

PrOPara project workshop

Focus Group Manual: Step-wise Approach

Sheep & goats in France and Scotland

Project deliverable 10. (WP4)



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I. Introduction

Parasitism is well recognized as a major challenge to the health and welfare of organic livestock. In organic small ruminant production systems, endoparasitic disease is accepted as the most important multifactorial syndrome, resulting in lack of appetite, diarrhoea, anaemia and in extreme cases, death. In organic cattle production, despite the low stocking densities and use of improved grazing management practices, helminth infections are still a significant issue.

The PrOPara project aspires to i) **assess existing knowledge from research, development and benchmarking studies on alternatives to parasite control on organic ruminant farms**, ii) **collecting novel data on disease prevalence, risk assessment analysis and parasite control measures, through monitoring** (farm surveys and stakeholder participation studies), iii) **performing cost-benefit analysis on alternative parasite control measures** and iv) **developing and delivering technical innovation to facilitate implementation of sustainable parasite control strategies**.

This handbook serves as a baseline to conduct workshops with stakeholders in France and Scotland. It provides the organisers with a structured approach on 8 steps. This approach can however be slightly adapted depending on specific situations. In this case, deviations from it should be carefully reported and justified.

The implementation of this approach will allow identification of main alternative GIN practices according to stakeholders' views, as well as analysing economic impacts and reasons for adopting them or not. Such a structured approach can be demanding but should at the same time be very interesting for farmers and scientists, since they can explore in-depth viable alternative practices, consistently reflect on trade-offs, and be pleased that their opinion is cautiously considered.

2. Step-by-Step approach

The analysis of social factors explaining the uptake and acceptance of alternative practices to control parasites (**GIN practices**) as well as their economic impacts will be undertaken following a structured participatory workshop with at least 4-6 farmers, 1-2 consultants/extension officers and up to 2 scientists (parasitologist and economist). Ideally, one of the farmers will be external to the project to provide a different perspective.

A diversity of views on alternative GIN practices, but also more generally on sustainability issues and ways of managing farms, must be reached to make the process more reliable and robust. It will allow participants to critically assess different opinions, taken individually but also relatively (by comparing them with each other), leading to well-reflected and stronger final results.

The procedure used in this stepwise approach is derived from the **Structured Decision Making (SDM)** approach (Conroy et al., 2008; Fatorić & Seekamp, 2017; Robin S. Gregory, 2012; Gregory & Keeney, 1994; Johnson et al., 2015; Ogden & Innes, 2009). This is an iterative approach that allows the identification of farmers' objectives as well as the analysis and weighting of these objectives against the background of opportunities, uncertainties and constraints. This approach also takes account of personal values and technical aspects.

Objectives are transformed into indicators (e.g. incomes) that should be able to measure the fulfilment of these objectives. Models can also be used to show the impacts of possible adoption of alternatives, and a method used to measure to the extent that potential solutions are expected to meet the objectives (Ferguson, Conroy, Chamblee, & Hepinstall-Cymerman, 2015).

The SDM approach excels in finding and analysing alternatives to current practices, however, it does not sufficiently address factors on innovation uptake and farmers' acceptance towards those innovations. In order to better address these elements, the SDM approach is complemented by theories on innovation, namely the **theory of innovation diffusion** by Rogers (Rogers, 1995) and the **theory of planned behaviour** (Ajzen, 2002, 2011; Armitage & Conner, 2001; Terry, Hogg, & White, 1999). These theories have been considerably used empirically (e.g. Scott, Plotnikoff, Karunamuni, Bize, & Rodgers, 2008; Talukder, 2012).

2.1 Step 1: Rationale and objectives of the workshop

This first step ($\approx 5'$) consists of a presentation (and discussion) in three stages:

(a) Objectives to participants:

- To identify alternative practices to combat parasites (GIN control) and their level of adoption.
- To assess the effects of new GIN practices on the use of anthelmintics, labour needed, animal health and productivity, etc.
- To assess drivers, barriers and economic impacts of different GIN practices.

(b) Expected outcomes for participants:

- To develop and also contribute knowledge on possible ways of changing practices to combat parasites while ensuring economic viability.
- To be better prepared for increased anthelmintic resistance and tighter regulations in the future.
- To identify needs in terms of research (technically and economically).

(c) Feedback:

- To ask participants to feedback and comment.
- To get approval from participants on the design of the workshop. Example: "we will discuss what you consider to be the most important success factors for your farm (evaluation criteria). Alternatives to current practices will then be discussed in parallel to these criterions; is this ok with you?"

2.2 Step 2: To define stakeholders' objectives

This second step ($\approx 20'$) aims at defining what "matters" to farmers on their farm. In other words, farmers will here formulate what their objectives are. These can be for instance to maximise their revenues or to care about sustainability. Three stages will be completed:

- (a) Examples of objectives will be presented and explained to participants. These objectives must not be in relation with the issues tackled in the workshop but examples of what managers' objectives on their company potentially are.
- (b) Farmers will work in pairs or together to reflect on what "matters" for them. The objectives will be communicated to the whole audience and written down by the organizers (to be shown on screen). Redundant objectives should be merged, and

a maximum of 5 objectives should be retained in the end. Scientists will also participate in the discussion.

The objectives should be clearly described by the farmers to ensure a full understanding of what is meant by them and make sure that they are really useful according to participants' opinions. Discussions could be recorded for eventual further analysis later on.

- (c) Farmers will rank objectives (objectives hierarchy) following a swing weighting preferences approach (e.g. Jacobs, Dyson, and Stockton 2013). This is important as it will determine the selection of alternatives in the end, through the use of evaluation criteria. This ranking will be undertaken through the help of a table (to be shown on screen) in an excel sheet. Table 1 is an example of such a table.

Objective / Ranking (e.g. with 10 participants and 3 objectives)	1	2	3	Score of importance
Objective 1	0	2	8	0 (0/10)
Objective 2	3	5	2	0.3 (3/10)
Objective 3	8	2	0	0.8 (8/10)

Table 1 Example of table of preferences for objectives

A score of importance will be calculated: an *importance column* will account for the fraction of the *maximum possible priority score*. It accounts for the number of times each objective is ranked first. Calculations are done automatically in the excel sheet.

It must be emphasized that the use of this structured preference assessment approach should be understood as a guidance to potential implementation of alternative GIN practices and not as a rigid process to get mechanical answers. It is important to record all discussions arising from that assessment procedure (for eventual further analysis) and to encourage rich and comprehensive dialogues.

2.3 Step3: To transform objectives into evaluation criteria

In this third step ($\approx 15'$), farmers will be asked (with the help of scientists), for each of the objectives, to define the way they look at the objectives, that is, to specify criteria of evaluation on the fulfilment of these objectives. One or more criteria (4 criteria maximum) can be defined for each of the different objectives. Organizers of the workshop carefully report criteria for each objective (to be shown on screen).

2.4 Step 4: To identify alternatives

This fourth step ($\approx 20'$) aims at identifying potential alternatives GIN practices based on objectives and evaluation criteria. It consists of 4 stages:

- a) First, a list of alternative GIN strategies should be displayed and briefly explained to the participants. This is to inform the participants of some strategies that have already been modelled and results will be shown later in the workshop.
- b) Asking participants to fill out a short questionnaire (5-10 minutes) addressing specific reasons for adopting or not the different alternative GIN practices: farmers' experiences, acceptance, practicality, and benefit. This questionnaire is provided separately from this guideline and will address closed questions. The latter will be based on a Likert scale (Brown, 2010).
- c) Critical discussion on these alternative GIN practices and survey results (involvement of both farmers and scientists):
 - Asking participants for general comments and feedback.
 - Asking participants for additional alternative GIN practices, which were not considered in the survey but that are seen as important by stakeholders. These alternatives will be developed based on objectives and related evaluation criteria. These additional alternatives will be reported in an excel sheet.
- d) Results of the questionnaire will be processed by one person from the organizing team and presented in step 6 of the workshop (trade-off regarding the eventual implementation of alternative GIN practices), in order to get feedback from the attendance.

BREAK: 10 minutes (drinks and small snacks offered)

2.5 Step 5: To analyse economic impacts of alternative GIN practices

This fifth step will ($\approx 30'$) aims to analyse economic impacts of alternative GIN practices. This evaluation will take account not only of average economic incomes but also of their (potential) variability. The factors of uncertainties and risks will be integral part of the analysis.

This step will be completed fulfilling three stages:

- a) Presentation of results ($\approx 15'$) from the model developed on economic impacts of different alternative GIN practices.
 - The baseline of the model will first be shown to the attendance: characteristics of the typical farms analysed; basic information on types and number of different animals, types and surface of the different crop productions, number of full job positions, etc.
 - Economic impacts on the implementation of different alternative GIN practices will be presented to the attendance.

- b) An open discussion with all participants will be opened on models' results ($\approx 10'$). The discussion will take place for each of the alternatives considered by the model.
 - Farmers will be asked to comment and give feedback on results, through a constructive discussion with modellers and scientists on what could be improved, on what does not make fully sense, etc.
 - Modellers and scientists will make a summary on the different issues raised by farmers and will discuss rooms for improvements on the model (stated in a simple way).

- c) To discuss economic impacts of alternatives that were not considered by the model but that are seen as important to consider by farmers ($\approx 5'$):
 - Discussion (involving all stakeholders) on alternative GIN practices that were identified in step 4 by farmers and scientists, and their potential or already known impacts of these alternative GIN practices, which were not considered in the modelling. The estimation of their economic impacts may be difficult, but stakeholders could agree on a potential range or at least on main factors that would most probably change as a result of the implementation of these alternative GIN practices. One or two additional alternative strategies could be modelled, later on, with this information. Key elements on their economic impacts will be reported in an excel sheet.

2.6 Step 6: To consider trade-offs

This sixth steps ($\approx 20'$) aims at identifying trade-offs between objectives (in relation to evaluation criteria) and eventual implementation of alternative GIN practices.

These trade-offs will be determined i) on the basis of the evaluation criteria specified in step 3, ii) on results and discussion of economic impacts in step 5, iii) on results from the short questionnaire addressed in step 4, and iv) on barriers to adoption of new GIN practices. All discussions could be recorded and further analysed.

This step will be implemented following 4 stages:

- a) Results of the questionnaire filled by farmers in step 4 will be presented. In the meantime, results from the questionnaire will have been processed by somebody from the organizing team.
- b) A discussion on results of this questionnaire will take place, involving all stakeholders. Comments and feedback will be collected.
- c) Barriers to innovation uptake will then be addressed as follows (involving all stakeholders):
 - Social barriers to changes (e.g. "I want to follow the family tradition").
 - Economic barriers to changes (e.g. "my revenue would decrease too much, I cannot afford").
 - Environmental / Ecological barriers to changes (e.g. "adopting this technic is positive by itself in terms of sustainability but will also lead to hidden side effects on the environment like...").
 - Political and institutional barriers to changes (e.g. "the government is instable and might easily change the policy design"; or "we get no support from research institutes").
- d) On the basis of the above, asking farmers (with the help of scientists) to reflect on possible trade-offs between their objectives (& related evaluation criteria) and eventual implementation of alternative GIN practices ⁽¹⁾. To do so, we will go through each alternative GIN practices, and the objectives (and criteria) will still be displayed on screen.

¹ From the survey in step 4, from the model in step 5, and other alternatives that were considered as important by farmers to look at in terms of their economic impacts in step 5.

2.7 Step 7: To rank alternatives

In this seventh step ($\approx 10'$), the different alternative GIN practices (¹) will be ranked by farmers in terms of their preferences (score of importance). The preference ranking will be based on step 6 (reflecting on trade-offs) and a score of importance will be calculated. An *importance column* will account for the fraction of the *maximum possible priority score*. It accounts for the number of times each objective is ranked first. Calculations will be done automatically in the excel sheet.

2.8 Step 8: Conclusion and feedback

This final step ($\approx 10'$) will ideally address the following points:

- a) To make a summary on outcomes of the workshop.
- b) To ask participants to react to that summary and with the opportunity to add other points.
- c) To ask participants to give a feedback on envisaged next plans and to do an overall “evaluation” of the workshop (new information? happy about discussions? usefulness? etc).
- d) Final words.

3. Conclusion

This handbook provides researchers and workshop organizers with a structured approach in order, in a participatory manner, to cautiously address and analyse factors of innovation uptake, barriers to innovation, economic impacts of diverse alternative GIN practices, and likelihood of adoption of these innovations. This will take up to 2.5 hours, including a break of 10 minutes.

However, this handbook must not be understood as a rigid process but rather as a guide. Depending on the context of the case study investigated, the stepwise approach presented in this guide might be slightly adapted.

The implementation of this stepwise approach, in the frame of the PrOPara project, will allow a deepening of the understanding of alternative GIN practices as well as on their wherefores and economic impacts. This, in turn, will help scientists and farmers to adapt farming practices to contribute to a better sustainability of food systems. Moreover, the participatory approach undertaken, through involving stakeholders into the process of evaluation itself, should empower them and foster dynamics of change in the near future.

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5. Annexes

Step	Time (≈)	Cumulated time (≈)	Task(s)	“Active” person(s)	Other resource(s)
1: Rationale and objectives of the workshop (5')	5'	5'	(a) Introduction and objectives explained to the participants (b) Expected outcomes for participants (c) Feedback	Facilitator & local expert Facilitator Farmers	- PPT slides - Video projector - (Flipcharts)
2: To define stakeholders' objectives (20')	5'	10'	(a) Examples of objectives to be presented and explained to participants	Facilitator	- PPT slides (examples)
	10'	20'	(b) To reflect on objectives in pairs Objectives to be written down in an on-screen excel sheet Redundant objectives to be merged	Farmers Assistant	- Excel sheets to show on screen (objective & preference table)
	5'	25'	(c) Farmers will rank objectives Excel table to be filled	All Farmers Assistant	- (Flipcharts)
3: To transform objectives into	5'	30'	(a) To define indicators of evaluation	All Assistant	- On-screen table (Excel sheet)

Step	Time (≈)	Cumulated time (≈)	Task(s)	"Active" person(s)	Other resource(s)
evaluation criteria (15')	10'	40'	To record indicators in a table in an Excel file	All	- (Flipcharts)
4: To identify alternatives (20')	5'	45'	(a) Alternatives displayed on screen and explained	Facilitator	- PPT slide
	15'	60'	(b) Questionnaire to be filled (c) Critical discussions: general comments, feedback, other alternative GIN practices to be considered (d) To process results of the questionnaire (in the background)	Farmers Farmers & local expert Assistant	- (Flipcharts) - Excel sheet - Excel sheet (different from the above)
BREAK: 10 minutes (food and drinks offered)					

Step	Time (≈)	Cumulated time (≈)	Task(s)	“Active” person(s)	Other resource(s)
5: To analyse economic impacts of alternative GIN practices (30’)	15’	85’	(a) Presentation of model’s results (baseline, economic impacts)	Facilitator	- PPT slides (presentation by scientists)
	10’	95’	(b) Discussion (comments, feedback, rooms for improvements)	All	- (Flipcharts)
	5’	100’	(c) Discussion on alternative GIN practices, which were not considered in the modelling - their potential or already known impacts Take notes on one or two alternative GIN practices that were not included in the model but that were identified as important in step 4 by farmers and local expert	All Assistant	- Excel sheet

Step	Time (≈)	Cumulated time (≈)	Task(s)	“Active” person(s)	Other resource(s)
6: To consider trade-offs (20')	10'	110'	(a) Presentation of results of the workshop questionnaire addressed to farmers	Facilitator & assistant	- PPT slides and/or excel sheets (graphics)
	10'	120'	(b) Discussion (c) Addressing barriers to innovation (social, economic, environmental, political/institutional) (d) Reflection on trade-offs	All All All	- (Flipcharts) - Excel sheet with objectives (and criteria) to be displayed
7: To rank alternatives (10')	10'	130'	(a) Alternative GIN practices to be ranked (b) To report results in an table in an excel sheet	Farmers Assistant	- Preference table (the same) in an excel sheet

Step	Time (≈)	Cumulated time (≈)	Task(s)	“Active” person(s)	Other resource(s)
8: Conclusion and feedback (10')	10'	140'	(a) Summary on outcomes of the workshop (b) Participants will react and have the opportunity to add other points (c) Feedback on envisaged next plans and overall “evaluation” of the workshop (d) Final words	Facilitator All Farmers Facilitator & local expert	- (Flipcharts)

Table 2 Summary of the stepwise approach and timeline