

The Commercialisation of Biofortified Crops Programme

Monitoring reference manual

September 2020



gain
Global Alliance for
Improved Nutrition



HarvestPlus
Better Crops • Better Nutrition

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Introduction

The global community's goals, especially Sustainable Development Goal 2 (SDG2), underline the importance of improving micronutrient intakes and diet quality as an essential part of tackling malnutrition. However, high levels of micronutrient deficiencies persist in many countries and communities leading to blindness, stunting, cognitive impairment, disease, and death; they also limit economic potential. The fundamental cause of these deficiencies is poor dietary quality. In May 2018, HarvestPlus and the Global Alliance for Improved Nutrition (GAIN) announced a partnership to accelerate progress to improving access to essential vitamins and minerals for vulnerable people.

GAIN and HarvestPlus share an ambition to expand coverage of biofortified nutrient dense foods to at least 190 million consumers by 2022, realizing a higher reach of up to three times this from the initial investment by 2028. The focus will be on biofortified varieties of six highly promising crops, developed by HarvestPlus and its partners. These crops form the frontline cluster of sentinel nutritious staple crops to be considered for commercialisation at scale by the partnership. They include iron-enriched beans and pearl millet, zinc-enriched wheat and rice; and vitamin A-enriched cassava and maize. We define commercialisation – the priority delivery approach – as the process of introducing a product into commerce or making it available in the market, rather than producing solely for family consumption.

Programme objectives

The overall vision of this programme is to scale up the commercialisation of biofortified foods. To realise this vision the programme aims to achieve three goals:

- Goal 1: Improve access to inputs and markets for biofortified seeds and food products by: identifying and overcoming barriers to access and acquisition of biofortified seeds, accelerating business development along the supply chains, and ensuring iterative research and development services are opened to link consumer and processor needs to continued biofortified food and food product modification.
- Goal 2: Generate demand for these nutrient-rich staple crops using a demand creation approach that taps into the rational and emotional drivers of consumer choices for nutrient-rich staples.
- Goal 3: Improve the enabling environment for biofortified foods and food products through advocacy, catalytic financing, and technology licencing services.

Programme theory

GAIN and HarvestPlus developed a programme impact pathway (PIP) that highlights the three commercial pathways through which we envision getting people to consume biofortified foods (**Figure 1**).

The PIP illustrates four key pathways to increased consumption of a biofortified food, of which the first three are considered commercial pathways. It is important to note however, that commercialisation (defined as the process of introducing a product into commerce or making it available in the market, rather than producing solely for family consumption) can occur at two levels: seed production and delivery of the food.

Briefly, biofortified foods and food products are:

1. purchased by consumers;
2. given to consumers in informal settings (e.g., friends/family);
3. given to consumers in formal settings (e.g., institutions/programs); and
4. allocated for home consumption from on-farm production (by farmer households).

The impact pathway formed the basis of the development of the country strategies and was used in alignment with a review of commercialisation to identify how commercialisation can be leveraged to accelerate the pathways to impact for biofortification.

Another depiction of the biofortification programme theory is the logical framework (also called a theory of change) (**Figure 2**). This describes the logical model for activities, outputs, and outcomes on which the biofortification programme operates. The activities related to the programme objectives described above and the processes by which the project goals will be achieved are outlined in the logical framework. Logical and causal relationships between the different levels of outputs and outcomes are also shown.

As shown in the logical framework, each of the main activities will lead to specific outputs that are expected to lead to specific outcomes, i.e., increased supply of biofortified seed, production of biofortified food, availability of biofortified foods and food products, demand for biofortified foods among consumers and value chain actors, and the integration of biofortification into policies and legal frameworks. As a result of these outcomes, it is expected that accessibility to biofortified foods and food products will increase and an enabling environment for biofortification will be created. In turn, consumption of biofortified foods will increase and ultimately micronutrient deficiencies will be reduced.

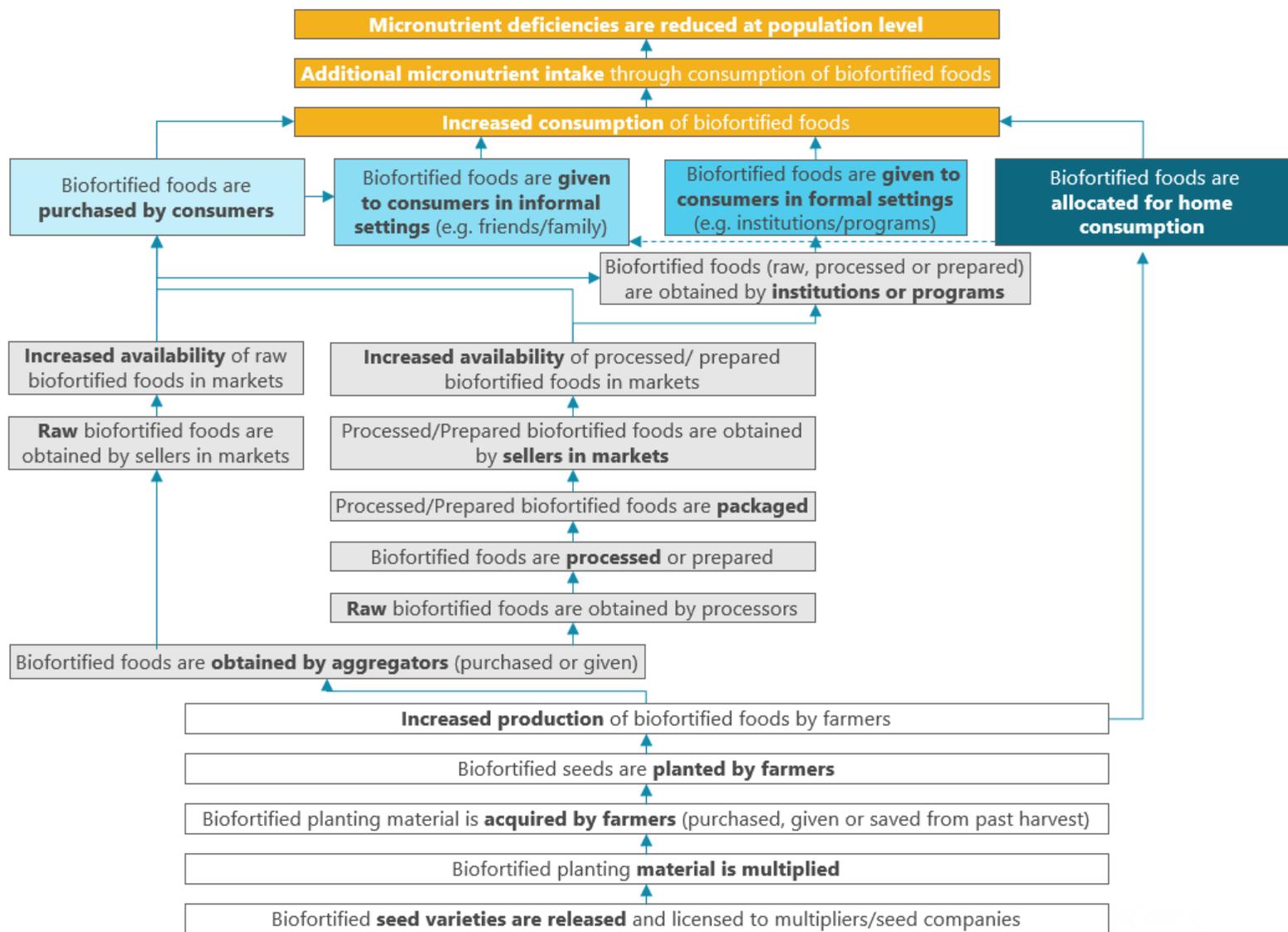


Figure 1. Biofortification programme impact pathway

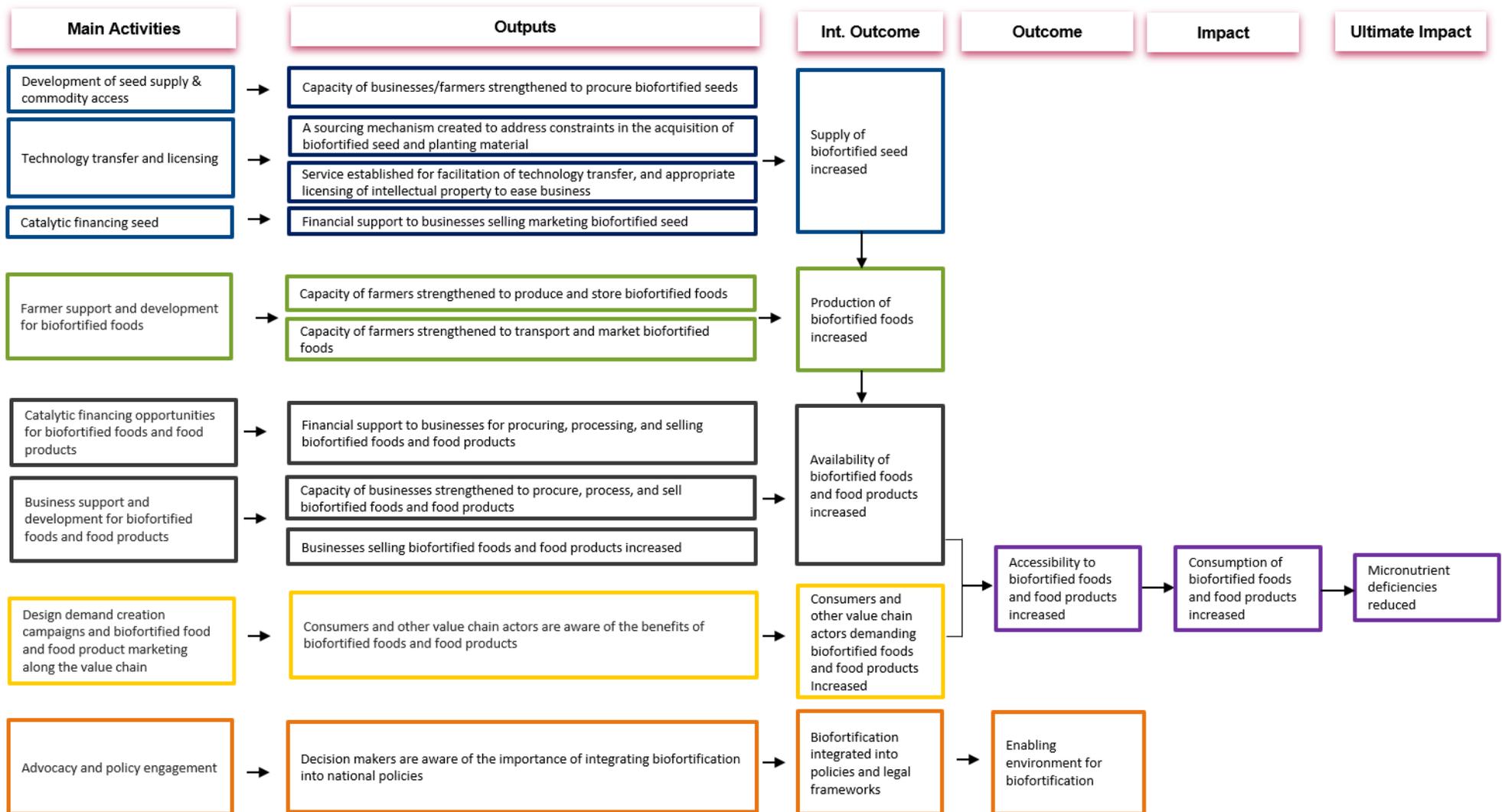


Figure 2. Biofortification logical framework

Monitoring and evaluation plan

Over the course of the programme, data will be collected to monitor and track progress of a series of indicators across all countries. GAIN and HarvestPlus will report on achieved progress of these deliverables and indicators, as outlined in this monitoring and evaluation (M&E) plan. As needed, this document will be revised to reflect changes in programme activities throughout the course of the program. Each country will in turn develop their own M&E plan with the specific details and indicators related to their country-crop programme.

Organisational structure

The overall programme will be managed by the Management Team comprised of senior organisational representatives from GAIN and HarvestPlus headquarters, regional, and country offices.

The programme implementation will be the responsibility of the Country Directors at the six GAIN and HarvestPlus country offices: Nigeria, Kenya, Tanzania, India, Bangladesh, Pakistan. To ensure effective implementation, the overall programme support and coordination of the nine projects in the six project countries will be the responsibility of the Central Partnership Support Team comprising Programme Managers and Programme Officers from GAIN and HarvestPlus. This team also has the overall responsibility for the planning, implementation, and review of all the partnership activities based on the approved plans.

The GAIN and HarvestPlus country teams will be supported by GAIN and HarvestPlus technical and operational global staff, including working closely with the Global M&E Team comprised of individuals from GAIN's Knowledge Leadership (KL) team and HarvestPlus' Monitoring, Evaluation and Learning (MEL) team.

The Central Partnership Support Team and the Management Team will ensure the quality and timely submission of deliverables and that the work is accomplished within budget.

Roles and responsibilities

Programme Managers: The Programme Managers (one each from GAIN and HarvestPlus) are responsible for leading the implementation of all programme components with support from the Country Directors and Global Programme.

Country M&E Officers: The Country M&E Officers are responsible for leading the M&E activities. Specifically, they will, in collaboration with key stakeholders, obtain and review monitoring data from implementing agencies to track progress of project objectives. Moreover, the Country M&E Officers will work with the Global M&E team, Programme Managers, and other key stakeholders in country to develop or support on-going monitoring and data collection activities and summarize and interpret the data as part of preparation for performance and donor reports.

Country Directors: The Country Directors will support the Programme Managers in implementing the programme activities in the country but will remain independent from the M&E activities to ensure impartiality.

Global M&E team: The Global M&E team has ultimate responsibility for ensuring that the M&E system is effective, accurate, and operational. It is responsible for providing M&E technical support to country M&E staff. During M&E system design, the Global M&E will review all country M&E plans and liaise with all staff. During implementation of M&E processes, Global M&E will be responsible for working with the Programme Managers and Country M&E Officers to develop various tools and methodologies for data collection,

analysis, management, and reporting for each of the main workplan activities. The Country M&E officers will liaise closely with the Global M&E team to collect, process, and analyse monitoring data to produce required reports. The Global M&E team will provide necessary training and technical guidance for data collection to country teams in order to ensure quality.

Central Partnership Support Team: The Central Partnership Support Team has overall responsibility for ensuring quality delivery of biofortification programmes in each country. The Central Partnership Support Team is accountable to the donor and ensures timely donor reporting. The Central Partnership Support Team will provide technical and strategic inputs into the M&E plan together with the Global M&E team and country offices. Furthermore, the Central Partnership Support Team will ensure the country teams have adequate support for programme delivery.

Overview of indicators

In line with the PIP and logical framework, GAIN and HarvestPlus identified and refined a series of indicators that will be tracked to monitor the process and outputs of commercialisation as well as to estimate reach and potential for impact of biofortification among target populations. The refined metrics will be adapted into country and crop specific M&E plans in each country. They form an essential part of the routine program monitoring and are designed to measure progress and facilitate corrective actions where needed throughout the course of the programme implementation.

The biofortification programmes will use 20 quantitative indicators directly related to programme objectives and the logical framework presented above. Each indicator focuses on a single aspect of the programme, and all of them combined provide crucial information for decision-making at every stage of programme implementation. The programme indicators are independent, defined in clear and unambiguous terms, and are inexpensive to measure. Where relevant, we additionally show where these indicators align with indicators from the Ministry of Foreign Affairs (MFA) Results and Indicator Framework. Respective definitions are clarified in the indicator reference sheets included in the plan. An indicator summary table is presented below (**Table 1**).

Table 1. Indicator summary

PIRS Sheet No.	#	Indicator	Ministry of Foreign Affairs (MFA) Indicator*
Objective 1: Improve seed supply			
Expected result 1: Supply of biofortified seed increased			
1	1.1	Quantity of seed/planting material available that is biofortified	No
2	1.2	Number of farmers that acquire biofortified seed/planting material	Yes - contributes to 2.2
Objective 2: Improve production of biofortified crops			
Expected result 2: Production of biofortified crops increased			
3	2.1	Quantity of harvested food that is biofortified	No
4	2.2	Number of farmers that grow biofortified foods	Yes – contributes to 8.1
5	2.3	Number of farmers that report increased production of biofortified foods	Yes – contributes to 2.1
6	2.4	Number of farmers that sell harvested biofortified foods	Yes – contributes to 2.2
7	2.5	Number of farmers that report increased income from sale of biofortified foods	Yes – contributes to 2.1
Objective 3: Support supply chain for biofortified foods and food products			
Expected result 3: Availability of raw biofortified foods and food products increased			
8	3.1	Quantity of biofortified food obtained by aggregators	No
9	3.2	Number of aggregators that procure biofortified foods	Yes – contributes to 8.1
10	3.3	Number of processors that procure biofortified foods	Yes – contributes to 8.1
11	3.4	Quantity of raw biofortified food volume available in the market	No
12	3.5	Number of retailers selling raw biofortified foods	Yes – contributes to 8.1
13	3.6a	Number of prepared or processed food products available that contain a biofortified food in the market	No
14	3.6b	Quantity of prepared or processed biofortified food volume available in the market	No
15	3.7	Number of retailers selling food products that contain a biofortified food	Yes – contributes to 8.1
16	3.8	Quantity of biofortified food distributed through formal institutions/programs (in any form, i.e., raw or prepared/processed)	No
Objective 4: Improve awareness of biofortification of value chain actors			
Expected result 4: Consumer and value chain actors demanding biofortified foods increased			
17	4.1	Number of value chain actors (e.g., seed producers, farmers, aggregators, processors, retailers, consumers) that are aware of biofortified foods and their benefits	Yes – contributes to 8.1
Objective 5: Advocacy and policy engagement			
Expected result 5: Biofortification integrated into policies and legal frameworks			
18	5.1	Number of policy/strategies/plans/legislation documents that mention biofortified foods at any level (e.g., local, regional, national)	Yes – 7.1
Objective 6: Develop capacity of value chain actors			
Crosscutting: Contributes to expected results 1, 2 and 3			
19	6.1	Number of value chain actors (e.g., seed producers, farmers, aggregators, processors, retailers) that received capacity development support (e.g. technical, financial)	Yes – contributes to 8.1
Objective 7: Improve consumption of biofortified foods			
Expected result 6: Increased consumption of biofortified foods			
20	7.1	Number of people who consume biofortified foods	Yes – 1.2.2.1 and contributes to 8.1

***MFA indicators:**

- 2.1 Number of family farms with increased productivity and/or income
- 2.2 Number of family farms with improved access to input and/or output markets
- 7.1 Number of major improvements/policies/laws contributed to
- 8.1 Number of women that benefitted from FNA interventions (e.g. women farmers, women owned businesses, women consuming biofortified foods)
- 1.2.2.1 Number of people for whom fortified food product becomes available

Methodology for data collection, management, and reporting

Responsible individuals: The Project Manager will have the overall responsibility for the coordination and collection of routine monitoring data to track progress of programme objectives and indicators for the specific activities that his/her organisation is responsible for in the workplan. They will be working closely with key national stakeholders and Global M&E advisors to ensure the necessary data is collected in a timely manner.

Data sources: plans, inspection/survey/training/procurement reports, protocols, project records, survey questionnaires should be easily accessible throughout the project. Data sources are specified for each indicator in the indicator reference sheets and the summary table at the end of this plan.

Data collection forms and methods: The Global M&E team will lead the development of generic data collection forms (for recording activity and output level data on an ongoing basis) that will be customized at country level by the Country M&E Officers. An Excel-based project activity monitoring tool will be developed by the Country M&E Officers and finalized in consultation with Central Partnership Support Team and Global M&E Team. The Global M&E team will lead the design and implementation of any survey-based data collection while the Country M&E Officers will be responsible for leading the planning, implementation and logistics of such surveys.

Timing and frequency of collection: The Country M&E Officer will collect the data regularly throughout the program duration. Data collection will be carried out by field implementing staff as they execute activities and submitted to the Country M&E Officer for verification, collation, and entry into the excel activity monitoring tool or database. The data will be compiled on a monthly or quarterly basis depending on performance indicator.

Data entry into the Excel project activity monitoring tool will be performed by the Country M&E Officer.

Data analysis will be carried out on a quarterly basis by the Country M&E officers, in consultation with the Global M&E team. Results will be shared with the Programme Managers and the Country Directors, as needed. It will include an analysis of changes during the preceding quarter, how actual data compare to targets, whether the intended results were achieved and why, what impact the program had, what implementation challenges were faced, and what measures are needed to improve performance.

Reporting of implementation progress for output level performance indicators will be carried out on a quarterly and annual basis by the Programme Managers and the Country Directors with assistance from the Global M&E team, as needed. Results of the data analysis for each of the performance indicators will be inputted into report templates provided by the Central Partnership Support Team. The frequency of reporting will vary by indicator based on the timing and frequency of data collection for that indicator. Progress will be discussed regularly with the donor and other stakeholders, and, if needed, programme work plans and M&E plans will be adjusted accordingly.

Data access, storage and protection: paper records will be kept in the guarded GAIN or HarvestPlus offices in each country. Electronic records will be backed up regularly and archived at the end of the project in accordance with GAIN and HarvestPlus standard IT procedures. Password protection will be used to protect sensitive information. The organizational policy requires that only authorized individuals can access the data.

Data quality assessment

A number of initiatives will be taken to ensure quality of data as well as to validate the information. The key activities to achieve the quality are explained below. A detailed *Data Quality Assessment Manual* will be provided that can be referred to for more details.

Participation and engagement: GAIN and HarvestPlus will ensure participation and engagement of staff from the Global M&E team, country teams, and implementing partners in developing and finalizing monitoring tools and methodologies. This will ensure ownership among all involved in the project management cycle as well as will promote common understanding of assigned tasks for each party.

Training and capacity building: This will be an integral part of monitoring and evaluation of the project and a key determinant of uniformity to data collection and management approaches and the quality of the data that will be generated. The Global M&E team is responsible for designing training modules, materials and methodologies for country teams, while Country M&E Officers will be responsible for planning and carrying out a step-down M&E training for partner M&E staff. They will facilitate the training of the plan, tools, data collection, analysis and reporting. The Global M&E team will provide on-going technical support to ensure protocols are followed and provide regular feedback and retraining if necessary.

Common elements in monitoring tools: There will be common elements in various tools such as a checklist, questionnaire, and guidelines for different parties. This will allow GAIN and HarvestPlus to collect same data/information from different primary sources to triangulate and validate the information.

Joint meetings: GAIN and HarvestPlus will promote joint consultation meeting with partners involved in the project. This will enable GAIN and HarvestPlus to discuss the common issue found during monitoring of the project progress. The joint meetings will also be helpful for validation of the information/data collected during the specific period.

Cross check with others: GAIN and HarvestPlus will continue to network with other players in the countries working in biofortification. Discussions with these actors will take place to exchange information related to nutrition. This will allow GAIN and HarvestPlus to triangulate and validate the data/information collected through monitoring process.

Annex 1 – Template Performance Indicator Reference Sheets (PIRS)

Template PIRS for illustrative purposes – to be completed in full for all indicators for each country/crop combination

PERFORMANCE INDICATOR REFERENCE SHEET 1			
Indicator 1.1: Quantity of seed/planting material available that is biofortified			
Expected result 1: Supply of biofortified seed increased			
Is this an Annual Report indicator? Yes, for reporting year(s) _____			
Is this an MFA indicator? No			
DESCRIPTION			
Precise definition: Total quantity of biofortified seed (defined as any planting material vegetative or grain) available (i.e. produced and available where farmers can access it (for free or purchase).			
<p>This indicator is used to measure the change in the quantity of biofortified seed available in a country from one year to the next. It is not cumulative and hence carry over seed can be counted as part of available seed for each year. The indicator focuses specifically on improved seed produced by formally recognized seed producers (seed companies or community-based seed multipliers (CBSMs)). It excludes farmer recycled own planting material and the seed that is shared voluntarily with fellow farmers outside the pass-on and payback agreement. This is measured at national level and NOT for project areas only. Methods for estimating quantity of improved seed differ for grain crops and vegetative crops (VPC) because most seed systems for VPCs are not well developed whereas that of grain crops are better developed. For both grain crops and VPCs consider only seed produced by formerly registered companies or multipliers.</p>			
Unit of measure: Number			
Calculation: Count and sum all seed quantities of biofortified crop varieties in the same geography to get total count of biofortified seed varieties			
Disaggregated by: Crop; Geographic location (i.e. country); Seed category (e.g. early generation seed (breeder and foundation), certified seed, quality declared seed, truthfully labelled seed)			
Indicator type (output/outcome/impact): Outcome			
Rationale for Indicator:			
PLAN FOR DATA COLLECTION			
Data source: Producers of biofortified seed, including seed companies and community-based seed multipliers (CBSMs)			
Data collection method: Document review of records from seed multipliers			
Frequency and timing of data collection:			
Individual(s) responsible: Country Project Staff (specify HarvestPlus or GAIN)			
Location of data storage:			
DATA QUALITY ISSUES			
Date of initial data quality assessment:			
Known data limitations and significance (if any):			
Actions taken or planned to address data limitations:			
Date of future data quality assessments:			
Procedures for future data quality assessments:			
PLAN FOR DATA ANALYSIS, REVIEW, & REPORTING			
Data analysis (responsible individual(s) and frequency): Country M&E Specialist			
Presentation of data: Tables and Graphs			
Data review (responsible individual(s) and frequency): Ongoing by Global M&E Team, quarterly by Country Manager			
Reporting of data: Quarterly and Annual Reports			
OTHER NOTES			
Notes on Baselines/Targets:			
PERFORMANCE INDICATOR VALUES			
Year	Target	Actual	Notes
2020			

2021			
2022			
THIS SHEET LAST UPDATED ON:			

PERFORMANCE INDICATOR REFERENCE SHEET 2
Indicator 1.2: Number of farmers that acquire biofortified seed/planting material
Expected result 1: Supply of biofortified seed increased
Is this an Annual Report indicator? Yes, for reporting year(s) _____
Is this an MFA indicator? Yes, contributes to 2.2
DESCRIPTION
<p>Precise definition: Total number of farmers (i.e. farmer households) that acquire biofortified seed (defined as any planting material vegetative or grain).</p> <p>This indicator considers any material (certified, truthfully labelled (TFL), quality guaranteed/quality declared or recycled) that is planted as seed to produce biofortified food crop. It excludes farmers that received EGS (basic/breeder and foundation).</p> <p>Acquired means seed that was distributed to/sold to, given to. There are 3 ways of acquiring seed depending on the source and means of payment:</p> <ol style="list-style-type: none"> 1. Farmers can pay cash or barter trade to get seed from the seed market; 2. Farmers can receive “free” seed as promotional packs; 3. Farmers can get recycled seed from fellow farmers either voluntary sharing (farmer to farmer – F2F) or obligated sharing (pass on or payback). <p>An individual who is recorded as having acquired planting material is assumed to represent a farming household, e.g. a seed receipt list with 10 different names represents 10 households (caution is taken to minimize multiple recipients from one household during distribution). There are usually no name lists for households that acquired seed from the market and through F2F.</p>
Unit of measure: Number
<p>Calculation: Count and sum farm households under each of the 3 categories:</p> <ol style="list-style-type: none"> 1. Category 1 households: Count the quantity of biofortified seed sold and divide by the number of the mode seed pack size of biofortified varieties. 2. Category 2 households: Count and sum all listed people in the recipient list. 3. Category 3 households: Use survey data – First, choose a reference base population cohort to establish diffusion factors, e.g. the % of farmers that share seed with fellow farmers, then take the average number of farmers that each farmer will give seed to.
Disaggregated by: Crop; Geographic location (i.e. country); Sex of farmer (male, female)
Indicator type (output/outcome/impact): Output
Rationale for Indicator:
PLAN FOR DATA COLLECTION
Data source: Records/databases of those promoting biofortified crops; Records (quantity distributed) of producers of biofortified seed, including seed companies and CBSMs; Use national demographic statistics especially for rural population, to estimate the male/female parameter for farmers who acquired seed from the market or fellow farmers.
Data collection method: Census count of people that received biofortified seed that was distributed during the reporting period (where you have distribution lists); Count of total quantity of biofortified seed acquired by farmers through cash/barter trade sales during a reporting period; Surveys to establish diffusion factors.
Frequency and timing of data collection:
Individual(s) responsible: Country Project Staff (specify HarvestPlus or GAIN)
Location of data storage:
DATA QUALITY ISSUES
Date of initial data quality assessment:
Known data limitations and significance (if any):
Actions taken or planned to address data limitations:
Date of future data quality assessments:
Procedures for future data quality assessments:
PLAN FOR DATA ANALYSIS, REVIEW, & REPORTING
Data analysis (responsible individual(s) and frequency): Country M&E Specialist
Presentation of data: Tables and Graphs
Data review (responsible individual(s) and frequency): Ongoing by Global M&E Team, quarterly by Country Manager
Reporting of data: Quarterly and Annual Reports

OTHER NOTES			
Notes on Baselines/Targets:			
PERFORMANCE INDICATOR VALUES			
Year	Target	Actual	Notes
2020			
2021			
2022			
THIS SHEET LAST UPDATED ON:			

PERFORMANCE INDICATOR REFERENCE SHEET 3			
Indicator 2.1: Quantity of harvested food that is biofortified			
Expected result 2: Production of biofortified foods increased			
Is this an Annual Report indicator? Yes, for reporting year(s) _____			
Is this an MFA indicator? No			
DESCRIPTION			
Precise definition: Total quantity of production/harvest of the biofortified food at national level.			
This indicator is an important measure of how much food is produced at the end of each cropping season and therefore a baseline value should be established at the beginning of the project.			
Unit of measure: Number			
Calculation:			
First, count the number of farmers that are growing the biofortified varieties of the crop at the end of the reporting period.			
Second, estimate the average yield attained by farmers for each crop.			
Third, estimate the average area planted by farmers for each crop.			
Fourth, estimate total amount of food produced/harvested biofortified using the 3 parameters above.			
Disaggregated by: Food; Geographic location (i.e. country)			
Indicator type (output/outcome/impact): Outcome			
Rationale for Indicator:			
PLAN FOR DATA COLLECTION			
Data source: Survey reports			
Data collection method: Multiple options: Rapid farm households survey to estimate yield in the target countries; Literature review; Analysis of existing datasets on seed supply			
Frequency and timing of data collection:			
Individual(s) responsible: Country Project Staff (specify HarvestPlus or GAIN)			
Location of data storage:			
DATA QUALITY ISSUES			
Date of initial data quality assessment:			
Known data limitations and significance (if any):			
Actions taken or planned to address data limitations:			
Date of future data quality assessments:			
Procedures for future data quality assessments:			
PLAN FOR DATA ANALYSIS, REVIEW, & REPORTING			
Data analysis (responsible individual(s) and frequency): Country M&E Specialist			
Presentation of data: Tables and Graphs			
Data review (responsible individual(s) and frequency): Ongoing by Global M&E Team, quarterly by Country Manager			
Reporting of data: Quarterly and Annual Reports			
OTHER NOTES			
Notes on Baselines/Targets:			
PERFORMANCE INDICATOR VALUES			
Year	Target	Actual	Notes
2020			
2021			
2022			
THIS SHEET LAST UPDATED ON:			

PERFORMANCE INDICATOR REFERENCE SHEET 4			
Indicator 2.2: Number of farmers that grow biofortified foods			
Expected result 2: Production of biofortified foods increased			
Is this an Annual Report indicator? Yes, for reporting year(s) _____			
Is this an MFA indicator? Yes, contributes to 8.1			
DESCRIPTION			
Precise definition: Total number of farmers (i.e. the individual that represents a farming household) that planted biofortified crop varieties during the reporting period.			
This is a cumulative indicator therefore it counts farmers that planted biofortified varieties in the most recent and past cohorts. In practice, not all farmers who planted in the previous seasons will continue forever. Some may discontinue to grow (i.e. disadoption) for various reasons. New farmers will also emerge hence the expectation is that there is a gradual net increase in the number of households growing biofortified varieties. These complex dynamic behaviour by farmers require survey-based research to establish disadoption and diffusion rates.			
Unit of measure: Number			
Calculation: Count all the farmers/households that planted biofortified crops and adjust for diffusion, disadoption. Alternatively, use simple excel based model methods (details upon request).			
Disaggregated by: Food; Geographic location (e.g. country, district); Sex of farmer (male, female)			
Indicator type (output/outcome/impact): Output			
Rationale for Indicator:			
PLAN FOR DATA COLLECTION			
Data source: Farmers; Partner records/databases; Survey reports; Seed distribution records			
Data collection method: Farm household surveys; Listing of recipients from seed distribution forms			
Frequency and timing of data collection:			
Individual(s) responsible: Country Project Staff (specify HarvestPlus or GAIN)			
Location of data storage:			
DATA QUALITY ISSUES			
Date of initial data quality assessment:			
Known data limitations and significance (if any):			
Actions taken or planned to address data limitations:			
Date of future data quality assessments:			
Procedures for future data quality assessments:			
PLAN FOR DATA ANALYSIS, REVIEW, & REPORTING			
Data analysis (responsible individual(s) and frequency): Country M&E Specialist			
Presentation of data: Tables and Graphs			
Data review (responsible individual(s) and frequency): Ongoing by Global M&E Team, quarterly by Country Manager			
Reporting of data: Quarterly and Annual Reports			
OTHER NOTES			
Notes on Baselines/Targets:			
PERFORMANCE INDICATOR VALUES			
Year	Target	Actual	Notes
2020			
2021			
2022			
THIS SHEET LAST UPDATED ON:			

PERFORMANCE INDICATOR REFERENCE SHEET 5			
Indicator 2.3: Number of farmers that report increased production of biofortified foods			
Expected result 2: Production of biofortified foods increased			
Is this an Annual Report indicator? Yes, for reporting year(s) _____			
Is this an MFA indicator? Yes, contributes to 2.1			
DESCRIPTION			
Precise definition: Total number of farmers (i.e. the individual that represents a farming household) that reported increased quantity of harvested biofortified food compared to the previous reporting period production level.			
This indicator tracks the farm household level change in production of biofortified crops over time. Increased production can be a function of both increase in yield or total area under production, or both. The measurement of production may be done in a variety of ways namely: (1) farmer self-reported production during surveys, (2) calculated using quantity of seed planted and average yield, (3) field measurements using the crop cut method. These methods have their advantages and shortfalls, affecting the reliability of the estimated harvested crop (IFPRI, 2011) noted that farmers estimates display considerably smaller variances than the crop-cut estimates whereas crop cuts can overestimate yield by as high as 30%.			
Unit of measure: Number			
Calculation: Count all the farmers/households that report increased quantity of harvested biofortified crop compared to the previous reporting period production level. To estimate this indicator as a proportion: Divide the number calculated above by the total number of all farmers that planted the biofortified crop in the reporting period and multiply by 100.			
Disaggregated by: Food; Geographic location (e.g. country, district); Sex of farmer (male, female)			
Indicator type (output/outcome/impact): Output			
Rationale for Indicator:			
PLAN FOR DATA COLLECTION			
Data source: Farmers			
Data collection method: Farm household surveys for baseline/endline; Monitoring data (e.g. interviews with a representative sample of households)			
Frequency and timing of data collection:			
Individual(s) responsible: Country Project Staff (specify HarvestPlus or GAIN)			
Location of data storage:			
DATA QUALITY ISSUES			
Date of initial data quality assessment:			
Known data limitations and significance (if any):			
Actions taken or planned to address data limitations:			
Date of future data quality assessments:			
Procedures for future data quality assessments:			
PLAN FOR DATA ANALYSIS, REVIEW, & REPORTING			
Data analysis (responsible individual(s) and frequency): Country M&E Specialist			
Presentation of data: Tables and Graphs			
Data review (responsible individual(s) and frequency): Ongoing by Global M&E Team, quarterly by Country Manager			
Reporting of data: Quarterly and Annual Reports			
OTHER NOTES			
Notes on Baselines/Targets:			
PERFORMANCE INDICATOR VALUES			
Year	Target	Actual	Notes
2020			
2021			
2022			
THIS SHEET LAST UPDATED ON:			

PERFORMANCE INDICATOR REFERENCE SHEET 6			
Indicator 2.4: Number of farmers that sell harvested biofortified foods			
Expected result 2: Production of biofortified foods increased			
Is this an Annual Report indicator? Yes, for reporting year(s) _____			
Is this an MFA indicator? Yes, contributes to 2.2			
DESCRIPTION			
<p>Precise definition: Total number of farmers (i.e. the individual that represents a farming household) growing biofortified foods that sell biofortified foods to value chain actors (e.g. other farmers, aggregators, processors, retailers, consumers).</p> <p>This indicator provides a summary measure of market participation among growers of biofortified foods. It can, when combined with other parameters like proportion of household production allocated for sale, serve as a measure of level or extent of commercialisation of biofortified crops.</p> <p>Do not include in the count households that only trade (e.g., brokers/aggregators) but do not grow. Buyers can include other farmers, aggregators, processors, retailers, consumers, institutions (e.g. hospital, school).</p> <p>The focus is on sales by the farmers that sold their harvested food ONLY - do not count intermediary buyers and sellers. Exclude sale of seed/planting material like vines, stems, and other recycled grain seed – only include sale of the harvested food.</p>			
Unit of measure: Number			
<p>Calculation: Count and sum all the farmers/households growing biofortified foods that sell it to value chain actors.</p> <p>To estimate this indicator as a proportion: Divide the number above by the total number of all farmers that grow the biofortified crop and multiply by 100.</p>			
Disaggregated by: Food; Geographic location (e.g. country, district); Sex of farmer (male, female); buyer type (e.g. farmer, aggregator, processor, consumer, institution)			
Indicator type (output/outcome/impact): Output			
Rationale for Indicator:			
PLAN FOR DATA COLLECTION			
Data source: Farmers growing biofortified crops			
Data collection method: Farm household surveys for baseline/endline or monitoring data (e.g. interviews with a representative sample of households)			
Frequency and timing of data collection:			
Individual(s) responsible: Country Project Staff (specify HarvestPlus or GAIN)			
Location of data storage:			
DATA QUALITY ISSUES			
Date of initial data quality assessment:			
Known data limitations and significance (if any):			
Actions taken or planned to address data limitations:			
Date of future data quality assessments:			
Procedures for future data quality assessments:			
PLAN FOR DATA ANALYSIS, REVIEW, & REPORTING			
Data analysis (responsible individual(s) and frequency): Country M&E Specialist			
Presentation of data: Tables and Graphs			
Data review (responsible individual(s) and frequency): Ongoing by Global M&E Team, quarterly by Country Manager			
Reporting of data: Quarterly and Annual Reports			
OTHER NOTES			
Notes on Baselines/Targets:			
PERFORMANCE INDICATOR VALUES			
Year	Target	Actual	Notes
2020			
2021			
2022			
THIS SHEET LAST UPDATED ON:			

PERFORMANCE INDICATOR REFERENCE SHEET 7			
Indicator 2.5: Number of farmers that report increased income from sale of biofortified foods			
Expected result 2: Production of biofortified foods increased			
Is this an Annual Report indicator? Yes, for reporting year(s) _____			
Is this an MFA indicator? Yes, contributes to 2.1			
DESCRIPTION			
<p>Precise definition: Total number of farmers (i.e. the individual that represents a farming household) growing biofortified foods that reported increased income from sale of the harvested biofortified foods compared to the previous reporting period.</p> <p>This indicator provides a summary measure of market participation among growers of biofortified foods. It can, when combined with other parameters like proportion of household production allocated for sale, serve as a measure of level or extent of commercialisation of biofortified foods.</p> <p>Do not include in the count households that only trade (e.g., brokers/aggregators) but do not grow. Buyers can include other farmers, aggregators, processors, retailers, consumers, institutions (e.g. hospital, school). The focus is on increased income from sales by the farmers that sold their harvested food ONLY - do not count intermediary buyers and sellers. Exclude sale of seed/planting material like vines, stems, and other recycled grain seed – only include sale of harvested biofortified food.</p> <p>Unit of measure: Number</p> <p>Calculation: Count all the farmers/households growing biofortified crops that reported increased income from sale of harvested biofortified foods compared to the previous reporting period. To estimate this indicator as a proportion: Divide the number calculated above by the total number of all farmers that sold the biofortified food in the reporting period and multiply by 100.</p> <p>Disaggregated by: Food; Geographic location (e.g. country, district); Sex of farmer (male, female); buyer type (e.g. aggregator, processor, consumer, institution)</p> <p>Indicator type (output/outcome/impact): Output</p> <p>Rationale for Indicator:</p>			
PLAN FOR DATA COLLECTION			
Data source: Farmers growing biofortified crops			
Data collection method: Farm household surveys for baseline/endline or monitoring data (e.g. interviews with a representative sample of households)			
Frequency and timing of data collection:			
Individual(s) responsible: Country Project Staff (specify HarvestPlus or GAIN)			
Location of data storage:			
DATA QUALITY ISSUES			
Date of initial data quality assessment:			
Known data limitations and significance (if any):			
Actions taken or planned to address data limitations:			
Date of future data quality assessments:			
Procedures for future data quality assessments:			
PLAN FOR DATA ANALYSIS, REVIEW, & REPORTING			
Data analysis (responsible individual(s) and frequency): Country M&E Specialist			
Presentation of data: Tables and Graphs			
Data review (responsible individual(s) and frequency): Ongoing by Global M&E Team, quarterly by Country Manager			
Reporting of data: Quarterly and Annual Reports			
OTHER NOTES			
Notes on Baselines/Targets:			
PERFORMANCE INDICATOR VALUES			
Year	Target	Actual	Notes
2020			
2021			
2022			
THIS SHEET LAST UPDATED ON:			

PERFORMANCE INDICATOR REFERENCE SHEET 8

Indicator 3.1: Quantity of biofortified food obtained by aggregators

Expected result 3: Availability of raw biofortified foods and food products increased

Is this an Annual Report indicator? Yes, for reporting year(s) _____

Is this an MFA indicator? No

DESCRIPTION

Precise definition: Total quantity of biofortified food obtained by aggregator (collected/aggregated from farmers for next stage in the production values chain). Aggregators are value chain actors who collect produces from farmers to channel them to other actors such as processors or sale to the market for consumers. Aggregators can be grouped in 3 categories based on size of enterprises as follows: Micro (less than 10 employees; small (10-50 employees); medium (50-250 employees); and large (>250 employees (<https://ec.europa.eu/growth/smes/business-friendly-environment/sme-definition>).

Unit of measure: Number

Calculation: Sum all quantities reported by individual aggregators per food.

Disaggregated by: Food; Geographic location (e.g. country, region); Sex of aggregator (male, female)

Indicator type (output/outcome/impact): Output

Rationale for Indicator: This measures the growth in the capacity of aggregators and the increase in the volume of biofortified foods available on the market.

PLAN FOR DATA COLLECTION

Data source: Aggregators that are in the VCA/SMEs register/database.

Data collection method: VCA database/register

Frequency and timing of data collection: Annual

Individual(s) responsible: Country Project Staff (specify HarvestPlus or GAIN)

Location of data storage:

DATA QUALITY ISSUES

Date of initial data quality assessment:

Known data limitations and significance (if any):

Actions taken or planned to address data limitations:

Date of future data quality assessments:

Procedures for future data quality assessments:

PLAN FOR DATA ANALYSIS, REVIEW, & REPORTING

Data analysis (responsible individual(s) and frequency): Country M&E Specialist

Presentation of data: Tables and Graphs

Data review (responsible individual(s) and frequency): Ongoing by Global M&E Team, quarterly by Country Manager

Reporting of data: Quarterly and Annual Reports

OTHER NOTES

Notes on Baselines/Targets:

PERFORMANCE INDICATOR VALUES

Year	Target	Actual	Notes
2020			
2021			
2022			

THIS SHEET LAST UPDATED ON:

PERFORMANCE INDICATOR REFERENCE SHEET 9

Indicator 3.2: Number of aggregators that procure biofortified foods

Expected result 3: Availability of raw biofortified foods and food products increased

Is this an Annual Report indicator? Yes, for reporting year(s) _____

Is this an MFA indicator? Yes – contributes to 8.1

DESCRIPTION

Precise definition: Total number of aggregators that procure biofortified foods for resale as raw or process.

This indicator tracks the post-harvest off farm utilization of biofortified foods. This tracks the shift in interest from non-biofortified towards biofortified foods by aggregators. Aggregators buy harvested foods from farmers for resale. Aggregators can be grouped in 3 categories based on size of enterprises as follows: Micro (less than 10 employees; small (10-50 employees); medium (50-250 employees); and large (>250 employees (<https://ec.europa.eu/growth/smes/business-friendly-environment/sme-definition>)).

This is a cumulative variable – only additional aggregators are added to the baseline at the end of each reporting period.

Unit of measure: Number

Calculation: Count and add any new aggregators to the previous reporting period total

Disaggregated by: Food; Geographic location (e.g. country, region); Sex of aggregator (male, female); size of enterprise

Indicator type (output/outcome/impact): Output

Rationale for Indicator:

PLAN FOR DATA COLLECTION

Data source: Records/databases of partners implementing biofortification; Records of Industry associations (where applicable)

Data collection method: Review of existing partner records/databases; Rapid census count of existing aggregators (for baseline)

Frequency and timing of data collection:

Individual(s) responsible: Country Project Staff (specify HarvestPlus or GAIN)

Location of data storage:

DATA QUALITY ISSUES

Date of initial data quality assessment:

Known data limitations and significance (if any):

Actions taken or planned to address data limitations:

Date of future data quality assessments:

Procedures for future data quality assessments:

PLAN FOR DATA ANALYSIS, REVIEW, & REPORTING

Data analysis (responsible individual(s) and frequency): Country M&E Specialist

Presentation of data: Tables and Graphs

Data review (responsible individual(s) and frequency): Ongoing by Global M&E Team, quarterly by Country Manager

Reporting of data: Quarterly and Annual Reports

OTHER NOTES

Notes on Baselines/Targets:

PERFORMANCE INDICATOR VALUES

Year	Target	Actual	Notes
2020			
2021			
2022			

THIS SHEET LAST UPDATED ON:

PERFORMANCE INDICATOR REFERENCE SHEET 10			
Indicator 3.3: Number of processors that procure biofortified foods			
Expected result 3: Availability of raw biofortified foods and food products increased			
Is this an Annual Report indicator? Yes, for reporting year(s) _____			
Is this an MFA indicator? Yes – contributes to 8.1			
DESCRIPTION			
Precise definition: Total number of processors that procure biofortified foods.			
This indicator tracks the post-harvest off farm utilization of biofortified foods. This tracks the shift in interest from non-biofortified inputs/ingredients towards biofortified food inputs/ingredients for manufacturing processed foods.			
Processors can be grouped into 3 categories based on size of enterprises as follows: Micro (less than 10 employees; small (10-50 employees); medium (50-250 employees); and large (>250 employees (https://ec.europa.eu/growth/smes/business-friendly-environment/sme-definition)).			
This is a cumulative variable – only additional processors are added to the baseline at the end of each reporting period.			
Unit of measure: Number			
Calculation: Count and add any new processors to the previous reporting period total			
Disaggregated by: Food; Geographic location (e.g. country, region); Sex of processor (male, female); size of enterprise; type of product processed			
Indicator type (output/outcome/impact): Output			
Rationale for Indicator:			
PLAN FOR DATA COLLECTION			
Data source: Records/databases of partners implementing biofortification; Records of Industry associations (where applicable)			
Data collection method: Review of existing partner records/databases; Rapid census count of existing processors (for baseline)			
Frequency and timing of data collection:			
Individual(s) responsible: Country Project Staff (specify HarvestPlus or GAIN)			
Location of data storage:			
DATA QUALITY ISSUES			
Date of initial data quality assessment:			
Known data limitations and significance (if any):			
Actions taken or planned to address data limitations:			
Date of future data quality assessments:			
Procedures for future data quality assessments:			
PLAN FOR DATA ANALYSIS, REVIEW, & REPORTING			
Data analysis (responsible individual(s) and frequency): Country M&E Specialist			
Presentation of data: Tables and Graphs			
Data review (responsible individual(s) and frequency): Ongoing by Global M&E Team, quarterly by Country Manager			
Reporting of data: Quarterly and Annual Reports			
OTHER NOTES			
Notes on Baselines/Targets:			
PERFORMANCE INDICATOR VALUES			
Year	Target	Actual	Notes
2020			
2021			
2022			
THIS SHEET LAST UPDATED ON:			

PERFORMANCE INDICATOR REFERENCE SHEET 11

Indicator 3.4: Quantity of raw biofortified food available in the market

Expected result 3: Availability of raw biofortified foods and food products increased

Is this an Annual Report indicator? Yes, for reporting year(s) _____

Is this an MFA indicator? No

DESCRIPTION

Precise definition: Total quantity of raw biofortified food available in the market.

Raw biofortified food is defined as a biofortified food that has not undergone any preparation or processing (i.e. milling, cooking, freezing, packaging, etc.). For example, cassava roots, OFSP roots and any harvested grain of biofortified food, such as iron beans, zinc wheat, zinc rice, vitamin A maize or iron pearl millet grain.

Verification of biofortification status of the food is required: for biofortified foods with visible traits this can be done by visual identification; for biofortified foods with non-visible traits this can be done by expert verification or lab assessment of nutrient content.

Unit of measure: Number

Calculation: Count the number of retailers selling raw biofortified foods in the market. Then estimate and sum the quantity available for each raw product at each retailer.

Disaggregated by: Food; Geographic location (e.g. country, region)

Indicator type (output/outcome/impact): Outcome

Rationale for Indicator:

PLAN FOR DATA COLLECTION

Data source: Retailers in the market

Data collection method: Market assessment survey

Frequency and timing of data collection:

Individual(s) responsible: Country Project Staff (specify HarvestPlus or GAIN)

Location of data storage:

DATA QUALITY ISSUES

Date of initial data quality assessment:

Known data limitations and significance (if any):

Actions taken or planned to address data limitations:

Date of future data quality assessments:

Procedures for future data quality assessments:

PLAN FOR DATA ANALYSIS, REVIEW, & REPORTING

Data analysis (responsible individual(s) and frequency): Country M&E Specialist

Presentation of data: Tables and Graphs

Data review (responsible individual(s) and frequency): Ongoing by Global M&E Team, quarterly by Country Manager

Reporting of data: Quarterly and Annual Reports

OTHER NOTES

Notes on Baselines/Targets:

PERFORMANCE INDICATOR VALUES

Year	Target	Actual	Notes
2020			
2021			
2022			

THIS SHEET LAST UPDATED ON:

PERFORMANCE INDICATOR REFERENCE SHEET 12			
Indicator 3.5: Number of retailers selling raw biofortified foods			
Expected result 3: Availability of raw biofortified foods and food products increased			
Is this an Annual Report indicator? Yes, for reporting year(s) _____			
Is this an MFA indicator? Yes – contributes to 8.1			
DESCRIPTION			
Precise definition: Total number of retailers selling raw biofortified foods.			
This indicator tracks the post-harvest off farm utilization of biofortified foods. This indicator excludes sales at farm gate level but includes sales in fresh produce markets and other formal retail outlets.			
Raw biofortified food is defined as a biofortified food that has not undergone any preparation or processing (i.e. milling, cooking, freezing, packaging, etc.). For example, cassava roots, OFSP roots and any harvested grain of biofortified food, such as iron beans, zinc wheat, zinc rice, vitamin A maize or iron pearl millet grain.			
Retailers can be grouped into 3 categories based on size of enterprises as follows: Micro (less than 10 employees; small (10-50 employees); medium (50-250 employees); and large (>250 employees (https://ec.europa.eu/growth/smes/business-friendly-environment/sme-definition)).			
This is a cumulative variable – only additional retailers are added to the baseline at the end of each reporting period.			
Verification of biofortification status of the food is required: for biofortified foods with visible traits this can be done by visual identification; for biofortified foods with non-visible traits this can be done by expert verification or lab assessment of nutrient content.			
Unit of measure: Number			
Calculation: Count and add any new retailers to the previous reporting period total			
Disaggregated by: Food; Geographic location (e.g. country, region); sex of retailers (male, female)			
Indicator type (output/outcome/impact): Output			
Rationale for Indicator:			
PLAN FOR DATA COLLECTION			
Data source: Records/databases of partners implementing biofortification; Records of Industry associations (where applicable)			
Data collection method: Review of existing partner records/databases; Rapid census count of existing retailers (for baseline)			
Frequency and timing of data collection:			
Individual(s) responsible: Country Project Staff (specify HarvestPlus or GAIN)			
Location of data storage:			
DATA QUALITY ISSUES			
Date of initial data quality assessment:			
Known data limitations and significance (if any):			
Actions taken or planned to address data limitations:			
Date of future data quality assessments:			
Procedures for future data quality assessments:			
PLAN FOR DATA ANALYSIS, REVIEW, & REPORTING			
Data analysis (responsible individual(s) and frequency): Country M&E Specialist			
Presentation of data: Tables and Graphs			
Data review (responsible individual(s) and frequency): Ongoing by Global M&E Team, quarterly by Country Manager			
Reporting of data: Quarterly and Annual Reports			
OTHER NOTES			
Notes on Baselines/Targets:			
PERFORMANCE INDICATOR VALUES			
Year	Target	Actual	Notes
2020			
2021			
2022			
THIS SHEET LAST UPDATED ON:			

PERFORMANCE INDICATOR REFERENCE SHEET 13			
Indicator 3.6a: Number of prepared or processed biofortified food products available in the market			
Expected result 3: Availability of raw biofortified foods and food products increased			
Is this an Annual Report indicator? Yes, for reporting year(s) _____			
Is this an MFA indicator? No			
DESCRIPTION			
Precise definition: Total number of prepared or processed food products that contain a biofortified food as an ingredient that are available in the market.			
Prepared or processed foods are defined as those that have undergone mechanical or chemical operations to change or preserve it, such as milling, cooking, canning, freezing, packaging, etc.			
Verification of biofortification status of the food is required: for biofortified foods with visible traits this can be done by visual identification; for biofortified foods with non-visible traits this can be done by expert verification or lab assessment of nutrient content. Alternatively, approval from a recognized board of standards may be used in place of expert or lab verification.			
Unit of measure: Number			
Calculation: Identify all retailers selling biofortified food products. Count and add any new biofortified food products to the previous reporting period total			
Disaggregated by: Food; Geographic location (e.g. country, region)			
Indicator type (output/outcome/impact): Outcome			
Rationale for Indicator:			
PLAN FOR DATA COLLECTION			
Data source: Retailers in the market			
Data collection method: Market assessment survey			
Frequency and timing of data collection:			
Individual(s) responsible: Country Project Staff (specify HarvestPlus or GAIN)			
Location of data storage:			
DATA QUALITY ISSUES			
Date of initial data quality assessment:			
Known data limitations and significance (if any):			
Actions taken or planned to address data limitations:			
Date of future data quality assessments:			
Procedures for future data quality assessments:			
PLAN FOR DATA ANALYSIS, REVIEW, & REPORTING			
Data analysis (responsible individual(s) and frequency): Country M&E Specialist			
Presentation of data: Tables and Graphs			
Data review (responsible individual(s) and frequency): Ongoing by Global M&E Team, quarterly by Country Manager			
Reporting of data: Quarterly and Annual Reports			
OTHER NOTES			
Notes on Baselines/Targets:			
PERFORMANCE INDICATOR VALUES			
Year	Target	Actual	Notes
2020			
2021			
2022			
THIS SHEET LAST UPDATED ON:			

PERFORMANCE INDICATOR REFERENCE SHEET 14

Indicator 3.6b: Quantity of prepared or processed biofortified food volume available in the market

Expected result 3: Availability of raw biofortified foods and food products increased

Is this an Annual Report indicator? Yes, for reporting year(s) _____

Is this an MFA indicator? No

DESCRIPTION

Precise definition: Total quantity of prepared or processed foods that contain a biofortified food as an ingredient.

Prepared or processed foods are defined as those that have had a series of mechanical or chemical operations performed on it to change or preserve it, such as milling, pre-cooking/parboiling, cooking, canning, freezing, packaging, etc. [add more detail as needed]

Verification of biofortification status of the food is required: for biofortified foods with visible traits this can be done by visual identification; for biofortified foods with non-visible traits this can be done by expert verification or lab assessment of nutrient content. Alternatively, approval from a recognized board of standards may be used in place of expert or lab verification.

Unit of measure: Number

Calculation: Count the number of retailers selling prepared or processed biofortified food products in the market. Then estimate and sum the quantity available for each raw product at each retailer.

Disaggregated by: Food; Geographic location (e.g. country, region); food product type

Indicator type (output/outcome/impact): Outcome

Rationale for Indicator:

PLAN FOR DATA COLLECTION

Data source: Retailers in the market

Data collection method: Market assessment survey

Frequency and timing of data collection:

Individual(s) responsible: Country Project Staff (specify HarvestPlus or GAIN)

Location of data storage:

DATA QUALITY ISSUES

Date of initial data quality assessment:

Known data limitations and significance (if any):

Actions taken or planned to address data limitations:

Date of future data quality assessments:

Procedures for future data quality assessments:

PLAN FOR DATA ANALYSIS, REVIEW, & REPORTING

Data analysis (responsible individual(s) and frequency): Country M&E Specialist

Presentation of data: Tables and Graphs

Data review (responsible individual(s) and frequency): Ongoing by Global M&E Team, quarterly by Country Manager

Reporting of data: Quarterly and Annual Reports

OTHER NOTES

Notes on Baselines/Targets:

PERFORMANCE INDICATOR VALUES

Year	Target	Actual	Notes
2020			
2021			
2022			

THIS SHEET LAST UPDATED ON:

PERFORMANCE INDICATOR REFERENCE SHEET 15			
Indicator 3.7: Number of retailers selling food products that contain a biofortified food			
Expected result 3: Availability of raw biofortified foods and food products increased			
Is this an Annual Report indicator? Yes, for reporting year(s) _____			
Is this an MFA indicator? Yes – contributes to 8.1			
DESCRIPTION			
Precise definition: Total number of retailers selling prepared or processed food products that contain a biofortified food as an ingredient that are available in the market.			
The retailers can be grouped into 3 categories based on size of enterprises as follows: Micro (less than 10 employees; small (10-50 employees); medium (50-250 employees); and large (>250 employees (https://ec.europa.eu/growth/smes/business-friendly-environment/sme-definition)).			
Verification of biofortification status of the food is required: for biofortified foods with visible traits this can be done by visual identification; for biofortified foods with non-visible traits this can be done by expert verification or lab assessment of nutrient content. Alternatively, approval from a recognized board of standards may be used in place of expert or lab verification.			
Unit of measure: Number			
Calculation: Count all retailers in the market			
Disaggregated by: Food; Geographic location (e.g. country, region); sex of retailer (male, female)			
Indicator type (output/outcome/impact): Output			
Rationale for Indicator:			
PLAN FOR DATA COLLECTION			
Data source: Retailers in markets			
Data collection method: Market assessment survey			
Frequency and timing of data collection:			
Individual(s) responsible: Country Project Staff (specify HarvestPlus or GAIN)			
Location of data storage:			
DATA QUALITY ISSUES			
Date of initial data quality assessment:			
Known data limitations and significance (if any):			
Actions taken or planned to address data limitations:			
Date of future data quality assessments:			
Procedures for future data quality assessments:			
PLAN FOR DATA ANALYSIS, REVIEW, & REPORTING			
Data analysis (responsible individual(s) and frequency): Country M&E Specialist			
Presentation of data: Tables and Graphs			
Data review (responsible individual(s) and frequency): Ongoing by Global M&E Team, quarterly by Country Manager			
Reporting of data: Quarterly and Annual Reports			
OTHER NOTES			
Notes on Baselines/Targets:			
PERFORMANCE INDICATOR VALUES			
Year	Target	Actual	Notes
2020			
2021			
2022			
THIS SHEET LAST UPDATED ON:			

PERFORMANCE INDICATOR REFERENCE SHEET 16			
Indicator 3.8: Quantity of biofortified food volume distributed through formal institutions/programs (in any form, i.e. raw or prepared/processed)			
Expected result 3: Availability of raw biofortified foods and food products increased			
Is this an Annual Report indicator? Yes, for reporting year(s) _____			
Is this an MFA indicator? No			
DESCRIPTION			
Precise definition: Total quantity of biofortified food (raw or processed/prepared) distributed through formal institutions or programs.			
Examples of institutions that distribute food are World Food program, hospitals, prisons, etc. Examples of programs that distribute food are school feeding programs, community-based meal programs, government run public distribution systems, etc.			
Verification of biofortification status of the food is required: for biofortified foods with visible traits this can be done by visual identification; for biofortified foods with non-visible traits this can be done by expert verification or lab assessment of nutrient content.			
Unit of measure: Number			
Calculation: Count and sum the quantities of biofortified food used in food distribution schemes by institutions/programs during the reporting period			
Disaggregated by: Food; Geographic location (e.g. country, region)			
Indicator type (output/outcome/impact): Outcome			
Rationale for Indicator:			
PLAN FOR DATA COLLECTION			
Data source: Records from institutions involved in food distribution			
Data collection method: Review of data/records from institutions involved in food distribution based on data sharing agreements			
Frequency and timing of data collection:			
Individual(s) responsible: Country Project Staff (specify HarvestPlus or GAIN)			
Location of data storage:			
DATA QUALITY ISSUES			
Date of initial data quality assessment:			
Known data limitations and significance (if any):			
Actions taken or planned to address data limitations:			
Date of future data quality assessments:			
Procedures for future data quality assessments:			
PLAN FOR DATA ANALYSIS, REVIEW, & REPORTING			
Data analysis (responsible individual(s) and frequency): Country M&E Specialist			
Presentation of data: Tables and Graphs			
Data review (responsible individual(s) and frequency): Ongoing by Global M&E Team, quarterly by Country Manager			
Reporting of data: Quarterly and Annual Reports			
OTHER NOTES			
Notes on Baselines/Targets:			
PERFORMANCE INDICATOR VALUES			
Year	Target	Actual	Notes
2020			
2021			
2022			
THIS SHEET LAST UPDATED ON:			

PERFORMANCE INDICATOR REFERENCE SHEET 17

Indicator 4.1: Number of value chain actors (e.g. seed producers, farmers, aggregators, processors, retailers, consumers) that are aware of biofortified foods

Expected result 4: Consumers and value chains actors demanding biofortified foods increased

Is this an Annual Report indicator? Yes, for reporting year(s) _____

Is this an MFA indicator? Yes – contributes to 8.1

DESCRIPTION

Precise definition: Total number of people that are aware (defined as having ever heard or seen) a biofortified food.

One is aware if they have ever heard/seen/consumed biofortified food. Information is shared on production, nutrition, and health benefits of biofortified foods through various platforms. These messages are aimed at creating awareness of biofortification in the population. Awareness of people on innovation and information diffusion in the population influences, decisions, choices, and the adoption of these new innovations (Diagne & Demont 2007).

Unit of measure: Number

Calculation: Count the number of people that have ever heard/seen/consumed a biofortified crop or food.

Disaggregated by: Food; Geographic location (e.g. country, region); sex (male, female); information source

Indicator type (output/outcome/impact): Output

Rationale for Indicator:

PLAN FOR DATA COLLECTION

Data source: Individuals

Data collection method: Household survey

Frequency and timing of data collection:

Individual(s) responsible: Country Project Staff (specify HarvestPlus or GAIN)

Location of data storage:

DATA QUALITY ISSUES

Date of initial data quality assessment:

Known data limitations and significance (if any):

Actions taken or planned to address data limitations:

Date of future data quality assessments:

Procedures for future data quality assessments:

PLAN FOR DATA ANALYSIS, REVIEW, & REPORTING

Data analysis (responsible individual(s) and frequency): Country M&E Specialist

Presentation of data: Tables and Graphs

Data review (responsible individual(s) and frequency): Ongoing by Global M&E Team, quarterly by Country Manager

Reporting of data: Quarterly and Annual Reports

OTHER NOTES

Notes on Baselines/Targets:

PERFORMANCE INDICATOR VALUES

Year	Target	Actual	Notes
2020			
2021			
2022			

THIS SHEET LAST UPDATED ON:

PERFORMANCE INDICATOR REFERENCE SHEET 18			
Indicator 5.1: Number of new policy/legislation documents that mention biofortified foods at any level (e.g. local, regional, national)			
Expected result 5: Biofortification integrated into policies and legal frameworks			
Is this an Annual Report indicator? Yes, for reporting year(s) _____			
Is this an MFA indicator? Yes – 7.1			
DESCRIPTION			
Precise definition: Total count of the documents in which biofortification is explicitly mentioned as a strategy or intervention to address micronutrient deficiencies.			
Documents include policies/plans/guidelines/strategies that were developed that mention biofortification. There must be clear evidence of the role of the institution that is counting/reporting the documents that include biofortification. Examples of evidence are documented advocacy meetings, funding of such processes etc. We aim to influence agriculture, food, nutrition and health related laws, legal frameworks, guidelines, declaration statements, regulations, administrative procedures, strategic or any other plans. These can be sub-national, national, regional or international.			
It is important to state the stage of development of any of these documents e.g.:			
a. currently under analysis (review of existing policy and/or proposal of new policy to include biofortification).			
b. currently going through public debate and/or consultation with stakeholders on the proposed new or revised policy to include biofortification or aspects of it. This could also include proposed repeal of an existing policy			
c. either newly drafted or revised – completed or in the 2 stages above			
d. d. has received official approval (legislation/decreree) of the new, revised, or repealed policy by the relevant authority (legislative or executive body) to include biofortification.			
Unit of measure: Number			
Calculation: Count and sum all documents of the same category per policy jurisdiction e.g. national, regional, international. Record only new ones in each category during each reporting period.			
Disaggregated by: Food; Geographic location (e.g. country, region);			
Indicator type (output/outcome/impact): Outcome			
Rationale for Indicator:			
PLAN FOR DATA COLLECTION			
Data source: Policy records			
Data collection method: Snapshot survey e.g. telephone and email to check with relevant authorities and to receive means of verification documents			
Frequency and timing of data collection:			
Individual(s) responsible: Country Project Staff (specify HarvestPlus or GAIN)			
Location of data storage:			
DATA QUALITY ISSUES			
Date of initial data quality assessment:			
Known data limitations and significance (if any):			
Actions taken or planned to address data limitations:			
Date of future data quality assessments:			
Procedures for future data quality assessments:			
PLAN FOR DATA ANALYSIS, REVIEW, & REPORTING			
Data analysis (responsible individual(s) and frequency): Country M&E Specialist			
Presentation of data: Tables and Graphs			
Data review (responsible individual(s) and frequency): Ongoing by Global M&E Team, quarterly by Country Manager			
Reporting of data: Quarterly and Annual Reports			
OTHER NOTES			
Notes on Baselines/Targets:			
PERFORMANCE INDICATOR VALUES			
Year	Target	Actual	Notes
2020			
2021			
2022			
THIS SHEET LAST UPDATED ON: To be added			

PERFORMANCE INDICATOR REFERENCE SHEET 19			
Indicator 6.1: Number of value chain actors (e.g. seed producers, farmers, aggregators, processors, retailers) that received capacity development support (e.g. technical, financial)			
Crosscutting: Contributes to expected results 1,2 and 3			
Is this an Annual Report indicator? Yes, for reporting year(s) _____			
Is this an MFA indicator? Yes – contributes to 8.1			
DESCRIPTION			
<p>Precise definition: Total number of value chain actors (e.g. seed producers, farmers, aggregators, processors, retailers) whose received capacity development support (i.e. technical or financial) or training on biofortification.</p> <p>Capacity development types include: (1) technical, and (2) financial support.</p> <p>Training types include: (1) long term academic at tertiary training institutions, (2) short term training that include exchange/learning visits or study tours by farmers/staff, (3) short term training of at least half day in length during which specified topics or modules are discussed, taught or shared.</p> <p>Technical support and trainings may focus on things such as, production; postharvest handling; nutrition education; processing and product development; and/or marketing.</p> <p>Do not consider sensitization/awareness meetings or simply information sharing as trainings.</p> <p>The indicator does not measure the number that gained knowledge of skills on certain concepts but just the number that was given access to some type of knowledge of skills, neither does it measure competence levels on those skills areas.</p>			
Unit of measure: Number			
Calculation: Count all value chain actors (VCA) that received capacity development support during the reporting period. Record an institution which received equipment as one VCA.			
Disaggregated by: Food; Geographic location (e.g. country, region); sex (male, female); capacity development type			
Indicator type (output/outcome/impact): Output			
Rationale for Indicator:			
PLAN FOR DATA COLLECTION			
Data source: Training records; financial records			
Data collection method: a census count of all people that were trained, received financial support and or equipment			
Frequency and timing of data collection:			
Individual(s) responsible: Country Project Staff (specify HarvestPlus or GAIN)			
Location of data storage: Partner M&E records and Country M&E database			
DATA QUALITY ISSUES			
Date of initial data quality assessment:			
Known data limitations and significance (if any):			
Actions taken or planned to address data limitations:			
Date of future data quality assessments:			
Procedures for future data quality assessments:			
PLAN FOR DATA ANALYSIS, REVIEW, & REPORTING			
Data analysis (responsible individual(s) and frequency): Country M&E Specialist			
Presentation of data: Tables and Graphs			
Data review (responsible individual(s) and frequency): Ongoing by Global M&E Team, quarterly by Country Manager			
Reporting of data: Quarterly and Annual Reports			
OTHER NOTES			
Notes on Baselines/Targets:			
PERFORMANCE INDICATOR VALUES			
Year	Target	Actual	Notes
2020			
2021			
2022			
THIS SHEET LAST UPDATED ON:			

PERFORMANCE INDICATOR REFERENCE SHEET 20

Indicator 7.1: Number of people who consume biofortified foods

Expected result 7: Increased consumption of biofortified foods

Is this an Annual Report indicator? Yes, for reporting year(s) _____

Is this an MFA indicator? Yes – 1.2.2.1 and contributes to 8.1

DESCRIPTION

Precise definition: Total number of individuals that consumed the biofortified food in any form (i.e. raw or processed/prepared) and in any amount.

Consumption of the biofortified food can occur through one of four pathways:

1. Biofortified foods are purchased by consumers;
2. Biofortified foods are given to consumers in informal setting (e.g. family/friends);
3. Biofortified foods are given to consumers in formal setting (e.g. institutions/programs);
4. Biofortified foods are allocated for home consumption by farming households.

Unit of measure: Number

Calculation: This indicator will be modelled based on production and availability data for each of the four pathways to consumption and then summed to get at total number of consumers.

Disaggregated by: Crop; Geographic location (e.g. country, region); sex (male, female)

Indicator type (output/outcome/impact): Impact

Rationale for Indicator:

PLAN FOR DATA COLLECTION

Data source: This indicator will be modelled based on results from indicators 3.4, 3.6a/b, 3.8

Data collection method: Not applicable

Frequency and timing of data collection:

Individual(s) responsible: Country Project Staff (specify HarvestPlus or GAIN)

Location of data storage:

DATA QUALITY ISSUES

Date of initial data quality assessment:

Known data limitations and significance (if any):

Actions taken or planned to address data limitations:

Date of future data quality assessments:

Procedures for future data quality assessments:

PLAN FOR DATA ANALYSIS, REVIEW, & REPORTING

Data analysis (responsible individual(s) and frequency): Country M&E Specialist

Presentation of data: Tables and Graphs

Data review (responsible individual(s) and frequency): Ongoing by Global M&E Team, quarterly by Country Manager

Reporting of data: Quarterly and Annual Reports

OTHER NOTES

Notes on Baselines/Targets:

PERFORMANCE INDICATOR VALUES

Year	Target	Actual	Notes
2020			
2021			
2022			

THIS SHEET LAST UPDATED ON:

Annex 2 – Template calendar of tasks

Example calendar shown for illustrative purposes – to be updated with actual list of indicators and shaded in when data collection will occur for each indicator for each country/crop combination

Key performance management tasks	2020							2021							2022							Responsible														
	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F		M	A	M	J	J	A	S	O	N	D				
Data collection by indicator																																				
1.1 Quantity of seeds/planting material available that is biofortified																																			M&E specialist	
1.2 Number of farmers that acquire seeds/planting material that is biofortified																																			M&E specialist	
2.1 Quantity of food volume harvested that is biofortified																																			M&E specialist	
2.2 Number of farmers that grow biofortified crops																																			M&E specialist	
2.3 Number of farmers that report increased production of biofortified foods																																			M&E specialist	
2.4 Number of farmers that sell biofortified foods to value chain actors																																			M&E specialist	
2.5 Number of farmers that report increased income from sale of biofortified foods																																			M&E specialist	
3.1 Quantity of biofortified food volume obtained by aggregators																																			M&E specialist	
3.2 Number of aggregators that procure biofortified foods																																			M&E specialist	
3.3 Number of processors that procure biofortified foods																																				M&E specialist
3.4 Quantity of raw biofortified food volume available in the market																																			M&E specialist	
3.5 Number of retailers selling raw biofortified foods																																				M&E specialist
3.6a Quantity of prepared or processed biofortified food volume available in the market																																				M&E specialist
3.6b Number of prepared or processed food products available that contain a biofortified food in the market																																				M&E specialist
3.7 Number of retailers selling food products that contain a biofortified food																																				M&E specialist
3.8 Quantity of biofortified food volume distributed through formal institutions/programs																																				M&E specialist

About GAIN

The Global Alliance for Improved Nutrition (GAIN) is a Swiss-based foundation launched at the United Nations in 2002 to tackle human suffering caused by malnutrition. GAIN mobilises public private partnerships and provides financial and technical support to deliver nutritious foods to those most at risk of malnutrition. GAIN's work to improve the consumption of nutritious and safe foods is based on three strategic objectives: increase consumer demand for nutritious and safe foods; increase accessibility to nutritious and safe foods; strengthen the enabling environment for designing, implementing, and scaling up effective programmes.

www.gainhealth.org

About HarvestPlus

HarvestPlus improves nutrition and public health worldwide by catalysing the development, production, and consumption of biofortified food crops that are rich in vitamins and minerals and providing leadership on biofortification evidence and technology. Working with public and private partners across the seed, crop, and food value chains, HarvestPlus helps advance healthy, inclusive, self-sustaining food systems that benefit the most vulnerable communities. HarvestPlus is part of the CGIAR research programme on Agriculture for Nutrition and health (A4NH).

www.harvestplus.org