

Plantwise in Burundi

End of Project Report



Plantwise is a global programme, led by CABI, that aims to increase food security and improve rural livelihoods by reducing crop losses. Working in close partnership with relevant actors, Plantwise strengthens national plant health systems from within, enabling countries to provide farmers with the knowledge they need to lose less and feed more.

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Introduction

Burundi's agricultural sector, dominated by subsistence farming, grapples with limited access to resources and declining soil fertility. Despite these hurdles, agriculture remains the primary source of income for most Burundians, with staple crops like maize, cassava, and beans dominating the agricultural landscape. Recognizing these challenges and the need for enhanced productivity, the Plantwise project was launched in-country in 2020. The project aimed to empower smallholder farmers by equipping them with knowledge, improving crop quality, and ultimately increasing yields.

Plantwise integrates interventions from other agricultural organizations, addressing issues such as access to information, agro-inputs, and market participation. This collaborative effort involves various stakeholders, including national and provincial extension services, academia, NGOs, and research institutions. Activities range from training agricultural personnel in diagnosis and advisory services to establishing ICT-based information-sharing systems. Plantwise envisions a future where empowered smallholder farmers enjoy significantly increased agricultural productivity, ultimately leading to food security for all. Through unwavering dedication and a collaborative approach, Plantwise acts as a catalyst for change. By nurturing a more robust agricultural sector, Plantwise is sowing the seeds for a brighter future for both the people and the agricultural landscape of Burundi.

The Plantwise project in Burundi focused on challenges confronting smallholder farmers through a comprehensive approach guided by a Theory of Change. This theory focused on strengthening four key components of the agricultural system: extension services, research, input supply, and regulations. By improving these areas, the project aimed to reduce crop losses, promote plant health, and ultimately increase agricultural productivity.

The project leveraged successful Plantwise experiences from other countries but tailored its interventions to local needs, aiming to foster sustainable growth and development in Burundi's agricultural sector. Progress and results of the Plantwise Burundi project were reported in annual technical reports that can be found [here](#).



Achievement of intended outputs and outcomes

Overview

The Plantwise project in Burundi was guided by a clear roadmap or Theory of Change, outlining key intended outcomes aimed at revolutionizing agricultural practices and enhancing the livelihoods of smallholder farmers. These outcomes included improving crop productivity and income for farmers, expanding access to quality advice from plant doctors, prompt identification and action on plant health problems, and increased adoption of recommended practices by farmers. Through establishing plant clinic networks, delivering advice at these clinics, utilizing Plantwise information resources, and adopting data-driven ICT-based processes, the project aimed to reach a wide audience and ensure the sustainability of its impact.

To track progress towards these outcomes, the project employed a robust Monitoring, Evaluation, and Learning (MEL) framework. Results monitoring surveys conducted in 2022 and 2023 provided valuable insights into the effectiveness of project interventions and progress towards objectives. These surveys involved systematic data collection from farmers visiting plant clinics, enabling a comprehensive assessment of adoption rates and their impact on pest management, productivity, and income levels. Rigorous measures, including random sampling techniques and geographic stratification, ensured the reliability and comparability of data over time.

Additionally, an independent end-of-project evaluation conducted by the KIT Royal Tropical Institute offered a comprehensive assessment of the project's effectiveness, contributing to accountability and informing future improvements. Plantwise Burundi also conducted gender-focused assessments to understand the social norms and practices influencing women's participation in agriculture. These assessments provided insights into the project's gender empowerment efforts, ensuring inclusivity, and addressing gender disparities within the agricultural sector.

Through a combination of rigorous monitoring, independent evaluation, and gender-focused assessments, the Plantwise project in Burundi included regular reflections on lessons learned in order to achieve its objectives, transforming agricultural practices, and improving the lives of smallholder farmers. The overall project results against targets can be found in Annex 1.

Analysis of Outputs

At the conclusion of the Plantwise project in Burundi, the project had made significant progress towards achieving its outcome targets through its various outputs.

Output 1 focused on establishing plant clinic networks to enhance access to information on sustainable plant health management. The project exceeded its target by establishing 121 plant clinics across the country. These clinics serve as vital hubs, providing practical advice to address farmers' plant health concerns. Through direct methods like plant clinics, plant health rallies, and community conversations, as well as indirect methods like mass extension campaigns, the project reached in excess of 540,491 farmers. This widespread coverage democratized access to agricultural resources, empowering farmers with knowledge and tools to safeguard their crops and livelihoods, thereby enhancing agricultural resilience and productivity. Although this project's reach may seem to fall slightly short of the target of 600,000 farmers, it should be stressed that the reported data exclude extrapolations based on farmer-to-farmer sharing, which CABI has found to be a factor 5 in other countries. We have not verified this number in Burundi, but it does mean that we have most likely been significantly under-reporting on total reach in the country.

Output 2 aimed to ensure that plant doctors deliver advice at these clinics. With the establishment of the 121 plant clinics, the project strengthened the capacity of 238 plant doctors to operate them. Refresher training sessions were conducted to reinforce skills and knowledge among plant doctors. Challenges remained in ensuring consistent quality across all clinics, highlighting the need for continued training and support amidst evolving agricultural landscapes.

Output 3 focused on leveraging digital platforms to disseminate plant health knowledge and resources. The Plantwise Knowledge Bank saw 437 active users accessing valuable data and information, surpassing the target of 350 users. Additionally, 19 extension materials developed by local experts were made available, enriching the Knowledge Bank with locally-relevant content. These resources empowered stakeholders to make informed decisions, adopt best practices, and enhance agricultural productivity, resilience, and sustainability.

Output 4 harnessed Information and Communication Technologies (ICT) to revolutionize plant health management. A total of 477 male and female plant doctors and stakeholders actively utilized the Plantwise ICT toolkit, including the Plantwise Factsheet Library App and the Plantwise Data Collection App. Challenges in data transmission were addressed through intensified app training and prioritized digitization efforts, resulting in 7,967 plant clinic data records submitted through the Plantwise Online Management System (POMS).

Analysis of Outcomes

Outcome 1: Plant doctors reach more farmers with better quality advice

Overall project target: Increase the satisfaction rate of farmers with plant doctor services to 80% by the end of the project.

By the close of the project in February 2024, Plantwise had exceeded its goal of ensuring farmer satisfaction with plant doctor services, as evidenced by the results of the regular result monitoring survey. The initial target was to reach 80% satisfaction, but by 2023, this had exceeded expectations, reaching 95%. This was a further improvement from the satisfaction level of 89% recorded in 2022.

Analysing the data further, it became evident that this increase in satisfaction was consistent across genders, with both female and male farmers reporting higher satisfaction rates in 2023 compared to the previous year. This achievement signifies several positive outcomes for the project. Firstly, it reflects enhanced trust and confidence in the expertise of plant doctors, leading to greater adoption of recommended practices by farmers. This, in turn, can result in improved crop health, higher yields, and increased productivity and income for smallholder farmers. Moreover, a satisfied farmer base contributes to the project's long-term sustainability, ensuring continued engagement and broader benefits for future participants.

Reflecting on these achievements, several contributing factors can be identified. Ongoing monitoring played a crucial role in tracking progress and identifying areas needing improvement, allowing for timely interventions and adjustments. Additionally, the project's emphasis on sustainability considerations underscored the importance of solutions that are not only effective but also affordable and adaptable to farmers' unique contexts.

Looking ahead, the need is to maintain and further enhance service quality to continue exceeding farmer satisfaction targets. The proposed follow-up project, PlantwisePlus (2024-2030), can provide ongoing backstopping and training support for plant doctors to ensure they remain abreast of the latest developments and best practices in plant health management. Tailoring communication strategies to address the specific needs and challenges of diverse farmer groups will also need to remain a priority, along with incorporating robust feedback mechanisms to facilitate continuous improvement in service provision.

Outcome 2: Plantwise contributing to prompt identification and action on plant health problems

Overall project target: Identify or solve a total of 2 new and emerging plant health problems throughout the project duration.

At the conclusion of the Plantwise project in Burundi, significant progress was made in identifying and managing emerging threats to agricultural productivity. In 2023, the project achieved a notable milestone by identifying two previously unknown pests in the country: the mango mealybug and citrus orthezia scale. This achievement marked a pivotal moment in the project's efforts to safeguard the agricultural sector against potential threats. Accurate identification of pests is crucial for implementing effective control measures, developing targeted interventions, and informing policy decisions.

The project had set a specific target of identifying only two new and emerging plant health problems throughout its entire lifespan. However, the identification of the mango mealybug and citrus orthezia scale contributed to a cumulative total of five such problems identified by the project, surpassing the initial target. This success underscores the project's effectiveness in surveillance and early detection of pests, essential for mitigating their impact on agricultural production and enhancing the resilience of farmers and agricultural systems.

However, this achievement also highlighted a significant challenge: the lack of essential diagnostic infrastructure and expertise within Burundi. Due to limitations in local molecular and morphological analysis tools, the identification process necessitated sending samples overseas, leading to delays and increased costs.

To address this challenge and ensure long-term resilience, the Plantwise project initiated several vital actions. Firstly, ten Burundian personnel underwent training in Kenya to gain introductory skills in pest identification, supporting the establishment of a proficient workforce capable of addressing future challenges. Additionally, 29 participants were trained on mealybugs of economic importance in East Africa and their biological control, further enhancing expertise in pest management strategies. Secondly, the project facilitated the refurbishment of ISABU's plant pathology laboratory, anticipated to be equipped with enhanced tools and resources, thereby enabling domestic diagnostic capabilities for future plant health assessments. Alongside these efforts, a horizon scanning workshop was held using CABI's Horizon Scanning Tool, which identified potential pests that could threaten Burundi's agricultural ecosystems in the future.

The lessons learned emphasized the critical importance of early detection of new pests and the need to strengthen local diagnostic capabilities through investment in human resources and infrastructure. By building on these successes and lessons learned, the proposed follow-up project, PlantwisePlus, needs to contribute to a more secure agricultural future for Burundi. Next steps need to involve utilizing newly acquired skills and improved facilities to confirm the distribution of these pests within the country and explore and implement targeted control measures to mitigate their potential damage. This proactive approach will establish a foundation for effectively managing future pest challenges, ensuring the continued resilience of Burundi's agricultural sector.

Outcome 3: Farmers adopt practices according to advice given by plant doctors

Overall project target: Increase the adoption of Plantwise advice by farmers by 30% during the entire project duration

At the end of the Plantwise project in Burundi, significant progress was recorded in terms of increased farmers' adoption of advice and recommendations from project interventions. The project set a target of achieving a 30% increase in adoption rates by the end of its duration, with regular result monitoring surveys tracking progress toward this goal.

Encouragingly, the 2023 survey revealed substantial improvements in adoption rates. The percentage of clients fully implementing plant doctors' advice increased significantly from 63% to 84%, while the perception of advice effectiveness rose from 49% to 76%. These findings indicate a growing level of trust and satisfaction among farmers with the services provided by plant clinics.

The rise in adoption rates holds promise for various benefits. Based on Plantwise impact studies elsewhere, improved crop health and yields are expected when farmers heed the guidance of plant doctors, leading to heightened income and enhanced food security among farming households. Furthermore, increased adoption should foster a more sustainable agricultural framework, as farmers reduce reliance on harmful chemicals by implementing effective integrated pest management practices and embracing new technologies. Moreover, widespread adoption of recommended practices signifies successful knowledge transfer from plant doctors to farmers, equipping them with the skills needed to make informed decisions about their crops and fostering greater self-sufficiency in farm management.

Several underlying factors likely contributed to the rise in adoption rates. Improved communication strategies may have facilitated clearer understanding of the advice dispensed by plant doctors, enhancing receptivity to their recommendations. The substantial increase in positive feedback indicates a growing trust in the expertise of plant doctors, motivating farmers to implement their suggestions more diligently. Additionally, the project's targeted approach in addressing farmer challenges and customizing recommendations to fit specific contexts likely fosters a conducive environment for increased adoption of recommended practices.

Looking ahead, sustaining the quality of service is paramount, necessitating ongoing investment in training and support for plant doctors to keep them abreast of the latest knowledge and best practices. Fostering farmer-to-farmer learning initiatives can facilitate the exchange of insights and experiences, fostering a supportive network and promoting widespread adoption of recommended practices. Lastly, maintaining rigorous monitoring and evaluation mechanisms through regular surveys enables timely adjustments to strategies, ensuring the continued relevance and effectiveness of the project's recommendations.



Project adaptations and adjustments

Throughout its duration, the Plantwise project in Burundi encountered various challenges and made significant adaptations to its implementation strategy to enhance effectiveness.

- The COVID-19 pandemic and subsequent containment measures initially disrupted the commencement of various project activities. However, through proactive measures, the project successfully recovered the lost time. These measures encompassed stakeholder engagement, meticulous planning, early risk analysis, and robust monitoring and control mechanisms. As a result, the project effectively addressed challenges, ensuring timely and successful implementation despite the pandemic's impact.
- The project initially aimed to train 80 plant doctors, but growing demand for agricultural support and alignment with government priorities necessitated a higher target. To address this, the project ambitiously increased the goal to train 300 plant doctors, including master trainers (45), plant clinic supervisors (17), and other roles. This required expanding the programme to include agronomy technicians at the Colline level (monitors), a strategy that proved successful.
- To win long-term government backing, the project, with additional funding from the donor, established four permanent plant clinics. These clinics serve as showcases for policymakers, advanced diagnostic centres for complex cases, and data hubs for regional plant health information. They leverage existing government buildings and utilize digital tools like social media for sample submission, ensuring a sustainable model.
- Recognizing a need expressed by partners, the project leveraged additional donor funding to facilitate a crucial capacity-building initiative. 10 delegates from key government agencies participated in a 1-month training programme in Kenya, focusing on areas critical to agricultural quality and export competitiveness – a shared goal for Burundi.
- The project also addressed the challenge of delivering top-quality diagnosis and advice by initiating continuous training and mentorship programmes for plant doctors. Recognizing the limited practical experience among some plant doctors, especially those operating new clinics, the project aimed to enhance diagnostic proficiency and ensure accurate and effective plant health guidance. This adaptation sought to improve the quality of services provided at plant clinics, ultimately benefiting farmers, and enhancing their trust in the project.
- Challenges in data transmission from plant clinics to central systems prompted the project to enhance app training for plant doctors and prioritize digitizing paper records. By addressing app usage difficulties and reliance on paper forms, the project improved data management practices, leading to a 300% increase in clinic data records submitted in 2023. This adaptation facilitated better monitoring and evaluation of project activities, enabling more informed decision-making.

- To ensure sufficient outreach to farmers with appropriate advice, the project began exploring partnerships with organizations like One Acre Fund. These partnerships aimed to enhance collaboration among diverse agricultural extension services, potentially improving the project's reach and impact. Although in its initial phases, this collaboration presents evident advantages for mutual cooperation, potentially addressing challenges related to outreach and service delivery.
- Addressing farmers' perceptions of recommended methods as prohibitively expensive posed a significant challenge. While the project did not have direct means to alleviate these cost barriers, it recognized the importance of addressing this concern for future initiatives or supplementary programmes within the country. This adaptation highlights the project's responsiveness to farmers' needs and its commitment to enhancing accessibility to agricultural resources.
- Limited diagnostic capabilities in Burundi posed challenges in effectively managing pests. To mitigate this issue, the project implemented measures to enhance Burundi's diagnostic capacity, including carrying out an assessment of the country's diagnostic capabilities, training Burundian personnel in Kenya, and facilitating the renovation of ISABU's plant pathology laboratory. These initiatives aimed to equip local personnel with advanced diagnostic skills and enhance diagnostic infrastructure, thereby improving pest management practices and agricultural resilience.
- The project refined its approach to measuring women's empowerment by transitioning to the Women's Empowerment in Agriculture Index (Pro-WEIA). This shift reflects the project's commitment to promoting gender equity and ensuring inclusivity in its impact assessment, aligning with broader development goals and priorities.
- The project addressed challenges in monitoring plant clinics by securing additional funding for a dedicated project vehicle. This new vehicle, compared to relying on ISABU's unreliable and costly aged fleet, improved operational efficiency, ensured staff safety during travel, and ultimately saved money on road travel for project activities.

Overall, these adaptations and adjustments to the project's implementation strategy were essential in addressing challenges, enhancing effectiveness, and ensuring the project's continued relevance and impact in Burundi's agricultural sector.

A photograph showing a man in a light-colored shirt and dark trousers standing on the left, holding a piece of brown fabric. To his right is a large pile of green leafy vegetables. Two women are standing further right, one wearing a colorful headscarf and the other a green headscarf and a yellow top. They are all in front of a brick wall.

Overall project impact

The Plantwise project in Burundi has made significant strides towards its overarching goal of improving crop productivity and income for smallholder farmers, ultimately contributing to agricultural growth and resilience. Through meticulous monitoring, evaluation, and learning activities, the project has been able to assess its effectiveness in achieving these outcomes.

In 2023, the project conducted the second result monitoring survey to evaluate its impact on farmers' adoption of improved practices, pest management enhancements, and changes in productivity and income for targeted crops. Encouragingly, the survey results demonstrated that the project is surpassing expectations in developing resilient farming enterprises. Farmers reported significant improvements in their ability to cope with unexpected challenges and disruptions, indicating the effectiveness of Plantwise interventions in equipping them with the necessary knowledge and resources.

Despite challenges posed by the limited timeframe, the survey provided valuable preliminary insights into the project's impact. Trends in productivity and income changes for specific crops were observed, with Irish potatoes showing substantial growth, suggesting the effectiveness of interventions in this sector. Additionally, insights into the demographics of farming households benefiting from the project were gained, allowing for a better understanding of which demographic groups are most receptive to the interventions.

In addition to its core objectives of enhancing crop productivity and income for smallholder farmers, the Plantwise project in Burundi has also played a pivotal role in catalysing social change and empowering women within agricultural communities. Community conversations emerged as crucial catalysts in shifting social norms and increasing women's empowerment levels, particularly in instrumental agency, although intrinsic agency remains comparatively lower.

Through these community conversations, women participants of the Plantwise project demonstrated higher empowerment scores and achieved greater household gender parity compared to non-participants, highlighting the positive impact of project interventions on gender dynamics within households. Despite facing challenges in meeting the initial target of 20%, the project witnessed commendable progress, with the percentage of empowered women increasing from 41% in 2022 to 46% in 2023. This upward trend reflects the project's commitment to fostering gender equity within the agricultural sector.

However, it is essential to recognize that empowering women in agriculture is a complex and multifaceted process that goes beyond providing access to knowledge and resources. It requires a fundamental transformation in social norms and decision-making power within households. Therefore, while the one-year intervention may not have achieved substantial and lasting behavioural change, the progress made lays a solid foundation for further growth as women gain confidence, skills, and influence within the agricultural sector.

The Plantwise project's success highlights the significance of tailored interventions and early positive trends in achieving lasting impact. While current surveys offer promising indications, future evaluations will be designed to capture a more complete picture, allowing for a refinement of the project's approach, and ensuring long-term success in fostering resilient family farms in Burundi. Moreover, the project's impact transcends merely enhancing agricultural productivity and income; it plays a crucial role in promoting positive social change by empowering women and advancing gender equity within farming communities in Burundi. Moving forward, continued efforts to address gender disparities and foster women's participation and leadership in agriculture will be essential for the project's long-term success and sustainability.



Partnerships

Partnerships played a crucial role in the success of the project, with various organizations contributing to its implementation. The following partners were instrumental in driving the project forward:

1. Institut des Sciences Agronomiques du Burundi (ISABU): Serving as the National Responsible Organization (NRO) and a member of the National Steering Committee (NSC), ISABU performed a significant role in coordinating project activities and ensuring alignment with national agricultural objectives.
2. General Directorate of Agriculture (DGA), Ministry of Environment, Agriculture, and Livestock (MINEAGRIE): As a member of the NSC, DGA provided strategic guidance and support, leveraging its authority and resources to facilitate project implementation.
3. General Directorate of Mobilization for Self-Development & Agricultural Extension (DGMVAE), MINEAGRIE: Functioning as a Local Implementation Organization (LIO) and a member of the NSC, DGMVAE played a pivotal role in the execution of project activities at the grassroots level, ensuring effective outreach and engagement with farming communities.
4. Directorate of Plant Protection (DPV), MINEAGRIE: As a member of the NSC, the DPV leveraged its authority in plant health management, supporting identification and management of pest and disease challenges faced by farmers.
5. Faculty of Agriculture of the University of Burundi (FABI): FABI's involvement as a member of the NSC enriched the project with academic insights and research-based approaches, enhancing the project's scientific foundation and credibility.
6. University of Ngozi: Another member of the NSC, the University of Ngozi brought regional perspectives and expertise to the project, fostering collaboration and knowledge exchange among different academic institutions.
7. Forum of Agricultural Producers of Burundi (FOPABU) and Burundi Seed Trade Association (COPROSEBU): Both organizations, as NSC members, represented the interests of agricultural producers and seed traders, respectively, ensuring that the project remained responsive to the needs and priorities of key stakeholders within the agricultural value chain.
8. Other supporting partners: Additional partners such as the Food and Agriculture Organization (FAO), AUXFIN, International Fertilizer Development Center (IFDC), Bureau d'Etudes et des Curricula de l'Enseignement Post Fondamental Technique et de la Formation Professionnelle (BECEPTFP), INADES contributed diverse resources and expertise to the project, strengthening its overall impact.

These partnerships were nurtured through national steering committee meetings, stakeholder forums and ongoing engagement mechanisms, fostering a collaborative environment where ideas were shared, challenges addressed, and collective efforts mobilized towards achieving common goals. The commitment and contributions of these partners were integral to the progress and success of Plantwise in Burundi, demonstrating the power of collaborative action in driving agricultural development and resilience.



Reports and publications

The project has generated a wealth of reports and publications documenting its activities, outcomes, and impact. These resources offer valuable insights into the project's progress and achievements, as well as its contributions to agricultural development and gender empowerment in Burundi. Below is a list of key reports and publications:

1. Three comprehensive annual reports covering the project's progress and achievements in **2021**, **2022**, and **2023**.
2. Four scholarly publications addressing various aspects of agricultural development and gender empowerment in Burundi, including studies on **community conversations**, **unpaid care work**, **diagnostic capabilities of plant health practitioners**, and the **assessment of the plant health system**.
3. Two public relations (PR) & Communications reports for the years 2022 and 2023, providing insights into outreach efforts and communication strategies.
4. The **end of project evaluation report** offers a comprehensive synthesis of project outcomes and lessons learned.
5. Two result-monitoring survey reports provide detailed insights into farmer satisfaction and project performance.
6. Other notable reports include the Plantwise Burundi baseline survey report, laboratory assessment report, and the Plantwise Burundi Project Gender & Women Empowerment Report.
7. **Extension materials** developed as part of the project are also available for further reference and dissemination.
8. An infographic detailing the workings of the project, providing a visual overview of its objectives, activities, and impact (Annex 2).

Access to these reports and publications contributes to knowledge sharing and promotes transparency in project implementation and impact assessment. Links to some of these resources are provided for easy access and reference.




Conclusion

The Plantwise project in Burundi has achieved significant milestones in enhancing agricultural productivity, empowering farmers, and promoting gender equity within farming communities. Through meticulous monitoring, evaluation, and learning activities, the project has demonstrated the effectiveness of tailored interventions in fostering resilient family farms.

The project's success in establishing a network of operational plant clinics, reaching thousands of farmers, and equipping them with essential knowledge and resources underscores its commitment to democratizing access to agricultural services. Despite challenges such as limited diagnostic capabilities and cost barriers perceived by some farmers, the project has adapted its strategies, implementing continuous training programmes for plant doctors, and enhancing digital tools for data management.

Moreover, the project's impact extends beyond enhancing agricultural productivity and income; it has played a crucial role in catalysing positive social change by empowering women and advancing gender equity within farming communities. Community conversations have been instrumental in shifting social norms and increasing women's empowerment levels, albeit with room for further growth.

As the project moves forward, the transition to PlantwisePlus Burundi will mark a new chapter in embedding farmer advisory approaches and addressing remaining weaknesses in the plant health system. Looking ahead, the legacy of Plantwise in Burundi will be defined by its commitment to sustainable agriculture, gender equity, and resilience-building within farming communities.

A smiling man with short dark hair, wearing a brown tank top and a yellow apron, is holding two large green cabbages. He is positioned in front of a large white sack filled with more cabbages. The background is slightly blurred, showing a building with windows. The text "Annex 1: Status of Plantwise Burundi performance against agreed indicators and targets" is overlaid on the left side of the image.

Annex 1: Status of Plantwise Burundi performance against agreed indicators and targets

Impact	Indicator	Disaggregation	Unit	Baseline	Achieved end-of-project		Project target (project end)
					Cumulative total	Narrative	
Impact: Improved crops productivity and income for smallholder farmers in Burundi contributing to agricultural growth	IM1.1. Number of family farms [farming households] (sub-sector, male/female, age: % < 35) with increased productivity directly as a result of Plantwise interventions	F	Number	0	-	The 2022-2023 timeframe isn't enough to fully assess Plantwise interventions' impact on productivity and income due to factors like crop cycles and weather. Despite this, preliminary findings provide encouraging indications that Plantwise interventions are positively affecting farmer productivity and income	60,000
		M	Number		-		
		Y	Number		-		
	IM1.2. Number of family farms [farming households] (sub-sector, male/female, age: % < 35) with increased income directly as a result of Plantwise interventions	F	Number	0	-		60,000
		M	Number		-		
		Y	Number		-		
	IM1.3. Number of family farms (sub-sector, male/female, age: % < 35) whose farming enterprise became more resilient to shocks directly as a result of Plantwise intervention	F	Number	0	35,855	Target surpassed	60,000
		M	Number		29,004		
		Y	Number		-		

Outcomes	Indicator	Disaggregation	Unit	Baseline	Achieved end-of-project		Project target (project end)
					Cumulative total	Narrative	
Outcome 1: Plant doctors reach more farmers with better quality advice	OC1.1. Number of farmers reporting satisfaction with plant doctor services (disaggregated by male/female)	F	Number	0	2,461	Moderate gap	8,000
		M	Number		5,016		
Outcome 2: Plantwise contributing to prompt identification and action on plant health problems	OC2.1. Number of new and emerging plant health problems identified or solved through Plantwise interventions		Number	0	5	Target surpassed	2
Outcome 3: Farmers adopt practices according to advice given by plant doctors	OC3.1. Number of farmers adopting Plantwise advice (disaggregated by male/female)	F	Number	0	167,108	Target surpassed	180,000
		M	Number		232,783		

Outputs	Indicator	Disaggregation	Unit	Baseline	Achieved end-of-project		Project target (project end)
					Cumulative total	Narrative	
Output 1: Plant clinic networks established and complemented by other extension methods to enhance access to information on sustainable management of crop health	OT1.1. Number of plant clinics operating in Burundi	NA	Number	0	121	Target surpassed	100
	OT1.2. Number of male and female farmers accessing advice from plant clinics and Plantwise led complementary extension approaches	F	Number	0	227,902	Moderate gap	600,000
		M	Number		312,589		
Output 2: Plant doctors deliver advice at plant clinics	OT2.1. Number of plant doctors offering advice to farmers at plant clinics (disaggregated by sex)	F	Number	0	26	Target surpassed	200
		M	Number		212		
Output 3: Plantwise Information resources used by plant doctors and other plant health stakeholders	OT3.1. Number of stakeholders using Plantwise knowledge bank (data and other information resources)	NA	Number	0	437	Target surpassed	350
	OT3.2. Number of extension materials developed/ adapted by local experts and stored in the knowledge bank for use in Burundi	NA	Number	0	31	Target surpassed	30
Output 4: Data driven ICT based processes adopted in systems for Plant health management at smallholder farmer level	OT4.1. Number of male and female plant doctors and other stakeholders using the Plantwise ICT toolkit (DCA, Factsheet App etc)	F	Number	0	10	Target surpassed	250
		M	Number		467		
	OT4.2. Number of plant clinic records stored in Burundi site of the Plantwise Online Management System (POMS)	NA	Number	0	7,967	Moderate gap	10,000

Results	Indicator	Disaggregation	Unit	Baseline	Achieved end-of-project		Project target (project end)
					Cumulative total	Narrative	
Result 1: Stakeholder linkages established/strengthened with key actors to ensure complementarity of activities in service delivery to farmers	R1.1. Number of collaborating institutions in Plantwise interventions	Pblc	Number	0	12	Target surpassed	12
		Pvt	Number		3		
	R1.2. Number of organisations represented in the National forum and steering committee	Pblc	Number	0	10	Target surpassed	7
		Pvt	Number		2		
Result 2: Plantwise steering committee involved in planning and overseeing implementation of project activities	R2.1. Number of Plantwise steering committee meetings	NA	Number	0	6	Target reached	6
Result 3: Plant clinics piloted in selected districts/collines	R3.1. Number of pilot plant clinics established	NA	Number	0	16	Target reached	16
Result 4: Webpage specific to Burundi established on the Plantwise Knowledge Bank and used in the country	R4.1. Number of organizations using Knowledge Bank resources	Pblc	Number	0	7	Target surpassed	10
		Pvt	Number		6		
Result 5: Additional plant doctors trained to run expanded networks of plant clinics in Burundi	R5.1. Number of additional male and female plant doctors trained and operating plant clinics	F	Number	0	22	Target surpassed	168
		M	Number		184		
	R5.2. Number of new plant clinics successfully established and operational	NA	Number	0	105	Target surpassed	84

Results	Indicator	Disaggregation	Unit	Baseline	Achieved end-of-project		Project target (project end)
					Cumulative total	Narrative	
Result 6: Content of Plantwise training modules included into curricula of agricultural colleges and universities	R6.1. Number of college and university curricula with Plantwise training materials/ content	NA	Number	0	2	Target surpassed	≥ 1
Result 7: Monitoring plant clinic performance and assessment of Plantwise outcomes conducted	R7.1: Number of plant clinic performance monitoring reports, including lessons learnt		Number	0	12	Moderate gap	16
	R7.2. Baseline and end line surveys completed	Bsl	Number	0	1	Target reached	2
		El	Number		1		
Result 8: Rapid Care Analysis (RCA) conducted; Community conversation dialogue process carried out; plant doctors trained on gender sensitive advisory service provision; learning on good practices for gender sensitive agriculture extension conducted	R8.1. Percent (%) of men doing unpaid care work activities in the household	M	%		-	[Dropped in favour of Pro-WEIA (R8.2) as a measure of women empowerment]	10%
	R8.2. Percent (%) of women having control or joint control over household income and farm products (Proportion of empowered women - Pro-WEIA)	F	%	41	5%	Significant gap	20%
	R8.3. Number of plant doctors trained on gender	F	Number	0	25	Target reached	300
		M	Number		274		

A woman with a red and yellow headwrap is shown in a field, holding a green bell pepper. She is wearing a striped shirt and looking off to the side. The background is a lush green field with many plants.

Annex 2: Project infographic



Ministère de l'Environnement,
l'Agriculture et de l'Elevage
(MINEAGRI)



Contribution du projet Plantwise dans la gestion des maladies et ravageurs des plantes au Burundi

116 cliniques des plantes dans toutes les communes du pays
(un agriculteur visite la clinique des plantes)

30 fiches techniques, docteurs équipés
(Tablettes, loupes, documents, Tables,
chaises, etc...)
Le docteur des plantes consulte
la banque de connaissances

La banque de connaissances partage des
données avec des docteurs des plantes avec
autres partenaires
Réseau de Docteurs des plantes et formateurs

Cible : Au moins
600 000 agriculteurs

327 docteurs des plantes
formés, 55 formateurs de
Docteurs des plantes formés

Banque de connaissance aide aux diagnostics

Les agriculteurs sont satisfaits par les conseils de
gestion des problèmes des plantes

Plus de 18 000 agriculteurs ont participé
aux campagnes de sensibilisations
sur la santé des plantes

17 Institutions impliquées

Perdre moins, nourrir plus



Ministry of Foreign Affairs of the
Netherlands

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Plantwise is a global programme, led by **CABI**, to increase food security and improve rural livelihoods by reducing crop losses

National Responsible Organization:



Plantwise Burundi is financially supported by:



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To find out more and discuss how you can get involved in this exciting new initiative,
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