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Support for collective gardening activities through methodological issues



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Appendix: Technical Manual 10

"Guide for the Management and Natural Resource Conservation"

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THE MINISTER OF AGRICULTURE

INSTITUTE OF RURAL ECONOMY

REPUBLIC OF MALI

One People - One Goal - One Faith



Technical sheet

Support for collective market gardening activities through methodological issues

Type of production: Creation of organizations and plant production techniques

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1. Introduction

gardening activities and fruit growing in rural areas are considered important measures both the food security terms and in terms of revenue diversification. Women living in the rural areas, in particular, show a strong desire to participate in these activities that not only allow them to get food for their families, but also bring them new cash income. However, it is difficult for them, due to economic constraints, purchase continuously materials and equipment as well as the seeds needed for agricultural activities that are, at present, performed either on small spans or short term. It is in this context that the GERENA Project (JIRCAS / IER) has provided support to women in four villages in Segou and Koulikoro in Mali, so they can create collective vegetable gardens and carry out activities Market gardening steady and sustainable manner, through the development of an action plan as part of a participatory approach based on the method of questions. The datasheet is to present the methodology for developing plans through an interview guide and the problem-solving methods and implementation of these activities on the example of concrete practice process during the past two years after the creation of vegetable gardens. so they can create collective vegetable gardens and gardening make the regular and sustainable activities, through the development of an action plan as part of a participatory approach on the basis of methodological issues . The datasheet is to present the methodology for developing plans through an interview guide and the problem-solving methods and implementation of these activities on the example of concrete practice process during the past two years after the creation of vegetable gardens. so they can create collective vegetable gardens and gardening make the regular and sustainable activities, through the development of an action plan as part of a participatory approach on the basis of methodological issues . The datasheet is to present the methodology for developing plans through an interview guide and the problem-solving methods and implementation of these activities on the example of concrete practice process during the past two years after the creation of vegetable gardens.

2. Objectives

The datasheet is to contribute to the diversification of income-generating activities for women and increase their income.

3. Expected Results

- sustainable market gardening activities will be carried out independently by women in market gardens.
- New revenues are created by growing vegetables and selling the products carried by women.

4. Details of activities

4.1 Method of questions

It is very rare that problems that occur after the creation of vegetable gardens and enforcement activities are addressed by measures taken at once and the problems are also very different in different villages. Else

hand, in villages experiencing significant economic constraints, it often happens that problems are not considered as such, or are seen as problems, but so confused, then left as without clarification and deferred later. However, activities can be pursued in a more sustainable and autonomous , if participants have a clear awareness of the problems that have arisen and the measures to be taken. Support for the resolution of problems by the method of questions is to facilitate the process by which participants can indicate the path to take to the solution, through questions asked continuously by a third party outside help, and to update the problem to the development of against-measures required.

The development of an action plan, as part of a participatory approach to village asking questions about existing problems to make their difficulties and reach a solution, consists of the following three processes; problem identification, planning against-measures and implementation of measures against, (see Figure 1). As shown in the cycle of these three processes, in case it fails to solve the problem or if a new problem arises, the questions will continually ask until a solution is found. It can be considered that the activities become sustainable and autonomous only when the cycle is done by participating, without the facilitation of external support.

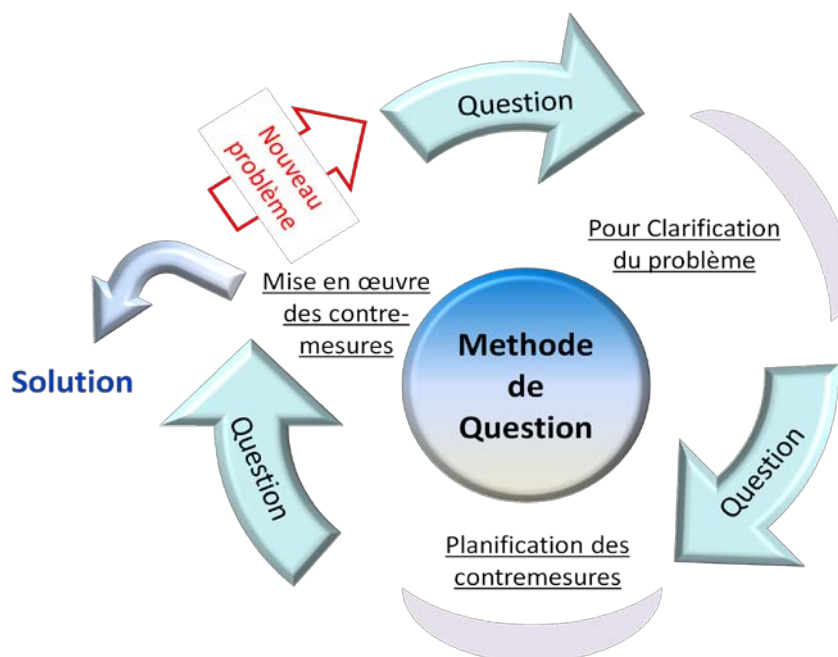


Figure 1: Diagram of solutions to the questions of method

4.2 Putting into practice the method of questions

In the method of questions, it is necessary to diversify the content of questions by level of recognition problems of the participants. If they do not recognize the problem, ask them if the problem exists or not; if consciousness same wave of the problem, to try to clarify and if the problem is identified without a solution has been made, to ask questions to get to the implementation of concrete measures against-(Table 1).

The content of the cons-measures and their implementation period should be decided in a flexible way, taking into account the particularities of the region and the situation of the participants (level of understanding of the activities, basic education level, will participation in the action, urgency of the problem, time limits because of the village's activities, etc.) in addition, for difficult problems by participating, such as technical problems (use of agricultural insecticides, etc.) or problems involving the establishment of expensive facilities (wells to ensure water resources), technical or financial assistance shall be the study to provide solutions. The questions of method is performed through workshops and group discussions,

Table 1: Level of reconnaissance this problem and content issues

Recognition Level problem	Content issues	Sample questions / answers
No recognition of the problem	Whether or not the problem	Question: Is it necessary to gardening? Have you encountered any problems during the gardening?
		Answer: The vegetables are sold expensive on the market and culture is needed. But animals have eaten all the last time we have grown them.
Have recognition, but very vague	Clarification of the problem	Question: We understand that gardening contributed to the revenue increase. Why vegetables could not be protected against animals?
		Answer: The garden fence was broken and the animals were allowed to enter.
Problem recognized but unable to take action	Implementing measures	Question: We understand that the problem of gardening is that the garden fence to protect the vegetables against animals is broken. How to fix that fence? When she will be repaired and by whom?

		Answer: We would like to repair the broken fence using new wood. It must be repaired before starting the gardening. We can do this work ourselves but we can not transport the wood and we would ask men to work for us. Against-measures: Before you begin gardening, women ask men to provide wood, which, in turn repair the fence.
difficult even Solution <u>taking steps</u>	Studying external assistance	(Consider this can be done by itself and which must be an external aid)

Table 2: Method of questions - answers and its application

Method	Application
Workshop	In case it is necessary to understand the content of a difficult problem for many people.
internal group meetings	If debates are addressed to members or to the main actors (leaders).
Interviews with a small number of people	If the discussions are aimed at specific people, as the representatives of business groups.

4.3 Role of facilitators

Facilitators (in the case of this project, it is versatile agricultural advisers *CAP* with technical supervision of Agriculture building) play an important role when developing the action plan through a participatory approach to village asking questions about their existing problems. With questions continually asked about the presence of problems and their clarification by these local councilors, participants can not only get the required facilitation, but to show confidence and a will to overcome the problem themselves on their own initiative, which helps to gradually increase the level of awareness of stakeholders towards other activities. It is necessary that the facilitators consider the following when asking questions.

- Content questions and method of interrogation of concrete, detailed and nice (so that participants can easily understand)
- Do not teach unilaterally (questions with only one answer expected) but adopt an attitude encouraging ideas or responses of the participants.

4.4 concrete Process

Support for the creation of vegetable gardens and strengthening of gardening activities, through the development of an action plan as part of a participatory approach based on the method of questions was set work for two years, from 2010 to 2012 in four villages in Segou and Koulikoro (Boidiéwere, Siakabougou, Sinzéna, Yayabougou). The activities began with planning the creation of a market garden and include an assessment at the end of the activities, respectively during the dry season and the rainy season, and the planning of the next period activities. The series of these activities, which aimed to achieve a performance at the initiative of the participating as for evaluation planning as and when they are implemented, was held for two years as indicated in Figure.2. As a result, collective gardening activities performed for two years in all affected villages continued to present the initiative of the participants.

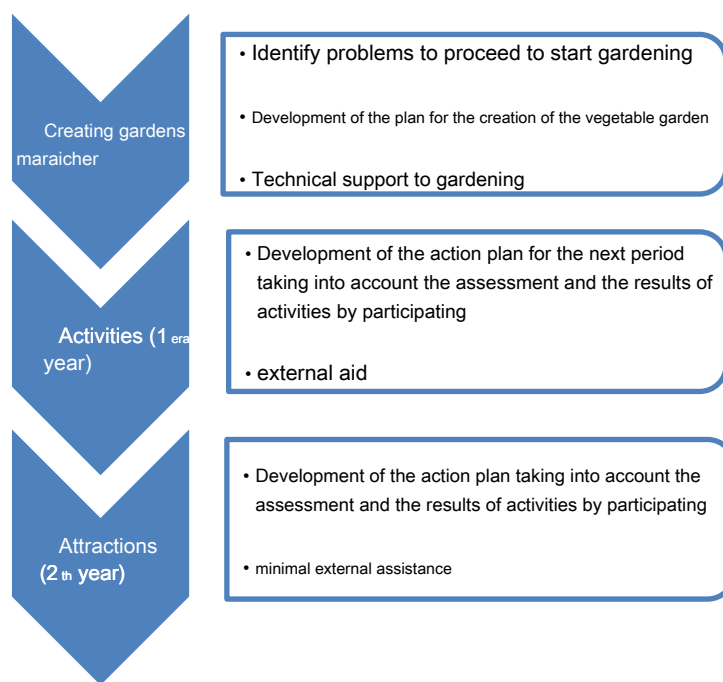


Figure 2: Flowchart of gardening activities

Table 3 shows examples of practicing against-measures problems by resorting to questions according to the solution diagram shown in Figure 2 in the four affected villages and their processes and their implementation periods. Some specific examples of implementation, they will be presented as examples more detailed for reference users

the datasheet wishing to set up market gardening activities. Among these examples, problems and typical measures against-gardening activities are addressed. However, we will insist on the fact that the questions and responses as well as against-the following measures do not have a definite form and that issues such solutions will take place at the initiative of users, even if the practical examples of this fact sheet were used for reference.

Table 3 : practical running of the support for the creation of vegetable gardens and strengthening activities

practical running	practical example of methodological issues	problem-solving process	Implementation period
Vegetable gardens	Workshop for identifying problems (Example (1))	Identifying Problems	July 2010
	Development of the plan for the creation of the garden (example (2)) vegetable	Planning against-measures	August 2010
	gardening techniques (Example (3)). Training for establishment of organizations, development of regulations for the use of market garden (Example (4))	Implementation of against-measures	November and December 2010
Activities (1 ^{era} year)	Execution of gardening activities in the dry season		December 2010-April 2011
	Evaluation session of gardening activities in the dry season (Example (5))	Identifying Problems	June 2011
	Development of market gardening action plan rainy season (Example (5))	Planning against-measures	June 2011
	collective purchase of materials and equipment, revision also for the use of market garden (Example (6))	Implementation of against-measures	July 2011
	Execution of gardening activities in the rainy season		June to October 2011
	Evaluation session of gardening activities in the rainy season	Identifying Problems	October 2011
	Development of market gardening action plan in dry season	Planning against-measures	October 2011
	collective purchase of materials and equipment (Example (7)), construction of a well at the expense of residents, building fences vegetable garden (Example (8))	Implementation of against-measures	November 2011-February 2012
Attractions (2 th year)	Execution of gardening activities in the dry season		December 2011-April 2012

Practical Example (1): Workshop for identifying performance problems vegetable gardening methods and study solution

During the workshop (Photos1.1 a and b), a method of research of the main problems, their causes and their solutions was applied by taking as reference the analysis of **problems (systematic problem tree) approach logical framework ZOPP (German abbreviation: Ziel-orientierte Projekt-Planung: Project planning goal-oriented)** for the identification of problems of execution of market gardening.

Procedure Workshop

Present: Women cultivating vegetables in each of peasant families (also the presence of committee members Villager Terroir Management CGTV)

- 1) Facilitators explain briefly the objectives, guidelines and conduct the workshop participants;
- 2) Each participant indicates a problem with the gardening, and the facilitator transcribes the problem in the local language on a card that affix to a wall or display panel (Photos1.2 a and b);
- 3) Participants present the main problems and their specific content, and the causes of each problem are confirmed by asking the participants;
- 4) The solutions to each problem are put to the study with participants. They are listed on the back of the card issue;
- 5) The solutions are classified and detail where the problem and solution are recorded is displayed on the panel (c photo1.2 and d) and the pursuit of assured future problem;
- 6) Finally, the facilitator says participants that they have a duty to pass on to other women the content was discussed during the workshop.

The main problems identified by women as a result of the workshops are presented in tableau1.1. The problems that have been identified have been classified as follows since, even if they are committed by groups of women on their own, they must resort to the help of village organizations and aid parts exterior.

- Problems began to study and solved by women and village organizations (CGTV)
- Problems began to study and solved by women's groups (creation of organizations or strengthening existing organizations)
- Issues with training given by outside help parties including facilitators

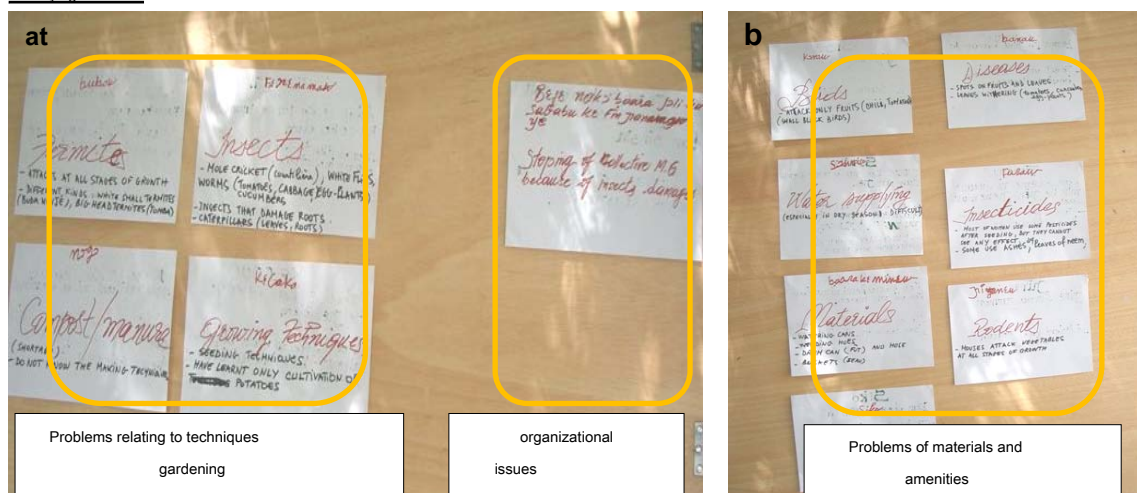
Tableau1.1 Principaux gardening problems and cons-measures s classified into 3 categories

problems identified	mentioned problems	Possible solutions
Problems relating to market gardening techniques	<ul style="list-style-type: none">• Need to improve the whole series of techniques, sowing seeds, livestock plants and vegetables processing techniques to seed production• Inability to protect against disease and insects, poor quality insecticides distributed on the market	<ul style="list-style-type: none">• Seek a solution by setting up training for strengthening market gardening techniques
Problems organizations	<ul style="list-style-type: none">• Women of the activities of organizations such as the maintenance of gardens and collection of contributions are not made in a sustainable manner	<ul style="list-style-type: none">• Seek a solution by setting up training for organizational strengthening women's groups and the analysis of problems in groups
Problems relating to materials and equipment	<ul style="list-style-type: none">• Difficulties in obtaining raw materials of good quality seeds, pesticides, fertilizers and other	<ul style="list-style-type: none">• Seek a solution through discussions between the parties of outside help, village organizations and women's groups

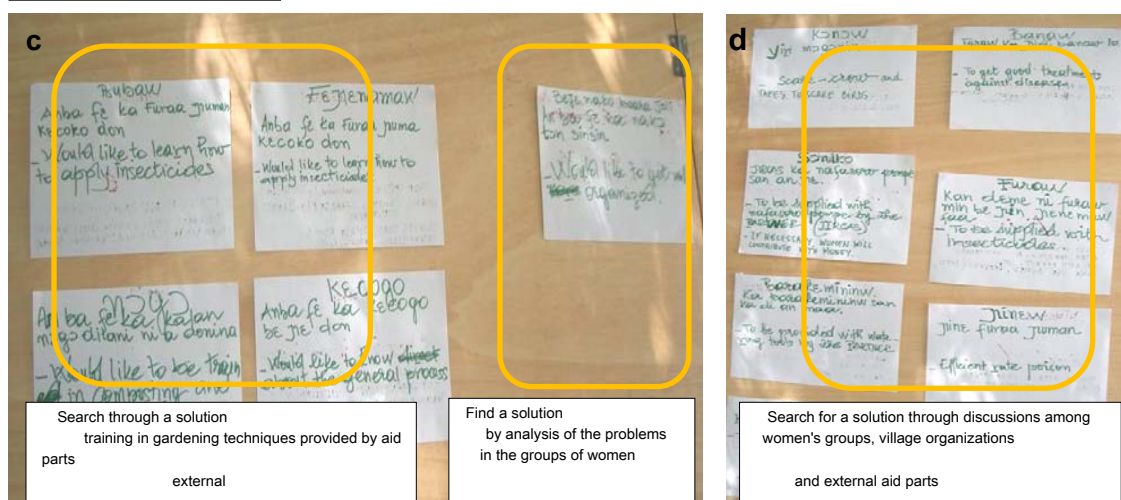


Photos 1.1 Workshops for problem identification given by facilitators (versatile agricultural advisers: CAP)

Identifying Problems



measures against Proposal for problems



Photos 1.2 Problem analysis by participants (a and b) and their solutions (c and d)

Practical example (2): Development of a plan for the creation of vegetable gardens by residents.

To better realize the problems that were identified during the workshop, the facilitators held meetings with women's groups and representatives of CGTV and requested the development of a concrete plan for the use of market gardens.

Use plans submitted by the four villages affected by the study were summarized in Table 2.1. Their content shows for all villages, numerous requests for supply of materials and equipment by outside using parts due to financial constraints. It was confirmed that the establishment and construction market gardens, and outfitting and distribution of garden land would be completed by the participants before the start of training on gardening techniques (mentioned below) external aid for the supply of materials and equipment (metal posts, fences,

Table 2.1 use of garden Map s collective market gardener

	Boidiéwéré	Siakabougou	Sinzéna	Yayabougou
Area	Strengthening the existing vegetable garden fence of 0.25 ha and displacement	Strengthening the garden fence gardener existing 0.25 ha. and extension (additional 0.25 ha)	New garden of 1 ha	New garden of 1 ha
users	25 persons (participation of farmers 6)	66 persons (participation of all farmers)	32 farmers (4 farmers do not participate because they are too far from the garden), use the vegetable garden by individual farmers	42 persons (participation of all farmers)
Needs	Materials for fencing (for strengthening) tools for gardening activities (watering cans, pulleys, water tanks, turnbuckles, rakes) Vegetable seeds (lettuce, onions, tomatoes, cabbage, okra)	Materials for fences (to the extending portion and reinforcement) Tools for gardening activities (watering cans, pulleys, tensioners, rakes, sprayers) seed (lettuce, onions, tomatoes, aubergines, sprouts, okra, carrots) and insecticides	Materials for fencing tools for gardening activities (watering cans, rakes, shovels, picks, etc.) Vegetable seeds (tomatoes, peppers, okra, eggplant, potatoes, papayas, carrots, cabbage, peppers, beets, lettuce, melons, African eggplant and green beans)	Materials for fencing tools for gardening activities (watering cans, rakes, shovels, picks, etc.) Vegetable seeds (tomatoes, peppers, bell peppers, potatoes, carrots, onions, cabbage, garlic, shallots, lettuce, okra, squash, papayas, melons) and insecticides.
Supported by villagers	Work allocation by villagers	Work allocation by villagers	implementation work of the garden fence gardener by villagers, plowing the earth of the vegetable garden and nursery development (collective work men and women)	implementation work of the garden fence gardener by villagers, plowing the earth of the vegetable garden, nursery establishment and watering.
growing problem	broken fences Penetration animal Lack of water supply seed diseases and insects (white ants, tomatoes) Inadequate training (seeds and seedlings, crop management, fertilizer and	Penetration Animal Diseases, insects and pests (white ants, rats) seed supply and materials Inadequate training (shallots cultivation techniques, cultivation techniques seedlings, fertilizers and manure, technical	-	-

	manure) Weak organizations	irrigation) Weak organizations (not of individual investments)		
<p><u>Practical Example (3): Training for capacity gardening techniques</u></p> <p>To improve even beginners gardening techniques that have been identified at the workshops and the use plan market gardens, training was organized for the capacity building of stakeholders in gardening techniques. In this project, CAP advisers acting as facilitators had sufficient capacity for technical supervision of agriculture and CAP 2 male and female counselors intervened as instructors to perform training.</p> <p>In this course, the main issues discussed during the workshops in each village were confirmed with the participants, and training was carried over to the following problems.</p> <ul style="list-style-type: none"> · Basic knowledge: maraichag definition, creation and management of the market garden, site selection, planning and cleaning the market garden · General methods of gardening: soil preparation, method of creating nurseries, cultivation of plants · vegetable production techniques: sowing period, creation of seedlings fields, growing plants, technical protection against diseases and insects · Methods of manufacture of fertilizer and manure (small pit manure and fertilizer placement in the market garden) <p>In addition, training has involved not only the current room but practical exercises on the establishment of nurseries, planting, watering, fertilizer production and manure and the production of organic insecticides to neem oil have also been planned. The training took place over 3 days in each village and planting work was carried out in nurseries during the practical exercises of the last day. Nursery management was entrusted to women's groups under the direction of the CAP and gardening activities started in each village.</p> <p><u>Practical example (4): Development of women's groups of the regulation for the use of market garden</u></p> <p>Besides training on gardening techniques, further training on creating gardening management organizations was provided with the aim of encouraging the development organization of women in four villages involved in the study of the activities of gardening. In this course, the main problems with organizations that were discussed during the workshops with groups of women in each village under the CAP leadership were confirmed and discussions were caused among participating. During training in particular, the exchange of views took place on issues relating to the management of the collective part of the vegetable garden, the creation of funds, management of materials and equipment as well as the activities to be undertaken (collectively) to create the next market gardens, while receiving explanations and advice of the CAP. During these discussions, the women of each village began to decide for themselves more rules, women's groups meetings were held again after training and the development of regulations for the use the market garden has been decided.</p> <p>The regulations for the use of vegetable garden developed by women's groups in each village are presented in Table 4.1. Their content reflects the problems organizationally in each village that were identified at the workshops and, for example, in the village of Siakabougou in the Segou region of the vegetable garden using schedules were determined to solve the problem of the flight of vegetables that occurred in the past when, for the problem of water shortage in the village of Yayabougou of Koulikoro, a rotation system was introduced for the use of irrigation water in the morning and evening. In addition,</p>				

T Reg ableau4.1 e ments for the use of public vegetable garden devel b oré by groups fem m es of the 4 affected villages

	Boidiéwère	Siakabougou	Sinzéna	Yayabougou
Area	0.25 ha (travel site flooded during the rainy season)	0.5 ha	0.25 ha	0.25 ha
users	30 people	88 people	103 people	60 people
roles	Representative Supervisor Treasurer Packer contribution charge of reconciling conflicts	Representative Deputy Representative Treasurer Sales Manager Responsible Manager reconciling conflicts fines Secretary	Representative, Assistant Secretary Treasurer Representative, Assistant Treasurer Manager Information and Organization Manager conciliation of conflicts of material management charge and fences Head seeds and Marketing Accounting	Representative Deputy Representative Treasurer, Assistant Treasurer Head of Information and organization Conciliation Officer Responsible for managing conflicts wells materials management Responsible Management Officer seeds Accounting
Topics	<p>1. The user must pay the reserve fund. (Those who have not paid for 3 months are notified by the Treasurer and use</p> <p>of garden vegetable is forbidden to them.)</p> <p>2. Meetings of the market garden of the group are held every 15 days. (The absent without valid reason must pay a fine of 250 FCFA.)</p> <p>3. Unauthorized use of market garden is prohibited. (The rights garden use are transferred to another person.)</p> <p>4. It is prohibited to grow in the market garden of other varieties of vegetables than those that have been decided. (These other vegetables will be removed.)</p> <p>5. Conflicts are prohibited within the garden gardener. (The two conflicting parties have to pay each a fine of 1,000 CFA.)</p> <p>6. corridors will be provided in the vegetable garden. (The People who do not respect the passageways will be fined 250 FCFA.)</p> <p>7. It is forbidden to fly in the vegetable garden. (The thieves must pay a fine of FCFA 500.)</p> <p>8. All users must participate in collective work in the vegetable garden. (Those who do not participate without a valid reason will be fined 250 FCFA.)</p>	<p>1. The use of vegetable gardens to be held equal and autonomous.</p> <p>2. The constitution of funds is compulsory for all users. (The people who have not paid for 1 to 3 months will be notified by the loaded fines and use of garden vegetable their is prohibited.)</p> <p>3. Meetings of the market garden group are held twice a month. (The absent without valid reason must pay a fine of 250 FCFA.)</p> <p>4. Animals must not be brought into the market garden (A fine of FCFA 100 per head to be paid.)</p> <p>5. schedules of irrigation works are from 8 am to 11 am and from 3:00 p.m. to 6:00 p.m. in the evening.</p> <p>6. Conflicts are prohibited within the market garden. (The two conflicting parties will have to pay each a 250 fine CFA.).</p> <p>7. The materials used for the vegetable garden are stored in the warehouse of the representative of the group. (Yes these materials are used without permission for other works than gardening, a fine of FCFA 500 to be paid.)</p> <p>8. All users must participate in collective work in the vegetable garden. (Individuals refusing to participate will have to pay <u>fined 200 CFA.</u>)</p>	<p>1. The users of the vegetable garden must pay 50 CFA as a reserve fund every month.</p> <p>2. The contribution to the use of the vegetable garden is 100 FCFA.</p> <p>3. The monthly meeting of the gardening group will take place all the first ones Saturdays. (The absent without valid reason will be fined 200 FCFA</p> <p>Latecomers a fine of 100 FCFA.)</p> <p>4. The management of materials is entrusted at the representative of the vegetable garden group.</p> <p>5. All users must manage part of the garden that was entrusted to them under their clean responsibility. (The People who do not manage their garden will be notified, and will have to make will be excluded from the group.)</p> <p>6. The machine should not be extended to the end of the vegetable garden. (People who have expanded their machine will have to pay a fine of FCFA 500) Other items whose development is planned: Annual rental costs, determining the place of conservation reserve funds, method of buying seeds and agricultural tools.</p>	<p>1. The annual rental fee of vegetable garden are 500 FCFA.</p> <p>2. Users of market gardens must pay 50 CFA francs per month as a reserve fund.</p> <p>3. A meeting of the Garden Group vegetable is organized once a month. (The absent without a valid reason will be fined 250 FCFA and laggards a fine of 100 FCFA.)</p> <p>4. Watering work in shifts rather have morning and evening.</p> <p>5. The seeds provided will reply the needs of users of the market garden.</p> <p>6. agricultural equipment will be purchased by the amount of reserve funds.</p> <p>7. Maintenance of equipment will be done with the utmost care.</p> <p>8. The use of market garden at place by working in the morning and evening.</p> <p>9. Conflicts are allowed inside of garden gardener. (The two conflicting parties have to pay each a fine of 1,000 CFA.)</p> <p>10. The cloths should not be extended on the closing of the market garden. (The people with expanded their cloths will be fined 500 FCFA)</p> <p>11. Animals should not be brought into the market garden. (A fine of FCFA 500 per head to be paid.)</p> <p>12. It is forbidden to fly in the vegetable garden. (The thieves must pay a fine of FCFA 500, and return the stolen things to their owner.)</p>

Example (5): Evaluation session of gardening activities in the dry season and the development of the action plan for the next rainy season

The creation of market garden, training in gardening techniques, the organization of women's groups and the development of regulations for the use of market gardens have been performed so far and the dry season gardening began in the villages concerned. Meetings were held with groups of women in 4 villages concerned for the assessment of market gardening in the dry season and the development of market gardening action plan for the next rainy season, in order to identified by participating new problems that have arisen during the process of market gardening (Photo5.1).



Photo5.1 Evaluation session activities and development of the plan

During the evaluation of market gardening in the dry season activities meeting, discussions focused on the problems of young plants, such as diseases and insects, as well as problems with the regulations for use of vegetable gardens . As for the seedlings, the problems are: Diseases and pests that have been mentioned in all the villages and among the specific problems each village, Boidiéwere said drudgery

watering, Siakabougou damage caused by hens Yayabougou lack of water (see Table 5.1). Regarding gardening activities, strengthening capacity of stakeholders should be ensured by the CAP by those of the next rainy season. Regarding the rules of use of the market garden, they are difficult to enforce the regulation should be revised during the women's group meetings.

Table 5.1 Evaluation of gardening activities in tumble season By women's groups in the 4 affected villages

	culture issues	Problems garden usage regulations vegetable garden
Boidiéwere	<ul style="list-style-type: none"> · Tomatoes are prone to diseases and parasites invaded. · The well is far and watering is very painful. 	<ul style="list-style-type: none"> · Lack of participation in meetings *
Siakabougou	<ul style="list-style-type: none"> · The plants were destroyed by the hens. · Tomatoes are prone to diseases and parasites invaded. 	<ul style="list-style-type: none"> · unpaid reserve funds, no meetings * · The materials are not well maintained *
Yayabougou	<ul style="list-style-type: none"> · Lack of water, repair of wells · <u>The tomatoes were infested with parasites.</u> 	<ul style="list-style-type: none"> · unpaid reserve fund · Unused Condos *
Sinzéna	<ul style="list-style-type: none"> · The tomato seeds were sown late. · <u>The tomatoes were infested with parasites.</u> 	<ul style="list-style-type: none"> · The materials are not well maintained * · Unused Condos *

* Problems that have not been mentioned by the participants but were seen by the facilitators.

Practical Example (6): Revision of Regulation of Use vegetable gardens

For problems of the regulation of use of market gardens that have been identified during the evaluation sessions activities, revisions have been made for a use of market gardens adapted to the current situation in each of the villages. The content of the main revisions focused on the elimination of rules that could not be observed (difficult to meet) and tended to be too severe from the start, as the obligation to pay fines and fines for people not paying the fund. A more dynamic use of market gardens in the future is expected with this revision of the rules that have been made easier to comply (see Table 6.1). In general, the development of regulations for conducting group activities is efficient because it avoids the various problems that arise during these collective activities beforehand. However, as shown by the examples presented here, as the locals have in some cases tend to develop overly strict rules and that this development is ultimately counterproductive since the regulation causes stagnation of activities, it is desirable that appropriate revisions be made in due course as and extent of activities with the locals.

Table 6.1 Contents of revisions to the use of market gardens settlement by women's groups in the 4 affected villages

	Contents of revisions to the use of market gardens settlement
Boidiéwere	<ul style="list-style-type: none"> · Removing the ban on using the market garden by people who have not paid the reserve funds · Removing the obligation to pay fines (conflicts, absences for meetings and group work)
Siakabougou	· No review
Sinzéna	<ul style="list-style-type: none"> · Decrease the amount of fines for missing meetings and laggards · Payment decision by each person of 425 FCFA to establish a fund after the harvest each season
Yayabougou	<ul style="list-style-type: none"> · Decrease the amount of fines for missing meetings and laggards · Payment decision by each person 400 FCFA to establish a fund after the harvest each season

Practical example (7) Construction of a well at the expense of people and building fences of the vegetable garden

After evaluating the gardening activities in the rainy season, the cons-measures problems unique to each village discussed for some time have been studied by women's groups with the facilitation of CAP so that the activities of gardening in next dry season are more profitable. As a result, in the village of Siakabougou to remedy the damage caused by chickens, women's groups have used their reserve fund to request an expensive way to a group of men the work of strengthening and development instead of branches at the bottom of the closing of the market garden to prevent penetration chickens and guinea fowl. (Photo 7.1)



Photo 7.1 Closing reinforced by branches

A Yayabougou to solve the water shortage problem in the dry season that had been indicated for a long time and for which certain activities were undertaken for a solution, two wells were dug by hand in the garden

garden using not only women's groups of the reserve funds, but also a part of the village CGTV of funds due to the high demand of the villagers (Photo7.2 a). Moreover, in Boidiéwere also, although the water was sufficient, the problem of the drudgery of carrying water for irrigation from wells located outside the



Photos7.2: Well whose construction was supported by the women's group (a: Yayabougou b: Boidiéwere)

market garden was discussed for quite some time and residents have expressed strong demand for the construction of a new well in the garden. Following discussions between the groups of women and the CGTV, it was decided that the well would be built by men and women group of the reserve fund would be used to pay part of the necessary cement for its construction (Photo7. 2 b). As these examples show, even if it took some time, as a result of the awareness of the problems by the participants and their search for adequate solutions through the questions constantly raised by the facilitators, against-measures problems have been implemented in all villages as and when the progress of activities.

Practical example (8): collective purchase of materials and equipment (use of the reserve fund women's groups).

Materials and equipment such as seeds, fertilizers and agricultural equipment, are absolutely necessary to be able to do gardening. In this project, the materials for the closing of the gardens and the minimum equipment required for gardening activities were provided in full at the time of the creation of vegetable gardens. However, in order that the activities can become self-sufficient and sustainable, new materials and equipment required after the start of market gardening activities (new materials to replace those that are broken, the seeds that will be used for crops of the next campaign etc.) must be purchased with a portion of the reserve fund women's groups (monthly amount collected from users, etc.) and the amount of this support should be increased gradually as and when the progress of activities. Specifically, during gardening activities during the rainy season for 2011, from 18 to 62% of the purchase costs of materials and seeds have been paid from the reserve fund women's groups and 50 to 72 % of costs for market gardening activities for the following year were also supported from the reserve fund (Tableau8.1). The group of women in particular Boidiéwere purchased on its own 30 kg shallot seeds during the dry season and proceeded to their culture. Similarly, in Sinzéna, the cultivation of potatoes that had provided good results during cultivation in the dry season the year before, was enlarged and thus,

Tableau8.1 Evolution and use of funds of reserve groups from year in 4 villages affected

affected villages	Reserve Fund group 1 CFA	production costs (percentage grant) 2 CFA (%)	Notes (events)
<u>gardening activities during the dry season 2010-2011</u>			
Boidiéwere	-	0 (100)	Success of growing onions
Siakabougou	-	0 (100)	
Sinzéna	-	0 (100)	Successful cultivation of potatoes
Yayabougou	-	0 (100)	Draining of wells, construction of a new well that dries in turn.
<u>gardening activities in 2011 rainy season</u>			
Boidiéwere	22,400	5000 (82)	Delay activities because of other seasonal work.
Siakabougou	28,000	10,000 (38)	
Sinzéna	85280	17,050 (80)	
Yayabougou	51825	6,250 (80)	Half of the vegetable garden is destroyed by torrential rains.
<u>gardening activities during the dry season 2011-2012</u>			
Boidiéwere	39,000	38,750 (28)	Purchase of 30 kg of shallot seeds
Siakabougou	40,000	20,500 (50)	Stagnation activities
Sinzéna	106425	50,000 (50)	Culture of 100 kg of potatoes
Yayabougou	74675	12,500 (50)	Construction of 2 new wells, travel plan of the vegetable garden

1 Amount of reserve fund at the beginning of the activities. These funds include membership fees, monthly user fees, fines, sales revenue vegetables and part of individual incomes. 2 Percentage management by fund women's groups and by external grant aid for the purchase of equipment and seeds required for production.



Photos8.1 Culture dry season shallots Boidiéwere (a) and harvest potatoes in the dry season to Sinzéna (b)

5. Impact of activities

One of the main objectives of this activity is to create a new income by selling vegetables through gardening. Based on the results obtained in two years of implementation in four target villages (see Table 4), staff estimated annual profit.

If in the case of a group of level 30 to 100 members, 65% of the use of the garden, and 50% of the harvested product is self-consumed, the annual income per person was estimated at 10,400 FCFA. This value was calculated from the annual per capita income of 12,200 CFA francs by selling harvested vegetables and the cost of annual output per person is 1,800 FCFA (can be covered by a monthly contribution of 150FCFA) for the purchase of seeds and materials (See Table 5). Since the value is estimated if the garden use is as low as 65%, because of other seasonal work such as grain milling and manufacture of shea butter, it is hoped that the biggest profits can be learned through this activity if the use of the garden is enhanced by improving the efficiency of the collective work within the group for other seasonal work. Therefore, we can conclude that the collective activities of gardening could be one of the new income-generating activities for women in rural areas.

Table 4 Profit staff of a collective work of gardening activity in four villages targeted during the project.

target villages	use %	Internal consumption %	Personal income CFA	Production cost Personal (supports Project) CFA (%)	Personal income CFA
seasonal activity sè c he, 2010-201 season 1					
Boidiewere	100	42	6738	0 (100)	6738
Siakabougou	100	33	1588	0 (100)	1588
Sinzena	90	50	-	0 (100)	-
Yayabougou	75	75	-	0 (100)	-
Activity of the season h ivermale, season 201 1					
Boidiewere	30	88	3,250	161 (82)	3089
Siakabougou	60	88	1,000	119 (38)	881
Sinzena	45	36	5688	159 (80)	5.529
Yayabougou	40	47	6,000	104 (80)	5896
seasonal activity sè c he, season 2011-2 012					
Boidiewere	100	-	4974	1250 (28)	3724
Siakabougou	50	80	520	244 (50)	276
Sinzena	91	41	7,995	467 (50)	7.528
Yayabougou	88	48	8459	208 (50)	8459

Table 5 Estimated annual profit generated per person through collective activities of gardening all production costs are paid by participants (where 65% of the garden is operated and 50% of harvested vegetables served to consumption)

Personal income	Production costs Personnel	profit Personnel
12,200 FCFA	1,800 FCFA	10,400 FCFA

6. Implementation of technical

The development of the action plan through a participatory approach based on the method of questions, can be applied to various activities in rural areas. The GERENA Project (JIRCAS / IER) has put into practice, using this approach, fertility enhancement techniques of agricultural land, afforestation and forestry and soil conservation in Mali.

7. About this data sheet (role of women's activities)

The datasheet was developed under the project implemented jointly by GERENA JIRCAS and IER. In this project, a guide to planning methods for the conservation of natural resources for agricultural production, was written and this data sheet, which is in Chapter 6 "Problems for implementing the Action Plan and remedies" including in this Guide addresses a topic of vegetable crops which is a priority among the activities of rural women.

We consider that, in terms of conservation of agricultural production resources in rural areas, the role of women is extremely important. he

is indeed possible that, in many villages, the production activities such as growing vegetables and fruits, breeding of small animals such as goats, collecting firewood, etc., carried out not only by men but often fall within the work of women who carry out these activities with a high awareness and high motivation for everyday life. We hope that the use of this data sheet will boost the activities of women in rural development in the future.

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