



NUTRITION SOCIAL BEHAVIOR CHANGE AND COMMUNICATION (SBCC) GUIDANCE

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BACKGROUND

HOW THEY SHOULD
PREGNANT WOMAN
→ Should eat three
→ Should go for
→ Should eat ab
② FOOD THEY NEED
→ ~~eggs~~ simsim,
→ ~~meat~~ calcium, ~~fish~~
→ PROTEIN → fresh meat
→ Carbohydrates → Cassava
Rice
③ ADDITIONAL CARE THEY NEED
→ Taking to hospital for
→ Enough rest → regular
→ ~~pregnant~~ pregnant ~~women~~ women about pregnancy
→ Should not eat honey
→ Should not eat eggs
→ ~~should not eat~~ should not eat ~~sugar cane~~ sugar cane

A. BACKGROUND

Malnutrition affects a large population in Uganda. From the UDHS report of 2016, wasting, stunting and underweight are reported at 4%, 29% and 11%, respectively. The contributors of malnutrition are diverse and include; disease, inadequate access to food in the right quantities and quality which compounded with other multi sectoral factors include limited implementation of the supporting policy among others.

Among the main contributors of malnutrition is the low awareness of the available options and in some instances - the poverty levels within certain regions that limits homes from accessing enough food or providing the appropriate health care.

It is upon this background that the Government of Uganda with the support from the International Fund for Agricultural Development funded two projects in Kalangala region and northern Uganda. The objectives of the projects were to improve households' income by increasing productivity of farmers through adoption of commercial farming.

The VODPII project in Kalangala was to achieve its objective through promoting commercial production of oil palms thus increasing household incomes. In northern Uganda, PRELNOR aimed at increasing production of food crops especially maize, beans, cassava and rice so that farmers have excess surplus to sell.

VODPII

In 2003 the Government of Uganda, International Fund for Agricultural Development (IFAD), BIDCO and individual farmers in Kalangala under Kalangala Oil Palm Growers Trust (KOPGT) teamed up to establish an oil palm project with expertise from Malaysia, the pilot was rolled out on Bugala Island with plans to expand the project to other neighboring islands in the district.

The project was designed to improve the livelihood of the people of Uganda and Kalangala in particular, more so on the nutrition status of the poor and reduction on the national cost burden of importation of vegetable oils.

PRELNOR

Although only 20% of the Uganda population lives in Northern Uganda, it accounts for 38% of the poor in Uganda with 26% of all the chronically poor living in the area. IFAD included Northern Uganda, particularly the Acholi region, as a high priority in the IFAD project pipeline.

Most farmers returning from the IDP camps rely on the natural fertility of the soils, with minimal or no inputs leading to low yields and productivity. The sub-region has excellent potential for agricultural development, which is needed for lifting the rural poor out of poverty.

The PRELNOR project aims to achieve increased incomes through; adoption of improved farming practices, improving market processes and structures and providing climate specific information to enable improved farming.

The IFAD contracted Bioersity International to mainstream Nutrition Education and Behavior Change Communication into the PRELNOR and VODP II projects The objective of

the activity is to ensure that project beneficiaries are equipped with the right knowledge and skills to sustainably use their resources to improve their food security and nutrition status as well as that of their families. This document entails the proposed Social Behavior Change Communication guidance for mainstreaming nutrition into IFAD’s PRELNOR and VODP II projects.

The Nutrition Social Behavior Change Communication guidance is framed from the National Nutrition Advocacy and Communication Strategy 2015 – 2020 and specifically supporting the implementation; **Pillar 2: Promoting Healthy Ugandan Diets** - Households, communities, government and other stakeholders can contribute to the production and post-harvest management of nutritious local foods, which improves access to and consumption of healthy Ugandan diets.

This pillar focuses on the recognition that families; including young children can be well-nourished with a diet of locally grown and produced foods promoting the production and access to these foods and their use, and schemes to improve food storage and preservation.

Objectives:

The Nutrition SBCC Guidance aims to:

1. Increase knowledge about the nutrition behavioral priorities for the key participants in VODP II and PRELNOR target areas
2. Increase risk perception of the negative practices that expose the key participants to the dangers of poor nutrition and food insecurity
3. Increase practice of the promoted nutrition priority behaviors by the key participants in the VODP II and PRELNOR target areas.



Figure 1 Social Ecological Model

In line with the above, the Nutrition Social Behavior Change is also underpinned to the well-known and widely-accepted theoretical concept of the Social Ecological Model (McKee, et al. 2000), that acknowledges the importance of the interplay between the individual and the environment and considers multi-level influences on behavior. In this regard, the individual is considered important but not sufficient in the process of behavior change: many other factors influence behavior and must be addressed in their spheres of influence as highlighted in **Figure 1**.

A group of people are gathered around a table in a meeting room. One person is writing on a large sheet of paper with a blue marker. The paper has some text written on it, including "Gzav 3" and "Bodybuilding". The room has a corrugated metal wall and a window with yellow curtains. The text "PRIORITY AUDIENCES" is overlaid in large white letters with a black outline.

PRIORITY AUDIENCES

B. PRIORITY AUDIENCES

Using the Social Ecological Model, the priority audiences and directly influencing audiences have been selected based on key findings from situation analysis and project review exercise carried out by Bioversity International and a thorough review of all projects' documents. Amongst the direct influencers, special consideration has been made to the Household mentors, the unit leaders who play a crucial role in implementation of the project and who have direct link with the beneficiaries. Project Management Unit members have also been taken into consideration for their role in overall management and overseeing the project implementation including monitoring and evaluation.

The table below provides characteristics for audiences prioritized for SBCC interventions.

Priority Audiences	Key Characteristics
<p>Most affected: Families of the Oil Palm Growers (Kalangala).</p>	<p>Illiterate or have only basic literacy/ many have some primary school education.</p>
<p>Most affected: Families of the Crop Producers (From Northern Uganda</p>	<p>Live in rural areas, engage in petty trade or subsistence farming, and have low levels of income. Have access to a phone or radio. Belong to one or more groups for social protection, livelihoods or economic strengthening like Transforming Agriculture for Improved Livelihood (TRAIL), NUSAF III among others</p> <p>Husbands are key decision makers in the household.</p> <p>Consider local community health workers to be trustworthy and providers of valid advice.</p> <p>Motivated to provide the best for their children and keep them healthy.</p> <p>No or basic agricultural tools; no animals or only a reduced number (chickens, could have goats).</p> <p>Find difficult to access extension services.</p> <p>Large families / high dependency ratios (average 6.1 people)</p> <p>Some households are labour constrained Livelihood strategies include agriculture and low wage labour provided to better endowed households within communities and beyond</p>

Priority Audiences	Key Characteristics
<p>Project Management Unit Members</p>	<p>Selected by the project Coordination team and are knowledgeable about the project details related to implementation, monitoring and evaluation and expected outputs and outcomes</p> <p>Hold at least a diploma</p> <p>Resourceful and have knowledge about the project objectives and goals.</p> <p>Have low knowledge on nutrition</p> <p>Provide oversight supervision to project staff especially community-based facilitators, Community development officers and extension agricultural officers.</p>
<p>Directly influencing audiences: Extension service providers (unit leaders, household-mentors, community-based facilitators agriculture extension workers) religious, cultural and political leaders, sub county and district technical staff, and,</p>	<p>Are community/family elders or district leaders at the different levels but especially the LCIs</p> <p>Some hold positions of authority within the district for example land officers, development officers</p> <p>Educated (at least Primary Seven for the Household mentors)</p> <p>Influence decision making at their levels of leadership since they are trusted.</p> <p>They have a desire to serve the community and influence change.</p> <p>They are knowledgeable as community resource persons with experience working in the community</p>
<p>Directly influencing audience: Factory owners, produce dealers, factory workers</p>	<p>Their objective is to increase production, sales and profit</p> <p>Most are employers or businessmen</p> <p>Participate in several high-level meetings</p> <p>Own mobile phone and a number of economic assets</p>

A woman wearing a vibrant blue and red patterned headscarf and a pink and black patterned shirt is working in a field of green leafy vegetables. She is leaning over, tending to the plants. The background is a vast field of similar vegetation under a bright sky.

DESIRED CHANGES

C. DESIRED CHANGES, BARRIERS AND SBCC OBJECTIVES BY AUDIENCE

From the formative research and various consultative meetings, several desired actions/ behaviors are defined for each target audience as shown in the table below. barriers and facilitators to the desired behaviors have also been identified and synchronized with behavioral determinants to guide the design and dissemination of the key SBCC messages.

Desired actions	Barriers to the desired change	Key Messages
Most affected: Oil Palm Growers (Kalangala) VODP II		
<ol style="list-style-type: none"> 1. Practice modern and sustainable agricultural practices: <ol style="list-style-type: none"> i. Inter crop appropriately in the first two years ii. Develop and Maintain nutritious backyard gardens. iii. Appropriate Use fertilizers and /manure for the food crops 2. Balance land allocation for production of commercial crops and food crops based on the proportion i.e. family needs and available land size). 3. Male inclusion and involvement in matters of food and nutrition 4. Allow women to have a say on land matters especially with regards to what should be produced on what size and type of land. 5. Stop destruction of forests and biodiverse sites. 	<p>Knowledge: Limited knowledge about.</p> <ol style="list-style-type: none"> 1. Desired smart modern farming methods that would sustainably support food and nutrition security. 2. Causes and consequences of Malnutrition especially for the different family members 3. Locally available nutritious food options/ dietary diversity. 4. Benefits of allocation of income for food and nutrition. 5. Role of biodiversity conservation to food and nutrition security and the ecosystem services. 6. Benefits of apportioning land to both commercial and food crop production 7. On how to foster family dialogue regarding resource allocation especially land and income for food and nutrition security <p>Efficacy: Low risk perception about the dangers of.</p>	<ol style="list-style-type: none"> 1. There is a range of modern farming methods that you can choose from as oil palm oil grower to meet the nutrition and food security needs of your family. Intercropping with nutritious crops in the first years and having backyard gardens that use techniques applicable for limited land and water. 2. Malnutrition has serious consequences and can be treated and prevented. Talk to a knowledgeable community resource person about the causes, assessment and management of malnutrition 3. There is plenty of locally available nutritious food options, their function to the body, their appropriate utilization, preparation/combination for healthier diets. 4. With increase in income it is possible to allocate it well and use it to meet family nutrient needs. 5. Bio diverse sites are important in ensuring food and nutrition security and deforestation affects food availability.

Desired actions	Barriers to the desired change	Key Messages
<p>6. Families allocate income for rich and diverse foods for consumption</p>	<ol style="list-style-type: none"> 1. Causes and Consequences of Malnutrition. 2. Continued practice of poor agricultural techniques like mono-cropping, planting methods, inappropriate application of fertilizers and planting timing among others 3. Prioritization of money for food acquisition. <p>Ability to act:</p> <ol style="list-style-type: none"> 1. Land use: most land has been set aside for oil palm production and thus limited land for food production. 2. Increased pressure on land due to limited land for farming leads to deforestation and destruction of biodiverse sites. 3. Weak enforcement of regulations on land use such as the requirement to set aside 1 -2 acres for food. 4. Modern agricultural practices: most farmers can no longer intercrop food crops with their oil palm trees after 2 years of establishment of the production 5. Nutrition: limited availability of food varieties in local markets. Expensive agricultural produce. Limited food supply especially of animal proteins. Since the food is bought from the mainland 6. Lack of diversity in economic activities: tough regulations on fishing forced most 	<ol style="list-style-type: none"> 6. Just like women, men have a very important role in family food and nutrition matters. These include but not limited to; apportioning money for food purchase, supporting women to seek health services, and intra-household food distribution and apportioning land to food crop production. 7. Assigning women land for food production ensures food and nutrition security of the home.

Desired actions	Barriers to the desired change	Key Messages
	<p>community members into palm oil production. Limited earning makes it difficult to set aside/ save money for purchase of food.</p> <p>7. Social and gender dynamics that influence how resources (land, income) are used. Such as the men are not involved or even aware of the problem of malnutrition and the role of appropriate nutrition to health of different family members so their priorities when it comes to land allocation for production and income allocation are different and do not favor nutrition. increased earnings for those engaged in oil palm production and its increased demand discourages production of food crops</p> <p>8. Women are not allowed to make decisions about land matters; in some cases, men allocate women very little land for growing food crops. Women are largely engaged in food crop production; food preparation is only a responsibility of the women –they face the difficulty in putting food on the table. Men are responsible for selling the produce and as such normally sell everything leaving the home with no food; some cultural norms prevent women from eating certain foods e.g. nutritious foods like chicken, kidney, eggs etc.</p>	

Desired actions	Barriers to the desired change	Key Messages
Most affected: Crop Producers (From Northern Uganda) PRELNOR		
<ol style="list-style-type: none"> 1. Practice modern agricultural practices including: <ol style="list-style-type: none"> a. Inter crop appropriately to ensure diversity in food production. b. Adopt mechanization. c. Maintain nutritious backyard gardens. d. Use of fertilizers and manure. e. Proper post- harvest handling techniques to limit loss of nutrients and farm produce 2. Produce both for home consumption and sell. 3. Ensure a diverse diet at Household level 4. Allow women to have a say on land matters. 5. Engage and include men in matters of food and nutrition 6. Stop destruction of forests and biodiverse sites 	<p>Knowledge: Limited knowledge about.</p> <ol style="list-style-type: none"> 1. Sustainable modern farming methods that support food and nutrition as well as income. 2. Causes and Consequences of Malnutrition. 3. Locally available nutritious food options/ dietary diversity. 4. Benefits of saving with a purpose and allocating some money to be used to meet food and nutrition needs. 5. Benefits of biodiverse sites and its linkages to yield and food and nutrition security. 6. Dangers of deforestation. <p>Gender norms: women are not allowed to make decisions about land matters, only women are largely engaged in food crop production, food preparation is only a responsibility of the women – it is only they who face the difficulty in putting food on the table. Women are not allowed to eat certain foods.</p> <p>Efficacy: Low risk perception about the dangers of.</p> <ol style="list-style-type: none"> 1. Malnutrition (Stunting, wasting and underweight in children, Anemia in 	<ol style="list-style-type: none"> 1. There is a range of modern farming methods including mechanization to increase productivity and reduce the Labour burden on the women. 2. Malnutrition has serious consequences and easily be treated and prevented if handled early. 3. Talk to a knowledgeable community resource person about the causes, assessment and management of malnutrition. There is plenty of locally available nutritious food options, their function to the body, their appropriate utilization, preparation/combination for healthier diets. 4. Joining farmer groups such as VSLAs, SACCOS, cooperative to enjoy benefits of collective bargaining and savings 5. Allocate food for home consumption and commercial purposes 6. Biodiverse sites are important in ensuring food and nutrition security and deforestation affects food availability

Desired actions	Barriers to the desired change	Key Messages
	<p>children and women of reproductive age).</p> <ol style="list-style-type: none"> 2. Continued practice of poor agricultural techniques such as use of rudimentary tools during production, mono cropping, late weeding. 3. Lack of savings. <p>Ability to act:</p> <ol style="list-style-type: none"> 1. Land use: large tracts of land available for commercial agriculture. Lack of mechanization makes it hard to effectively use the available land for commercial agriculture. 2. Continued preference for individual enterprise makes it hard for farmers to form cooperatives. 3. Enforcement of laws and regulations: lack of enforcement of laws on land use continuously lead to degradation of forests and biodiverse sites. 4. Nutrition: limited availability of food varieties in local markets. Expensive agricultural produce. Limited food supply especially of animal proteins <p>Motivation: increased and easy earnings from charcoal production encourages deforestation and destruction of biodiversity sites</p>	<p>and water catchment that would support production.</p> <ol style="list-style-type: none"> 7. Men like women have a major role to play in matters affecting nutrition and food security in a home. These include but not limited to; apportioning money for food purchase, supporting women to seek health services, and intra-household food distribution and allocating available land to support production of nutritious foods, Men can also reduce work load for women by personally supporting them or hiring help. 8. Assigning women land for food production ensures food and nutrition security of the home.

Desired actions	Barriers to the desired change	Key Messages
Directly influencing audiences: service providers (unit leaders, household-mentors, community-based facilitators' agriculture extension workers, leaders etc.)		
<ol style="list-style-type: none"> 1. Provide relevant information on backyard farming, mixed farming, environmental conservation, and nutrition to food crop and oil palm producers. 2. Challenge the social and gender norms that promote, environmental degradation and expose families to the risk of malnutrition. 3. Enforce available laws and policies aimed at increasing food crop production. 	<p>Barriers</p> <ol style="list-style-type: none"> 1. They do not have full knowledge on the key practices being addressed. 2. Low skills on the key practices 3. Limited motivation to fully engage the community members 4. Limited acceptance and integration with the existing structures <p>Facilitators</p> <ol style="list-style-type: none"> 1. Based within the communities 2. Trusted resource persons 3. Desire to have better communities. 	<ol style="list-style-type: none"> 1. There are social and economic benefits with the recommended practices and behaviors among food crop and oil palm producers. 2. Demystifying the negative social norms and attitudes that prevent appropriate nutrition practices and uptake of the recommended practices and behaviors among food crop and oil palm producers that would positively influence food and nutrition security. 3. Available laws and policies on land use for food crop production enforced.
Directly influencing audience: Factory owners and produce dealers.		
<ol style="list-style-type: none"> 1. Offer favourable pricing for the farmers produce. 2. Encourage farmers to apportion land for food productions 	<ol style="list-style-type: none"> 1. Profit over rules everything. 2. Weak government support to the farmers leaving them at the mercy of the produce dealers. 3. Competition with imported cheap options making it difficult for the producers to stay afloat while offering good prices to the farmers. 	<ol style="list-style-type: none"> 1. Healthy and satisfied farmers are key source for the continued supply of your raw materials 2. Poor nutrition and food insecurity are a threat to the profitability of your business

A close-up photograph of a person's hand holding a small, vibrant green seedling with two leaves and a small bud, growing out of a small amount of dark soil. The background is a soft, out-of-focus green, suggesting an outdoor setting. The text 'IMPLEMENTATION PLAN' is overlaid in white, bold, sans-serif font across the middle of the image.

IMPLEMENTATION PLAN

E. IMPLEMENTATION PLAN FOR MAINSTREAMING NUTRITION EDUCATION AND BEHAVIOR CHANGE COMMUNICATION:

1. Stakeholder engagement meetings.

These will be conducted at district and sub-country level. Some of the key activities will include community dialogue meetings, PMU orientation meetings, training of project beneficiaries

At the district level. The following persons should be engaged; Project focal persons, DNCC members (in their absence, heads of departments and a civil society representative), health service commission members and district elected leaders.

At the sub-county level. BI should engage the following persons: Sub-county nutrition coordination committee members. In their absence, ensure that you sensitize the following stakeholders; health facility in charges, elected councilors, project coordinators (PMU), agricultural extension workers, sub-county community development officers, parish leaders and health assistants.

Mode of operation: Project staff (OPM/BI), ministry of health officials, representatives from ministry of agriculture and the nutrition focal person should conduct the sensitization meetings. These in addition to two district representatives should then cascade the sensitization meeting at sub-county level.

Stakeholder engagement meetings should be conducted at the start of nutrition education and behaviour change communication mainstreaming activities.

SBCC products: SBCC guidance document, Fact sheets, Stakeholder sensitization manual, extension service providers training manuals, job aids for the extension service providers.

2. Orientation of project management unit members

Project management unit members will receive a one-day training on: basic concepts of nutrition, nutrition assessment and classification, food groups, meal planning, how to achieve a good nutrition status and nutrition related indicators.

The training objectives will be to.

1. Equip PMUs with the right knowledge to support project beneficiaries make better choices aimed at improving the nutrition status of the family
2. Build the skills of PMUs to supervise project activities.

Persons to conduct trainings will include BI staff, MoH officials and certified nutrition facilitators.

Materials to use, training manuals and counselling cards.

At the end of the orientation of this team, PMUs will be in position to; identify key nutrition aspects to monitor in the project, decide essential indicators to monitor progress on mainstreaming activities and design an orientation and supervision schedule for the beneficiaries.

3 Capacity building for project extension service providers

These include household mentors, unit leaders, community health workers including VHTs and peer educators.

The capacity building objectives for this group are to.

1. Equip extension service providers with the necessary skills to mentor project beneficiaries and
2. Equip extension service providers with skills and knowledge to engage with local leaders within the project catchment areas.

Mode of operation; members of the PMU, BI and district nutrition focal persons will conduct the training with this group.

Materials to use; Training manual covering all the food and nutrition concepts related to the projects including indicators and their measurements. The sessions should be as interactive as possible and illustrative as possible

based on the low and diverse level of illiteracy of the expected

4. Community dialogue meetings.

These should be held at village/parish level with key project beneficiaries. The objectives of the meetings are

1. Create awareness about the nutrition problem within the local
2. Seek opinions from the community about nutrition and food security challenges,
3. Create awareness of proposed solutions on how best to address the nutrition gaps within their community.
4. Garner public commitment to improve the nutrition status of the households

Mode of operation; Any three members from the oriented sub-county team should conduct the dialogue meetings. Preference should be given to the parish chiefs, agricultural extension workers and nutrition focal persons (in their absence, a health facility representative).

Materials to use, fact sheets, community sensitization manual, flyers, mass sensitization equipment.

5. Training of project beneficiaries

All project beneficiaries will receive a training on basic concepts of nutrition, nutrition assessment, meal planning and how to achieve a good nutrition status. The training objective will be to equip the beneficiaries with the right knowledge to make better choices aimed at improving the nutrition status of the family.

Mode of operation; this training will be integrated into on-going VSLA trainings/ meetings. It should be delivered in a modular manner to allow beneficiaries room to implement simple concepts learnt.

Persons to conduct trainings will include project staff, MoH officials and certified nutrition facilitators.

Materials to use, training manuals and counselling cards.

6. Development of community friendly job aids

With the use of the creative briefs Biodiversity International will conduct a mapping and review exercise of the existing job aides and subsequently customize those that are relevant and develop new ones to address gaps.

7. Ongoing mainstreaming activities

On finalization of training, the project should ensure that taught concepts are implemented as a way of achieving good nutrition status. The objectives of ongoing capacity building activities are.

1. Support beneficiaries to practice acquired nutrition concepts
2. Promptly address challenges encountered by beneficiaries.
3. Ensure that project activities are continuously monitored.
4. Actively collect data to monitor activity progress.

These activities will include mentorship, support supervision to the project beneficiaries and data collection by the mentors

Mode of operation; these should be done on a monthly basis through home visits to members. The persons to carry out ongoing training will include, PMU leaders, household mentors and sub county-trained leaders.

Materials: counselling cards, household checklists, support supervision tools, any other SBCC materials to be shared with clients.

8. Mass media

The role of mass media is to reach out to a large population of both project beneficiaries and other people within the project catchment area with tips on achieving good nutrition as well as addressing any impending challenge faced in the community. It is also the aim of this channel to build confidence in the population to adopt the desirable nutrition and food security practices.

Mode of operation; the project should use a mix of several mass media products including; radio talk shows, radio Vignettes, top of the hour reminders and DJ mentions to educate the population.

The persons to participate in radio talk shows include district leaders, health officials, community influencers, project staff and representatives from the community.

Materials to use; Talk show guides, DJ mention notes, produced vignettes and top of the hour reminders delivering key nutrition messages.

Work plan.

To achieve the most out of all SBCC activities, it's important that mass media activities are implemented at a time when other local level SBCC activities are running, more details are illustrated in the matrix below.

Activity		Timeline/months											
		1	2	3	4	5	6	7	8	9	10	11	12
1	Stakeholder engagement meetings (National and district level leaders)	X	X										
2	Orientation of project management unit members	X											
3	Capacity building for project extension service providers												
4	Community dialogue meetings			X	X								
5	Ongoing capacity building activities						X	X	X	X	X	X	X
6	Development of community friendly job aids				X								
7	Mass media												
8		X		X			X	X	X	X	X	X	X

A group of people are gathered around a table in a meeting room. One person in the foreground is writing on a large sheet of paper. The paper has handwritten text: "CHILDREN" and "How They...". The room has red chairs and a table with a water bottle. The overall atmosphere is collaborative and focused.

MONITORING AND EVALUATION

F. MONITORING AND EVALUATION

To determine the effectiveness of the interventions the following monitoring and evaluation activities will be implemented at process and outcome level.

a) Process Level

At this level the following activities will be carried out

Activity	Description	Frequency	Responsible Party
Activity/ Processing Monitoring	To document the various processes involved in the planning and implementation of the various activities described in this strategy data will be collected and stored in a secure data base. The project's existing data collection tools will be completed at various stages of activity implementation. From the submitted data (in the data base) various reports including monthly and quarterly will be generated to inform ongoing activity implementation. In addition, where possible all field-based activities will be geo-tagged to enhance planning and accountability. GPS maps will be produced to visualize the various results from activity implementation.	On-going	
Activity After Action Reviews	At the end of each activity implemented a review session with all the key stakeholders involved will be held to document lessons and recommendations for future activities. These will be documented as part of the activity report.	End of every activity	
Periodic Reviews	Using the data generated from activity implementation, the planned annual survey for tracking output indicators and, data from consortium and other implementing partners, quarterly and annual review and planning sessions will be held. From these process reports, and work plans will be generated to guide implementation of SBC interventions	TBD	

Outcome Evaluation:

At the core of this plan will be the measurement of output/outcome indicators that measure whether the various communication objectives that are supposed to address the various determinants to change have been positively affected. The table describes how each of the output/come indicators will be measured.

Indicator	Data source & Disaggregation
Nutrition Specific Indicators	
Percent who strongly believe that there are actions they can take to improve household nutrition	Annual survey
Percent who can report consumption of at least 4 food groups.	Mid-term assessment
Proportion of households with functional kitchen gardens	Spot checks
Proportion of households that are actively using food storage facilities.	Annual reports
Number of acres gazetted for food production within project sites	Mid-term assessments
Proportion of households assigning more than 30% of their income to food purchase	Mid-term assessments
Percent of audience (mothers/caretakers) who can prepare nutrient dense meals	End line
Percent of audience who feel confident that they can feed the children under five with the minimum recommended diet.	Spot checks End line survey
Perceived percent of friends and community members who currently practice recommended IYCF practices. 1. Exclusive breastfeeding 2. Age appropriate complementary feeding	Spot checks End line survey
Perceived percent of friends and community members who currently practice recommended WASH practices.	End line
Children under 5 within the target area that are up to date with routine immunization	Monthly reports
Number of beneficiaries receiving nutrition assessment. Disaggregate by 1. Pregnant and lactating women 2. Children 6-59 months 3. The elderly	Monthly reports
SBCC Specific Indicators	
Percent of oil palm & food crop producers exposed to interventions.	Data Source: Cross sectional survey (Pre, midline and post) Disaggregation: Age, Sex & district

Indicator	Data source & Disaggregation
<p>Percent of oil palm & food crop producers with correct knowledge on the:</p> <ol style="list-style-type: none"> 1. Allocating household income to food 2. Good nutrition practices 3. Male Involvement in matters affecting nutrition and food security in a home. These include but not limited to; apportioning money for food purchase, supporting women to seek health services, and intra-household food distribution 4. Modern and sustainable agricultural methods to enable increased food production. 5. Increase the amount of land set aside for food production. 6. Saving of biodiverse sites e.g. swamps and forests. 7. Women assigned land for food production. 8. Protection of the environment through afforestation and protection 	<p>Data Source: Cross sectional survey (Pre, midline and post)</p> <p>Disaggregation: Age, Sex & district</p>
<p>4. Percent of oil palm & food crop producers with increased risk perception about the dangers of:</p> <ol style="list-style-type: none"> 1. Malnutrition. 2. Continued practice of poor agricultural techniques. 3. Not allocating a portion of money /income to food and nutrition. 	<p>Data Source: Cross sectional survey (Pre, midline and post)</p> <p>Disaggregation: Age, Sex & district</p>
<p>Percent of oil palm & food crop producers who think the practicing the promoted behaviours is necessary to improve their wellbeing.</p>	<p>Data Source: Cross sectional survey (Pre, midline and post)</p> <p>Disaggregation: Age, Sex & district</p>
<p>Percent of oil palm & food crop producers who feel the confident to challenge the negative norms that promote, environmental degradation and expose families to the risk of malnutrition.</p>	<p>Data Source: Cross sectional survey (Pre, midline and post)</p> <p>Disaggregation: Age, Sex & district</p>
<p>Percent of farmers satisfied with the prices offered by local producers and dealers.</p>	<p>Data Source: Cross sectional survey (Pre, midline and post)</p> <p>Disaggregation: Age, Sex & district</p>

Indicator	Data source & Disaggregation
Percent of farmers who allocate at least 1 - 2 acres of land for food crop production.	<p>Data Source: Cross sectional survey (Pre, midline and post)</p> <p>Disaggregation: Age, Sex & district</p>
<p>5 Percent of oil palm & food crop producers who practice the promoted behaviors:</p> <ol style="list-style-type: none"> 1. Saving money for food supplementation 2. Good nutrition practices 3. Modern agricultural methods. 4. Increase the amount of land set aside for food production. 5. Saving of biodiverse sites. 6. Women allowed to have a say on matters land. 7. Protection of the environment through afforestation and protection and restoration of biodiverse sites. 	<p>Data Source: Cross sectional survey (Pre, midline and post)</p> <p>Disaggregation: Age, Sex & district</p>



APPENDIX

APPENDIX A: KEY NUTRITION MESSAGES

Nutrition specific messages

1. Couples discuss, agree to grow and/or buy nutrient-rich foods: animal- source foods, fruit and vegetables
2. Mothers initiate exclusive breastfeeding within the first hour of delivery and continue providing only breast milk on demand, day and night, for 6 months
3. Mothers, fathers and other caregivers initiate age-appropriate complementary feeding at 6 months, ensuring food diversity (including animal source foods), sufficiently nutrient-dense preparations, and adequate quantity and feeding frequency, while continuing to breastfeed until 24 months and beyond
4. Mothers feed children appropriately and increase breastfeeding and care during and following illness episodes, including giving ORS (and zinc) for diarrhea
5. Pregnant and lactating women eat a more diverse daily diet that includes animal-source foods and micronutrient- rich fruits and vegetables (appropriate feeding at different life stages; 9 months of pregnancy, 0 – 6 months of exclusive breastfeeding, 6 – 23 months of complimentary and 23 – 59 months).
6. Pregnant and lactating women rest when they can and seek help with heavy, labour intensive chores/work
7. Pregnant women and postpartum women (first 6 months) take daily iron foliate supplement
8. Parents and other family members wash hands with soap before preparing food and feeding /eating
9. Family members have and maintain a grain storage facility
10. Parents and family members prepare and/or purchase snacks from locally grown products at the market rather than sugary drinks, sweets or biscuits Parents and other caregivers comply food and feeding /eating with scheduled clinic visits and medical

Nutrition Sensitive messages

1. Family members treat, store, and retrieve water safely (follow National Water Treatment programme guidelines)
2. Families and communities create clean, safe living areas and play spaces for children free of animal faeces, pests and rubbish.
3. Parents seek monthly growth monitoring and promotion services for children in first two years of life.
4. Parents immunize infants and children at or near ideal schedule through local health services.
5. Families and communities create clean, safe living areas and play spaces for children free of animal faeces, pests and rubbish.
6. Couples prepare and follow plan in the mother's antenatal passport (includes 4 ANC visits, skilled attendant at birth, emergency delivery plan): take malaria prophylaxis, deworming, TT, iron-folate tablets.
7. Parents and other caregivers seek health care services immediately after noticing child-health/ nutrition danger sign(s) example: if fever persists for 24 hours.
8. Couples and family members seek health care services immediately after noting maternal-health danger sign(s), including signs of infection or bleeding.

9. Parents and other caregivers seek health care services immediately after noticing child-health/ nutrition danger sign(s) example: if fever persists for 24 hours.
10. Practice appropriate feeding during adolescence.
11. Parents and family members seek agriculture extension services and learn about nutrient-dense varieties of fruits and vegetables, crop diversification dietary, food pyramid and balanced diets and optimal growing/ harvest/post-harvest processing for them.
12. Couples and family members seek health care (antenatal and postnatal care, immunization and supplementation).

APPENDIX B: CREATIVE BRIEFS

I. Creative Brief for Project Management Unit Members

Malnutrition affects a large population in Uganda. From the UDHS report of 2016, wasting, stunting and underweight are reported at 4%, 29% and 11%, respectively. The contributors of malnutrition are diverse and include disease, inadequate access to food which compounded other multi-sectoral factors include limited implementation of the supporting policy among others.

Among the other main contributors of malnutrition is the low awareness of the available options and in some instances - the poverty levels within certain regions that limits homes from accessing enough food or providing the appropriate health care.

It is upon this background that the Government of Uganda with the support from the International Fund for Agricultural Development funded two projects in Kalangala region and Northern Uganda. The objectives of the projects were to improve households' income by increasing productivity of farmers through adoption of commercial farming. In addition to increasing farm productivity and household incomes, the project also aims at ensuring that beneficiary households achieve the recommended food and nutrition security.

These are key influencers in the uptake of the key practices. It should be noted that the projects have also streamlined structure that includes the unit leaders and household mentors. This enables the projects to strengthen the Interpersonal communication and dialogue within the communities and households. Therefore, it's important that the Project Management Unit members are empowered with the relevant skills and tools in order to engage the crop producers and palm oil producers within the respective regions.

Key Objectives:

1. Ensure PMUs support implementation of nutrition related actions and follow through to ensure progress is monitored.
2. Encourage Project Management Unit members to endorse the key practices promoted for food security and nutrition
3. Engage Project Management Unit members to encourage their constituents especially home mentors to follow food security and nutrition practices recommended under the two projects
4. Engage Project Management Unit members to advocate for food security and nutrition frequently at various forums.

Key Audiences:

1. Project Management Unit members
2. Project Management Unit members

Key Benefit:

If you endorse the food security and nutrition practices, you recognized as a key resource person

Key Points to include:

1. Food Security and Good Nutrition, for great leaders who love their communities
2. Food Security and Good Nutrition help to keep the children healthy and to grow strong
3. Food Security and Good Nutrition increases the households and community productivity

How will our message be seen/heard?

Think of innovative ways of ensuring your audience gets the message.

1. Fact Sheets
2. Job Aides
3. Support Supervision and Continuous mentorship
4. Orientation/ Trainings
5. Stakeholder meetings/ Engagements

What is the tone of voice?

e.g. Plush, stylish, attractive, confident?

6. Motivational
7. Inspirational
8. Credible
9. Trustworthy

2. Home Visits by Household Mentors

Background

Malnutrition affects a large population in Uganda. From the UDHS report of 2016, wasting, stunting and underweight are reported at 4%, 29% and 11%, respectively. The contributors of malnutrition are diverse and include disease, inadequate access to food which compounded other multi-sectoral factors include limited implementation of the supporting policy among others.

Among the other main contributors of malnutrition is the low awareness of the available options and in some instances - the poverty levels within certain regions that limits homes from accessing enough food or providing the appropriate health care.

It is upon this background that the Government of Uganda with the support from the International Fund for Agricultural Development funded two projects in Kalangala region and Northern Uganda. The objectives of the projects were to improve households' income by increasing productivity of farmers through adoption of commercial farming.

In addition to increasing farm productivity and household incomes, the project also aims at ensuring that beneficiary households achieve the recommended food and nutrition security.

Social Behavior Change Guidance and the projects identified interpersonal communication as a main communication channel that will address the determinants to change. The roll out of the interpersonal communication will seek to achieve the right saturation and optimal reach to spur the change processes. The Interpersonal communication activities will range from the community dialogues, public events but specifically this creative brief will focus on the home visits that will be conducted by the Household mentors and unit leaders within the project implementation structures.

Target audiences: Primary audience

1. Palm Oil Producing Households
2. Food Crop Producing Household

Secondary audience

1. Household Mentors
2. Agricultural extension workers
3. Community based health workers
4. Unit leaders

Objectives

1. Provide home based support to households to practice desired behaviour.
2. To provide suggested things to say that will be acceptable and feasible
3. To suggest ways to discuss and negotiate difficult reactions
4. To provide ideas for follow up actions, especially related to realistic positive behaviours
5. To motivate secondary audiences to reach out to the person with social support

Desired behaviours by the end of the campaign, households should be able to

1. Practice desired farming methods
2. Store enough food to last the lean period
3. Families should be able to adopt appropriate health and nutrition seeking behaviour.
4. Limit or control non-desirable behaviours leading to environmental destruction and degradation.

Key benefits

1. Primary audience: If you adopt the food security and good nutrition practices, you will get more from your agriculture production efforts
2. Secondary audience: If you support your community members, you will help your community remain resilience to food insecurity and malnutrition challenges

Key points to incorporate

If beneficiaries practice the promoted actions, they will be able to increase household food production,

incomes and the nutrition status of their households.

Tone and image: the persons conducting home visits should be firm, empathetic and knowledgeable. The

local community should trust them.

Other creative considerations

Counselling guides used should be mainly pictorial and easy to use.

How to; procedure for conducting a home visit.

STEP 1: Greetings and introductions

1. Introduce the project and oneself
2. Introduce purpose of visit

STEP 2: Assess situation together

1. Understand the client's needs
2. Understand barriers to action
3. Assessing ability to change
4. Understand the motivating factors

STEP 3: Focus on key issues

1. Correct wrong information
2. Tackle barriers
3. Listen more, talk less

STEP 4: Agree on desirable doable actions

1. Identify areas that need behavioural change
2. Agree on timelines for action

3. Agree on timeline for follow-up

STEP 5: Set return date

Agree on return date. The time should be realistic enough to allow the client to implement agreed upon actions

Creative Brief for Opinion Leaders

Malnutrition affects a large population in Uganda. From the UDHS report of 2016, wasting, stunting and underweight are reported at 4%, 29% and 11%, respectively. The contributors of malnutrition are diverse and include disease, inadequate access to food which compounded other multi-sectoral factors include limited implementation of the supporting policy among others.

Among the other main contributors of malnutrition is the low awareness of the available options and in some instances - the poverty levels within certain regions that limits homes from accessing enough food or providing the appropriate health care.

It is upon this background that the Government of Uganda with the support from the International Fund for Agricultural Development funded two projects in Kalangala region and Northern Uganda. The objectives of the projects were to improve households' income by increasing productivity of farmers through adoption of commercial farming. In addition to increasing farm productivity and household incomes, the project also aims at ensuring that beneficiary households achieve the recommended food and nutrition security.

Social Behaviour Change Guidance refers to the opinion leaders as the community gate keepers. These are key influencers in the uptake of the key practices. It should be noted that the projects have also streamlined structure that includes the unit leaders and household mentors. This enables the projects to strengthen the Interpersonal communication and dialogue within the communities and households. Therefore, it's important that the influencers are empowered with the relevant skills and tools in order to engage the crop producers and palm oil producers within the respective regions.

Key Objectives

1. Encourage opinion leaders to endorse the key practices promoted for food security and nutrition
2. Engage opinion leaders to encourage their constituents to follow food security and nutrition practices
3. recommended under the two projects
4. Engage opinion leaders to advocate for food security and nutrition frequently at various forums.

Key Audiences

1. Opinion leaders

Key Benefit

If you endorse the food security and nutrition practices, you recognized as a great leader

Key Points to include

1. Food Security and Good Nutrition, for great leaders who love their communities
2. Food Security and Good Nutrition help to keep the children healthy and to grow strong
3. Food Security and Good Nutrition increases the households and community productivity

How will our message be seen/heard?

Think of innovative ways of ensuring your audience gets the message.

1. Fact Sheets
2. Orientation/ Trainings
3. Stakeholder meetings/ Engagements

What is the tone of voice? e.g. Plush, stylish, attractive, confident?

1. Motivational
2. Inspirational
3. Credible
4. Trustworthy

4. Creative Brief for Radio Spots

Background

Malnutrition affects a large population in Uganda. From the UDHS report of 2016, wasting, stunting and underweight are reported at 4%, 29% and 11%, respectively. The contributors of malnutrition are diverse and include disease, inadequate access to food which compounded other multi-sectoral factors include limited implementation of the supporting policy among others.

Among the other main contributors of malnutrition is the low awareness of the available options and in some instances - the poverty levels within certain regions that limits homes from accessing enough food or providing the appropriate health care. It is upon this background that the Government of Uganda with the support from the International Fund for Agricultural Development funded two projects in Kalangala region and Northern Uganda. The objectives of the projects were to improve households' income by increasing productivity of farmers through adoption of commercial farming. In addition to increasing farm productivity and household incomes, the project also aims at ensuring that beneficiary households achieve the recommended food and nutrition security.

Social Behavior Change Guidance identified radio is required to address the specific determinants identified for each of the audiences, these include; initial resistances or issues tied to the adoption of the key promoted practices aimed at improving the food security and nutrition which include:

1. Low risk perception about the dangers of, malnutrition, continued practicing of poor agricultural techniques and the lack of saving
2. Lack of support/endorsement from the key influencers like the factories and dealers

Target audiences

Primary

1. Palm Oil Growers (Kalangala)
2. Food Crop Growers (Northern Uganda) Secondary:
3. Factories and Dealers in produce

Objectives (actions that should be taken by the audiences after they are exposed to the campaign):

4. Seek correct knowledge on the key practices from Home Mentors
5. Develop Action Plans to implement at least two of the key practices being promoted under the project
6. Uptake at least two key practices being promoted under the project

Obstacles:

1. Increased earnings for those engaged in oil palm production discourages production of food crops

2. Increased and easy earnings charcoal production encourages deforestation and destruction of the biodiversity sites

Key benefits (benefits that the audiences will experience when doing the actions promoted in the objectives):

1. Availability of diverse foods will ensure the healthy household which in turn increases the productivity and saves you resources on treatment of preventable illnesses
2. Good Nutrition will give you a lively, joyful and active child who will bring you pride and happiness as a family

Key points to incorporate

1. Home Mentors are available to help you achieve your food security and nutrition needs of the household
2. There are locally available options to improve the food security and nutrition of the household
3. Develop locally creative ways to mitigate the problem of food security and nutrition within household

Tone and image

1. Local scene (traditional music, etc.)
2. Exciting

APPENDIX C: KEY TERMS & CONCEPTS

1. Food any nutritious substance that people eat or drink and provides them with nutrients to maintain life and growth
2. Nutrition is the science of foods and the nutrients and other substances they contain, and of their actions within the body (including ingestion, digestion, absorption, transport, metabolism, and excretion).
3. Malnutrition is a lack of proper nutrition, caused by excess intake (over nutrition), inadequate intake
4. (undernutrition) or an imbalance of energy and/or nutrients in the body. Malnutrition is categorised as either acute (recent) or chronic (long term).
5. Overnutrition is an excess of energy or nutrients. An excess of energy can lead to overweight and obesity.
6. Undernutrition is a deficiency of food energy or nutrients, which leads to nutrient deficiencies. It is caused by inadequate intake or poor absorption of nutrients in the body. Acute malnutrition, chronic malnutrition, stunting, wasting, underweight and micronutrient deficiencies occur as a result of undernutrition, and they can have serious consequences on the development and health of infants and young children. Undernutrition is one of the leading causes of mortality for young children across the globe and is often caused by an interaction between inadequate dietary intake and frequent illness.
7. Macronutrients: these are needed in large quantities in our bodies. They include carbohydrates and proteins
8. Micronutrients: Vitamins and minerals are called 'micronutrients' as they are only needed in small amounts by the body

Forms of malnutrition

1. Moderate Acute Malnutrition (MAM) is characterised by moderate wasting (weight or height between 2 to 3 standard deviations).
2. Severe Acute Malnutrition (SAM) is characterised by severe wasting and/or nutritional oedema. It is diagnosed in children aged 6 – 60 months who have a weight or height ≤ 3 standard deviations, a mid-upper arm circumference ≤ 11.5 centimetres and/or bilateral oedema.
3. Chronic malnutrition is malnutrition caused by long-term food deprivation; characterized in
4. children by short height for age (stunting).
5. Stunting (low height for age) is a consequence of chronic undernutrition over a period of time during childhood.
6. Wasting (low weight for height) or 'thinness' is a reversible condition caused by acute or present undernutrition. It may be caused directly by a lack of food, or indirectly by an illness that decreases appetite or results in malabsorption of food that is consumed.
7. Underweight (low weight for age) is a result of being thin and/or short for one's age.
8. Underweight is a measure often used in growth monitoring to see if a child is gaining weight at an appropriate rate. It may not be as useful for detecting present undernutrition as a child may have a low weight as a result of stunting (a consequence of past undernutrition).

9. Micronutrient deficiencies occur when insufficient amounts of vitamins or minerals are consumed.
10. They are often difficult to detect, as clinical signs of micronutrient deficiencies generally only occur when the deficiency is severe.

COMMON MICRONUTRIENT DEFICIENCIES IN UGANDA

I. Iron

Function	<p>Iron is required for the synthesis of hemoglobin, which transports oxygen to the cells in our body.</p> <p>Iron is required by every growing cell and therefore is essential for child growth and development.</p> <p>Iron is involved in energy production, immunity, and regulation of the central nervous system.</p>
Deficiency	<p>Iron deficiency may lead to iron deficiency anemia, a condition experienced when the body is not making enough hemoglobin.</p> <p>Clinical signs of deficiency include fatigue, weakness and paleness.</p> <p>Iron deficiency anemia can also be detected by looking for signs of pallor: pale skin (especially on palms), pale lips and pale skin on the inside of the bottom eyelid.</p> <p>Iron deficiency during early childhood can impair physical and cognitive development.</p> <p>See page 19 for more information on iron deficiency anemia.</p>

1. Zinc

Function	<p>Zinc supports the immune system, aids in protein building, and encourages wound healing.</p> <p>It is also crucial in growth and development processes during pregnancy, childhood and adolescence.</p>
Deficiency	<p>Zinc deficiency is associated with poor growth, a decreased ability to fight off infections and an increased incidence of stillbirths.</p>

2. Iodine

Function	<p>Iodine is essential in the proper functioning of the thyroid gland, which helps to regulate the body's use of energy (metabolism).</p> <p>Iodine is essential for physical and mental growth, and it is particularly important during fetal development.</p>
Deficiency	<p>Goiter, a swelling of the thyroid gland, is the most notable symptom of iodine deficiency.</p> <p>Severe maternal iodine deficiency can result in cretinism, whereby the child is born with severe physical and mental retardation.</p> <p>Less severe forms of iodine deficiency in young children can cause mental deficits such as lowered IQ and reduced ability to focus.</p> <p>Goiter is reversible whereas cretinism is irreversible.</p>



Figure 5: Goiter caused by iodine deficiency.

3. Calcium

Function	<p>Calcium is a major structural component of bones.</p> <p>Besides contributing to bones, calcium also plays a critical role in muscle contractions (including the heart) and blood clotting.</p> <p>It is the most abundant mineral in the human body and is essential for health.</p>
Deficiency	<p>Low intakes of calcium during growing years can limit the body's ability to achieve optimal bone density and mass. This can leave bones susceptible to fractures under common, everyday stresses. During the 'first 1000 days', it is important for children to receive adequate calcium to ensure their bones are strong and healthy.</p> <p>A calcium deficiency is not easy to detect because, as bones lose calcium and become weak, the deficiency does not make itself known through symptoms. Therefore, it is best to ensure adequate consumption of calcium rich foods to protect against deficiency.</p>

Key Fat--soluble Vitamins

4. Vitamin A

Function	<p>Vitamin A helps keep eyes healthy, promotes vision, and provides protection against infection.</p> <p>Vitamin A is needed by the tissues that line our lungs, gastrointestinal tract and eyes.</p> <p>Without adequate vitamin A, these tissues are susceptible to bacterial invasion; as such, deficiency is associated with frequent illness and severe deficiency may result in blindness.</p>
Deficiency	<p>Clinical signs of vitamin A deficiency (VAD) include night blindness, Bitot's spots and keratomalacia (in order of severity).</p> <p>VAD is associated with high rates of respiratory and diarrheal infections and can be assumed where under 5 child mortality is greater than 70 per 1000.</p> <p>Bitot's spot on the VAD is the leading cause of preventable blindness in the world.</p>



Figure 8: Bitot's eye, due to VAD.

5. B Vitamins




Function	<p>The B vitamins include thiamin (B1), riboflavin (B2), niacin (B3), B6, folic acid and B12.</p> <p>They share similar names and often coexist in foods but are actually chemically and structurally distinct.</p> <p>Their functions mainly focus on energy metabolism. Folic acid and vitamin B12 also help cells multiply, which is especially important for healthy red blood cells and fetal development.</p>
Deficiency	<p>Since B vitamins serve important roles throughout the body, there are many signs of deficiency. Most signs are not clinically visible, such as impairment of the immune system.</p> <p>Visible signs of severe B vitamin deficiency include skin problems, swollen red tongue, and cracked skin in the corners of the mouth.</p> <p>Women with insufficient folic acid intakes are at increased risk of giving birth to infants with neural tube defects (e.g. spina bifida), low birth weight, preterm delivery, and poor growth of the fetus during pregnancy.</p> <div style="display: flex; justify-content: space-around; align-items: center;">    </div>

Figure 10: Dermatitis (left and center); smooth, swollen tongue (right) due to B vitamin deficiency.

6. Vitamin C

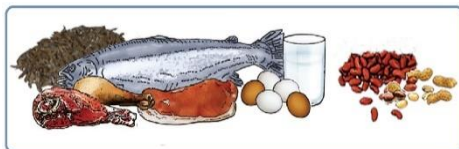
Function	<p>Vitamin C is needed for the synthesis of collagen, which holds cells together and helps maintain healthy skin and teeth.</p> <p>Vitamin C also help decrease the risk of disease.</p> <p>Another important role of vitamin C is to help with iron absorption; eating foods rich in vitamin C along with iron containing plant foods helps our bodies absorb iron. For example, eating guavas, potatoes, or oranges during or immediately after a meal that contains plant sources of iron (e.g. leafy greens) will improve iron absorption.</p>
Deficiency	<p>Clinical signs of vitamin C deficiency include bleeding gums and loose teeth.</p> <div data-bbox="339 611 683 792" data-label="Image"> </div> <p>Figure 12: Bleeding gums due to vitamin C deficiency.</p>

7. Basic Food groups

Broadly classified as Go (Energy giving foods), Glow (Protective) and Grow (Body building foods).



Carbohydrates supply our bodies with energy. Examples include grains (e.g. maize, millet, sorghum, wheat, etc.), tubers/roots (e.g. Irish potato, yellow or orange sweet potato, cassava), bananas, plantain (i.e. matooke), breads, chapatti, fruits and vegetables.



Proteins support the formation and function of body tissues and are known to be “body--building.” Examples include meat, pork, chicken, fish, small whole fish (i.e. sardines and mukene/ omena), milk, beans, eggs and groundnuts.



Fats also provide energy and they are necessary for the structure of all cells and the absorption of fat-soluble vitamins (Vitamins A, D, E and K). Examples of fats include oil, whole milk, cheese, animal fat, margarine, ghee, avocado and egg yolk.

Micronutrients

Vitamins and minerals are called 'micronutrients' as they are only needed in small amounts by the body.

Food pyramid

Foods are broadly classified into six groups:

Bread, starches, roots, tubers, and other cereals

Fruits

Vegetables

Meat, meat substitutes and other proteins

Milk and other milk products

Sweets, oil and fats

Serving recommendations

Fats, oils and sweets should be eaten sparingly

Eat 2-3 servings of from the meat/ other protein group

Eat 2-3 servings of milk and or milk products

Eat 2-4 servings of fruits per day

Eat 3-5 servings of vegetables per day

Consume 6-11 servings from the bottom group (Bread, grains and other starches)



Food hygiene:

Caregivers should always wash their hands and their child's hands with soap and clean running water before and after eating, especially once the child is self-feeding.

All surfaces and utensils used to prepare, cook and eat food should be thoroughly washed with clean water and soap.

Raw foods (e.g. fruits and vegetables) should be washed thoroughly before being prepared and eaten.

Meat products should be purchased as close as possible to the time of cooking. They should not be left out for long periods of time before cooking, as doing so can encourage the growth of bacteria.

Cooked foods should be eaten immediately (or while still warm) after being prepared. If cooked foods have been left sitting out for more than one hour, they should be thoroughly reheated before being eaten.

Foods being stored should be done so under hygienic conditions in clean containers with covers. For more information on good hygiene practices, see IYCF Counselling Card #22.

Food consumption indicators

Minimum dietary diversity: Proportion of children 6–23 months of age who receive foods from 4 or more food groups

$$\frac{\text{Children 6–23 months of age who received foods from } \geq 4 \text{ food groups during the previous day}}{\text{Children 6–23 months of age}}$$

Minimum meal frequency: Proportion of breastfed and non-breastfed children 6–23 months of age who receive solid, semi-solid, or soft foods (but also including milk feeds for non-breastfed children) the minimum number of times or more.

$$\frac{\text{Breastfed children 6–23 months of age who received solid, semi-solid or soft foods the minimum number of times or more during the previous day}}{\text{Breastfed children 6–23 months of age}}$$

and

$$\frac{\text{Non-breastfed children 6–23 months of age who received solid, semi-solid or soft foods or milk feeds the minimum number of times or more during the previous day}}{\text{Non-breastfed children 6–23 months of age}}$$

Minimum acceptable diet: Proportion of children 6–23 months of age who receive a minimum acceptable diet (apart from breast milk).

This composite indicator will be calculated from the following two fractions:

$$\frac{\text{Breastfed children 6–23 months of age who had at least the minimum dietary diversity and the minimum meal frequency during the previous day}}{\text{Breastfed children 6–23 months of age}}$$

and

$$\frac{\text{Non-breastfed children 6–23 months of age who received at least 2 milk feedings and had at least the minimum dietary diversity not including milk feeds and the minimum meal frequency during the previous day}}{\text{Non-breastfed children 6–23 months of age}}$$

The household dietary diversity score (HDDS) is meant to reflect, in a snapshot form, the economic ability of a household to access a variety of foods. Studies have shown that an increase in dietary diversity is associated with socio-economic status and household food security (household energy availability)

Individual dietary diversity scores aim to reflect nutrient adequacy. Studies in different age groups have shown that an increase in individual dietary diversity score is related to increased nutrient adequacy of the diet.

The optimal time of year to measure dietary diversity of households or individuals depends on the objective of the survey or monitoring activity. The following table describes several scenarios to assist potential users in planning surveys