STEP FOUR: PLANNING THE TESTS OF SELECTED PRACTICES WITH FARMERS

4.1 EXPLORING THE IMPACTS IN MORE DETAIL

Based on the discussions and choices made in Step 2 and 3 a selected number of practices will have been identified, and treatments applied in selected fields, compared with fields with no treatment. To explore the impacts, the group could continue to use the tables of financial impacts (Table 2.1) and less tangible impacts (Table 2.2) as a basis for this exploration of impacts, drawing up a table specifically for the site. A checklist of questions that the group might also find helpful is given in Box 4.1. Not all of these questions will be relevant to each practice and farmers may well have other questions to add. But the list may stimulate discussion and help to bring out issues of concern to the farmers.

An alternative or complementary approach would be to follow that used in community IPM (Van den Berg 2001) whereby facilitators could work with farmers to draw up an ideas matrix for each of the selected pollinator-friendly practices. This would encourage farmers to come up with their ideas about the possible effects of the selected practice on their cropping system and wider effects on their livelihoods and wellbeing. In the second column farmers note the source of these ideas and in the third discuss what they think about the ideas, to stimulate discussion about how these ideas might be tested. This ideas matrix is meant to be indicative only, and farmers should be encouraged to identify the effects of each practice themselves.

Box 4.1

CHECKLIST OF KEY QUESTIONS TO EXPLORE

INPUTS

- **How would the practice affect the area in the plot that can be used for crops?**
- **How would the practice affect the amount of inputs needed– seeds, fertilizer, herbicides, pesticides?**
- **How would the practice affect labour inputs needed?**

OUTPUTS

- **How would the practice affect yields?**
- **How would the practice affect quality and timing of harvest?**

MARKETING

- **Would the practice affect the price at which the product would be sold?**

DIVERSIFICATION OF LIVELIHOODS

- **Would the practice bring an additional income source? E.g. beekeeping**
- **Would the practice provide additional food sources for the family?**
- **Would the practice provide additional food sources for family's livestock?**
- **Would the practice reduce risk of total crop failure?**

OTHER IMPACTS

- **Would the practice reduce health risks to farmer and family?**
- **Would the practice reduce or increase other hazards for farmer and family? (fire, snake bites, insect bites)**
- **Would the practice involve work that is more tiring?**
- **Would the food produced taste better?**

Box 4.2

IDEAS MATRIX ON USE OF LESS TOXIC PESTICIDES

WHAT EFFECTS	SOURCE OF EACH IDEA	WHAT DO WE THINK? DOES IT NEED TO BE TESTED?
Will do less harm to wild pollinators, improve pollination and hence yield	Visiting experts	Not convinced; needs to be tested locally
Will reduce yield as pest control will be less effective	Experience of other farmers	May be less than the increase in yield if pollination is effective. Depends on how pesticides applied. Need to observe
Will reduce the cost of inputs	One of the participants	Yes but to what extent?
Reduced inputs will lead to reduction in labour time to apply pesticides	Farmers' provisional calculations	But may be minimal. Needs to tested
Less risk to health for farmers and family	One of the participants	Need to observe – but how?

Source: adapted from Van den Berg (2001)

4.2. SELECTING INDICATORS AND DETERMINING HOW THEY WILL BE RECORDED

The aim of this step is to identify indicators that are meaningful to farmers and that they can record easily. Taking the impacts explored in the previous step, the facilitator should work with the farmers to identify the indicators that would be appropriate and practical. Box 4.3 gives some examples of indicators. Not all of these will be relevant to each practice or to each farmers group and there may well be others that farmers can suggest. The list below is meant to be a starting point for discussion.

Box 4.3

CHECKLIST OF POSSIBLE INDICATORS

INPUTS

- **Volume of seeds used per plot per season**
- **Volume of mineral fertilizer used per plot per season**
- **Volume of manure used per plot per season**
- **Volume of herbicides used per plot per season**
- **Volume of insecticide used per plot per season**
- **Number of days/hours of labour per plot per season**

OUTPUTS

- **Yield per plot per season of pollinator-dependent crops in cropping system**
- **Yield per plot per season of non-pollinator-dependent crops in same cropping system**
- **Price received for crops that are sold**
- **Quality of crops produced**
- **Timing of harvest**

COSTS

- **Cost of seeds used per plot per season**
- **Cost of mineral fertilizer used per plot per season**
- **Cost of other purchased inputs e.g. manure**
- **Cost of herbicides used per plot per season**
- **Cost of insecticide used per plot per season**
- **Cost of irrigation water used per plot per season**
- **Cost of hired labour per plot per season**
- **Cost of family or hired labour to apply practices, such as planting of hedgerows or mixing of botanical pesticides**

OTHER IMPACTS

- **Volume used of other products (fodder, medicinal plants, food) in hedgerows, and patches of native vegetation, planted or left to regenerate specifically for pollination**
- **Frequency and severity of sickness related to application of pesticides**
- **Frequency of snake bites**
- **Frequency of insect stings**

The ideas matrix identified the main hypotheses about the impact of the pollinator-friendly practice and the impacts that need to be tested. One approach to take this further is for farmers to draw up an observation matrix (again based on IPM). To do this they would discuss what needs to be observed to test the hypotheses, how measurements should be made and when, as shown in the example below. A key issue will be the units for measuring material inputs and crop outputs. The participants will need to determine the most practical units for measuring the volume or weight of each and agree on a standardised approach (same size can, matchbox, etc) so conversion to metric units can be made later. Box 4.4 gives an example.

Box 4.4

OBSERVATION MATRIX ON USE OF LESS TOXIC PESTICIDES

WHAT SHOULD BE OBSERVED	HOW? WHAT UNITS?	WHEN AND HOW OFTEN?
Yield per plot	Record number of bags	At harvest
Labour inputs for the production cycle on the plot	Record number of hours of own labour/ other family members and hired labour	Daily and weekly
Material inputs (seeds fertilizer, pesticides) applied to the plot in one production cycle	Record volumes/weights with fertilizer (can) pesticides (litres)	When inputs are made
Health	Farmer assessment of symptoms – nausea, dizziness etc. after application of pesticides: none, mild, moderate, severe.	When pesticides are applied

Source: adapted from Van den Berg (2001)

4.3 APPROACHES TO INFORMATION COLLECTION

Understanding how farmers currently assess their production practices, the extent to which they keep records, mental or written, and their motivations for this will be important for identifying feasible approaches to information-gathering. Most subsistence and small farmers do not keep written records although they are able to recall prices and observe general trends such as decline in yields. Keeping records is time-consuming and often tedious. If it is to be done in the evenings it requires good lighting in homes. It also requires farmers to be literate and numerate or to have family members that are. Where farmers are producing in small quantities and primarily for own consumption, record-keeping may not seem worthwhile. Recording one's own labour is particularly problematic. Farmers generally need an incentive to carry out record-keeping and so they are more likely to do this when they are producing for a market that demands this, in particular organic markets.

Box 4.5

EXAMPLES OF RECORD-KEEPING

NEPAL

Mr. Chandra Prasad Adhikari of Fulbari-3, Sripur in the Chitwan district of Nepal, has been an organic farmer for 16 years and leads an organic cooperative which has 123 members (the majority being women) (Figure 4.1). He made the switch to organic farming because he saw that he was using more and more pesticides and producing less and less output. Mr Adhikari's main crop is rice planted over an area of one hectare, but he also grows wheat, maize, and a range of summer and winter vegetables in a number of inter-cropping, mixed cropping and relay cropping systems.

In spite of the complexity of his farming system, Mr Adhikari keeps records of inputs and outputs, including labour on a daily basis. These records help him to decide which crops and crop varieties are good. For example he has tried out 16 varieties of rice, assessing a number of criteria such as grain production, grain quality, taste, and length of rice straw. Similarly, he tests and compares different kinds of pulses, including many local varieties.

KENYA

The Burimburi Young Farmers Group in Kakamega started in 2007 with 40 members and now has 12 active members (Figure 4.2). The members were trained in the Farmer Field School programme, and learnt how to cultivate vegetables such as kales and traditional vegetables for sale. The group has received loans from a Farmer Field School project and from the Ministry of Agriculture and has a bank account with Equity Bank. This money was invested in buying seeds and fertilizer. The group keeps records of sales, expenditure on inputs and hired labour but not their own labour.

Figure 4.1

FULBARI ORGANIC COOPERATIVE, CHITWAN, NEPAL

© M. Grieg-Gran.

Figure 4.2

BURIMBURI YOUNG FARMERS GROUP, KAKAMEGA, KENYA


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Left: *Some members of the Burimburi Young Farmers Group;* right: *Farmers' experimental fields*

Key questions to consider include:

- What do farmers currently measure in their production systems?
- How do they do this? – quantitative approaches with precise recording of volumes or monetary value of inputs and outputs, or more qualitative approaches which record inputs and outputs in rough categories such as low, medium, high.
- Would farmers be interested in doing more record-keeping?
- Which types of information would farmers be able and willing to collect in the form of regular quantitative records?

If farmers are not comfortable with record-keeping, the group facilitator will need to help them by taking on this task. This may make sense if there is a strong likelihood that farmers will be motivated by the demonstration to begin record-keeping later on. An alternative approach where there is little production for the market, and where less tangible impacts might be important is for farmers and/or the facilitator to record qualitative information. This is discussed in Section 4.4.

Examples of templates for quantitative record-keeping

Three types of template will be needed, and are presented in the annexes to this document. They are also available under the documents tab of the International Pollinators Initiative website (www.internationalpollinatorsinitiative.org).

- ***Plot characteristics (Annex 1. Cover sheet template)*** - A cover sheet to describe the key characteristics of the plot. This will help to ensure that the treatment plots and control plots are as similar as possible in their key characteristics and land use history. If before and after comparisons are being made, this information will help to understand differences between farmers participating in the trials.
- ***Inputs (Annex 2. Weekly Template or Annex 3. Daily and Weekly Template)*** - Weekly (or other agreed frequency) sheets to record labour and material inputs.
- ***Outputs (Annex 4: Templates for output – single crop for whole harvest period; or Annex 5: Templates for output – single crop harvested weekly; or Annex 6: Templates for output – multiple crops over whole harvest period)*** – depending on the crop these can be for a whole crop or cropping system harvest and be filled out after the harvest and sale have taken place. Alternatively, record sheets of harvested volume and sales could be filled in once a week (or other appropriate frequency) during the harvesting period. This would be appropriate, for example, for garden eggs in Ghana as these are harvested on a weekly basis over several weeks and the price varies considerably over the season.

  These templates can be adjusted to meet the needs of the farmers and the experiments concerned. Pictures rather than words for example, can denote activities. Records of labour input can be made per activity and/or per plot depending on what farmers agree is appropriate and feasible.

4.4 RECORD-KEEPING FOR QUALITATIVE INFORMATION AND PERCEPTIONS OF CHANGE

Some types of information such as own labour time may be too challenging and burdensome for farmers to record with precise measurement of number of hours or days for different activities. The farmers may however, be able to record the labour spent for different production activities with rough qualitative categories agreed by the group such as 'low, medium, high' or 'lower than normal, normal, higher than normal'. This could be sufficient for the purposes of comparing inputs to treatment plots and control plots (or before and after comparisons). This would make it possible for the comparisons based on the easily quantifiable information on inputs to take into account any major differences in own labour inputs.

Where it is not practical for farmers to record even qualitative information on a regular basis, an alternative approach would be for the facilitator to track perceptions of change in periodic group meetings. The facilitator could periodically lead a discussion with the farmer group on their perceptions of change with the introduction of the pollinator-friendly practice. A possible format for this and checklist of questions is given in Box 4.6.

Box 4.6

RECORDING FARMERS' PERCEPTIONS OF CHANGE

A periodic meeting (weekly or monthly) meeting where the facilitator would lead a discussion with the group based on the following questions. The facilitator would note down main changes identified and overall assessment by the group at each meeting.

CHANGES IN PRODUCTION PRACTICES

- **What activities (in the production system) have you done this week/month?**
- **What changes have you made to how you have done them (because of the pollinator-friendly practice?)**
- **What inputs did you use - how much – was this more or less than in previous seasons/or in the control plot?**

LABOUR

- **Did you feel that it took longer or less time than in other seasons/ or in the control plot?**
- **Did the work feel more or less tiring – why?**
- **What other differences did you notice about this activity this week/month?**
- **What other factors might explain any differences identified - e.g. the work might have seemed more tiring because it was hotter this year than last year, or done at a different time of day than (higher sun) than last year?**

IF IT IS HARVESTING TIME

- **How much did you harvest - how did this compare with last year?**
- **What quality - how did this compare with last year?**
  - **What aspect of quality changed – e.g. taste, length of stalks, seed production, perishability**
- **What other factors might explain any differences identified?**

OTHER LESS TANGIBLE IMPACTS

- **Are there any other changes or impacts that you think relate to this change in your practices?**

OVERALL ASSESSMENT

- **What is your overall assessment so far of this change in your agricultural practices? - Good, bad, no difference.**

4.5 KEY QUESTIONS IN THE PLANNING OF TESTS

Pollinator-dependent crops only or the whole cropping system?

If comparing sites with and without a pollinator-friendly practice in the context of multi-cropping and crop rotation, how important (and how feasible) is it to record outputs, inputs and labour for each constituent crop including those that are not dependent on pollinators?

This depends on the pollinator-friendly practice that is being examined as some may affect the non-pollinator dependent crops as well. For example, planting of species attractive to pollinators adjacent to fields may take nutrients away from the main crops, adversely affecting yield of non-pollinator-dependent crops, or may reduce pest problems with a positive effect on all crops in the cropping system. If such effects for the pollinator-friendly practice being assessed are thought likely to be significant, or if there is insufficient knowledge about them, it will be necessary to record data for all of the constituent crops in the cropping system.

Records on inputs for each activity or for the crop production cycle

Is it important and practical to record labour for each activity or will total labour per crop production cycle be sufficient?

It will be important if the information gathered:

- Will be useful to explain how the pollinator-friendly practice affects labour inputs adding to credibility of the results.
- Will be useful to identify scope for improvement.

If the practice being evaluated affects only one activity, for example application of pesticides is it necessary to record volumes of other types of inputs and amount of labour inputs throughout the production cycle?

It will be important if:

- The information gathered will serve to capture any differences in volumes of seeds, fertilizers and amounts of labour between the treatment plot and the control plot.
- It is a possible impact that the reduction in labour in pesticide application may be offset by greater need for monitoring at other times during the production cycle.

Is it important for farmers to know how different types of labour input will be affected? Hired labour, own labour, labour of family members?

This will be important if:

- Family labour is already close to being fully employed.

Physical data only or price and cost data as well

How important is it to collect information on prices of outputs as well as volume?

Crop price information can be sensitive and changes in price can reflect external factors that have little to do with pollination (Figure 4.3). It may be simpler to work with physical volumes only. Price information on outputs will be useful if:

- Changes are expected in the output of different components of multi-cropping systems with some crops increasing in volume and others declining in volume. But even in this case it may be possible to use price ratios if these are reasonably stable.
- A change in price of the pollinator-dependent crop can be expected because of changes in quality or timing of production.
- Significant changes in the cost of inputs are expected, and farmers want to examine changes in revenues net of cost.

How important is it to collect information on input costs?

Such information will not be needed if prices of inputs are standard and stable. It will be necessary if:

- If the pollinator-friendly practice involves replacement of a high cost input by a low cost one or vice versa.

Figure 4.3

MARKETING OF POLLINATOR-DEPENDENT CROPS

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Crop price information is subject to many drivers, many not linked to pollination. Nonetheless, for many farmers it may be most relevant to show that pollinator-friendly practices have price impacts, due to increases in quality, quantity or timing of production. There is some indication that higher levels of pollination services may help to produce fruit earlier in the season, when prices are higher. Also, in a blind panel test in Australia, people significantly preferred bee pollinated tomatoes over hand-pollinated ones, finding them to have a greater depth of flavor (Hoogendorn *et al.* 2010).

How to get accurate data on farmers' own labour?

This is challenging, as farmers are not likely to keep records of time spent on different activities. If farmers do agree to start record-keeping this will be the most challenging aspect of this as they will need to separate the time they spend on the 'treatment' plot from the time they spend on the rest of their land or their other livelihood activities. It is likely that the facilitator will need to assist the farmers in this aspect of record-keeping.

Where recording labour inputs proves impractical, an alternative is to record farmers' perceptions of change from the previous year (if a "before and after" comparison is pursued) or from the control plots. This can also take into account more qualitative issues such as strenuousness or tediousness of the work.

How should farmers' own labour be costed?

There is no easy answer to this other than to try and work as much as possible with physical units and examine returns to labour (volume or value of output per unit of labour). The local rate paid for agricultural labour may give an indication or a rural minimum wage rate but is misleading if there are very few alternative employment opportunities available. When these rates are used, much small-scale agriculture will appear to be operating at a loss, raising the question why these farmers continue in this activity. For example economic evaluation of different maize production technologies in Western Kenya found that monocropping of maize, the most common production approach, was not profitable when labour costs were included at a standard rate (De Groote *et al.* 2010). But farmers continue because it is an important livelihood option, that they have some control over, unlike paid employment and because there are few other options. This means that the opportunity cost of farmers' own labour is lower than typical rural wage rates would suggest. Extension officers in Kenya suggested based on their experience that it could be counter-productive to record labour costs as it would be disheartening for the farmers to see that they were operating at an apparent loss.

Where farmers are operating on a more commercial basis, with a large part of their production directed at high value markets, or where there are clear alternative sources of employment, it may be more appropriate to assign a cost based on a typical agricultural wage rate.

How can data collection on less tangible impacts be undertaken?

This can be data-intensive, for example tracking use of resources from patches of non-crop vegetation so it is important for the farmers to identify the impacts that are most relevant to the practice being tested and are of the most concern to them. Some of the impacts identified in Table 2.2 could also be quite subjective such as better tasting food. Tracking this over time would require farmers to agree on some system of ranking the taste of food and apply it consistently.

If farmers consider that collecting data on these variables is too onerous, an alternative is for the facilitator to record their perceptions of change in periodic group discussions (see Section 4.4). This would also give an opportunity to record impacts that were identified only after the experiment started.

How many production cycles to collect data for?

Repetition of the trials for both treatment plot and control plot in subsequent production cycles will increase the reliability of the results. It will also allow farmers to record other impacts that are not foreseen and only emerge as the practice is tried out.

For example, higher prices received for higher quality crops or for crops harvested at a different point in the season may emerge as a beneficial impact. Farmers may decide to restrict data collection to physical production initially but leave open the possibility to address price changes in subsequent production cycles.

STEP FIVE: ANALYZING AND EVALUATING THE PRACTICES

5.1 ANALYZING QUANTITATIVE DATA ON THE INDICATORS

Analysis needs to be based on discussion with farmers on what would be useful and what degree of disclosure about individual farms they would be comfortable with. Simple ratios of input and output per unit of production in both physical terms and if possible monetary terms can be estimated for each plot.

Physical data

Outputs

- Yield per plot (or per agreed land unit if treatment and control plots are not the same size)
- Yield per plot of different quality gradings

Inputs

- Materials
  - Volume of material inputs per unit of output
- Labour
  - Number of hours/days of labour per plot per production cycle
  - Number of hours/days of labour per unit of output
  - Number of hours/days of hired labour per plot/unit of output

Monetary data

Outputs

- Market value of production per plot or agreed land unit

Inputs

- Cost of material inputs per unit of output
- Cost of labour – hired and family

Profitability/Returns

- Returns to labour
  - Market value of production less total material input costs per plot – divided by the number of hours/days spent, this gives a unit wage rate
- Returns to land
  - Market value of production per plot (agreed land unit) less total costs of production
- Returns to material inputs/value added
  - Market value of production less amount spent on material inputs
  - Market value of production per USD (or local currency unit) spent on material inputs

5.2 DRAWING COMPARISONS BETWEEN PLOTS

From physical data to monetary data

Comparisons between trial plots and control plots and between production cycles could be made for physical data and for monetary data (if collected). It is recommended to use physical data as much as possible.

Monetary data on price and costs may be difficult to obtain and farmers may not always want to disclose these even if they have kept records. Conclusions can be drawn however about the effect of the pollinator-friendly practice by examining simple ratios in physical terms as given above. For example the treatment plot may be shown to produce more output per plot than the control plot, and with lower material and labour inputs.

Such comparisons become more complicated when there are several crops and several types of input involved with different prices. In these cases, if the ratios of crop and input prices do not vary too much, a weighting system can be used. For example if the main crop in a cropping system usually commands a price double that of the secondary crop, an increase in the output of the main crop in the treatment plot that is offset by a reduction in the output of the secondary crop as compared with the control plot would still be considered to be an improvement (see Table 5.1). For subsistence crops that are not marketed, this system of weights could be derived through farmers' assessment of the importance of each crop to their livelihoods or food supply.

Table 5.1

An example of using price ratios or importance weightings to compare plots with mixed crops

CROP	CONTROL OR 'BEFORE' PLOT	TREATMENT OR 'AFTER' PLOT
Main crop output: nº of bags	20	22
Secondary crop output	10	8
Total output of the plot	30	30
Total output with weighting of 2 for main crop and 1 for secondary crop	50 (2x20 + 1x10)	52 (2x22 + 1x8)

Taking account of variation

The difference between one treatment site and one control site may be due to variations in other factors like soil compactness and not the impact of the pollinator-friendly practice. As no two plots can ever be identical it is important to take account of variation by averaging the results from a number of treatment plots and a number of control sites and comparing the averages. It is also necessary to consider the variation between the measurements.

A simple way of doing this, which can involve the farmers, is to look at the range between the lowest and highest measurement for the treatment plots and the control plots (or for the "before" plots and the "after" plots), and see to what extent they overlap. This is appropriate for tests involving just three replicates and can be done by the farmers themselves in a diagram as shown in Figure 5.1 (Van den Berg 2001).

In the first example, there is a clear separation between the yield in the control plots and the yield in the treatment plots. In the second example there is some overlap, indicating that further assessment is needed through observation of more plots before conclusions can be drawn.

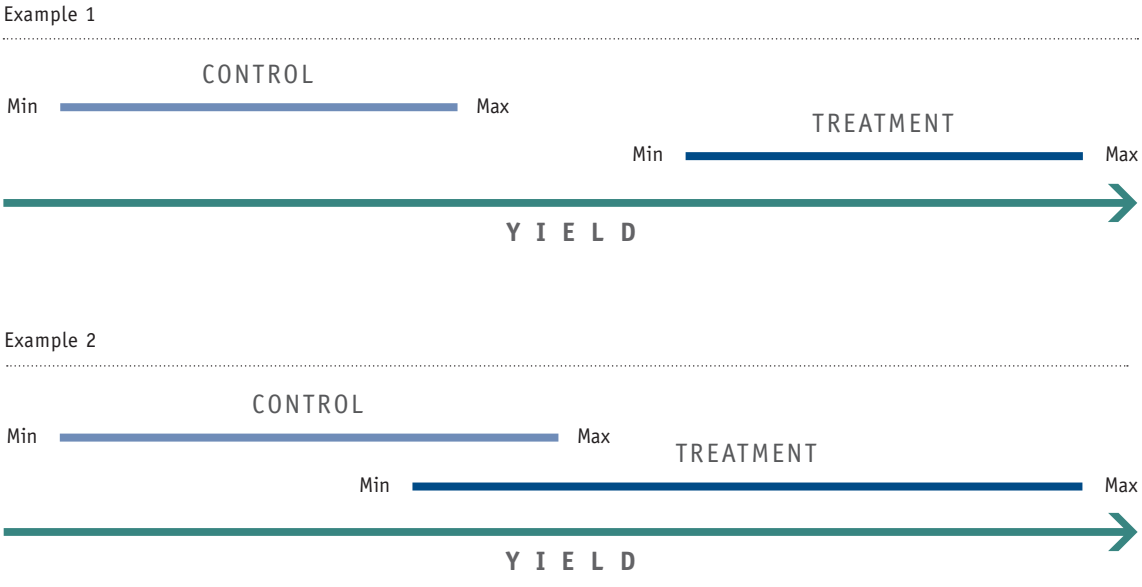
As more farmers participate and the number of replicates increases, it will be necessary to supplement this simple approach with statistical analysis of the significance of the difference between treatment plots and control plots or between before and after the introduction of the pollinator-friendly practice.

5.3 EVALUATION BASED ON QUALITATIVE INFORMATION

If farmers are not able or willing to keep records with quantitative information, or the records are not comprehensive, there is still scope for evaluation using qualitative information. This can be used in two ways: to complement evaluation based on quantitative information or as the main form of evaluation.

Figure 5.1

DRAWING COMPARISONS BETWEEN PLOTS



Source: adapted from Van den Berg (2001)

Using qualitative information to complement evaluation based on quantitative data

A likely situation is that farmers will at most keep quantitative records of purchased inputs including hired labour, but not their own labour. Comparisons of the quantitative data between the treatment plots and the control plots may indicate that the pollinator-friendly practice is beneficial (or that it results in a loss). But consideration of other factors, in particular the amount of own labour used with and without the practice, may change the overall assessment by the farmers.

Qualitative records on whether own labour required for each production activity is low, medium or high, can be compared for the treatment and control plots (or the before and after trials). The facilitator can then initiate a discussion amongst the farmers on the extent of the differences identified, the importance of these differences and whether there are other factors that might explain the ranking of own labour use. In this context, the most likely other factor would be substitution by hired labour. Own labour might have been ranked as high for a particular activity

for the treatment plot, not because of the pollinator-friendly practice, but because less hired labour than normal was used.

If there are clear differences identified that are not obviously attributable to other factors, the farmers need to discuss whether they are significant enough, when examined against the quantitative information, to affect their assessment of the practice.

A similar process can be followed for assessment of less tangible impacts (see Table 2.2) that have been considered relevant for the tests.

Qualitative information as the main form of evaluation

This type of evaluation would be based on the perceptions of change tracking discussed in Section 4.4. Although not very precise, it has some advantages in that the open-ended questions discussed may lead to the identification of impacts that were not foreseen by the farmers in the planning of the tests.

The facilitator and the farmers' group at the end of the cropping season can review the assessments they gave for the pollinator-friendly practice at each of their periodic meetings and the rationale for the assessment. They can discuss whether these assessments still seem reasonable, produce a final list of advantages and disadvantages of the practice and make an overall assessment of the practice.

It is important to do such evaluation as this will help to reveal how farmers perceive the pollinator-friendly practices tested and the factors that will influence their decision whether or not to adopt them.

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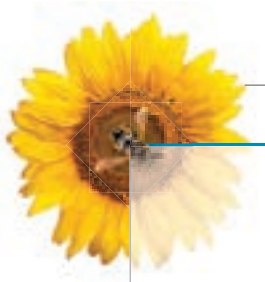

CONCLUSION

This guidance has been provided for use by the seven countries in the GEF/UNEP/FAO project on the "Conservation and Management of Pollinators for Sustainable Agriculture through an Ecosystem Approach": Brazil, Ghana, India, Kenya, Nepal, Pakistan, and South Africa. It is by no means meant to be restricted to these countries. Indeed, the approach presented herein has been developed so as to encompass a broad array of farming situations. It is anticipated that it can be applied within an even wider range of farming communities and systems and in many countries so that it becomes possible to better document the value of pollinator-friendly practices on a worldwide basis. It is therefore hoped that many people will find this guidance useful and will adopt it and share their experience with it in return and provide feedback so as to improve it.

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http://www.internationalpollinatorsinitiative.org/jsp/documents/documents.jsp
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