sub-district Kalibawang, Kulonprogo District)

After explaining the purpose of the meeting, the potential benefits of meeting for other groups, and the meeting’s agenda, the IPM Field Worker and extension worker prepare things for the next part of the meeting including dividing the large group into small working groups.

STEP THREE, collecting information. There are many methods that can be used to collect information. For such specific information as group formation or group activities, the research team used small group discussion.

“Dividing the group into small groups, besides making it easier for participants to answer questions, makes it more likely that all participants will contribute to the discussion. The total number of small groups was based on how many specific topics we wanted to learn about, for example, the history of the group, the officers of the group, activities that the group has done, etc.”

(Supardal, Field Leader II, DPO Kulonprogo)

So the small groups are formed based on the total number of information topics identified by the research team as critical to their task of developing an IPM Case Study. Thus each small group has a specific topic to discuss. In the case of Kulonprogo each group discusses the following topics:

» **Group 1** - Discuss various issues related to the group, for example, the history of the development of the group, membership issues, finances support, typical meetings, and so forth.

» **Group 2** - Discuss organizational issues related to management such as the management structure, selecting officers, roles and tasks of officers, etc.

» **Group 3** - Discuss activities of the group both before and after the IPM Field School took place including the results of the activities.

» **Group 4** - Prepare background data about the village such as local culture, geographical data, etc.
After the small groups are formed and each small group understands its specific task the extension worker and IPM Field Worker pass out writing materials such as paper and pens. Each member of the research team sits in on the discussion of one small group. The research team member functions as a facilitator.

After each small group discusses and writes out information relevant to its topic, one person from each group presents the findings of his or her group. The research team takes notes from
these presentations and asks clarifying questions. These questions are usually answered by the members of the small group in question, but others would also contribute. In fact during these presentations, discussions amongst groups often take place that lead to the revelation of information that the small group had forgotten.

This process is very familiar to the participants. The process is very similar to the process used in an IPM Field School. Thus everyone is very comfortable with how the meeting proceeds.

Other ways of completing the data collection needs could be via interviews with specific sources in the field that could shed further light on the subject. Photographs are also very useful in documenting visual information such as field conditions, prominent people, or specific activities.

STEP FOUR, after the data gathering meeting. After the presentations are finished, the IPM Field Worker closes the activity and thanks everyone for their participation.

"We, the research team, want to thank you all for coming here. After we are finished here the research team will discuss the results of the meeting. If we find that there are still some holes in our understanding, we hope we can come back here and meet with a few members of the group."

(Sutiman, IPM Field Worker, Kalibawang Sub-district, Kulonprogo District)
After the meeting is closed, the research team meets. There are three primary issues that the group discusses: what did they learn from this meeting, what information do they still need, and determination of follow-up tasks for team members. In examining the results of the meeting with the farmers, the team classifies the information it collected into three categories - qualitative, quantitative, and other. This helps to determine what information is still needed. As the team identifies what tasks remain, who will complete those tasks is also determined.

"We agreed that the IPM Field Worker and the extension worker would return to get further information; the Field Leader II at the DPO, assisted by the IPM Field Worker, will summarize the information that we have collected to help facilitate the write-up of the case at the SPPO; the Field Leader II’s from the DPO and SPPO will set a deadline for when this summary will be completed."

(Sri Handoyo, Field Leader II, SPPO Jogjakarta)

C. Writing the IPM Case Study

Each Field Leader II at the SPPO is responsible for writing up an IPM Case Study based on the case he or she followed in the field. When it comes to write up the case study there are several things that need to be focused on: the kind of case or innovation and type of activity involved. The classification of case or innovation is to determine where the innovation took place. There are at least three classifications: farmer innovations, farmer group innovations, IPM movement innovations. Examples of types of activities are as follows:

- **Farmer Innovation:** An activity conducted by a farmer or several farmers such as a specific study and its results.

- **Farmer Group Innovation:** An activity carried out by all the members of a farmers group such as an approach to pest control or a process for getting financial support for the group.

- **IPM Movement Innovation:** One example of this type of innovation is local official support for IPM program activities such as financial aid at the village or sub-district levels or policy support.

"So the first step in writing up a case study is determining what it is that you want write about. If your topic is clear, then all that is needed is to determine what aspect do you want to stress such as a person, a problem that was solved, or a technological aspect. Then you need to refer to the data that has been collected and summarized by the research team to help you in your writing."

(Sutarsana, Field Leader II, SPPO Jogjakarta)
Field Leaders at The SPPO did the process of writing the IPM Case Study using the SPPO's computer.

"If you are writing about a person readers want to know: who is this person, why are we writing this about him or her, what has he or she done, what the background and goal for what he or she has done, and what were the results of what was done. It's the same with other aspects. Your writing becomes more focused once you are sure of what it is you want to tell to others. A benefit of knowing what your topic is and determining your focus, is that you get a clearer picture of the planning needed for developing the media that will distribute the information in the case to other farmers."

(Nanang Budiyanto, Field Leader II, SPPO Jogjakarta)

Thus the IPM Case Study is written up by the Field Leaders of the SPPO who have been involved in researching the case. The case should be written on the computer at the SPPO. Once the case is written it should be given to the coordinator of Case Studies at the SPPO, this person should have already been identified. The coordinator is responsible for:

- The completion of the write-up of the IPM Case Study by the research team;
- The editing of the case study;
- The publication of the cases in booklet form that is easily read;
- The creation of IPM Farmer Media.
D. The Creation of Farmer Media

Farmer media is media that is oriented toward the farmer. It supports the IPM learning process at the farmer level. The following are some ideas of Nanang Budiyanto, Field Leader II, SPPO Jogjakarta, about the process of creating IPM Farmer Media.

"Before beginning the process of making farmer media there are three important issues: know who the farmers are who will be using the media; the factors influencing the use of media among these farmers and what can we do about them; what is the most appropriate approach for providing information to these farmers. For example, we assume that farmers are people who always want to know and are thorough. But maybe the present conditions don’t support this, maybe these farmers read poorly, can’t understand Indonesian, or are, in fact, illiterate. Once we know these things we can determine what media is most appropriate for a given group of farmers."

Thus an important issue in developing farmer media based on the information contained in a case study is that it isn’t enough to just put the information into a new form.

"Information can’t be presented in the same way in another media as it is in a case study. Because of this, you need to ‘translate’ this information from one form to another."

Farmer media is the supporting material on learning for farmers.
In print media such as a brochure, the message that you want to deliver has to be reformed, abbreviated into its basic points that express the basic ideas of a concept or the basic actions involved in a particular activity. Following this pictures are added to help clarify the written message. These pictures are usually in the form of photographs or drawings made by the research team. The computer at the SPPO will be very useful in making several kinds of media.

"In making media we used the materials that we have available at our SPPO office, paper, pencils, pens, felt-tip pen, and rulers. We use a photo-copier to enlarge or shrink to drawings that we are going to use then we cut them and glue them to the media that we are making. Our farmer media is designed to be photo-copied, that way, besides being cheap, we always have it on hand if we need to make more...

... The farmer media that we made at SPPO Jogjakarta spring from two origins. The first is farmer media that is based on the information contained in an IPM Case Study, for example, our brochure on traditional pesticides and our theater drama. The second is farmer media that was made in response to a field problem that arose suddenly and required a solution, for example the problem of tungro that just recently appeared in Jogjakarta."

What we can seen here is an SPPO functioning in its role as a coordinator and manager of information to support farmer field activities. The Field Leaders are aware of field needs and creative in responding to them. They use a variety of media to approach issues, including theater.
There are many forms of theater that can be used to spread information related to IPM such as: drama with farmers as actors, traditional local theater forms, and so forth. In Jogjakarta the group of farmers from Kulonprogo District that was able to establish itself without the support, financial or otherwise, of local officials was written up as an IPM Case Study. In another district, Sleman, another group was facing the same problem, it wanted to grow and establish itself, but it had no outside support. Given the results of the case study conducted by the SPPO, the Field Leaders were able to help the Sleman group as it designed a theater presentation. The Field Leader II of DPO Sleman was able to help influence the script being written by Sleman farmers based on what had been learned in Kulonprogo.

"The script for kethoprak is pretty standardized. Most actors already know the plot of the story and its dialog. We took the opportunity to ask the Field Leader II to contribute to the script basic IPM concepts that we wanted to add that fitted with our conditions. There will be no problem for the actors to play their roles, they have all been through an IPM Field School."

(Pak Sudarmo, Head of Sedjo Rukun Farmers Group Sleman District, Jogjakarta)

"The IPM message couldn't just be stuck in anywhere in the script. The issue was fitting it into the traditional kethoprak story and form. We were able to slip IPM concepts into the dialogue between the king and one of his advisors as they discussed agricultural issues."

(Bambang Yoris, Field Leader II, DPO Sleman)

E. Field Testing Media

Once IPM Farm Media have reached the stage of final draft, before you want to go to print and distribute the media in your region, you should try out the media with farmers. The goal here is to determine whether the information you wish to pass on to farmers and the form of media you are using to pass on the information are appropriate to farmers.

There are many ways to test media. For example, you could use an IPM Field School as a forum for testing media or perhaps a routine meeting of an IPM farmers group. To get input from Field School leaders such as IPM Field Worker, extension workers, or farmer facilitators, you could use the monthly technical workshop at the DPO or other forum where these people come together.

"We have used several different forums for field testing farmer media: IPM Field Schools, DPO Monthly Technical Workshops, Farmer Technical Workshops, and Farmer Planning Meetings."

(Bambang Yoris, Field Leader II, DPO Sleman)
"Testing media with farmers and field leaders has two different goals. When you test media with farmers you are trying to find out if they can understand the information and whether their understanding is impeded by the form of media. When you test media with field leaders the issue is whether they can use the media."

(Nanang Budiyanto, Field Leader II, SPPO Jogjakarta)

Testing media will provide many ideas and suggestions that will be useful in perfecting not only the media in question, but you efforts at developing various forms of media in the future. The more you understand about the ultimate users of the media and their ability to understand and use the media you are developing, the more effective you become as a developer of farmer media.

"This tungro brochure uses a lot of terms that I don't understand. For example: 'eradication', 'susceptible', and 'source of inoculation'."

(Pak Pujdtiyono, Head, Ponggok Farmers Group, Sleman District)

"For farmers, its a lot easier to understand any media if foreign terms are translated into Indonesian."

(Pak Muh Wazani, Dusun Kweni Farmers Group, Bantul District)

"You have to consider the fact that not all farmers can read or speak Indonesian. For farmers who are illiterate, pictures are very useful. We need to try to develop media that makes use of local languages."

(Budi Santoso, IPM Field Worker Sleman District)
An easy way to conduct a field test of farmer media would be the following process in which you are testing the media with a group of farmers:

» Divide the group into several small groups;
» Give each group the media that you want to test;
» Ask the participants to read the materials, give them enough time to do so, ask them to determine what they think is the meaning of the content of the media;
» Representatives from each small group present what their group understands the content of the media to be;
» The facilitator asks the small groups questions that focus on the meaning of the content. For example, ask the group to explain the meaning of a specific sentence or term.
» Ask the group to write out suggestions that they have for improving the media;
» Based on their answers determine what percentage of the participants understand the information contained in the media being tested:
  • Over 90% of the participants understand the media - print it.
  • 80 to 90% of the participants understand the media - maybe there are some improvements to be made.
  • 70 to 80% of the participants understand the media - ask yourself where the problems are, its clear that some improvements are needed.
  • Less than 70% understand the media - back to the drawing board.

F. Distribution

Once you have tested the media go ahead and distribute the media to the field. The field management system that is now in place for the program should be used for this distribution process. The first priority for receiving media are IPM Field School farmers groups, next are those who are conducting field schools, including farmer trainers.

"After we tested the IPM Farmer Media, the media was sent to the four DPO in SPPO Jogyakarta. Each DPO sent the media on to farmers groups via the IPM Field Worker in its district."

(Guntoro, Field Leader II, SPPO Jogyakarta)
"One of the farmer media made by SPPO Jogjakarta, the brochure on Tungro, was used by the Provincial Agriculture Department. It was reprinted and sent out to all farmers in areas that might be experiencing tungro problems."
(Bambang Yonis, Field Leader II, DPO Sleman)

"Besides sending the farmer media out to farmers in general, we have used the media in IPM Fields Schools in special topic exercises and in group dynamics exercises."
(Sri Handoyo, Field Leader II, Jogjakarta)
SEWON: An IPM Case Study

Sewon . . . it's a short name, you only need five letters to write it . . . but we are going to need of a couple thousand words to tell the story of IPM in this sub-district. Sewon is located about seven kilometers south of Jogjakarta with a population of 69,122 people living in 12,028 households, within an area of about 27.16 Km2. The majority of these people are involved in agriculture, however for most of those people farming is only one of several household activities for earning money. The total area of land in agricultural production is 1507 ha. with an annual planting cycle of rice-rice-non-rice crop. In the villages of the sub-district there are 40 farmers groups. The IPM concept was first introduced in Sewon in 1979 by the extension service.

On the Trail of IPM Field Schools

Between 1990 and March 1995, 21 IPM Field Schools have been implemented in Sewon. These Field Schools have been the result of the work of one IPM Field Worker and 12 Farmer IPM Trainers. There have been many kinds of IPM related activities taking place in the sub-district including traditional theater presentations of IPM issues. Such continuous development doesn't happen in a vacuum. The local government has been very supportive of Field Schools. In 1993 the sub-district chief published a declaration urging the continued expansion of IPM related activities. The local government has supported Field Schools by providing both funds and administrative help. Following is an interview with the sub-district chief, Bapak Abidin Soehoed, which covers Field School implementation and the IPM Farmers Alumni Association.

Question (Q): What is your opinion of IPM Field Schools?

Answer (A): The understanding of IPM that is spread by Field Schools is very positive weather you look at from the position of local government or from the perspective of farmers.

Q: What benefits can you point out?

A: As IPM expands you get more and more farmers who know about IPM. This will decrease the likelihood of major crop loss because of insect damage.
Q: Describe the growth of IPM Field Schools in your sub-district.

A: The number of Field Schools has expanded very quickly while being well planned. Village government has been very supportive and of the 48 farmers groups in the sub-district, 21 have had field schools. These schools have been funded by a variety of sources including the National IPM Program, provincial government, district government, and farmers themselves. Village funds, averaging 180,000 Rp per SLPHT, have been used to top off IPM project Field Schools.

Q: What have you done to help the expansion of IPM in your area?

A: I have issued a declaration establishing a sub-district level IPM working group to provide leadership in the development of a local IPM program. Such a declaration is helpful in that it formally states a mechanism for bringing people together to work on a specific issue. In this case it provides a venue that farmers can use for accessing local government.

The following questions were directed to the head of Panggunharjo village.

Q: As head of a village, what do you feel has been the benefits your village has derived from IPM Field Schools?

A: We are pleased to support Field Schools, we think they make several important contributions to the village:

- they helped the development of local agriculture by contributing to increased farmer incomes.
- the contribute towards environmental protection because fewer pesticides are being used.

IPM Farmers Take Action

Starting from the proposition that increased incomes would be the result of changing traditional farming methods, IPM Field School alumni of Sewon thought it important to provide a venue for the discussion and sharing of their experiences. Thus the idea was put forward to establish and IPM Farmer Alumni Association. The association was officially christened in October of 1994 with the goal of becoming the venue for communication among IPM farmers about the field problems that they are facing with the hope that they might be able to solve these problems. The association was given the name *Ngudi Asri* which reflects the desire of the group to establish an agricultural environment that is stable, healthy, and sustainable.
The association has established a basic routine activity: once a week, every association member must conduct a field observation of their rice field. Problems or issues that arise because of these observations are the grist for discussion at a monthly association meeting. The goal is to provide an opportunity for IPM farmers to benefit from each other’s experience as they try to analyze and solve their problems. Besides the discussion session the monthly meeting also has a revolving fund that is supported by all members and can be borrowed from by all members. Besides this several groups have been conducting field studies which they hope will serve to provide an educational tone to the association. One study being conducted concerns the use of urea tablets.

Now we’ll go back and ask the sub-district chief and the village head about what they think of the Alumni Association.

Q: As sub-district chief what do you think about farmers organizing their own alumni association.

A: It’s a great idea. The association will help farmers to organize themselves, improve communication amongst farmers, overcome problems that have been hanging them up in the field, and reactivate farmers who have been away from their IPM groups.

Q: But what is the benefit for farmers in this?

A: First of all these farmers have a chance to associate with each other. Next they have a chance to talk about issues affecting agriculture in their area. This alone will provide them more information about the issues surrounding them and an opportunity to analyze those issues. The analysis should lead to action decisions and this will improve the general agricultural climate and in the end the agricultural economy.

Q: What do you think about the strengthening of the links between farmers from different villages?

A: A healthy competition will develop among the different villages to see who can have the strongest agriculture and this will provide motivation for them all to stay focused on their work.

Q: As the village head and an officer in the association, what do you think about the association?

A: We hope that this will establish IPM in our village so that IPM will be the accepted norm. We feel that this will result in an improved agricultural economy and healthy environment.
Natural Means of Pest Control from South Sulawesi

Introduction

The following is a brochure developed in South Sulawesi on control methods for various pests in rice. The methods are mechanical or make use of non-chemical means of control. The original brochure is presented first and the translation follows. The panels in the original have been numbered to help the reader associate the translation with the panel in the original brochure. The methods presented have all been field tested by farmers in Soppeng District of South Sulawesi.
UNBUHAN KELAPA SANGIT

Sisipan pemangkang sawah dan nyamuk setiap malam, karena kelapa sangit tajam seperti pedang panjang, maka akan terbakar dan karena terbakar api obor akan mati dengan mudahnya.

Kelompok Tani SOBOB Soppeng

SEJUTA BAMBU TIKUS

Potong-potong bambu sepanjang ± 1,5 meter, dan hilingkang penghubung antar rumput tikus yang biasa ditemui dalam tanah. Letakkan bambu tersebut pada pemangkang sawah atau tanah semak yang bisa ditaliti tikus. Setiap pagi dinaikkan dan diletakkan di obor, sedikit untuk dibunuh.

Kelompok Tani YONGGONG LERENG Soppeng

FELEPAH TALAS HITAM PENGBALAU TIKUS

Potong pelepah beserta daun dan letakkan dimuka pemangkang sawah dengan jarak ± 5 meter. Karena pelepah talas berwarna hitam (soperti Ular Hitam), licin menggigit dan tidak masuk ke petani sawah.

Kelompok Tani LAPAB Soppeng

SUHU DAPUR PENGUSIR HPP

Talas hitam, kunyit, panini dan 3 butir kemiri di tumbuk halus, lalu dimasukkan kedalam ember yang telah disi air dan diaduk merata. Setelah dinginkan selama 1 (satu) malam, kemudian disaring dan dimasukkan kedalam tangki (Sprayer) untuk disemprotkan pada lahan yang ter- serang Hama Pupih Felis/HPP.

Kelompok Tani CERANA I Soppeng
Suru Anumal GLPT
ini hasil tercobakku,
terpa apa cara?

TRASI UNTUK PENGENDALIAN WALING SANGIT

Ambil trasi secukupnya dan larutkan kudalau air sampai merata. Celupkan sani
bub kelapa kedalam larutan trasi tersebut dan tuak du
ngan patok, kemudian tancap
kan di pematang batang dengan kutungkian 25 cm di atas per
nukaan tanaman. Karena ma
lung sangit turut asik akan terbuang naha akan terbuang
pada sabut kelapa tersebut. Kemudian larutkan Anda 17.

Karet Dekas UNTUK PENGENDALIAN TINUS

Karet bekas dan mobil/n
otor disinfisai dengan
Pada malam hari karet dipu
sang dipematang sawah dan
di bahannya tanah setu ujungnya di
pada patok dipotong pengat,
akan tidak akan masuk.

Kuatoran Kuda VERSUS
ULAT GRAYAK

Katoran kuda yang tular
coring, dinilaiikan kecndu
ikhitanhikan dengan
dalam keadaan mudah-mudah.
Pupulas ulet grayak akan
berkurang.

Kelompok Taul LONKONG RESIKAN Suppeq
Kelompok Taul SITAPITING Suppeq
Kelompok Taul LAPAKKAL Suppeq

ABU DAPUR PENDEBANDAL
APHTIS (Hama Pengendang)

Abu dapur atau abu suku
nuburkan pada pematang
yang tumbuh APHTIS, insya
Allah semoga akan terbibir-
barat.

Kelompok Taul LAKALUKU Suppeq

LENKAUS DAN JAHÉ UNTUK
PENGENDALIAN ULAT GRAYAK

Lenkaus dan Jahé ditum-
bul/ispur dan dambli ceri
nya, Seri lenkaus dan Jahé
dispensair air bukunya dan
masukkan dalam tangal (spray
yori) untuk mubahalai ulet
grayak. Niscaya pupula
ulat grayak akan berkurang.

Kelompok Taul TONHONG RESIKAN Suppeq
Natural Pest Control Methods

From Farmers for Farmers
South Sulawesi

1. Rice Seed Bugs and the Torch
Set the torches out on the edges of the ricefield and every evening light them. The seed bug is attracted to the flame of the torch. The insect's will fly to and collect near the flame. As they fly into the flame they will perish.

Soboe Farmers Group, Soppeng

2. Black Taro Mid-ribs Drive Away Rats
Cut the leaves of black taro so that you have a long stem and place the leaves around the edge of the ricefield about three to five meters apart. Because the stem is black (like a black snake) rats will be scared off of entering the field.

Lapal Farmers Group, Soppeng

3. Rats and A Million Bamboos
Take bamboo with a diameter sufficient for a rat to enter. Cut the bamboo into lengths of about 1.5 meters. Clean out the bamboo so that it is one long chamber that is closed at one end. Place the bamboo at the edge of the ricefield or along the paths that rats use to get into the field. Every day check the bamboo, when you find a rat has entered the bamboo, once in they can’t turn around and exit. you can take the rat out and kill it.

Tonrong Lbureng Farmers Group, Soppeng

4. Kitchen Spices Keep Off Leaffolders
Take black taro, tumeric, vanilla, and three candlenuts, grind them into a fine powder. Put the mixture into a bucket of water and stir until well mixed. Allow to sit overnight. Strain the mixture and put it into a sprayer. Spray your field.

Cenrana I Farmers Group, Soppeng
The Voice of IPM Field School Alumni:

These are the results of our field testing!
Who is ready to try them?

5. Shrimp Paste for Controlling Rice Seed Bugs
Take a scoop of shrimp paste and mix it with water. Take half a coconut shell, mount it on a stake, fill it with the trasi mixture, and set it on on a ricefield bank (*the shell with the mixture should be about 25 cm above the tops of the rice plants*). Because the rice seed bugs like the smell, they are going to collect in the shell. After that its up to you.

*Lakalukku Farmers Group, Soppeng*

6. Kitchen Ashes Control Aphids
Take kitchen ashes and spread them on plants infected with aphids. The aphids should run off quickly.

*Lakalukku Farmers Group Soppeng*

7. Using Rubber from Old Tires to Control Rats
Cut rubber off of old tires in long strips. At night hang the rubber from a pole placed in the edge of the rice field. Set fire to the end of the strip. Rats won’t enter the field.

*Sipadecegeng Farmers Group, Soppeng*

8. Using ginger to Control Caterpillars (ulat grayak)
Pound ginger into a paste. Take this and put into water and put it in a sprayer. Spray the caterpillars. This will lower the population of the caterpillars.

*Tonrong Lebureng Farmers Group, Soppeng*

9. Horse Manure Versus Caterpillars (ulat grayak)
Take dried horse manure, break it down until almost powder, spread it on a field that has been prepared for transplanting with water covering the whole field. The caterpillar population will go down.

*Lapakkail Farmers Group, Soppeng*