HORTIPLUS

INCEPTION REPORT

JUNE 30, 2023



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1 INTRODUCTION

1.1 Introduction

The Inception Phase of HortiPlus started on December 1st 2022 with an online kick-off meeting between the members of the consortium. From that moment onwards, the consortium has been preparing the ground for implementation of the project. This report outlines the findings of our research, baseline studies and feasibility studies, and substantiates the adaptations in our implementation strategies. In addition, underlying document also contains 3 other specific deliverables of the inception phase.

1.2 Report Outline

Chapter 2 will outline the activities conducted in the overall management of the project. Chapters 3 – 5 provide detailed information on the baseline and decision-making processes on crop, cooperative and SME selection, and their eventual implications for the project design. Chapter 6 discusses the G50 strategy, as well as the customisation of the AUXFIN apps to the Burkinabé situation and the linkages with MFIs.

Underlying report also contains the following deliverables of the inception phase:

- Chapter 7 sets out our Monitoring and Evaluation plan
- Chapter 8 is dedicated to the Risk and Security plan.
- Chapter 9 outlines the Communication strategy.

Lastly, chapter 10 summarizes all implications for the project design as a result of the baseline studies.

2 PROJECT MANEGEMENT INCEPTION PHASE

2.1 Meetings and consultations

An online kick-off was held on December 1st, 2022, to mark the start of the project and outline the planning for the next months. In January 2023, a three-day face-to-face kick-off meeting was organised in Ouagadougou with all consortium partners and relevant staff, during which we also received a visit from the EKN.



Explanation of AUXFIN apps during kick-off meeting in January 2023

This was followed by a consultation meeting with members of the consortium (AUXFIN and Agriterra) with board members of the Kaya Union and smaller cooperatives around Ouagadougou. Further, in April 2023, consortium members Advance Consulting and Agrodev organised a four-day workshop on the administration and financial management and online accounting software for the project.



Discussions during the administration and finance workshop in April

In May, a visit by consortium members Agriterra and AUXFIN to the Kaya and Korsimoro union in Centre-North has been undertaken.



Meeting with the Korsimoro union and visit to onion storage

A second workshop on administration and finance was organised half June 2023, followed by a workshop on safety and security for all consortium members in Ouagadougou.

After the kick-off in January, weekly management meeting were organised with the project managers of all consortium partners, to exchange on planning, activities and progress made.

Regular consultation has been conducted with the EKN, through visits in January, April and June and online consultations when necessary.

2.2 Consortium agreement

During the Inception Phase, a consortium agreement was signed between the consortium members. The signed agreement can be found in Annex I.

2.3 Project office and staff

During the kick-off in January, it was decided to rent a shared office space with the HortiPlus staff, Agrodev and AUXFIN. We contracted the office space in Ouaga 2000 end of March 2023.



Visit to the office space in April

During the inception phase, we held several recruitment rounds for project staff. Unfortunately, this process took longer than foreseen, due to multiple setbacks in the hiring process. Eventually, we hired a Finance and Administration Director in April, followed by the Project Director and Senior Agronomist in June. With the Project Director now on board, we will continue recruiting the M&E officer, Business Development Officer, Operations Manager, Office Assistant and Driver. The camera person and translation person will most probably be hired on a consultancy basis.

3 BASELINE FINDINGS: CROP SELECTION & MARKET STUDY

3.1 Methodology

In the process of selecting crops for the project and conducting a preliminary market study, we adhered to a three-step procedure. Firstly, we established a long list of potential fruits and vegetables. Next, we shortlisted this list to those with high potential. Third, we selected two crops for the project to be added to the two preselected crops, including tomatoes and onions.

To establish the long list, we implemented a series of criteria. The first criterion was the nutritional value of the fruits and vegetables, which enabled the establishment of a list of fruits and vegetables that align with the government of Burkina Faso's food and nutrition security goals. We also considered other sets of criteria, encompassing aspects such as market opportunity, crop rotation compatibility, association, people knowledge and perception and the presence of cooperatives. We employed desk research and stakeholder interviews. The primary goal was to establish a shortlist of fruits and vegetables.

To further refine our list, we introduced a new set of criteria focused on farmers' or cooperatives' locations and their availability and size, yield potential, and market demand. We employed various methods, including fieldwork and in-depth farmer interviews enabling initial qualitative analysis of all shortlisted crops, consortium member analysis, and information screening. This allowed us to establish a list of high-potential fruits and vegetables within our areas of interest.

The final stage involved selecting the two crops best suited to the project. This decision was primarily driven by their alignment with project goals and consortium member interests. We conducted comprehensive qualitative interviews with value chain actors associated with the high-potential fruits and vegetables within the project areas. We further assessed the seasonality of these crops and the factors influencing their production, conducting a detailed qualitative analysis. The primary goal was to identify two fruits or vegetables to incorporate into the project while uncovering potential opportunities for other crops for a potential pilot.

3.2 Selection process

3.2.1 Long list and shortlist of fruits and vegetables

Our primary criteria were to select crops that would positively contribute to the food and nutrition security of Burkina Faso. Indeed, available data reveals that the levels of iron and folic acid, Vitamin A, and iodine deficiencies are high. In Burkina Faso, iodine deficiency is typically addressed through iodised salt, a public health strategy not directly impacted by our crop selection. However, we found that the project is well-positioned to contribute significantly towards addressing deficiencies in Vitamin A and Iron.

To contribute to the eradication of Vitamin A deficiency, a primary cause of vision impairment, respiratory infections, and diarrhoea in children, we considered a list of fruits and vegetables rich in vitamin A produced in Burkina Faso. These included cantaloupes, carrots, guavas, lettuce, mangoes, melons, oranges, papayas, red peppers, spinach, tangerines, and tomatoes.

In addition, for Iron deficiency, a leading cause of anaemia in pregnant women in Burkina Faso, we also considered a list of iron-rich fruits and vegetables rich in vitamin A produced in Burkina. These crops include amaranth, Bambara groundnuts, cabbages, cowpeas, moringa, mustard greens, okra, pineapples, pomegranates, spinach, strawberries, and watermelons.

Amaranth, cabbage, carrots, chilli pepper, green beans, Okra (gombo), spinach, strawberries, and watermelon were shortlisted from the above lists of fruits and vegetables rich in vitamin A and iron. This was done based on the criteria and approach discussed above.

3.2.2 Selection of two additional fruits and vegetables

- *Cooperatives*

Ensuring that the shortlisted fruits and vegetables are produced by farmers within cooperatives was a critical criterion in our selection process. Farmers' membership in these cooperatives is most popular in the Haut-Bassins and Boucles de Mouhoun regions, whereas in the Centre and Centre-West regions, it's not as common. The most represented producers within these cooperatives are those growing cabbage and onions. These cooperatives play an important role in providing technical training to producers. However, their contribution to the market and agricultural input acquisition is minimal.

- *Production*

Generally, the yields per hectare are currently low across the regions surveyed. On average, farmers possess less than one hectare of land in the Haut-Bassins, Boucles de Mouhoun, and Centre-Ouest regions. In the Centre region, the average landholding is even smaller than in other regions. The production cycles for these regions are generally short, typically spanning three months. This implies that farmers often have the opportunity for multiple cropping cycles within a year. This will be discussed later in the report.

Regarding farmers' crop yields, tomatoes range from 10 to 16 tons per hectare, with potential yields reaching up to 30 tons per hectare in Burkina Faso. These crops usually have two cycles per year. Onion yields vary from 9 to 25 tons per hectare, which is already above the average in West Africa. Burkinabé farmers reach a yield range with cabbage of 13 to 40 tons per hectare and could potentially reach 50 tons per hectare when using good agricultural practices. Okra (Gombo) yields between 0.5 to 5 tons per hectare, with the potential yield reaching up to 15 tons per hectare. Finally, the yield for Amaranth ranges from 3 to 4 tons per hectare. Farmers reported these figures, but they would need to be verified. However, they clearly illustrate the considerable potential for yield improvement per hectare for these crops. As from the following graph, farmers are very selective regarding the crops to produce.

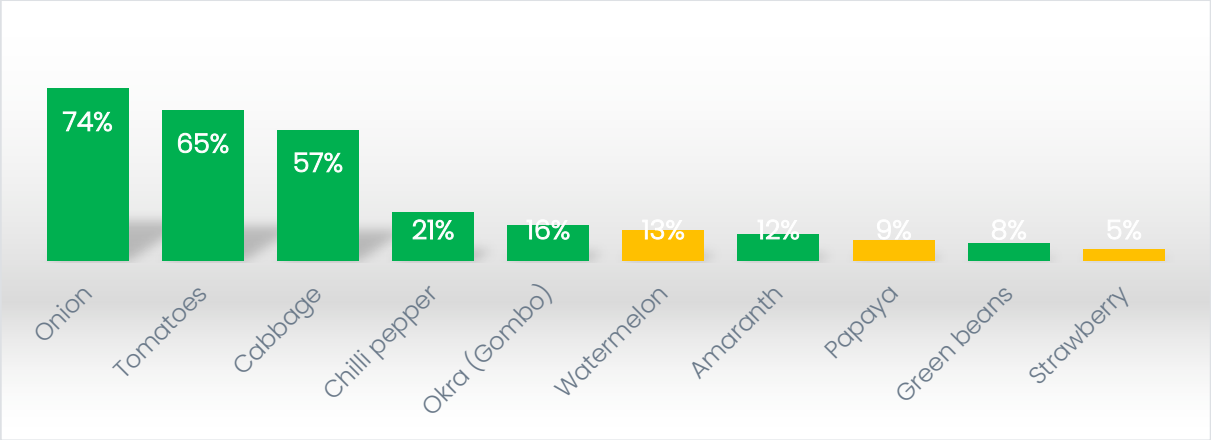


Figure 3.1: Main fruits and vegetables farmers produce (source: authors).

It was apparent that three crops dominate the agricultural landscape - onions, tomatoes, and cabbages. These vegetables are cultivated extensively, most likely reflecting their high demand and significant role in the local diet. Most farmers do not specialise in one crop. They usually have one or two lands where they plant two of the three main crops.

In terms of fruit production, watermelon distinctly sets itself apart. The number of farmers producing watermelon markedly outshines other fruits. However, despite the prominence of watermelon, it is noteworthy that extensive fruit farming is not common. Most farms typically have one or two fruit trees in their yards or farms, suggesting that while fruits feature in the agricultural environment, they are not the primary focus of cultivation. These trees likely serve a dual role, providing both shade and an additional source of nutrition or income.

- *Geographical repartition*

The following graph illustrates the geographical repartition of fruits and vegetables produced in the areas of interest of the project.

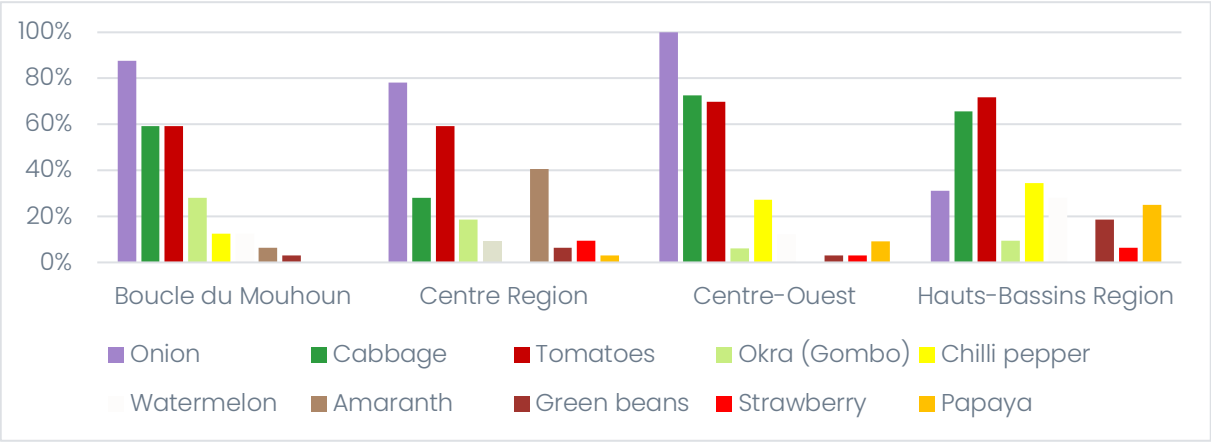


Figure 3.2: Main fruits and vegetables farmers produce by area (source: authors).

Only tomatoes, cabbages, and onions are almost universally cultivated across the regions observed. The Hauts-Bassins region stands out for its remarkable crop diversity, especially concerning fruit production. Notably, watermelon and papaya thrive in this region, indicating a suitable environment for these crops and a likely preference among local consumers. An intriguing find was the prominence of red chilli pepper in the Hauts-Bassins and Centre-Ouest regions. This suggests a potent combination of favourable growing conditions and market demand for this spice crop.

Turning our attention to the Centre region, we noted the significant presence of amaranth, a crop valued for its nutritional content and adaptability. This crop's popularity could be linked to its resilience under varied growing conditions and its integral role in local diets.

A noteworthy observation was the exclusive production of strawberries in the Centre region. Burkina Faso's strawberry cultivation is concentrated here, underscoring a unique niche market and likely specialised farming expertise.

- *Water dynamic*

A common set of factors broadly influences fruits and vegetable production across the regions. These encompass rainfall patterns, the availability of water reserves for irrigation, farmer knowledge, market prices, the presence of a viable market, farmers' financial capacity, and seeds' availability. These elements play a decisive role in shaping the choice of crops and the manner of their cultivation.

However, the dynamics of water availability emerge as the cornerstone of fruit and vegetable production. Water - both in terms of its natural occurrence as rainfall and its stored forms for irrigation - is crucial. It directly impacts the range of crops that can be cultivated, the planting periods, and, consequently, the economic viability of horticultural practices. Addressing water-related challenges is paramount to fostering the growth and sustainability of the horticultural sector in Burkina Faso.

→ Hivernage (rainy season)

During the rainy season, commonly called “hivernage”, engaging in horticulture is almost impossible for farmers. They reported that the excessive rain could lead to waterlogged fields, damaging their crops and causing unreversible financial losses.

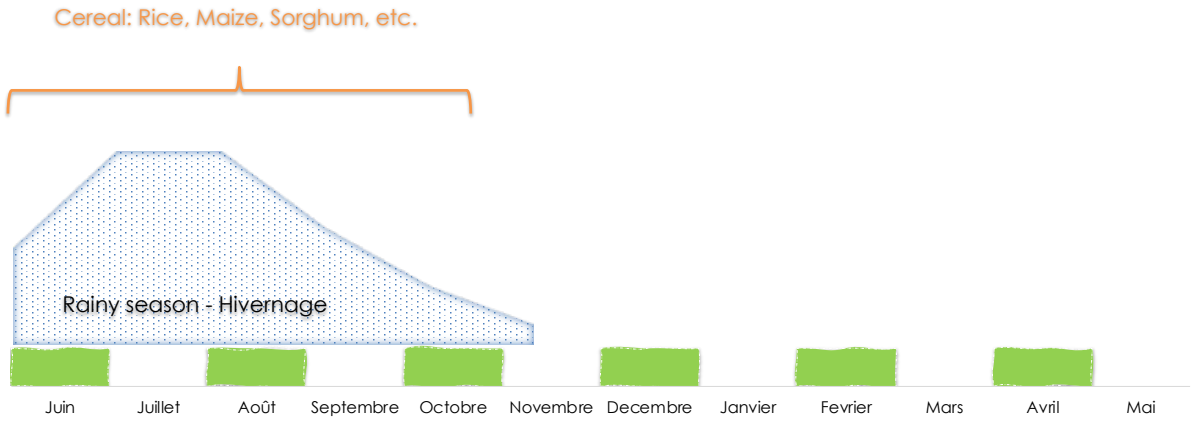


Figure 3.3: Rainy season period – "hivernage" (source: authors)

During this rainy period, the farms are flooded, and farmers' focus shifts to cereal production. Rice is becoming a key cereal, with its cultivation often managed by cooperatives. Other cereals are also produced, mainly to stock the farmers' granaries. This serves as a food reserve for the farmers’ households, underscoring the subsistence nature of these crops. It is important to note that for farmers not part of rice cooperatives, these cereal crops are typically not grown to make a profit but rather to ensure food for the household during the year.

→ Water reserve for irrigation

Currently, the production of fruits and vegetables is after the rainy season only under irrigation.

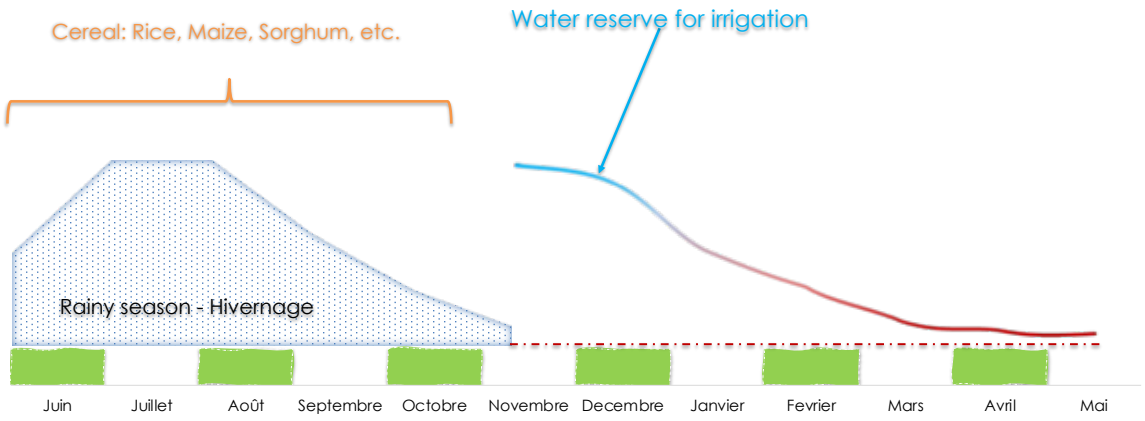


Figure 3.4: Water for irrigation availability (source: authors)

Irrigation water reserves are largely dependent on the rains during the rainy season. These reserves are significantly used between January and February as all the farmers start producing. Starting in March, water scarcity becomes prevalent, notably in Ouagadougou, due to very high temperatures.

→ First production cycle – "experienced" farmers

Though producing in the rainy season is challenging for farmers since the farms are flooded, it is not impossible.

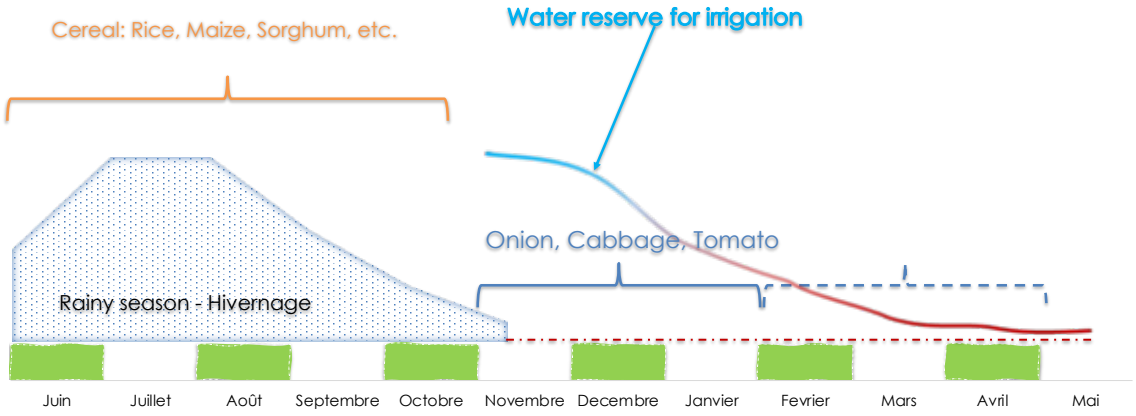


Figure 3.5: Production cycle for "experienced" farmers (source: authors)

A small percentage of "experienced" producers, particularly in Ouagadougou, initiate their onion cabbage or tomato production as early as August or November. They leverage the lower temperatures in December and the potential for higher market prices during the festive season and in the early months of the year, January and February. However, this early start can prove challenging for many producers as they need to master drainage systems others wise could lead to an increased risk of loss.

While crop rotation could be a viable strategy during this period, access to water becomes a significant challenge as they compete with other farmers for water for irrigation. However, those navigating these

difficulties could still take advantage of the higher market prices during the rainy season. This highlights the delicate balance farmers must strike between environmental constraints and market opportunities to optimise their production strategies.

→ First production cycle – farmers

Farmers rely on the water dynamic to produce their fruits and vegetables. Producing in November is very challenging for farmers since the farms are flooded.

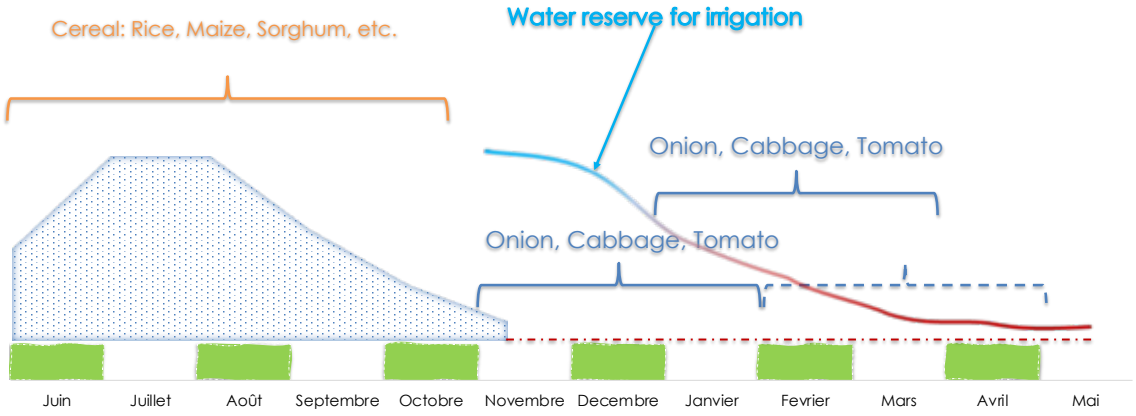


Figure 3.6: First production cycle for farmers (source: authors)

Starting in January, all fruits and vegetable farmers are out in the fields, focusing on onion, tomato, or cabbage cultivation. In Ouagadougou, a group of farmers mainly produces strawberries in this period. Producers consider January an optimal time for farming these crops as the rate of crop losses is generally lower during this period. This coincides with a soil-drained and availability of irrigation water, which is critical for the growth and development of these crops. Therefore, this time frame marks a significant phase in the agricultural calendar, where conditions are more conducive to cultivating these primary crops successfully.

→ Second cycle

For this second cycle, water becomes scarce, and the rainy season is approaching, so farmers rely on short-cycle crops that are drought resistant.

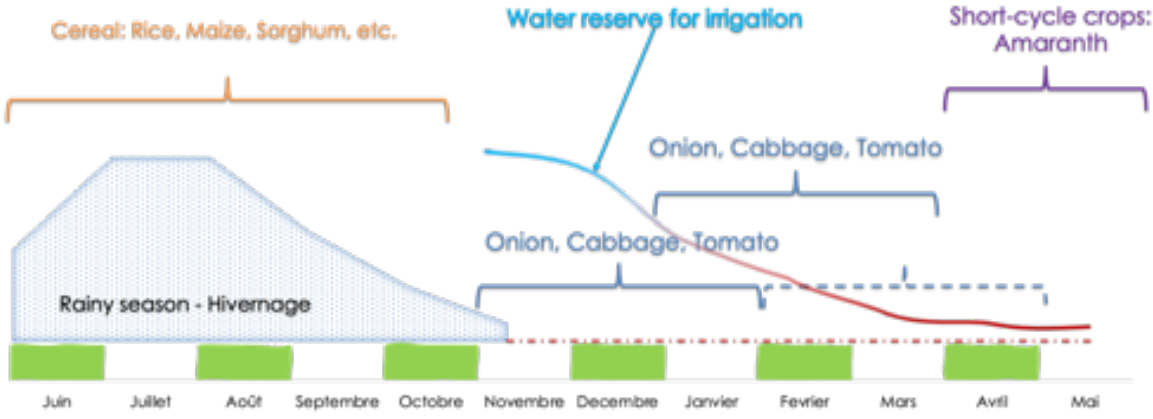


Figure 3.7: Second production cycle for farmers (source: authors)

Short-cycle vegetables are planted just after the production of main horticultural crops. Farmers also choose crops that are not demanding in water. They mostly prefer amaranth, especially around Ouagadougou.

→ Particular cases

There are specific cases that exist among producers, regions, and crops. A network of over 200 producers grows strawberries in Ouagadougou. In Koudougou, producers primarily focus on growing onions due to the large onion market, showing less interest in short-cycle crops as many are drawn to the local gold mines. In Dédougou, the surrounding area offers a great diversity of crops, however, the region faces significant security issues which affect agricultural activities.

- *Price of fruits and vegetables*

Seasonality in the production of fruits and vegetables plays a major role in determining their prices. The following graph is just a simulation of price fluctuation of tomato, cabbage and onion.

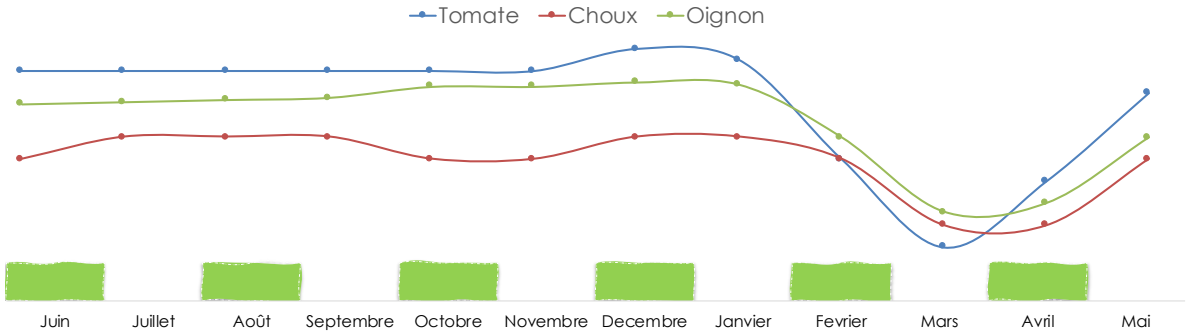


Figure 3.8: Price fluctuation of main crops (source: authors)

Though the prices of the main crops, including cabbage, onion and tomato, follow more or less the same production pattern, a few differences can be seen at the market. For instance, the price of tomato is the highest, then dropping to be the lowest around March. Many factors can explain this dynamic, but the following are the main drivers. The supply of cabbage can be substituted by other available vegetables on the market, so its prices never go very high. Onion farmers have the advantage of being able to leave their produce in the field for up to three months, hence can monitor the best timing to sell the onion. However, tomato farmers face a different challenge: once tomatoes reach maturity, they must be harvested and sold immediately. Creating an oversupply during the harvest period and a scarcity after the harvest period.

Other factors, including uncoordinated production and sales efforts, can result in high production costs and difficulties in sales. In terms of production, farmers often buy more inputs than they need because they have small plots since there is no way to buy input in small quantities. Furthermore, irrigation becomes complex due to a lack of solidarity and organisation, and the product quality is not uniform.

In addition, uncoordinated sales create other challenges. It can be difficult for producers to find customers, leading them to reduce prices continuously to attract buyers. On the other hand, buyers may not know where to find the producers or when the product is ready. Moreover, buyers may hesitate to purchase from a producer they do not know.

- *Key actions to consider*

During the selection process, what was clear was that there was a huge potential for fruits and vegetables in Burkina Faso. Enabling farmers to produce the main crops in two cycles would be a game changer. However, this requires good water management.

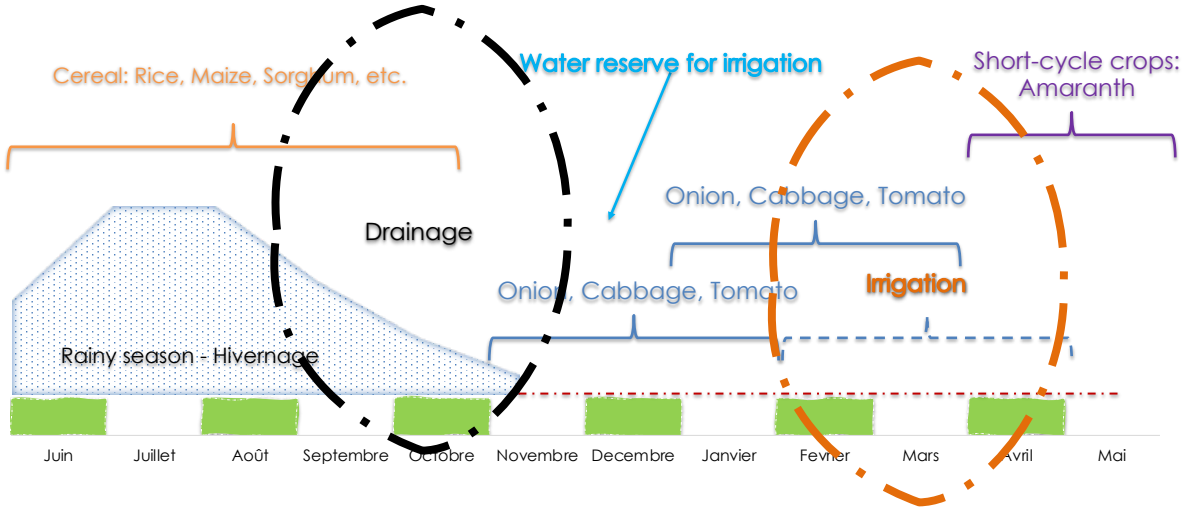


Figure 3.9: Action required for water management (source: authors)

For all the crops, we are exploring the opportunity for water drainage during the rainy season and efficient irrigation – solar irrigation – during the dry season. Also, the introduction of high-quality seed varieties will be beneficial, involving collaboration with seed providers.

3.3 Final crop selection

The following table presents the ranking of recommendation for the crops selected for the project.

Crop	Recommendation	Comments
Onion	10/10	Very large production, with strong local and regional demand
Cabbage	08/10	High production. Agricultural inputs can be problematic.
Tomato	07/10	High production but a lot of constraints in terms of production, and marketing. Post-harvest loss high.
Amaranth	06/10	Very interesting plant with a lot of positives. However, production remains very low
Red chilli	05/10	The market is favourable for chilli but, production remains low. Around Dédougou has the highest production but is insecure
Strawberry	05/10	Very profitable crop, however, only produced by a group of farmers around Ouagadougou.

Table 3.1: Ranking of selected crops

Against this background, the following crops were selected. For all regions, four main crops have been identified for potential focus: cabbage, onion, tomato, and amaranth.

A pilot project will be established in Ouagadougou focusing on strawberries. For chilli peppers, a pilot project could be set up either in Koudougou, Bobo-Dioulasso, or Dédougou.

3.4 Selected crops

3.4.1 Tomato



Tomato is a critical cash crop for smallholder farmers across Burkina Faso and part of the daily meals of Burkinabé's households. Local production predominantly emphasises processing low-water-content tomatoes for sauces, frequently combined with onions. However, the sector faces substantial competition from imported tomato paste, mainly from China and Italy.

While tomatoes are customarily grown in open fields in Burkina Faso, greenhouse tomato production is gaining traction in Africa, offering a more controlled environment for growth. The cultivation of tomatoes frequently occurs during dry seasons for easy field management and to evade risk losses prompted by heavy rain and flood in the farms. Yet challenges persist due to factors such as a lack of crop rotation, low seed quality, and production gaps, all of which can intensify the issues faced in tomato production. Nutritionally, tomatoes are rich in vitamins A and C and lycopene, providing substantial health benefits. The production is more or less even across Boucle du Mouhoun, Centre, Centre-Ouest and Hauts-Bassins Regions, with 60-70% of farmers producing it among other crops.

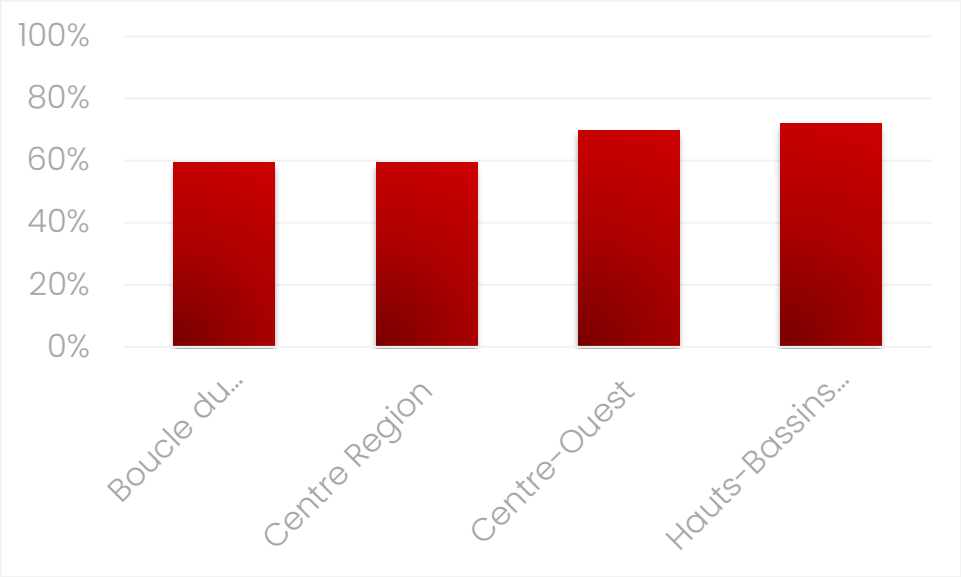


Figure 3.10: Farmers producing tomatoes by area (source: authors).

Tomatoes are produced in large quantities in Burkina Faso, but they have a short lifespan. The high cost and scarce availability of fertilisers pose a significant challenge. Moreover, pesticides are expensive, amplifying the risks of diseases and pests. Post-harvest losses are another critical issue due to inadequate storage facilities and challenging logistics, making it difficult to reach major cities.

Additionally, the country's security situation makes it less attractive to foreign traders, complicating export efforts. Burkina Faso has lost many clients, especially from Ghana, who have experienced a currency devaluation, making products from Burkina Faso more expensive. Despite these challenges, the production of tomatoes continues in large quantities, and the traditionally exported surplus to neighbouring countries is now becoming a loss for farmers. Nonetheless, tomatoes remain a key ingredient in Burkinabe cuisine, reflecting their cultural significance. This attracts many small and medium enterprises to the production of tomato paste.

Main issues in farming/ agricultural practices:

- Low yields
- High post-harvest losses
- Soil testing for efficient fertilisation
- Short production season
- Lack of irrigation
- No nurseries for good quality plugs or plants, genetics used unknown
- Pesticides used are quite expensive

Focus areas for improvement:

- Use of hybrid disease tolerant determinate processing variety
- High density planting
- Basic staking & pruning to reduce disease pressure
- Consider using black reflective plastic on ridges
- Crop rotation
- Medium inputs
- Use of organic fertiliser
- Enrich the soil with compost

Move gradually towards:

- Drip irrigation
- Shadecloth covering

3.4.2 Onion



Onions adapt well to various climates and require low maintenance. The main cultivation component is the edible bulb, extensively used as a vegetable and seasoning. However, the leaves also provide a flavourful and versatile addition to numerous culinary preparations, further broadening their cultivation.

Burkina Faso's widespread cultivation of onions is attributed to its significant role in cooking and culinary versatility. They add flavour and aroma to various dishes, both in raw and cooked forms. They are also nutritionally valuable, rich in vitamins, minerals, fibre, and antioxidants. Onions possess a long shelf life, allowing for extended storage periods without spoilage, which adds to their appeal. Their global demand ensures a consistent market, making their cultivation economically viable. An onion plant comprises the bulb and leaves that arise from the bulb's base, reaching lengths of 30 to 60 cm or even longer, depending on the variety.

Onion is highly produced in Boucle du Mouhoun, Centre and Centre-Ouest regions. Surprisingly, it is less attractive in the Hauts-Bassins region.

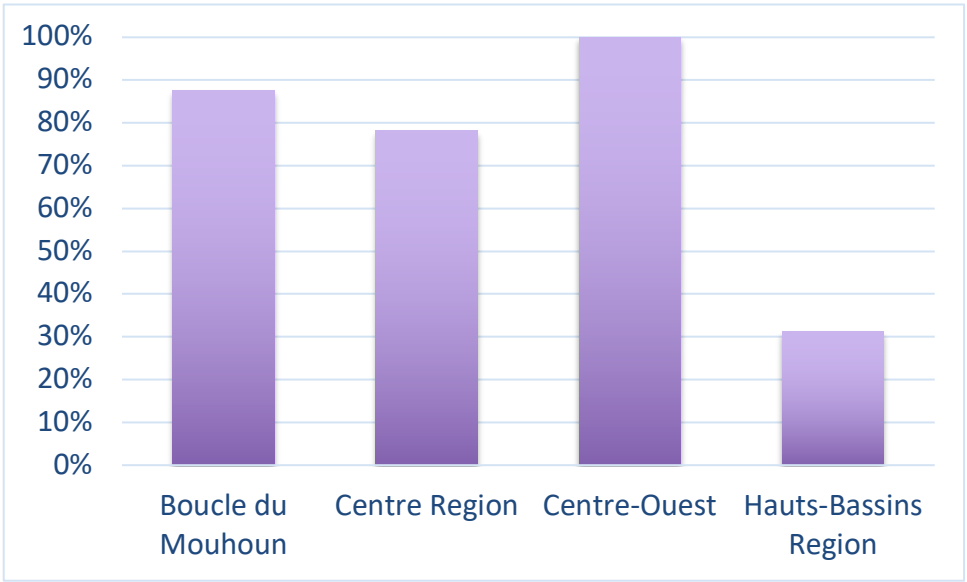


Figure 3.11: Farmers producing onions by area (source: authors).

Onions remain the most appealing crop despite their high production levels. A big onion market in Koudougou is worth exploring as an opportunity to facilitate market access for onion farmers. Water availability poses a significant challenge to onion cultivation. Rainfall is insufficient and irregular, affecting the reserve of water for irrigation and contributing to the difficulty in achieving consistent crop yields. While irrigation is used, it does not fully satisfy the crop's needs, as onions require considerable water. The pricing of onions also presents an issue, as producers often must accept the offered price, which is subject to significant fluctuations.

Main issues in farming/ agricultural practices:

- Lack of fertiliser and chemicals adapted to onion
- Declining soil fertility
- Lack of crop rotation with diseases firmly embedded in the soil
- Lack of drainage and irrigation
- High cost of irrigation
- Lack of quality seeds of the right high-yielding varieties
- Harvest losses, with hired labour leaving too many onion bulbs in the ground

Focus areas for improvement:

- Improve irrigation & drainage
- Improve fertiliser: regime adapted to the soils with compost to maximise yields while improving shelf life
- Quality seed and better-adapted varieties
- Use of organic fertiliser
- Enrich the soil with compost
- Better agricultural practises

3.4.3 Cabbage



Cabbage, a versatile and hardy crop, enjoys extensive cultivation across Burkina Faso due to its adaptability to diverse climatic conditions and significant nutritional value. With its high content of vitamins C and K and dietary fibre, cabbage plays an essential role in food security in the country. The crop's widespread culinary usage in local dishes ranging from stews to salads, further drives its production. Another contributing factor is its role in crop rotation systems; cabbage thrives in various soil conditions, enhancing soil fertility and mitigating disease and pest proliferation. The vegetable's relatively long shelf life compared to other produce reduces post-harvest losses, such as tomatoes, offering some flexibility in sale and consumption. Cabbage is produced in most intervention areas of the project.

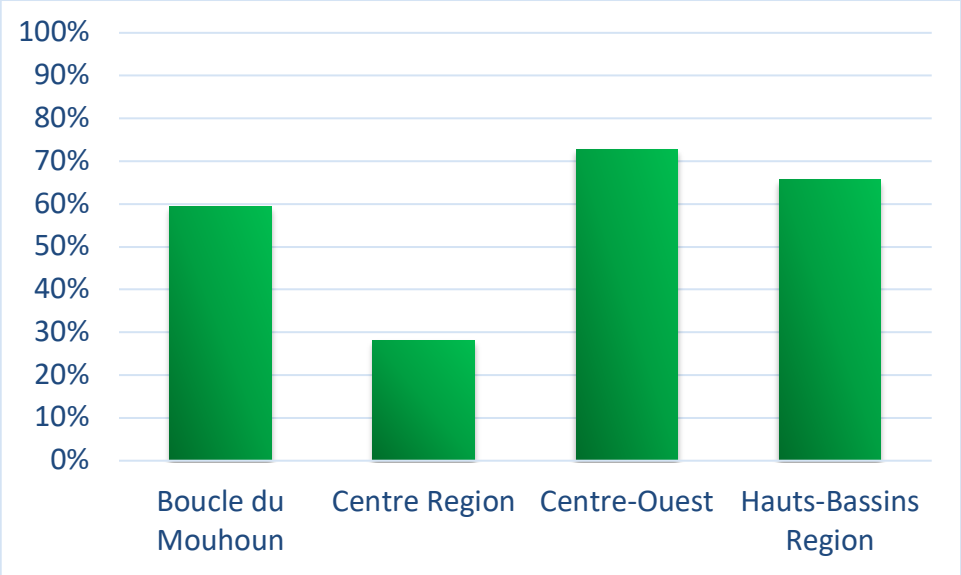


Figure 3.12: Farmers producing cabbage by area (source: authors).

Most farmers produce cabbage due to its hardiness and ease of growth. In addition, however, the production of cabbage in Burkina Faso faces some challenges.

Regarding inputs, a significant issue is the high cost and limited fertiliser availability. Fertilisers, essential for replenishing soil nutrients and ensuring a healthy and high-yielding crop, are prohibitively expensive for many farmers. Furthermore, the local soils tend to be low in humus, which can negatively affect the soil's fertility and water retention capabilities, thus impairing the growth and productivity of the cabbage.

The market price of cabbage presents another challenge. Producers find themselves at the mercy of price fluctuations, often due to changes in supply and demand, as cabbage is easily substituted by Burkinabé households, which can lead to unstable income. The high volatility of prices in the market can discourage farmers from cultivating the crop.

Despite these challenges, cabbage farming provides a stable income stream for smallholder farmers due to its consistent demand in local markets, especially during harvesting.

Main issues in farming/ agricultural practices:

- Lack of fertiliser and chemicals adapted to onion
- Declining soil fertility
- Lack of crop rotation with diseases firmly embedded in the soil
- Lack of drainage and irrigation
- High cost of irrigation
- Lack of quality seeds of the right high-yielding varieties
- Harvest losses, with hired labour leaving too many onion bulbs in the ground

Focus areas for improvement:

- Improve irrigation & drainage
- Improve fertiliser: regime adapted to the soils with compost to maximise yields while improving shelf life
- Quality seed and better-adapted varieties
- Use of seedlings from certified suppliers
- Better agricultural practises
- Use of organic fertiliser
- Enrich the soil with compost

3.4.4 Amaranth



Amaranth is cultivated due to its rich nutritional profile, offering protein, fibre, and essential micronutrients. Its ability to thrive in various soil conditions and drought resistance makes it a suitable crop for challenging climates such as Burkina Faso. The plant is also resistant to many common diseases, ensuring a safer crop yield. A unique characteristic of amaranth is its continuous harvest capability, providing farmers with a consistent food and income source. Its versatile nature allows the leaves to be consumed as a vegetable. Thus, amaranth cultivation offers substantial economic and nutritional advantages, particularly for farmers in Burkina Faso with limited agricultural resources. Amaranth is very popular in the Centre region. In other regions, other short-cycle crops are planted.

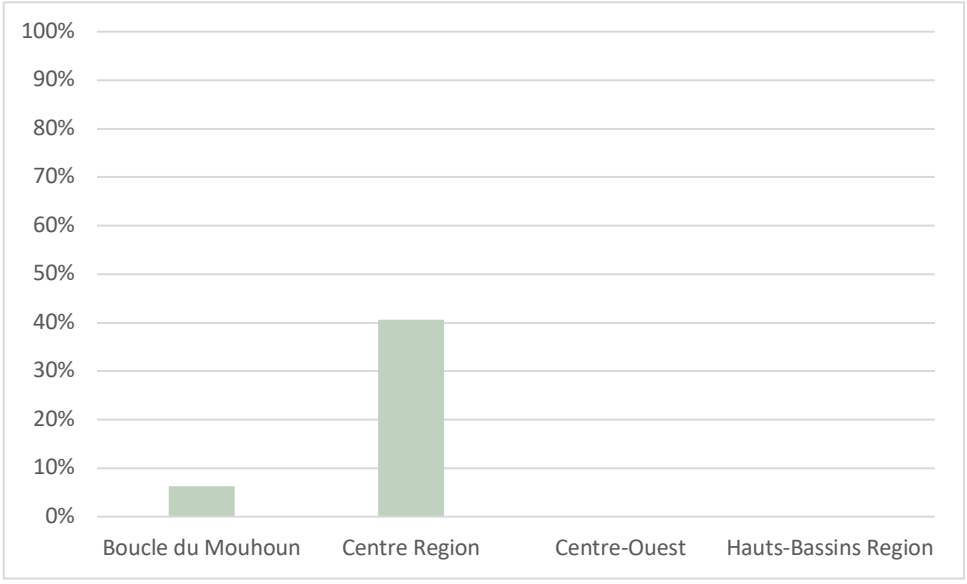


Figure 3.13: Farmers producing amaranth by area (source: authors).

Amaranth is a major potential for farmers in Burkina Faso, providing a consistent source of money for around three months. Indeed, farmers in Burkina Faso pick amaranth on a rolling basis for one to two

months, ensuring consistent revenue throughout time. It is only planted after the main crops and by farmers with low revenues. Despite its modest production levels, amaranth has enormous potential due to its nutritional richness and simple growth procedure. It is disease-resistant and drought-tolerant, making it a durable crop under adverse environmental circumstances. Its high nutritious value and low cost make it an enticing vegetable choice for families. In conclusion, amaranth is a nutrient-rich, cost-effective food source that can also provide producers with a consistent income stream.

Main issues in farming/agricultural practices:

- Declining soil fertility
- High cost of irrigation – manual irrigation
- Cultivated on very small pieces of land

Focus areas for improvement:

- Improve irrigation
- Increase the land size
- Use of seedlings from certified suppliers
- Use of organic fertiliser
- Enrich the soil with compost

3.4.5 Strawberry



Strawberries present a unique opportunity in the Burkina Faso agricultural landscape due to their popularity, flavour, and high nutritional value. They could be a high-value crop with potential profitable returns for Burkina Faso farmers due to their demand in various sectors, such as fresh markets, food processing, and value-added products like jams and desserts. However, strawberries require careful handling due to their fragile nature and susceptibility to pests and diseases. While the climate in Burkina Faso can be challenging for strawberry cultivation, with the implementation of modern farming techniques and crop management strategies, they can be grown successfully. Advances in cultivation methods, such as hydroponics and high tunnels, could be explored with a few advanced farmers, as it could make it easier to control growing conditions, leading to more consistent and high-quality yields. Thus, despite the challenges, the cultivation of strawberries offers promising potential for farmers, contributing to their economic well-being and the diversity of agricultural produce in Burkina Faso. Currently, strawberries are only produced by a few numbers of farmers around Ouagadougou in the Centre region.

Main issues in farming/ agricultural practices:

- Extremely low yields
- Small areas of production
- Short production season
- Lack of irrigation
- No nurseries for good quality plugs or plants, genetics used unknown
- Pesticides used are not adapted to strawberry

Focus areas for improvement:

- Promote farming on ridges covered in reflecting shade plastic
- Promote growing under shade cloth
- Select a good variety for local conditions from what is available in South Africa or Morrocco or Egyot
- Set up professional nurseries
- Promote the use of compost
- Solar irrigation and driplines to automate irrigation

3.4.6 Chilli pepper



Red chilli peppers hold substantial potential in West African cuisine because they enhance flavour and spice in various dishes. Despite the production constraints, such as high costs and limited availability of fertilisers, chilli peppers are still cultivated because they are an integral part of the culinary culture in West Africa. The issues related to the commercialisation of chilli are relatively less problematic, likely due to its lower production volume. Furthermore, the long shelf life of dried chilli peppers ensures their availability throughout the year and could offer a steady source of income for the Burkinabé farmers.

Though the data show that chilli production in the Boucle de Mouhoun region is low, it is worth noting that chilli farmers in that region were out of reach for interviews due to insecurity issues in the area. Nevertheless, chilli is relatively produced in all the regions of Burkina Faso.

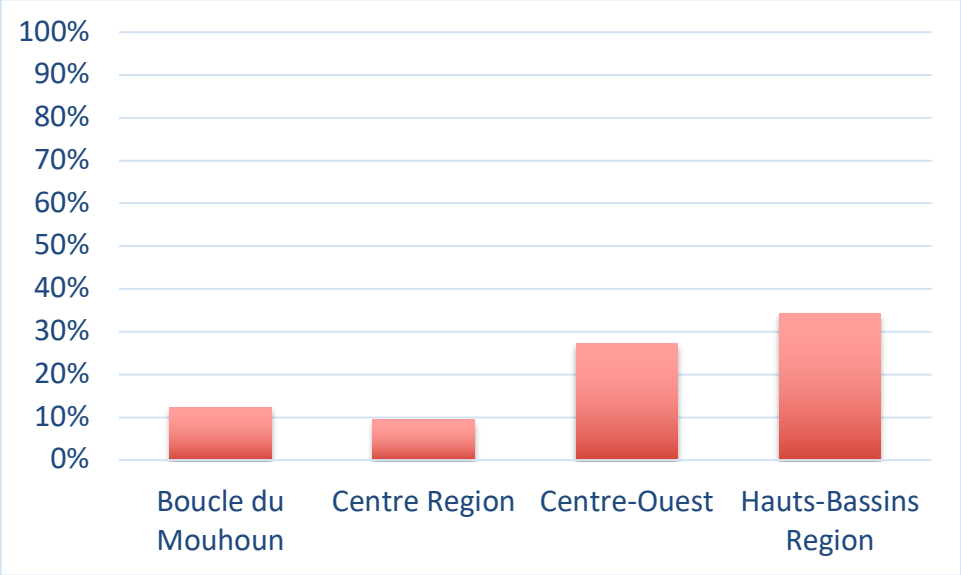


Figure 3.14: Farmers producing chilli by area (source: authors).

Red pepper holds significant potential in West African cuisine, serving as a critical ingredient that adds flavour and heat to various dishes. Its commercialisation does not pose substantial challenges, likely due to the relatively small scale of its production.
However, like other crops, the issue of costly and scarcely available fertilisers presents a hurdle for red pepper cultivation. Despite these challenges, red pepper remains a staple in West African culinary culture, symbolising the region's rich and diverse food heritage. Its vibrant colour, spicy kick, and distinct flavour make it a beloved ingredient, and its enhanced cultivation could boost the regional food industry. This offers chilli farmers a huge opportunity to export their chilli.

Main issues in farming/ agricultural practices:

- Extremely low yields
- Small areas of production
- Short production season
- Lack of irrigation
- No nurseries for good quality plugs or plants, genetics used unknown
- The varieties cultivated are not the most popular
- Areas that produce chilli are inaccessible due to insecurity

Focus areas for improvement:

- Quality seed and better-adapted varieties – most popular chilli in West Africa
- Conduct a pilot in regions that are relatively safe
- Set up professional nurseries
- Promote the use of compost
- Solar irrigation and driplines to automate irrigation

4 BASELINE FINDINGS: COOPERATIVE SELECTION

The Hortiplus project aims to work with 7 cooperatives with a total membership of at least 8,000 members. The choice of these cooperatives is therefore an important step in the implementation of the project. HortiPlus will intervene both on cooperative management level to strengthen the business operations, as well as work directly with the producers who are members of these cooperatives through the G50 approach. We developed a strategy to take both intervention levels in account in the selection process. In this, we also had to consider the characteristics of cooperatives in the horticultural sector in Burkina Faso. To reach the desired scale, we decided to target cooperative unions (with primary cooperatives as members) and add some primary cooperatives in certain production areas.

These primary unions and cooperatives were selected from the project implementation areas: the triangle between the regions of the Centre, the Boucle du Mouhoun and the Hauts Bassins. At the same time, we introduced and justified the need to work with a specific union with which consortium member Agriterra already has a partnership: the UPCPO union based in Kaya in the Center North. The good relations with Agriterra, and the good internal organization of this union will be decisive for a successful start-up phase of the project.

4.1 Methodology

Agriterra has a general 3-step selection methodology for selecting cooperatives, that we used for HortiPlus:

1. Step 1 is the identification phase. This consists of identifying cooperatives and unions based on documentary analysis and exchanges with the administrative technical services and the experiences of various organizations intervening in the localities. This phase makes it possible to have a large database of cooperatives or farmers' organizations in the project intervention areas. A filtering and pre-selection process is then carried out on this extended list, considering the accessibility of the areas, the number of members and other preliminary information.

2. Step 2 is the scoping phase, which is done with Agriterra's scoping tool. Scoping consists of field missions, to meet with the pre-selected cooperatives. During these half-day sessions, Agriterra advisors collect basic information and assess the cooperative's development ambitions. This step makes it possible to check whether the organisation is really a cooperative or not, since when it exists, what its business model is and that of its members, and what are its ambitions. The cooperative's internal capacities such as resources, commercial experiences and services to members are briefly evaluated and documents to sustain this as proof are collected. Agriterra also conducts a short evaluation of governance and financial management. A scoping report is then drawn up, which contains all necessary information for the decision making on which cooperative will go to the third phase.

3. Step 3 is the cooperative analysis phase; Agriterra has developed a complete cooperative analysis tool to carry out a complete diagnosis before starting any intervention. This analysis is done during 5 days of work with experts to assess the cooperative's business case, governance, financial management and reputation. As part of the Hortiplus project, it was decided to use a

lighter version of this cooperative analysis; this light version consisted of 3 days of fieldwork and analyzed the business case, financial management and governance.

4.2 Selection process for HortiPlus

As described in paragraph 4.1, the selection process consists of three steps: identification, scoping and cooperative analysis.

4.2.1 Identification

In the identification phase, we focused on two different types of cooperative organisations:

1. Cooperative unions with at least 1,000 members: According to the last general agricultural census in 2010, only 30% of horticulture farmers belong to a farmer organisation; this figure has certainly changed with the advent of the OHADA law, but is still very low compared to other sectors. At the same time, horticulture cooperatives are generally very small in terms of the number of members according to Agriterra's experience in the field. They therefore form unions of cooperatives to increase their capacity for negotiation, production, and marketing. It is therefore at union level that economic activities such as the purchase and supply of inputs, collection and marketing are carried out. However, work at union level does not always make it possible to grasp certain realities at the level of production and grassroots cooperative life. Hence the targeting within the framework of this project of certain primary cooperatives, especially in certain specific areas.

2. Primary cooperatives in the Centre region with minimum 100 members: In the Centre region around Ouagadougou, cooperatives are generally small; there are also no strong unions around this region. Due to the proximity to the city, these primary cooperatives can provide production and marketing services to their members. To take into account the specificity of this production area, we targeted primary cooperatives with a minimum of 100 members during the selection process.

Also, we used this phase to research the possibility to build on the existing primary cooperative (members of the unions) structure to constitute the G50 groups (more on this can be found in Chapter 5).

To start the identification, we used cooperative databases of consortium members, and we carried out documentary research using the internet and by meeting with the decentralized services of the Ministry of Agriculture in Burkina Faso. In this case, we met with the DGPER to obtain additional data on horticulture cooperatives. The cross-checking of all these lists according to the project intervention area, made it possible to select 11 cooperatives for the scoping phase.

N	REGION	HQ	COOPERATIVE	MEMBERS
1	CENTRE	Boulmiougou	Scoop Namaneg-zanga des producteurs de fraise de Boulmiougou	105
2	CENTRE	Komsilga	Coopérative Maraichère de la Commune de Komsilga	107
3	CENTRE	Boulmiougou	Scoop Sougre-Nooma des producteurs de fraise de Boulmiougou	121
5	CENTRE	Loumbila	Union Nakolbzanga de Loumbila	214
6	CENTRE-OUEST	Tenado	Union NYI-DWI-NYE du Sanguié	6.780
8	HAUTS-BASSINS	Bobo-Dioulasso	Union Régionale des jeunes professionnels agricole des Hauts Bassins	200
9	HAUTS-BASSINS	Dande	Union Woroyirè de Dande	1.219
10	BOUCLE DU MOUHOUN	Bale	Union Provinciale des Producteurs d'Oignon des Bale	466
11	CENTRE-NORD	Korsimoro	UDSCOOP Song-Taaba de Korsimoro	1.867
12	CENTRE-NORD	Kaya	UPCPO Kaya	2.561

Table 4.1: List of cooperatives selected for the scoping phase

4.2.2 Scoping

As explained above, scoping consists of meeting the cooperative on its site for half-day of exchanges. We organized field trips to meet each of the 11 pre-selected cooperatives. The scoping reports were drawn up and analysis have been carried out for decision-making. At this level, a certain number of criteria guided the choice at the end of the scoping. Each criterion was rated from 1 to 5 (poot to excellent).

These criteria were:

- Governance: availability of legal documents (e.g. receipt, statutes and rules of procedure), human resources available, minutes of the last General Assembly, availability of a Strategic Plan / Action Plan, member database and all necessary documents.
- Financial Management: annual budget, financial reports (audit), manual accounting book, accounting software.
- Marketing: group sales, commercial contracts, conservation store, commercial partners, business plan, realistic commercial ambitions.
- Services to members: supply of inputs, access to credit, access to markets, agricultural advice.
- Crops: Tomato, Onion, Cabbage, Chilly Pepper, Amaranth, Strawberry, Eggplant.
- ICT integration: digital database, accounting software, digital evaluation system.
- Security: Easy access, completely red zone, orange zone, green zone.

The scoping results are summarized in Table 4.2. Based on the scoring, a decision was made on the selection of the 7 cooperatives for the third step: cooperative analysis. These cooperatives are shaded green in Table 4.2.

N	REGION	HQ	COOPERATIVE	MEMBERS	Onion	Tomato	Cabbage	Lettuce	Strawberry	Amaranth	Chill pepper	Gouvernance	Commercialisation	Financial governance	Services for members	Crops	ICT	Security situation	Overall Quality
1	CENTRE	Boulmiougou	Scoop Namaneg-zanga des producteurs de fraise de Boulmiougou	105	X		X	X	X	X		2	2	1	4	4	1	5	19
2	CENTRE	Komsilga	Coopérative Maraichère de la Commune de Komsilga	107	X	X	X	X	X			2	4	2	4	4	1	5	22
3	CENTRE	Boulmiougou	Scoop Sougre-Nooma des producteurs de fraise de Boulmiougou	121	X		X	X	X	X		1	2	1	4	4	1	5	18
5	CENTRE	Loumbila	Union NAKOLBZANGA de Loumbila	214	X	X	X					4	4	1	4	4	2	5	24
6	CENTRE-OUEST	Tenado	Union NYI-DWI-NYE du Sanguié (Ténado)	6.780	X	X	X					4	4	2	4	4	2	2	20
8	HAUTS-BASSINS	Bobo city	Union Régionale des jeunes professionnels agricole des Hauts Bassins	200	X	X	X					4	1	2	4	4	2	4	21
9	HAUTS-BASSINS	Dande	Union Woroyirè de DANDE	1.219	X	X	X				X	4	4	1	4	4	1	1	18
10	BOUCLE DU MOUHOUN	Bale	Union Provinciale des Producteurs d'Oignon des BALE	466	X	X	X				X	4	1	2	2	4	1	4	18
11	CENTRE-NORD	Korsimoro	UDSCOOP SONG-TAABA de Korsimoro	1.867	X	X					X	4	4	1	4	4	1	2	18
12	CENTRE-NORD	Kaya	UPCPO Kaya	2.561	X	X	X					4	4	4	4	4	4	2	26
			Total members of selected cooperatives	**12.100**															

Table 4.2: Scoping results and selection of cooperatives for cooperative analysis

4.2.3 Cooperative Analysis

The cooperative analysis meets a double objective: to understand the different aspects of the cooperative as well as its future ambitions for decision-making concerning participation in the HortiPlus project; thus, at the end of each analysis, we gave a final go/no-go to the cooperative. Also, the cooperative analysis provides the baseline to build the capacity strengthening activities with each cooperative. As such, the cooperative analysis report constitutes the reference to measure the evolution of the intervention of the project.

We carried out 6 cooperative analyses and each analysis lasted an average of three days of fieldwork with cooperatives. Kaya's UPCPO union has not been analysed as it is already in Agriterra's portfolio.

Each analysis was carried out with the primary managers of the cooperatives, in particular the members of the boards of directors, supervisory boards, key members and staff. The analysis team was made up of 2 experts: the Agriterra cooperative advisor and a local agripooler1.

The different areas of analysis are summarized in the following table:

TYPE OF ANALYSIS	ANALYSIS DETAIL	TYPE OF PARTICIPANTS	TOOLS USED
BUSINESS CASE **1.5 DAYS**	- Introduction "Commercial Dossier", Value Chain analysis - Business model - Cash flow analysis - Marketing strategy analysis - Future business ambitions	- Board members - Marketing officer - Manager	Questionnaire in the report tool
FINANCE **0.5 DAYS**	- Financial Management Health Check Analysis - Internal capitalization - Credit history - Working capital estimate - Funding requirements - Risks on financial viability	- Supervisory Board - Board of directors - Manager - Accountant	- Financial Management Health Check - Questionnaire in the report tool
GOVERNANCE **0.5 DAYS**	- Governance health check analysis - Inclusion of young people and women - Resource management human - Willingness to change	- Supervisory Board - Board of directors - Manager - Accountant	- Governance health check - Questionnaire in the report tool
FINALIZATION AND RESTITUTION **0.5 DAYS**	Tool Agriterra analysis	- Supervisory Board - Board of directors - Manager and his team	Feedback PPT

Table 4.3: Cooperative analysis process

4.3 Selected cooperatives

At the end of each cooperative analysis, the expert team draw up the conclusions and gave its recommendations, after which we decided to retain all 6 cooperatives plus the Kaya union for the HortiPlus project. At the same time, the retained cooperatives confirmed their participation in the project. Below follows a summary description of each cooperative.

4.3.1 UPCPO Kaya

The Provincial Union of Cooperative Societies of Onion Producers of Sanmatenga (UPCPO/SNM) was created in 2011 under Law No. 014/99/AN of 15 April 1999 regulating cooperative societies and groups in Burkina Faso. The union was known as the Union des Groupements des Producteurs d'Oignons du Sanmatenga (UGPOS), but since November 2019 it has complied with the OHADA Uniform Act on

[1] Agripooler or expert agripool is a concept of Agriterra to designate an expert within a cooperative.

Cooperative Societies and registered as a Union of Simplified Cooperative Societies under number RSC N° 19-SU-343 PSNM of November 04, 2019.

The UPCPO/SNM is made up of 96 primary horticulture cooperatives from the 7 municipalities of the province of Sanmatenga which are: Pibaoré, Boussouma, Mané, Kaya, Pissila, Dablo, and Barsalogho. It has 2,516 active members, including 1,570 (62.4%) women and 1,024 (40.7%) young people. The main mission of UPCPO/SNM is to improve the living conditions of its members and the production of onions in Sanmatenga. The union was set up to federate grassroots cooperatives in order to ensure quality production and above all a better organization and marketing.

The union mainly produces onions, constituting 80% of the production of its members. It also produces tomatoes, green beans, cabbage, and many other vegetables. The union works on an area of 550ha divided into 110 production sites with an exploitable potential of more than 1000ha. It produces an average of 17,000 tons of onions per campaign, with an average yield of between 20 and 30 tons per hectare. Production is carried out in the dry campaign between October and March and to a lesser extent in the winter season between May and September. For the last campaign, it produced 6,737 tons of onions on a total sown area of 344 ha, which gives a yield of 19.5t per hectare. For the last campaign the union was able to facilitate the sale of 6500 tons of onions.

PROVINCIAL UNION	DEPARTMENTAL UNION	NUMBER OF PRIMARY COOPERATIVES	NUMBER OF PRODUCERS			CURRENT PRODUCTION CAPACITY	
			M	F	T	Area (ha)	Production (tons)
UPCPO	Pissila	8	44	41	85	344	6 737
	Pibaoré	26	358	233	591		
	Boussouma	5	45	128	173		
	Kaya	7	33	107	140		
	Barsalogho	7	24	155	179		
	Mané	17	172	212	384		
	Total UPCPO	70	946	1570	2516		

Table 4.4: Key figures UPCPO

4.3.1.1 Vision, mission and strategy

The union's mission is to become a strong, autonomous union capable of mobilizing internal and external resources and better positioning its products on competitive markets at national and regional level.

Main objectives for the coming years:

- The development of the commercial service with the members. To date, the union manages to buy and market 40% of the members' production.
- The increase in conservation capacities; it is an essential element for the value chain if the cooperative really wants to develop marketing.
- The professionalization of the cooperative and primary cooperatives.

4.3.1.2 Partnerships

The union works mainly with the agri-agency TRIAS on production and leadership since 2017. The first partnership began in 2018 and ended in 2021. A second partnership began in 2022 and will end in 2026. This relationship with TRIAS has enabled the cooperative to benefit from the construction of storage warehouses through subsidies. TRIAS is currently helping UPCPO to develop its leadership in areas relating to the inclusion and employability of young people and women. The partnership is also working to improve production and develop relations between members and the cooperative.

Agriterra was introduced by TRIAS to this cooperative to strengthen the management of the cooperative, reinforce financial management and facilitate access to credit and markets. Agriterra has already developed a marketing plan, which is currently being implemented. Today, the cooperative has its own accountant and a computerised accounting and financial management system that makes it possible to make financial information available each year and to pass an audit for greater transparency. It is then possible to work towards linking the cooperative with financing institutions. Hence the complementarity with the HortiPlus project.

4.3.2 UDSCOOP SONG-TAABA by Korsimoro

The Songtaaba Departmental Union is located in the center-north of Burkina Faso. It has specialized in the production of fresh vegetables such as 100% bulb onion, 80% pepper, 70% eggplant, tomato and cabbage since 2004. It complied with OHADA on October 14, 2019, under number 19- SU-289-PSNM. The compliance process is continuing at the level of member grassroots cooperatives.

The Song-Taaba union of Korsimoro has 1,867 individual members united in 20 grassroots cooperatives. They are distributed in 11 villages: Kougpela, Wapougo, Nabdogo, Goerba, Tangpooré, Tanwema, Ouedsé, Yaoghin, Toeguin, Gouerba and Raguitenga. The union is currently working on an area of 365 ha but has a potential of over 1000 ha in the production zone. Average annual production is estimated at 8,280 tonnes, with a yield of around 23 tonnes per hectare. SONG-TAABA's production potential is estimated at more than 20,000 tonnes per year if it exploits its acreage properly.

UDSCOOP SONG-TAABA OF KORSIMORO	NUMBER OF PRIMARY COOPERATIVES	NUMBER OF PRODUCERS			PRODUCTION CAPACITY	
		M	F	T	Area (Ha)	Capacity production
	20	1152	715	1 867	365	8,280

Table 4.5: Key figures UDSCOOP SONG-TAABA of Korsimoro

In terms of services to members, it must be said that the union mainly facilitates access to agricultural inputs. According to estimates made during the cooperative analysis, it meets around 15% of input

needs. As a result, the union is always on the lookout for financial and technical resources for training members and monitoring production.

UDSCOOP SONG-TAABA is recognized for its strength in organizing marketing and its relationship with the Ivorian and Ghanian market; there is huge demand from these two markets.
However, during the cooperative analysis, it became clear that there was a challenge regarding sales prices, as buyers negotiate directly with producers. This individual sales option is favoured by the union because it has no working capital.

In terms of governance and financial management, there is no financial staff within the union. The union does not plan costs or draw up functional budgets. As a result, there are no annual financial reports.
There is also a lack of overall planning of activities, and management bodies such as the supervisory board do not function properly.

4.3.2.1 Vision, mission and strategy

UD Song-Taaba does not have an up-to-date strategic plan; but the main ambitions guiding their actions for the coming years are:

- Increase logistics capacities (more conservation stores, acquisition of trucks)
- Boost grassroots cooperatives
- Organize the collection of products from producers for group sale
- Sign commercial contracts
- Render services to grassroots members and in return mobilize dues

To do this, the union must draw up a realistic five-year strategic plan in a participatory manner. Then it will have to set up a clear and accessible communication system for each member producer. It should mobilize sustainable equity internally through a financing plan. Also, the credits should serve as an investment and an opportunity for the empowerment process.

4.3.2.2 Partnerships

During the past ten years, the union focused a lot on the production of bulb onions with the support of rural development projects and programs and agricultural technical services. Its strength lies in its experience, its conservation and marketing capacity. In the past years, it has benefited from the support of development projects and programs such as PAFASP, PROFIL, US ADF, Neer-Tamba. At present, they have financial (Coris Bank and Caisse Populaire for loans) and technical (Regional Directorate of Agriculture, CPF, CRA-CN) partnerships.

4.3.3 Union NYI-DWI-NYE of Sanguié (Ténado)

The NYI-DWI-NYE Horticulture Cooperative of Sanguié (SCOOPS NDN / Sanguié) was born from the desire of producers in the villages of the province to set up a union in 2015. It should be noted that SCOOPS was registered under No. N°2016 - 05 /MATDSI/RCOS/PSNG/HC/CAB under Law 014/99/AN regulating cooperative societies and groups in Burkina Faso pending its regularization under the OHADA Law. It has 8 communal cooperatives made up of 6780 members including 2834 adult women, 1302 young women and 868 young men. It produces 100% bulb onions, 90% tomatoes, 80% cabbage and many other speculations over an area of 864 ha. SCOOPS NDN / Sanguié has 4 marketing counters (Ténado, Kyon, Réo and Pouni) managed by a COGES(Comité de Gestion) composed of three entities (producers - traders - municipal representative); but it should be noted that only functional one is Ténado.

PROVINCIAL UNION	DEPARTMENTAL UNION	NUMBER OF PRIMARY COOPERATIVES	NUMBER OF PRODUCERS			CURRENT PRODUCTION CAPACITY	
			M	F	T	Area (ha)	Production (tons)
NDN	TENADO	20	385	897	1 282		
	DASSA	15	304	470	774		
	KYON	17	431	683	1 114		
	REO	18	535	506	1 041		
	DIDYR	20	496	689	1 185	794.2	11 879
	KORDIE	13	272	497	769		
	POUNI	10	221	394	615		
	Total NDN	113	2 644	4 136	6 780		

Table 4.6: Key figures NDN

At the Production and marketing level, with an average onion yield estimated at 25 tonnes per hectare, NDN is capable of producing over 10,000 tonnes of onions per year and over 350 tonnes of tomatoes. A local seed called "violet de Réo" is used for production. The members finance most of their own production and consequently sell their harvests at home without going through the union. The union has 4 counters (Tenado, Kion, Pouni, Réo) managed by traders in the pilot phase, and 85 tonnes of storage facilities. Demand for onions is strong and the Sanguié province has a good reputation for the availability of market garden produce,

In terms of governance and financial management, the main problem is the lack of an accounting and financial system. NDN does not draw up annual budgets; it keeps manual, simplified accounts that do not provide cost data and financial reports. There is also a weak internal control system, and a low level of operation of the company's governing bodies. NDN does not any financial staff inside the organization.

4.3.3.1 Vision, mission, strategy

SCOOPS NDN / Sanguié has two main ambitions:

1. To position itself in the province as the main supplier of horticulture products, with an emphasis on onions to the various players in marketing and processing
2. To make the local variety “Violet de Réo” a nationally and internationally prized variety.

Therefore, the union has set itself the following tasks:

- To organize the production of onion seed, especially the "Violet de Réo" variety, for labeling in concert with the public agricultural authorities.
- To support members in onion production through the supply of inputs, and technical support for production.
- To organize the onion collection of its members in its village counters.
- To market the products of its members, especially onion, through commercial contracts.

To do this, SCOOPS NDN / Sanguié has set the following objectives:

- Revise the statutes and regulations of scoops, departmental and provincial unions.
- Formalize the scoops, the departmental unions and the provincial union according to OHADA standards.
- Renew the various offices at the level of scoops, departments and the province.
- Develop a five-year strategic plan.
- Mobilize working capital for the supply of inputs of at least 104,880,000 FCFA (€ 160,000).
- Build three sales counters in three departments (Dydir, Kordié, Dassa).
- Establish seed companies in each department in concert with the agricultural authorities (INERA, Agriculture, etc.) for labeling.
- Reinforce the capacity of the members in production on the one hand and in their role and responsibility within the cooperative on the other hand.

4.3.3.2 Partnerships

Currently, NDN union cooperatives has no partnership.

4.3.4 Scoops Namaneg-Zanga of Boulmiougou strawberry producers

The NAMANEGZANGA cooperative is an organization of strawberry producers, located on the Boulmiougou production site in the commune of Ouagadougou. It is a primary cooperative registered under number 19-SC-OO134/RCEN/PKAD OF DECEMBER 31, 2019. It has been in existence for 4 years with 107 members including 20 women and 10 young people. It was born out of a desire to improve the marketing of strawberries to wholesalers on the Ouagadougou market.

NAMANEGZANGA	NUMBER OF PRODUCERS			PRODUCTION CAPACITY	
	M	F	T	Area (Ha)	Capacity production
	68	37	105	54	1 000

Table 4.7: Key figures Scoops Namaneg-Zanga of Boulmiougou

The cooperative mainly produces and markets strawberries (100% of the members), but also lettuce, cabbage and other fresh fruits and vegetables for the Ouagadougou market and in some countries in the sub-region. In addition, it facilitates access to inputs, market research and production monitoring/supervision for its members.

The cooperative produces an average of 750 tonnes of strawberries a year, and around 300 tonnes of onions, lettuce and other vegetables. The average yield for strawberries is 17 tonnes per hectare. The cooperative works on an area of 55 hectares and has a strawberry production potential of around 1,300 tonnes.

One of the challenges facing the cooperative in terms of production is the availability of strawberry seed, which is no longer sufficient to achieve the desired yield. It is therefore necessary to introduce a new seed, either a new variety or to negotiate commercial relations with a pepiniarist, according on the conclusions of the cooperative analysis.

4.3.4.1 Vision, mission, strategy

Its vision is to increase the income of its members through better organization of the sale of strawberries while increasing their negotiation skills. It has set itself the following objectives:

- Facilitate access to quality inputs.
- Facilitate access to agricultural credit.
- Strengthen the capacities of members.
- Capitalize, disseminate, inform members about good production practices.
- Strengthen the synergy of action with the other links in the sector.
- Participate in consultation meetings.
- Participate in fairs and promotional days.
- Promote the group purchase of inputs.
- Promote strawberry production.
- Participate in national fora to set the floor price for strawberries.
- Strengthen the capacities of producers in an entrepreneurial spirit.
- Improve strawberry quality.

4.3.4.2 Partnerships

This cooperative is currently working with HELVETAS Swiss Interoperation through the PAPEA project; this project, which runs until the end of 2023, aims to strengthen the cooperative's capacities but also to facilitate the creation of new commercial relationships; these new relationships are direct at member level, which means that it is not possible to negotiate through the cooperative. The members then sell their produce at a low price. This is where the cooperative's interest lies for HortiPlus: to strengthen marketing, commercial development and negotiation skills at cooperative level, and to gain the ability to sign formal delivery contracts with agreed prices for all members.

4.3.5 Provincial Union of Onion Producers of Balé (UPPOB)

The Provincial Union of Onion Producers of Balé is a result of the Burkina Faso's government policy to organize producers by sector. Through the project “PROFILE”, which aimed to support projects in the agricultural sector, onion producers were organized in departmental and provincial unions. Consequently, on March 11, 2015, the Provincial Union of Onion Producers of Balé (UPPOB) was created, and later recognized and registered under the OHADA law on June 21, 2021 with the No. 21-SCU-011-BF- RBMH-PBL. The union's headquarters are located in Boromo in the Balé Province, in the Boucle du Mouhoun region of Burkina Faso.

The UPPOB currently has 456 members, including 168 women, divided into 4 departmental unions and 30 primary cooperatives.

PROVINCIAL UNION	DEPARTMENTAL UNION	NUMBER OF PRIMARY COOPERATIVES	NUMBER OF PRODUCERS			CURRENT PRODUCTION CAPACITY	
			M	F	T	Area (ha)	Production (tons)
UPPOB	Bagassi union	10	114	19	133	7.4	94
	Boromo union	13	114	80	194	14	177
	Fara union	3	9	56	65	4	49
	Pourra union	4	51	13	64	6.4	81
	Total UPPOB	30	288	168	456	32	401

Table 4.8 Key Figures UPPOB

UPPOB has a production potential of 1,601 tons of onions; in terms of arable lands, it has 102 hectares, which means that most of the land has not yet been exploited due to the availability of water, the lack of manpower (young people are directed towards gold panning), the lack of protection of the land against animal raids, and the lack of financial resources at producer level for development.

UPPOB offers input supply services to members through the establishment of a revolving fund (onion seed and chemical fertilizer). As far as marketing is concerned, the producers sell either individually or through their grassroots cooperatives; sales are not organized at union level; which remains the main challenge for the union.

UPPOB has a 10-ton store in Bagassi and has enabled 27 producers to benefit from storage spaces.
For the next 5 years, the UPPOB aims to organize and centralize marketing across the union to enable members to make a living from their activities; to do this, it must improve its administrative and financial organization and develop its governance.

4.3.5.1 Vision, mission, strategy

UPPOB's mission is to increase the income of its members through niche markets. To do this, it intends to position itself at national and regional level as a reference cooperative in the production and marketing of onions. It has set itself the mission of improving the production conditions of its members and selling their product on buoyant markets. Since the cooperative is not yet carrying out any marketing activities, its strategy to do so is described as follows:

- **Increase onion productivity**

  - Increase exploitable areas
  - Grow the number of members
  - Strengthen the capacities of producers in Good Agricultural Practices
  - Harmonize onion grading
  - Strengthen support in inputs and production equipment.

- **Develop outlet markets**

  - Set up a team in charge of marketing (estimate and commitment to producers, organization of storage, centralization of products)
  - Develop meeting frameworks with potential business partners at national and regional level
  - Sign commercial contracts (starting with around 24 tons for 2023)

To do this, UPPOB has a working capital to organize the marketing of suitable inputs with its members; in other words, it assesses the need of its members for onion seed and chemical fertilizer which it buys and makes available to them on credit payable in two instalments (before the start of the campaign and after the harvest).

4.3.5.2 Partnerships

Between 2020-2023 the union received support from the US American Development Foundation (USDAF), which enabled UPPOB to recruit an accountant and an agricultural advisor. In addition, among the producers 60 people were recruited to set up two teams; a team of 30 lead farmers and a monitoring and evaluation team of 30 people. This partnership has made it possible to build 27 storage warehouses, each holding 10 tonnes, within the departmental unions. These warehouses have been built to facilitate the storage at member level. A warehouse for storing inputs is also being built at the union's headquarters. This partnership will end in September 2023.

For UPPOB, the Hortiplus project provides an opportunity to work on access to finance and commercial development. Agriterra will include UPPOB in its Farmers focus transformation project in order to maintain the accounting staff, who make a considerable contribution to the cooperative's market research and management.

4.3.6 Union NAKOLBZANGA of Loumbila

Created in 2014, the Nakolbzanga union complies with the OHADA law on 10/12/2021 under number 21 SC-436-BF-RPCL-POTG as a simplified cooperative society. It mainly produces onions (100% of the members) but also tomatoes, cabbage and eggplant. Its headquarters are located in Zongo about 10km from Loumbila going towards the airport of Dossin. The union has 214 individual members, including 136 women, gathered in 9 grassroots cooperatives in the 9 villages that are part of the union.

The union currently produces 268 tons of onions, 28 tons of tomatoes and around 10 tons of other vegetables such as leafy vegetables but also cabbage and eggplant. The union works on an area of 24 hectares with a potential of 53.5 hectares of available land. In terms of production potential, the union can reach around 700 tons of production with a yield of 15 tons per hectare.

LOUMBILA	NUMBER OF PRIMARY COOPERATIVES	NUMBER OF PRODUCERS			PRODUCTION CAPACITY	
		M	F	T	Area (Ha)	Capacity production
	9	78	136	214	53,5	268

Table 4.9 Key Figures Union NAKOLBZANGA

As services to its members, the union facilitates access to agricultural credit for production, and market access.

With the support of its partner MANITESE, the union has signed an agreement with the microfinance Caisse Populaire. Based on this agreement, each member is authorised to take out a working capital loan directly for production purposes. With this loan, each member can buy its inputs for production and repays the credit directly to the MFI.

The union is encouraging its members to engage in agro-ecological production to serve customers in the city of Ouagadougou. Currently, 45 members specialise in this type of production. Production remains one of the cooperative's major challenges, as water sources are becoming increasingly scarce. On top of this, the lack of market availability is hampering production. The Loumbila cooperative markets its products mainly in the city of Ouagadougou and is currently helping to find markets for its agro-ecological produce. It has signed a partnership agreement with Bio Protect to market its members' products.

4.3.6.1 Mission, vision and strategy

In its strategic plan the union has decided to direct its production towards agroecological production; and the ambition is for this practice to become the rule by 2030. This strategic option, which is a niche market, has to procure sales contracts with wholesalers and other commercial partnerships in Ouagadougou. However, the marketing of members' products remains a challenge for the cooperative. The union has set itself the task of combating poverty in the municipality of Loumbila, by significantly improving the income of horticulture farmers, by improving yields and purchase prices for producers.
For the next 5 years, the union intends to work on the following areas of development:

- The search for sales channels for the sale of products to ensure producers a remunerative price
- Promotion of production in sufficient quantity and quality through agroecological production
- Strengthening the technical, organisational, and institutional capacities of the union

4.3.6.2 Partnerships

In the past, the Loumbila union worked mainly with the NGO MANITESE until 2022 to build its headquarters and develop its institutions. This partnership has also enabled the union to benefit from a 10-tonne warehouse for preserving onions.

The union is currently working with the NGO ACRA to test new, more productive onion seeds.
Through HortiPlus, union will be able to pursue its ambition of facilitating agro-ecological production among all its members and to develop the marketing of its products.

4.3.7 Horticulture Cooperative of the Municipality of Komsilga

The Horticulture Cooperative of the Municipality of Komsilga (CMCK), governed in the form of a cooperative society (law 014/99/AN on cooperative societies and groups was created in 2009 to better organize producers for increased profitability of the fruit and vegetable sectors. Since November 2019, it has complied with the OHADA Uniform Act on Cooperative Societies and registered as a Simplified Cooperative Society under number RSC N° 19-SC-00113/RCEN/PKAD of 28/10 /2019.

The CMCK has its headquarters in Komsilga, 30 km from Ouagadougou; it brings together 107 members including 20 women and 10 young people producing on three production sites in the municipality with an area of 55 hectares.

CMCK COOPERATIVE (SCOOPS)	MEMBERSHIP			PRODUCTION CAPACITY	
	M	F	Total	Areas (Ha)	Production (tons)
	87	**20**	**107**	**55**	**102**

Table 4.10 Key Figures CMCK Cooperative

The main crops produced are onions, cabbage, and tomatoes. Thanks to its partner (Centre Regional Council), it benefits from the part-time support of an agricultural technician. The organizational structure of the cooperative is made up of a management committee and a monitoring committee. The members of the cooperative have access to quality inputs at a lower cost, to spaces to store their onions, to a tiller to facilitate the ploughing of the plots, and training on new production techniques. As far as the market is concerned, CMCK does not offer its members any services to facilitate access to the market. CMCK has 2 storage warehouses of 100 tons and 10 tons for onions.

4.3.7.1 Vision, mission and strategy

The CMCK does not have a strategic plan or a business plan. But its ambition is to improve the services rendered to the members by facilitating the supply of inputs to the members, by strengthening the capacities of the members on new production techniques, by facilitating the conservation of the onions of the members by building warehouses, the market research.

4.3.7.2 Partnerships

Currently, the CMCK cooperative does not have any partnerships. However, it did have several partnerships over the past years, such as SME ADS, a local buyer company who provided a loan to support production, and the Embassy of Japan which provided a grant for the construction of a 10 tons onion storage. Unfortunately, according to the cooperative, the constructor did not respect the conditions for a good storage (of which the Embassy has been made aware). Another past partnership the Agri-agency Fert, which worked on capacity strengthening of the cooperative, which enabled them to formalize the cooperative according to the OHADA law.

The HortiPlus project is an opportunity to work on the production issues; it should allow the cooperative to facilitate access to inputs for good production which is one their challenges. CMCK cooperative has the ambitions to work on the commercialization of its products to serve the market in Ouagadougou and also start the negotiation with exporters.

5 BASELINE FINDINGS: SME SELECTION

As formulated as outcome 2 in the M&E framework, the overall objective of the private sector development workstream of our project is to improve the business operations and access to finance and markets of 7 cooperatives and 120 SMEs. Underlying section outlines the SME baseline. Reference is made to section 4 for the baseline of the cooperatives.

During the baseline study we pre-selected 102 SMEs and acquired the baseline data from the administrations of the pre-selected SMEs. Final selection of the SMEs will be made after approval of the inception report.

Section 5.1 outlines the methodology for the pre-selection of SMEs. Section 5.2 is dedicated to an analysis of the pre-selected SMEs, whereas a full list of pre-selected SMEs is provided in Annex II. Section 5.3 concludes with the implications of pre-selecting the SMEs for the design of our project.

5.1 Methodology

The objective of the SME development sub-workstream is to improve the business operations and access to finance and markets of 120 SMEs. The following activities will be implemented to achieve this:

- 40 SMEs receive business plan training
- 3 SMEs introduce new business models via the Innovation Fund
- 5 SMEs receive intensive business development support
- 80 SMEs participate in masterclasses on value chain developments
- 10 SMEs matched with new markets
- 5 SMEs assisted with fund raising
- 3 SMEs assisted with obtaining Bio-GPS certification
- 10 SMEs assisted with introduction of selling Bio-PGS certified fruits & vegetables

SMEs have been pre-selected from the networks of the project partners, using selection criteria on company performance, ethics and experience with target crops. The pre-selection process involved a due diligence on all SMEs, including a visit to the SMEs and access to their administrations.

Specifically, in order to be eligible to be pre-selected for participation in HortiPlus, candidate SMEs needed to meet the following minimum criteria:

- The organisation should be a legal Burkinabe entity.
- The organisation should be willing to contribute to the project goals and deliverables, have open communication and willingness to share knowledge and lessons learnt.
- The organisation should operate in the project area covering the Bale, Boulkiemde, Houet, Kadiogo, Mouhoun, Oubritenga and Sanguie provinces.
- The organisation should be active in at least one of the project's target crops; tomato, onion, amaranth, cabbage, chilli pepper and strawberry.

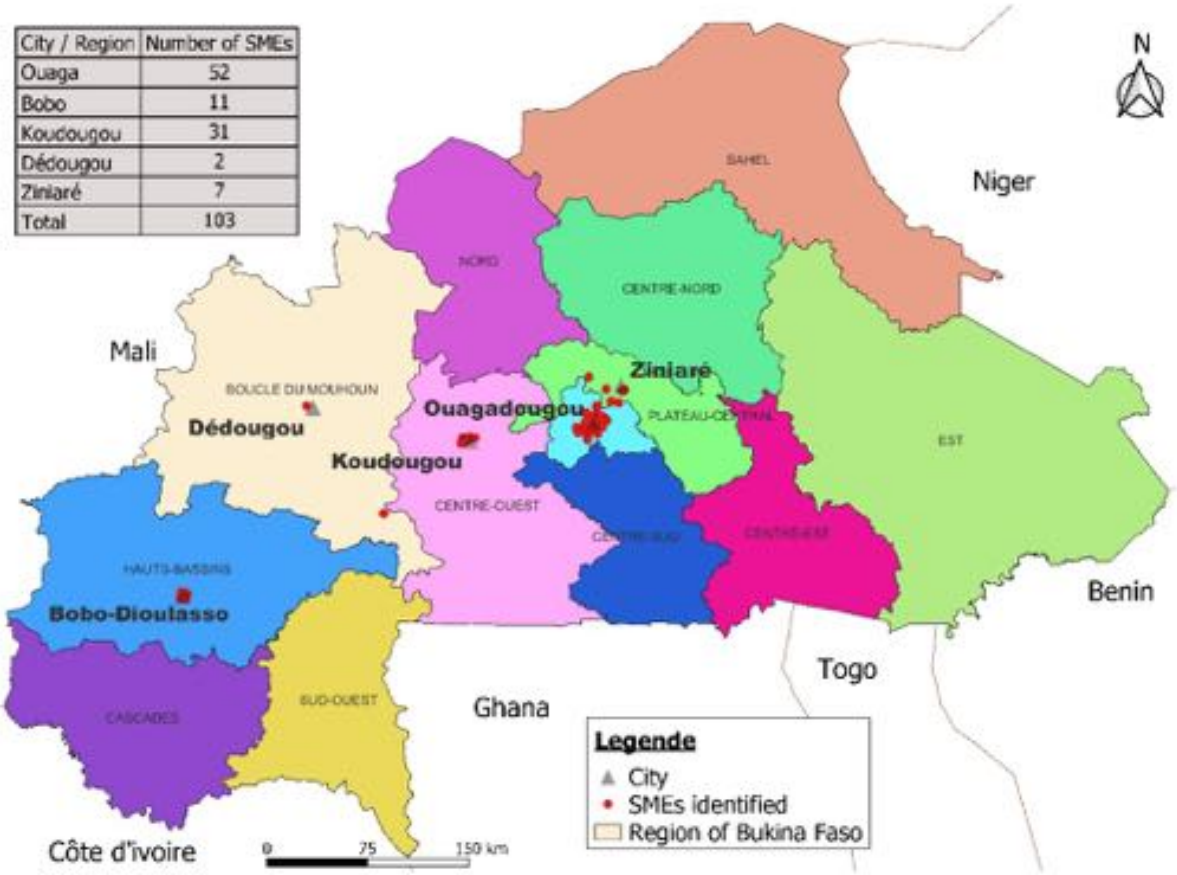
- The organisation should be willing to undergo assessment of the skills and capabilities, and host project staff on company premises during project evaluation and implementation.
- The organisation should be motivated to invest time and/or finance into at least one of the project's target crops tomato, onion, amaranth, cabbage, chilli pepper and strawberry.
- The organisation should be willing to work towards improving the position of women and young adults in their organizations.

The selection process comprised the following steps:

- Consortium partners reached out to prospective SMEs directly or indirectly.
- SMEs expressed their interest.
- Team made long-list of SMEs meeting the minimum criteria.
- Team made due diligence visits to longlisted processors.
- Team drafted due diligence report on longlisted processors.
- Pre-selection done by Selection Committee (consisting of project managers from Agrodev and Advance Consulting).
- Communication to SMEs on outcomes of selection (after approval of underlying inception report).
- Formalising agreement selected SMEs in cooperation agreements (again, after approval of underlying inception report).

5.2 Analysis of pre-selected SMEs

Consortium partners reached out to 143 SMEs. A total of 107 SMEs met the minimum criteria and were subsequently longlisted. After the due diligence visit to longlisted SMEs, a total of 103 SMEs were pre-selected by the Selection Committee. The full list of pre-selected SMEs is provided in Annex II, and summarized in tables and graphs below:



As can be obtained from the graph above, the pre-selected SMEs are located in the vicinity of the five largest cities of the target area: Ouagadougou, Bobo-Dioulasso, Koudougou, Dedougou and Ziniare.

An overview of SME age is provided in tables below:

Year of establishment	
Before 2000	6
Between 2000 and 2005	9
Between 2005 and 2010	11
Between 2010 and 2015	12
Between 2015 and 2020	48
After 2020	17
Total	**103**

From the tables can be concluded that the pre-selected SMEs are quite experienced in the horticulture sector, as 83% of the SMEs are operational for longer than 3 years. Please note that 37% of the pre-selected SMEs even have a track record that exceeds 8 years.

Tables below contain further insights in the activities of the SMEs:

Crops	
Onion	70
Tomato	71
Cabbage	22
Pepper	46
Amaranth	13
Strawberry	19

SME type	
Processor	57
Trader	39
Input supplier	7
Total	**103**

The far majority of pre-selected SMEs are involved in onion and/or tomatoes. Cabbage, amaranth and strawberry are less prominent, whereas chilli pepper is an interesting case in between these two groups.

Interestingly, 57 out of 103 SMEs are involved in processing of fruits and vegetables, whereas traders constitute 39 out of 103 pre-selected SMEs. Tomatoes, onion and chilli pepper processing constitute the far majority of the processing activities. A total of 50 SMEs is involved in the processing of tomatoes, whereas 33 SMEs are processing onions and 24 SMEs are processing chili peppers. Cabbage (6), strawberry (12) and amaranth (9) processing are less prominent amongst the pre-selected companies.

The total value of sales on the internal market in Burkina Faso of pre-selected companies amounted to EUR 40.2 mln in 2022, whereas the total value of the 2022 sales on the export market constituted EUR 35.4 mln. It is interesting to note that although the sales value for the export market was 12% lower, the export value was realized with 39 SMEs whereas the domestic value was accomplished by 95 SMEs, i.e. 59% lower. In other words, there are relatively large export companies amongst the pre-selected SMEs. An overview of the size of pre-selected SMEs is provided in the table below:

Sales turnover 2022	Internal market	Export market
Less than EUR 2,000	14	8
Between EUR 2,000 and EUR 5,000	13	2
Between EUR 5,000 and EUR 10,000	15	3
Between EUR 10,000 and EUR 20,000	19	6
Between EUR 20,000 and EUR 50,000	17	8
More than EUR 100,000	17	12
No sales (on internal / export market)	8	64
Total	**103**	**103**

From this table can also be obtained that the majority of pre-selected SMEs are small enterprises. 64% of the SMEs that are active on the internal market have annual sales below EUR 20,000. This percentage is equal to 49% for SMEs that are active in the export market. The due diligence on these companies highlights the necessity for entry-level business development support by the project (i.e. business plan training and masterclasses on value chain developments). On the other side of the spectrum, there 17 SMEs that market for more than EUR 100,000 on the internal market, and there are 12 SMEs that sell for more than EUR 100,000 outside Burkina Faso. As concluded in the due diligences, we expect to provide high-level business development services to these companies as market entry assistance, support with acquiring financing, assistance with acquiring Bio-GPS certification for outlets. These companies are also more suitable to introduce new technologies and business models via the Innovation Fund.

A similar segmentation can be made, looking at the number of permanent and seasonal employees in the tables below:

Employment - II	
Total number of permanent employees	5,983
Number of women among permanent employees	3,956
Total number of seasonal employees	1,805
Number of women among seasonal employees	1,120

Staffing in 2022	Permanent	Seasonal
0	0	21
Between 1 and 10	56	36
Between 10 and 25	30	23
Between 25 and 100	12	16
More than 100	5	7
Total	**103**	**103**

The pre-selected SMEs employ 5,983 permanent staff members and 1,805 seasonal staff members. As expected in the horticulture sector, the potential impact on women is significant, as 66% of permanent staff members and 62% of seasonal staff members are women.

54% of the pre-selected SMEs have less than 10 permanent employees, 55% of these SMEs have fewer than 10 seasonal employees. On the other hand, there are 17 SME with more than 25 employees and 23 SMEs with more than 25 seasonal workers. Although these groups mostly comprise of the same organizations, it underscores the requirement of high-level business development services. Again, the smaller organizations are more suitable for entry-level business development services.

A few other measures of the state of development of the pre-selected SMEs are captured in tables below:

Employment - I	
Formal employment contracts	33
Informal engagements	70
Total	**103**

Administration	
Financial procedures in place	84
Audited financial statements available	59
Loan repayment history	34

Again, from these figures can be concluded that there is a significant need for entry-level business development services. Only 32% of pre-selected SMEs have formal employment contracts for its staffing in place, and 57% of SMEs have audited financial statements. On the upside, 82% of the pre-selected SMEs have financial procedures in place, and 33% of the SMEs have loan histories with MFIs and banks.

5.2.1 Implications for project design

After screening against our selection criteria, out of the initial 143 SMEs, a total of 103 SMEs were pre-selected, which is less than the 120 SMEs we initially aimed for. Although it is expected that new SMEs will be added for support during project implementation, we also foresee that not all 103 pre-selected SMEs will actually participate during project implementation. As such, the target of the SME development sub-workstream of improving the business operations and access to finance and markets of 120 SMEs will decrease to 100 SMEs.

On a positive note, most activities and sub-targets will remain in line with the original project design:

- 40 SMEs receive business plan training
- 3 SMEs introduce new business models via the Innovation Fund
- 5 SMEs receive intensive business development support
- 80 SMEs participate in masterclasses on value chain developments
- 10 SMEs matched with new markets
- 5 SMEs assisted with fund raising

- 3 SMEs assisted with obtaining Bio-GPS certification
- 10 SMEs assisted with introduction of selling Bio-PGS certified fruits & vegetables

Specifically, there are two modifications to the original design of the activities and sub-targets:

- The sales increase targets for SMEs and cooperatives will decrease from EUR 1,500,000 to EUR 1,300,000, as the total number of targeted SMEs decrease from 120 to 100.
- There will be overlap in the groups of SMEs that receive entry level business development support (i.e. business plan training and masterclasses on value chain developments). In other words, most farmers that receive business plan training will also participate in the masterclasses on value chain developments.

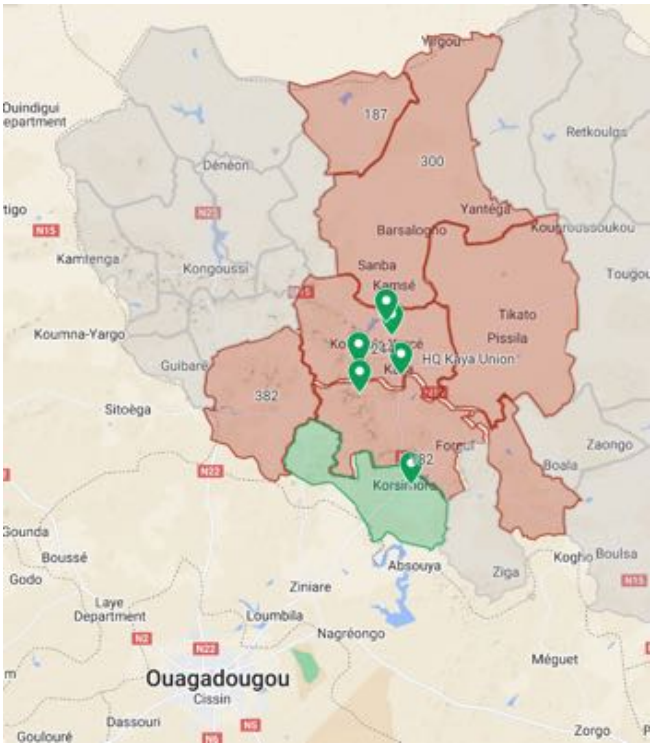
6 LOCALIZATION OF UMVA PLATFORM AND THE G50 APPROACH

6.1 G50 approach

In HortiPlus, we will reach the union and cooperative members through the G50 approach. G50's are farmer groups of 50 people, that regularly meet and share a tablet with the UMVA platform and AUXFIN apps (FinanceCoach, AgriCoach, NutritionCoach, Jeanne). This approach is based on AUXFIN's experience in Burundi, where the group size of 50 farmers, supported by a network of activators, turned out to be the most efficient and sustainable.

During the inception phase, we needed to adapt this approach to the context of horticulture farming in Burkina Faso. While in Burundi, the G50 network has been constituted by AUXFIN, in Burkina Faso we want to connect with already existing primary cooperatives and farmer groups that are members of the 7 selected unions as described in Chapter 4. To validate this strategy and to further adapt the G50 approach, we collected basic country and project specific information and held conversations with pre-selected unions and cooperatives on their service ecosystem, IT systems and user needs.

In February 2023 we organised a user needs workshop with the Kaya union and several cooperatives in Ouagadougou, followed by the development of an initial strategy based on the workshop an additional data. Further, we organized a field trip to the Centre North region to meet with the unions of Kaya and Korsimoro and four primary cooperatives, to validate our assumptions, to collect more information and to assess the security situation. In the map below, the communes of Kaya are indicated in brown with the number of members and green for Korsimoro. The green pointers indicate the locations of the cooperatives met.



6.2 Results

During our assessment, we found that in general, the approach is welcomed, and people are interested and excited. There is a need for better financial and information systems. Currently, some fertilizer orders are being collected digitally, but this process takes two months of hard work in the rainy system. We believe we can improve this significantly when groups have easy access to the tablets and are able to order themselves.



Regarding the G50 approach, we observed that:

- The average group size of the primary cooperatives is 35, which smaller than 50.
- There are 3 larger unions and 4 which only consist of a few groups.
- The distances between the groups are relatively large.
- Activators might necessarily want to have a fulltime job; they have other work (farming) and women in general are not easily permitted by their husbands to work fulltime.
- Salary expectation of the activators is higher than foreseen.

This requires a serious adaptation to the G50 approach as developed in Burundi, where the population is dense, and 20 groups of 50 families can be found easily within walking or biking distances. Also, the G50 network in Burundi is being build village after village so distance between clusters of groups is small.

6.3 Implications for project design

Based on these findings and considering the tasks of AUXFIN in additional projects the G50 approach has been adapted in the following way:

- The average group size will be 35 instead of 50. As such, we will reach at least 7,000 farmers.
- Activators will be (mostly) part-time positions with higher salaries than budgeted.
- To compensate for higher salary budget, activators will get a compensation for travel costs on their own motorcycle instead of a new motorcycle.

6.3.1 Synergy with the AUXFIN Holistic Approach to Community Activation (HACA) Programme

Combined, the seven selected unions/cooperatives as described in Chapter 4 have a number of 12.100 individual members. With HortiPlus, as explained above, we aim to reach at least 7.000 members, which would mean that the unions would have only part of their members connected to the G50 network. However, in the EKN HACA (Holistic Approach to Community Activation) programme, the mission of AUXFIN is to create a sustainable digital highway to the communities in the rural areas of Burkina Faso based on the G50 approach. The G50 groups of HortiPlus are already planned to form part of this wider network. At the same time, the HACA programme is also challenged by the sparsity of the networks in different value chains of Burkina Faso. From the perspective of sustainability and to the benefit of unions AUXFIN proposes to use resources from the HACA programme to be able to include the rest of the members of the 7 unions and to optimize the density. These groups will not be reported in HortiPlus but separately as part of the EKN HACA programme.

6.3.2 Implementation strategy

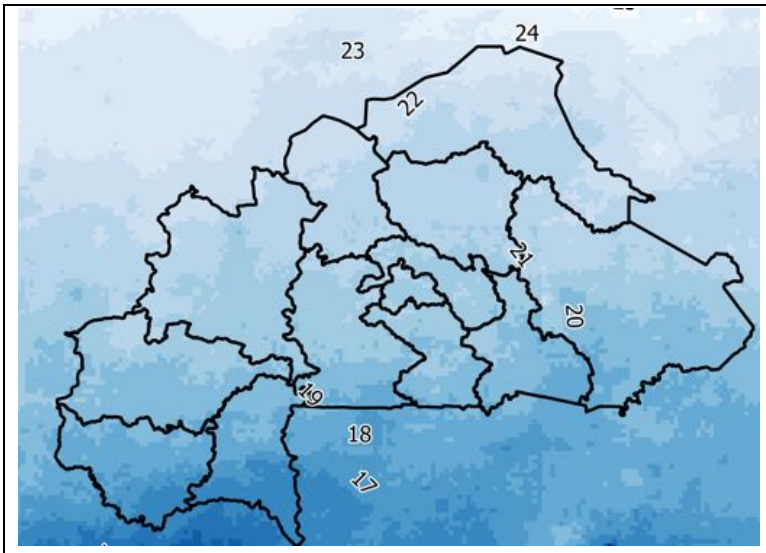
Based on these parameters an implementation strategy has been developed. We will start registration and working with the G50s in two phases, taking into account the seasons and recruitment and training of activators:

Phase 1 (September 2023): We will start registration of Scoop Sougre-Nooma des producteurs de fraise de Boulmiougou (1). This is a small cooperative close to Ouagadougou. Here we can easily test our applications with the end user. Once the system works, it will be implemented at scale starting with UDSCOOP SONG-TAABA de Korsimoro (2) and UPCPO Kaya (3) in the Centre North region. When the groups are registered, they will start working with the FinanceCoach first and later with the AgriCoach. This will be the first test at scale, with approximately 2,000 smallholder farmers connected to the G50 network.

Phase 2 (January & February 2024): During these months missed groups will be added to the network together with other small unions close to Ouagadougou. These are the Coopérative Maraichère de la Commune de Komsilga (4) and Union NAKOLBZANGA de Loumbila (5). Further, we plan to scale-up to the largest union, which is the Union NYI-DWI-NYE du Sanguié in Ténado (6) and the last one, the Union Provinciale des Producteurs d'Oignon des BALE (7). This will be the scale-up phase, with the additional 5,000 smallholder farmers, reaching a total of 7,000.

6.4 System preparation

Most of the work on the adaptation of the AUXFIN apps and the platform for HortiPlus has been on the customization of the AgriCoach. The agronomic data management portal has been prepared in such a way that the agronomic data for multiple organizations can be managed side by side in multiple (local) languages. In the portal it is now possible to select the data for crops that are already available in the AgriCoach and adapt it for Burkina Faso to make sure it is valid in the new context. This does not only include a translation to Moore, Dioula and Bissa but also the adaptation of the agronomic parameters such as the classification grow area (In the dry and flat Burkina Faso water and micro relief is important, more than e.g. the slope as in mountainous countries), but also the concept of the activity calendar, with Burkina Faso being a large country with a steep north south rainfall gradient. The start of season and therefore moment of planting in the AgriCoach is now implemented in location specific way.



Start of the rainy season in Burkina Faso. The numbers in the map indicate the average week the rainy season starts for a specific shade of gray. In the darker areas in the South the rainy season starts earlier and receives more rain than the lighter areas in the North. The map has been generated based on the daily rainfall pattern of the last 20 years as measured by the climate hazard center in Santa Barbara (CHIRPS) at a resolution of 5x5 km

To able to create crops suitability maps, we generated a climatology report for Burkina Faso based on temperature and rainfall over the past 20 years. We derived the temperature data from the European ERA5 data service as created by ECMWF for Copernicus. This data set provides hourly estimates of historical weather from 1948 till now at a resolution of 9x9 km globally, based on the best possible fit between state-of-the-art weather models and all available weather observations in that period.

We derived the rainfall data from the Climate Hazards Group InfraRed Precipitation with Station data (CHIRPS), which is a data service that provides a 35+ year quasi-global rainfall data set. Spanning 50°S-50°N and ranging from 1981 to near-present, CHIRPS incorporates our in-house climatology, CHPclim, 0.05° resolution satellite imagery, and in-situ station data to create gridded rainfall time series for trend analysis and seasonal drought monitoring.

The climate and crop suitability for HortiPlus will be discussed in more detail in a separate report.

We also worked on the adaptation of the UMVA system, which is also part of the before-mentioned HACA-programme. Based on this programme, currently different other apps are being customized to the local context of Burkina Faso. As such, the registration app and our chatbot Jeanne have been translated in both Moore and Dioula. Localization of the G50 app for the registration of meetings and

group transactions and the FinanceCoach are in progress. Also, the first videos of the FinanceCoach have been redubbed and are ready to be launched after the registration of the first G50 groups.

6.5 MFI selection

AUXFIN selected and signed MoU's with 2 MFIs in the context of HortiPlus, being PRODIA and ECLA. With the MoU's signed, AUXFIN and the MFIs are ready to start the implementation of the UMVA system with these MFIs. This will allow members of the targeted cooperatives to make use of financial services of these MFIs at a distance, starting with digital current account services, savings and possibly credits. For the MFIs it means that they get access to a wider network of clients, which they can profile and monitor better building on the data in the UMVA system. In addition, the UMVA system can be used as an internet system for other (existing) clients. The training of the PRODIA team is expected to start in the coming months and ECLA will follow next year.

Apart from these MFIs AUXFIN is having MoU's with 2 other MFI's RCPB and GRAIN which will be connected to the UMVA platform through other projects. The MFI CODEC has shown interest to connect as well, which would result in one more MoU. In addition, AUXFIN is undergoing a due diligence process of a large pan-African bank with a presence in Burkina Faso, in order to have their services linked to the UMVA platform too, but this process has not yet been finalized.

Even though the MFIs will be connected to the UMVA platform through different projects, in the end, through its holistic approach, AUXFIN aims to make all connected MFI branches which are located nearby the beneficiaries selectable and accessible to them.

7 MONITORING AND EVALUATION PLAN

7.1 Scope and purpose

The Monitoring and Evaluation Plan is based on the updated project design and updated logical framework as set forth in this Inception Report. In sum, HortiPlus aims to improve food and nutrition security in Burkina Faso by increasing production, income and climate resilience of 7,000 horticulture farmers, improving business performance of 7 cooperatives and 100 SMEs and enhancing dietary diversity of 50,000 rural consumers. Our activities are geared towards delivering concrete results and impact. Our Monitoring & Evaluation (M&E) system is of paramount importance to effective and efficient project management, accountability, ongoing learning and communication. Specifically, we will deliver on the following M&E objectives:

- Accountability: towards EKN, showing results on Dutch policy goals, but also towards partners, farmers, cooperatives, SMEs and other horticulture sector stakeholders.
- Efficient project management: evidence-based steering of project activities towards the desired outcomes.
- Learning and communication: gathering lessons learned, best practices and common challenges, to be shared with partners, farmers, cooperatives, SMEs and other horticulture sector stakeholders.

The specific purpose of this document is to explain and summarize the key elements of the M&E system of HortiPlus to our team, consortium and other stakeholders that will be playing a direct or indirect role in Monitoring & Evaluation.

With regards to the scope of this M&E plan it is important to clarify that the document largely focuses on the Theory of Change, monitoring and learning. Although evaluation is touched upon in various parts of this document, operational details regarding HortiPlus evaluations will be developed in close coordination with EKN in line with, but separately from, this plan.

7.2 Theory of Change

Our Theory of Change visualizes the relation between our activities (interventions) and the desired results of those interventions. It visualizes our ideas of how results and desired change will be created via so called “impact pathways”.

Figure 7.1 presents the HortiPlus Theory of Change. The graphic should be read starting at the bottom and moving upwards. In other words: starting at the HortiPlus core activities, which result in concrete outputs, moving up towards the desired immediate and intermediate outcomes and ultimately, the impact HortiPlus wants to deliver.

Our Theory of Change is based on our belief that stable and growing supply chains can create sustainable economic development, improve all dimensions of food security and combat the negative effects of climate change. We implement an integrated value chain approach that intervenes from smallholder farmer to consumer, where we aim to address the missing linkages across the value chains, including production, sourcing, processing, markets, finance and the supporting environment.

Each work package focuses on a certain stakeholder group, while these groups highly depend on each other. That is why the work packages are interlinked and reinforcing, strengthening the entire horticulture sector. In fact, within and between all the work packages, we intend to create a flywheel effect: the initial investment of this program will set in motion a self-reinforcing virtuous cycle of positive outcomes. This will ensure the sustainability and long-term impact of the program.

Work package 1

The majority of smallholder farmers face many different social, economic and environmental challenges that limit their production and income generation capacity. Training farmers to farm differently than they are used to is not effective. Encouraging farmers to enter into buying arrangements and taking out loans without training, group solidarity and systemised monitoring, will likely lead to losses. When smallholder farmers have suitable knowledge, financial resources AND market opportunities, they will reap the benefits and increase production and income, using the profit to invest in their farm and household needs (e.g. buy nutritious food).

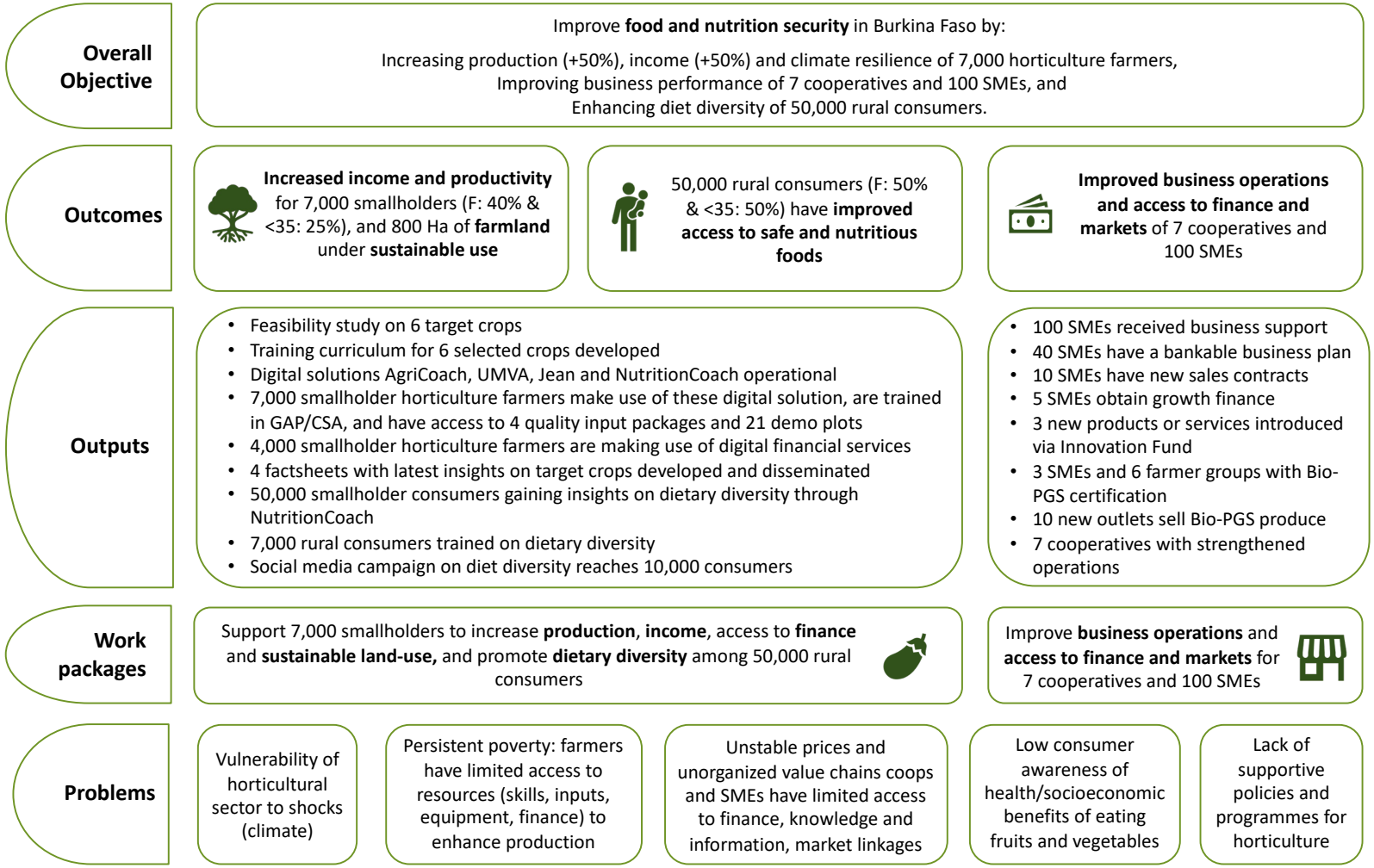
Awareness raising on how and why to eat healthy foods – especially when involving the primary preparers of food, mothers, as changemakers – does contribute to increased consumption. We also acknowledge that increased awareness doesn't necessarily lead to changed behaviour, and that acknowledge that awareness raising campaigns – in order to appeal to people – need to be positive and energising, and not be pedantic. Indigenous foods, for example, are often neglected because of consumer's association with poor rural lifestyles and low status, while they could be affordable, often available and rich in different micro-nutrients. As such, we will create a movement on healthy, nutritious and local food consumption that excites rural people via the NutritionCoach and a social media campaign.

Work package 2

A thriving private sector is a pre-condition for the creation of impact on smallholder farm level. Especially in the fragmented horticulture private sector of Burkina Faso, its paramount to build the technical, administrative and financial capacities of SMEs and cooperatives in this work package. This will lead to improved off-take, pre-financing and service delivery to smallholder farmers. In addition, for a sustainable horticultural sector, continuous innovations in products and services are necessary. Innovation drives entrepreneurship. However, at their pre-competitive stage, innovative business ideas are yet to transform into market-ready products or services. A major challenge is that such innovative business ideas, being high-risk in nature, don't attract the needed funding in Burkina Faso. Another essential activity of this work package is therefore the creation of an Innovation Fund, which will enable the introduction of new products, services and business models to the horticulture sector in Burkina Faso.

As stated before, awareness raising on how and why to eat healthy foods doesn't necessarily lead to changed behaviour. For new behaviour to be adapted, there needs to be capability (can the behaviour be accomplished?), opportunity (is there sufficient opportunity for the behaviour?) and motivation (is there sufficient motivation for the behaviour to occur?). While work package 1 contributes to the capability and motivation aspects, this work package focuses on the opportunity aspect to improve availability of quality/organic produce by providing market match making assistance to cooperatives and SMEs as well as supporting CNABio with the roll-out of Bio-PGS certification.

Figure 7.15 Updated Theory of Change HortiPlus



7.3 Indicators and measurement plan

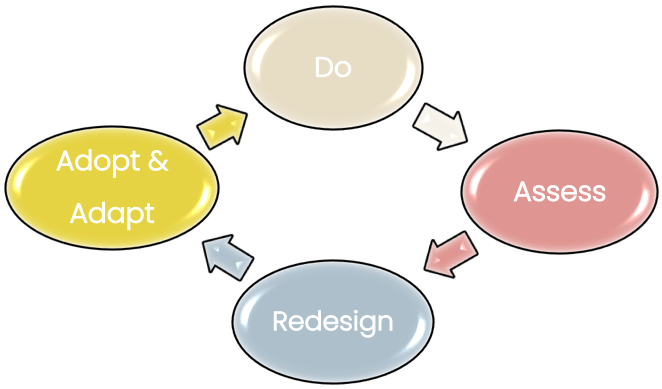
Indicators are very specific characteristics that can be measured. When measured over time they can show the changes, effects or progress that HortiPlus is making towards the results we want to achieve. Indicators are an important part of any M&E system, as they enable us to assess whether progress is being made towards our objectives.

The indicators used in this framework are related to our Theory of Change, and where possible, linked to the 2022 Food and Nutrition Security Results Framework of the Ministry of Foreign Affairs of the Netherlands[2]. Between the time of proposal development and now, the several indicators within the FNS Framework have changed, and we have adapted our indicators accordingly. The updated logical framework can be found in Annex III.

7.4 Learning

Learning is one of the main objectives of our monitoring and evaluation and is key to successful project implementation. In addition, because our monitoring and evaluation will provide strategic guidance during project implementation, adaptive learning is required for continuous improvement on our performance and impact. As such, adaptive learning is integrated from the first phase of implementation (e.g. crop selection, cooperative selection, G50 strategy development) until project close (e.g. sustainability of the G50 network).

The learning cycles involve: experiencing (do), reviewing the experience (assess); planning (redesign) for new ideas and embedding (adopt & adapt).



A non-extensive list of project activities that will entail significant learning components comprises the following:

- Registration of the G50 groups
- Cooperative strengthening activities
- Demonstration plots and input packages development and roll-out
- Connecting smallholder farmers to MFIs through the UMVA platform

[2] Food and Nutrition Security Results Framework 2022

- Development of customized content for the apps (AgriCoach, NutritionCoach, FinanceCoach) and their use by the G50 groups
- Business support to SMEs
- Introduction of new products, services and business models through the Innovation Fund
- Bio-PGS certification training and roll-out

Various approaches will be deployed for reflection in the course of project implementation. At one level, this will be done internally, where on intermittent basis, project team members will meet to reflect on progress. Amongst others, during biweekly team meetings project team member will be carrying out reflections on progress and making adjustments. Semi-annual review sessions will be instituted for the consortium to review and assess progress on workplans and set out activity plans for the next 6 months.

Overall lessons learned will be shared with consortium members, cooperatives, smallholder farmers, SMEs, and wider sector stakeholders.

7.5 Reporting

Our reporting schedule to EKN can be summarized in the following way:

Report type	Comment	Period	Submission by
Updated Annual Plan & Budget Year 1	Submitted	01/06/2023-31/12/2023	23/05/2023
Inception phase report	Baseline study Feasibility and market study Monitoring and Evaluation plan Risk and security plan Communication strategy	01/12/2022-31/05/2023	30/06/2023
Annual plan		01/01/2024-31/12/2024 01/01/2025-31/12/2025 01/01/2026-31/12/2026	*01/10/2023* 01/10/2024 01/10/2025
Quarterly narrative reporting	In IATI, in accordance with IATI standards	Quarterly	No later than 3 months after end quarter
Annual narrative reporting		01/12/2022-31/12/2023 01/01/2024-31/12/2024 01/01/2025-31/12/2025	31/03/2024 31/03/2025 31/03/2026
Final narrative reporting		01/12/2022-30/11/2026	01/02/2027
Annual financial reporting		01/12/2022-31/12/2023 01/01/2024-31/12/2024 01/01/2025-31/12/2025	31/03/2024 31/03/2025 31/03/2026
Final financial reporting		01/12/2022-30/11/2026	01/02/2027
Annual Audit Report		01/12/2022-31/12/2023 01/01/2024-31/12/2024 01/01/2025-31/12/2025	30/04/2024 30/04/2025 30/04/2026
Mid-term evaluation	External and ToR in consultation with EKN	01/12/2022-31/12/2024	01/04/2025
Final evaluation	External and ToR in consultation with EKN	01/12/2022-30/11/2026	30/05/2027

8 RISK AND SECURITY PLAN

HortiPlus invested in the design and development of a Risk and Security plan for the consortium, as well as for the individual consortium partners. In May 2023, we organized a safety and security webinar, in which we adopted a holistic safety and security framework (see text box), in which we defined roles and responsibilities regarding safety and security, established a network of safety and security focal points, and examined which current plans for security were operational in the different consortium members' organisations.



Holistic Approach to Safety and Security

Hortiplus has adopted a holistic approach to safety and security that will be implemented throughout the project. A holistic approach to safety and security takes into account three dimensions:

1. human,
2. organisational and
3. technological dimensions.

For example: procedures and instructions are designed around the human capabilities of the teams involved (the human dimension). An organisation has a safety culture: values, attitudes, beliefs, and behaviours are geared towards safety, which is seen as a priority (the organisational dimension). Organisations use technology to ensure the safety of their staff, but they also ensure that the technology itself cannot become a source of danger or insecurity (the technological dimension).

In June, we organized a two-day face-to-face workshop in Ouagadougou to train project staff and consortium members in the holistic approach to safety and security, to develop contextualized safety action plans for the most imminent threats, to organize exchange of security information in and outside of the consortium, and to set up crises management teams within each organisation.

In sum, the safety and security plan in HortiPlus includes the following elements:

1. A **holistic approach to safety and security framework** that includes physical, psychosocial, and digital dimensions in which roles and responsibilities from organisations and staff are detailed.

2. A **network of safety and security focal points** with monthly meetings, fostering exchange of information, documentation of threats and incidents and linking to external sources of information (started in the end of June). The safety and security focal points are also requested to organize regular safety and security risk analyses, capacity analyses and conversations about safety and security within the project teams. The consortium also connected with the security

officer in the Dutch embassy in Ouagadougou, briefed him on the implementation areas and agreed upon organizing regular exchanges for security updates and – if applicable – advise for specific missions.

3. Contextualized action plans & guidelines as a prevention for the most imminent threats (traffic accidents, banditry, violence/hostage taking by unknown perpetrators), in combination with a more specific actor mapping in the different implementation areas. These guidelines focus on communication (contact persons in the office, contact moments, lists of trustable contact persons, list of emergency contacts, field contacts), travel procedures (when to travel, who to inform and not to inform, exit strategy), number of staff, how to present the project to third parties, modes of transport, trusted transport companies, guidelines for drivers, SOPs etc. These guidelines will be developed by each partner organisation, for the following groups of staff and locations before September 2023:

   - Staff working with smallholder farmers and travelling from/to villages and fields.
   - Staff working with cooperatives in regional centers.
   - General transport guidelines for staff, drivers and communications.
   - Safety and security for the office in Ouagadougou.
   - International staff visiting Burkina Faso.

   These guidelines will be presented for evaluation to an external security expert, who will recommend adaptations and additional safety measures.

4. Setting up of Crises Management Teams within each organisation where they were not yet operationalised. This process will be finalized before September 2023.

5. A capacity strengthening plan for training for staff (for example HEAT training, First Aid, Office safety) to be completed in September 2023.

6. A communication strategy and plan to be developed in the coming months.

9 COMMUNICATION STRATEGY

This Communication Plan aims to provide guidelines for both internal and external communication applicable for HortiPlus. In this plan we will outline the key communication objectives, the key stakeholders and the key communication activities.

The main objective of the Communication Plan is to contribute to the efficient implementation of the Project by ensuring that information and any communications activities and products, its objectives, results and achievements are executed and produced with highest quality and distributed in a timely manner to target groups.

The communication strategy for HortiPlus serves two main purposes:

1. To Inform donor, important stakeholders, and the general public about HortiPlus progress and achievements.
2. To support reaching the project's objectives on:
   - The promotion of dietary diversity
   - The promotion of GAP/CSA and conservation practices
   - The improvement of SME business operations

In the section below, we will outline the strategy per purpose.

9.1 Informing donor, stakeholders and the general public

Throughout the lifespan of the HortiPlus project, we wish to communicate with the EKN, the Dutch Ministry of Foreign Affairs, the Burkinabé Ministry of Agriculture, partner organisations and the general public about the HortiPlus activities and progress made. We will do this by sharing change stories, challenges and lessons learned, raising awareness about the project, its purpose and the role of its national and international partners.

9.1.1 Communication channels

We will develop and use the following communication channels:

- A project website with regular project updates, market, agricultural and technical information on selected value chains, Q&A community and social media functionalities.
- A series of newsletters on success stories and best practices identified with companies and farmers.
- Project page on LinkedIn
- Social media and project hashtag
- Facebook Account
- Reports

9.2 Supporting the project's objectives

Our communication strategy is also aimed at reaching specific project's objectives; this is particularly the case for the objective to promote dietary diversity among 50,000 rural consumers. In part, this objective will be reached through the implementation of the NutritionCoach in the G50 groups. In addition, we will develop and roll-out (social) media campaigns to support this objective. The content for the (social) media campaign and the customization of the NutritionCoach will be developed based on input and research by nutrition experts at the start of G50 registration activities.

Further, the communication strategy support the objective to promote GAP/CSA and conservation practices among 7,000 smallholder farmers. This will be done through the AgriCoach, for which customised videos in local languages will be scripted and filmed in the coming months.

Lastly, the improvement of business operations of SMEs will be supported by the communication strategy through the development and dissemination of crop-specific factsheets. As outlined in the proposal, we will organise Masterclasses around these factsheets, and communicate on these throughout our communication channels.

9.3 General project visibility

The communication strategy also entails general project visibility and unity of appearance. This includes project branding with a HortiPlus logo, colour scheme, the project hashtag, key messages, presentations and printables (banners, roll-ups, stickers, business cards etc.). The hashtag and key messages will be developed through a workshop in July in Ouaga.

10 IMPLICATIONS FOR PROJECT DESIGN

10.1 Updated General Information

Project title	HortiPlus Action entrepreneuriale pour cultiver, commercialiser et consommer **plus** des fruits et légumes
Overall objective	To improve **food and nutrition security** in Burkina Faso by: - Increasing production (+50%), income (+50%) and climate resilience of 7,000 horticulture farmers, - Improving business performance of 7 cooperatives and 100 SMEs, and - Enhancing diet diversity of 50,000 rural consumers
Duration	January 2023 – December 2026
Outcomes	- Increased income and productivity for 7,000 smallholders (F: 40% & <35: 25%) - 800 Ha of farmland under sustainable use - Improved business operations and access to finance and markets of 7 cooperatives and 100 SMEs - 50,000 rural consumers (F: 50% & <35: 50%) have improved access to safe and nutritious foods
Target regions	Centre, Centre North, Centre-Ouest, Boucle du Mouhoun
Target crops	Main crops: tomato, onion, cabbage, amaranth Specific crops: strawberry, chilli pepper
Partnership	Advance Consulting (Partnership lead) AUXFIN Agrodev Agriterra Sense
Budget	EUR 3,999,978

10.2 Project Updates

Below we summarize the updates made to the project design:

In Work Package 1, the following changes have been made:

Number of crops:
Initially, four crops would be selected for the project; we decided to add two more (chilli pepper and strawberry) for specific targeted projects in smaller areas.

G50 strategy:
Based on the findings regarding the G50 implementation strategy, the G50 approach has been adapted in the following way:

- The average group size will be 35 instead of 50. As such, we will reach at least 7,000 farmers.
- Activators will be (mostly) part-time positions with higher salaries than budgeted.
- To compensate for higher salary budget, activators will get a compensation for travel costs on their own motorcycle instead of a new motorcycle.

In Work Package 2, the following changes have been made:
After screening against our selection criteria, out of the initial 143 SMEs, a total of 103 SMEs were pre-selected, which is less than the 120 SMEs we initially aimed for. Although it is expected that new SMEs will be added for support during project implementation, we also foresee that not all 103 pre-selected SMEs will actually participate during project implementation. As such, the target of the SME development sub-workstream of improving the business operations and access to finance and markets of 120 SMEs will decrease to 100 SMEs.

On a positive note, most activities and sub-targets will remain in line with the original project design:

- 40 SMEs receive business plan training
- 3 SMEs introduce new business models via the Innovation Fund
- 5 SMEs receive intensive business development support
- 80 SMEs participate in masterclasses on value chain developments
- 10 SMEs matched with new markets
- 5 SMEs assisted with fund raising
- 3 SMEs assisted with obtaining Bio-GPS certification
- 10 SMEs assisted with introduction of selling Bio-PGS certified fruits & vegetables

Specifically, there are two modifications to the original design of the activities and sub-targets:

- The sales increase targets for SMEs and cooperatives will decrease from EUR 1,500,000 to EUR 1,300,000, as the total number of targeted SMEs decrease from 120 to 100.
- There will be overlap in the groups of SMEs that receive entry level business development support (i.e. business plan training and masterclasses on value chain developments). In other words, most farmers that receive business plan training will also participate in the masterclasses on value chain developments.

10.2.1 Updated Logical Framework and Indicators

In Annex III the updated logical framework can be found. In sum, we have made the following changes in indicators:

- We changed the indicator "*number of hectares of farmland under sustainable use*" to "*the number of hectares of farmland under at least 2 conservation practices*", to be in line with the current FNS outcome indicator of the Ministry of Foreign Affairs.
    - Change in number of ha: the combined number of ha currently cultivated by the 7 unions/cooperatives is 1,697, which is less than the estimated 2,400 ha in the proposal. With a total membership of 12,100 farmers, this means the average number of hectares per farmer is 1,697 ha / 12,100 farmers = 0,14 ha. As explained in chapter 6, not all 12.100 members of the unions/cooperatives will be reached through HortiPlus, the additional 5.100 members will be connected through the HACA project. Thus, the realistic number of ha under at least 2 conservation practices in HortiPlus will be 7,000 farmers x 0,14 ha = 980 ha. We estimate that at least 80% of the farmers will apply the learned practices to their lands, which makes a total of at least 800 ha.

- We deleted the following indicator that became inactive in the current FNS framework of the Ministry of Foreign Affairs:
    - *Number of farmers applying CSA practices in horticulture*

- We deleted the following nutrition indicator after consultation with a nutrition expert who indicated that, regarding our interventions on nutrition, it is relevant to measure the indicator *number of people with a more diverse and adequate diet* instead the indicator below:
    - *Number of people whose nutritional situation became more resilient to shocks*

- We decided to measure the *number of people with a more diverse and adequate diet* with the FAO Household Dietary Diversity Score (HDDS).

- We increased the target for the number of crops selected from 4 to 6, since we selected 4 main crops and 2 specific pilot crops (strawberry and chilli pepper).

- We decreased the number of videos produced per crop from 25 to 15; this is a more accurate number as some crops will have more than 15 videos and other less. In addition, more important than the number of videos, would be the content of the videos and to make sure that all crops have the right steps explained in the videos.

- We added the following output indicators in line with the new FNS indicators of the Ministry of Foreign Affairs:
    - *Number of hectares of farmland directly reached with activities aimed at structural/systemic improvement of agro-ecological sustainability*
    - *Number of people directly reached with activities aimed at structural/systemic improvement of their nutritional situation*
    - *Number of people indirectly reached aimed at structural/systemic improvement of their nutritional situation*

- We deleted the following indicators, since these got replaced with the FNS indicators mentioned above:
    - *Number of smallholders actively using NutritionCoach App (F: 40% & <35: 25%)*
    - *Number of smallholder family members gaining insights on dietary diversity through NutritionCoach App (F: 40% & <35: 25%)*

ANNEXES

Annex I - Signed Consortium Agreement

Annex II - Pre-selected SMEs

Annex III – Updated Logical Framework

Annex IV – Updated Budget