Everything You Ever Wanted to Know about Sweetpotato

Reaching Agents of Change ToT training manual

VOLUME 6

Topic 11: Gender and Diversity Aspects

Topic 12: Monitoring of OFSP Dissemination and Uptake

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Natural Resources Institute

Helen Keller INTERNATIONAL

Orange-Fleshed SWEETPOTATO

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Reaching Agents of Change ToT Training Manual

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Foreword

During the past decade, interest in sweetpotato in Sub-Saharan Africa (SSA) has been expanding, the number of projects utilizing sweetpotato increasing, and the demand for training development practitioners and farmers subsequently rising as well. Sweetpotato scientists at the International Potato Center and national research centres often receive these requests and frequently hold 1-3 day training sessions, drawing on whatever training materials they have or can quickly pull together. The inadequacy of this approach has been quite apparent, but resources to address the problem were not available until now.

The funding of the Reaching Agents of Change (RAC) project in 2011 has changed the situation. Jointly implemented by the International Potato Center (CIP) and Helen Keller International (HKI), RAC seeks to empower advocates for orange-fleshed sweetpotato (OFSP) to successfully raise awareness about OFSP and mobilize resources for OFSP projects. RAC also seeks to build the capacity of public sector extension and non-governmental organizational personnel to effectively implement those projects funded to promote the dissemination and appropriate use of vitamin A rich, orange-fleshed sweetpotato. The goal is to see *sustained* capacity for training senior extension personnel about the latest developments in sweetpotato production and utilization in each of the major sub-regions of SSA: Eastern and Central Africa, Southern Africa, and West Africa. Hence, CIP has identified a local institution to work with in Mozambique, Tanzania, and Nigeria to host an annual course entitled: *Everything You Ever Wanted to Know about Sweetpotato.* During the first cycle of this course, CIP scientists worked closely with national scientists in implementing the course. During the second cycle, the national scientists will lead the training activities and course management with backstopping from CIP personnel. During the third cycle, national scientists will organise and conduct the course with just financial support from the project. In subsequent years, we hope that the course will have become fully self-sufficient on a cost recovery basis.

In developing the course content, a long-time collaborator of CIP, Dr. Tanya Stathers of the Natural Resources Institute (NRI), University of Greenwich, has led the review of existing training material, added in new knowledge from sweetpotato scientists and practitioners, and designed the course with a heavy emphasis on learning-by-doing. Dr. Stathers previously collaborated with CIP, Ugandan sweetpotato scientists from the National Agriculture Research Organization (NARO), and FAO Global IPM Facility in Kenya on a field project which developed a comprehensive Sweetpotato IPPM Farmers Field School manual for Sub-Saharan Africa in 2005. In developing the course, Dr. Stathers has consulted CIP personnel (Robert Mwanga, Ted Carey, Jan Low, Maria Andrade, Margaret McEwan, Jude Njoku, Sam Namanda, Sammy Agili, Jonathan Mkumbira, Joyce Malinga, Godfrey Mulongo) and HKI nutritionists (Margaret Benjamin, Heather Katcher, Jessica Blankenship) and an HKI gender specialist (Sonii David) as well as her fellow NRI colleagues (Richard Gibson, Aurelie Bechoff, Keith Tomlins). She adapted training material from the DONATA project, the Reaching End Users project and many others. After running the course and using the manual in 2012, a review was held and the manual and course were subsequently updated to meet facilitators and participants demands, and a standard set of accompanying Power Point presentations were created. Dr. Stathers has done a tremendous job and we deeply appreciate her commitment to producing this high quality manual.

The level of this course is aimed at senior extension personnel or leaders of farmer organizations who will in turn train others. We envision the course to be improved on an annual basis as new knowledge comes in and based on feedback received from the course participants. In this way, we expect the vibrant and knowledgeable sweetpotato community of practice to continue to grow in the coming years. The *Everything You Ever Wanted to Know about Sweetpotato* course will help us to achieve the major objectives of the Sweetpotato Profit and Health Initiative (SPHI). Launched in October 2009, the SPHI seeks to improve the lives of 10 million sub-Saharan African families in 16 countries by 2020 through the diversified use of improved sweetpotato varieties.

Jan W. Low, Leader of the Sweetpotato for Profit and Health Initiative, International Potato Center
June 2013

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This team has brought together and shared their many years of experience of working with sweetpotato systems and farmer learning processes across Sub-Saharan Africa to compile this *Everything You Ever Wanted to Know about Sweetpotato* resource. None of this experience would have been gained without the partnership of many sweetpotato farmers and other stakeholders (extensionists, national researchers, traders, transporters, NGO staff, nutritionists, media and donors) across the region. We thank you, and hope that this resource can in return offer you support in your sweetpotato activities.

The photographs used throughout this manual come from a wide range of places and we thank Margaret McEwan, Jan Low, Richard Gibson, Erna Abidin, Aurelie Bechoff, Keith Tomlins, Sam Namanda, J. O'Sullivan, Gabriela Burgos, Tanya Stathers, Olasanmi Bunmi, Benson Ijeoma, Grant Lee Neurenberg, Sammy Agili, the late Constance Owori, Ted Carey, Robert Mwanga, Ana Panta, Kirimi Sindi, Frank Ojwang, CIP digital archive, G. Holmes, B. Edmunds, and Nicole Smit for kindly sharing them. Most of the cartoons used in this manual were drawn by Movin Were.

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Acronyms and abbreviations

ACIAR	Australian Centre for International Agricultural Research
AIs	Adequate Intakes
ARMTI	Agricultural and Rural Management Training Institute
ASCII	American Standard Code for Information Interchange
AVRDC	The World Vegetable Centre
BMGF	Bill and Melinda Gates Foundation
CBO	Community Based Organisation
CGIAR	Consultative Group on International Agricultural Research
CIAT	International Centre for Tropical Agriculture
CIP	International Potato Center
DAP	Days After Planting
DFE	Dietary Folate Equivalents
DONATA	Dissemination of New Agricultural Technologies in Africa
DVM	Decentralised Vine Multipliers
EMU	Eduardo Mondlane University
dwb	Dry weight basis
FAEF	Faculty of Agronomy and Forestry Engineering
FAO	Food and Agriculture Organisation of the United Nations
FC	Food Consumption
FW	Fresh Weight
GI	Glycemic Index
HH	Household
HIV/AIDS	Human Immunodeficiency Virus / Acquired Immunodeficiency Syndrome
HKI	Helen Keller International
IBPGR	Bioversity International
IFPRI	International Food Policy Research Institute
IIAM	Institute of Agricultural Research Mozambique
IIED	International Institute for Environment and Development
IIRR	International Institute of Rural Reconstruction
IITA	International Institute of Tropical Agriculture
IMMPACT	International Micronutrient Malnutrition Prevention and Control Program
IPGRI	International Plant Genetic Resources Institute
IPM	Integrated Pest Management
IPPM	Integrated Pest&Production Management
IRETA	Institute for Research Extension and Training in Agriculture
K	Potassium
LGA	Local Government Areas
LGB	Larger Grain Borer
LZARDI	Lake Zone Agricultural Research and Development Institute (Tanzania)
M&E	Monitoring and Evaluation
MAP	Months After Planting
m.a.s.l.	metres above sea level
MM	Mass Multiplication
MRC	Medical Research Council, South Africa
MSC	Most Significant Change
N	Nitrogen
NARO	National Agricultural Research Organisation
NAS	National Academy of Sciences
NBS	National Bureau of Statistics
NGO	Non Government Organisations
NHV	Negative Horizontal Ventilation
NPC	National Population Commission
NPCK	National Potato Council of Kenya
NPK	Nitrogen, Phosphorus, and Potassium
NRI	Natural Resources Institute
OFSP	Orange-fleshed sweetpotato
P	Phosphorous
PMCA	Participatory Market Chain Approach
PMS	Primary Multiplication Site
PPP	Public Private Partnership
PVC	Polyvinyl chloride
QDPM	Quality Declared Planting Material
QDS	Quality Declared Seed
RAC	Reaching Agents of Change
RAE	Retinol Activity Equivalents
RCT	Randomised Control Trial
RDA	Recommended Daily Allowances
RE	Retinol Equivalents
REU	Reaching End Users
RH	Relative Humidity
SASHA	Sweetpotato Action for Security and Health in Africa
SDC	Swiss Agency for Development and Cooperation
SMS	Secondary Multiplication Site
SP	Sweetpotato
SPCSV	Sweetpotato chlorotic stunt virus
SPFMV	Sweet potato feathery mottle virus

SPHI Sweetpotato for Profit and Health Initiative
SPKP Sweetpotato Knowledge Portal
SPVD Sweetpotato Virus Disease
SSA Sub-Saharan Africa
SUA Sokoine University of Agriculture
TFNC Tanzania Food and Nutrition Centre
ToT Training of Trainers
TMS Tertiary Multiplication Site
Tshs. Tanzanian Shillings
TSNI Towards Sustainable Nutrition Improvement
UN HABITAT United Nations Human settlement Programme
UNESCO United Nations Educational, Scientific and Cultural Organization
UNICEF United Nations Children's Fund
UNU United Nations University
USA United States of America
USAID United States Agency for International Development
USD United States Dollar
USDA United States Department of Agriculture
Ushs. Ugandan Shillings
USIM United States Institute of Medicine
VAD Vitamin A Deficiency
WAP Weeks After Planting
WFP World Food Program
WHO World Health Organisation
WTP Willingness To Pay

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How to use this manual

This manual contains '*Everything you ever wanted to know about sweetpotato*'. We hope that it will be useful for those involved in training extensionists and NGO staff at different levels, and that they in turn will train farmers in practical ways that help them to build their problem solving and decision-making skills so they can continue to learn, question, test and address different opportunities and challenges relevant to their livelihoods.

The manual consists of fourteen topics which, after the initial two topics on training and the origin and importance of sweetpotato, follow the sweetpotato crop cycle. Each topic discusses the key need to know aspects highlighting the relevant gender issues and then presents suggestions for how this topic might be incorporated in a 10 day ToT course, with step by step guidelines for several hands-on learning-by-doing activities. The last two topics focus on the ToT training course programme and preparations. The fourteen topics are:

Topic 1: Helping Adults to Learn discusses the characteristics of good facilitators, and provides suggestions to help improve one's facilitation skills. It covers how to plan a training course from the needs assessment, through the development of learning outcomes, awareness raising, participant selection, development of the programme, use of discovery-based/ experiential learning approaches, follow-up and long-term monitoring and scaling up and out. The learning-by-doing activities involve the participants practicing their facilitation skills while delivering different sweetpotato topics and understanding the importance of evaluating their training.

Topic 2: Origin and Importance of Sweetpotato describes the historical origins and spread of sweetpotato and presents an overview of the current uses of and production figures for sweetpotato across the world.

Topic 3: Sweetpotato Varietal Selection and Characteristics. Sweetpotato roots range in colour from purple to orange to yellow or white. A wide diversity of leaf shapes, root sizes and shapes, tastes, textures, maturity periods and flesh colours also exist. Farmers use such characteristics to select which varieties to grow. A method for comparing the different characteristics of different varieties on-farm is described.

Topic 4: Orange-fleshed Sweetpotato and Nutrition. An overview of food groups and good nutrition is given, followed by discussion of the consequences of poor nutrition including vitamin A deficiency and the use of conventional breeding to biofortify crops. The benefits of eating orange-fleshed sweetpotato are discussed along with the complexities of trying to create demand for foods that help address frequently unrecognised nutritional problems such as vitamin A deficiency.

Topic 5: Sweetpotato Seed Systems are reviewed including the different seed multiplication levels, the roles of the different stakeholders within the system. The factors influencing decisions on whether to use a single shot or an ongoing planting material dissemination approach, and the level of subsidisation required are discussed. Examples are given for planning different types of planting material multiplication and dissemination strategies. Methods for selecting clean planting materials and then conserving and multiplying them are presented.

Topic 6: Sweetpotato Production and Management covers the importance of advanced planning to ensure sufficient planting materials are available at the start of the rains, land preparation, planting methods, intercropping, nutrients needs, the main growth stages and their associated management tasks.

Topic 7: Sweetpotato Pest and Disease Management explains how recognising the lifecycles of the damaging insect pests and diseases such as the sweetpotato weevil (*Cylas* spp.) and viruses can help farmers learn how to manage them more successfully. The signs and management strategies for mole rats and erinose are also discussed.

Topic 8: Harvesting and Postharvest Management. The physical damage caused during harvest and transport can reduce the shelf-life and value of sweetpotato roots. Over-drying and prolonged storage can reduce the beta-carotene content of dried orange-fleshed sweetpotato products. Good postharvest handling and storage practices for dried products are discussed, and methods for curing and storing fresh roots to increase their quality, value and availability are presented.

Topic 9: Processing and Utilisation. Many delicious, nutritious and potentially profitable food products can be prepared from orange-fleshed sweetpotato. The use of sweetpotato as animal feed is also discussed.

Topic 10: Marketing and Entrepreneurship. The concepts of marketing, market orientation, entrepreneurship, and the 5 pillars of marketing (product, price, price, promotion and people) are discussed in relation to fresh sweetpotato roots and sweetpotato products.

Topic 11: Gender and Diversity Aspects. The importance of recognising gender and diversity issues in agriculture and sweetpotato systems is discussed. Situations where sweetpotato is grown as a female crop, and others where it is grown as a male crop, or grown by both men and women are presented along with the different constraints, needs and priorities of female and male farmers. Best practice suggestions are made for how gender can be incorporated into sweetpotato programmes.

Topic 12: Monitoring of OFSP Dissemination and Uptake. An explanation of the reasons for monitoring and the differences between monitoring and evaluation is provided. This is followed by a range of tools which can be used for monitoring the dissemination, performance and use of sweetpotato planting materials. In order to understand the long-term impacts and reach of sweetpotato training it is important that records are kept on who has been trained. These records can be used for follow up activities.

Topic 13: Using the 'Everything you Ever Wanted to Know about Sweetpotato' ToT course. Detailed programs for a 10 day and a 5 day learning-by-doing ToT course are presented. They describe: the topics to be covered each day; the intended learning outcomes; the sequential activities and their timing; and the materials and advanced preparations required. These programs are not intended to be prescriptive and we hope that facilitators will creatively adjust them to their participants needs.

Topic 14: Reflections. We hope that after field testing this manual trainers and participants will reflect on it and share their ideas for how it could be improved. Please send any suggestions you have to Jan Low j.low@cgiar.org and where possible we will incorporate them into new editions.

TOPIC 11: GENDER AND DIVERSITY ASPECTS

IN

EVERYTHING YOU EVER WANTED TO KNOW ABOUT SWEETPOTATO

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Topic 11: Gender and Diversity Aspects

11.1 Defining gender and diversity

The term gender is widely used in the development sector but is often misunderstood. The term "sex" refers to the biological and physiological characteristics that define men and women. "Gender" on the other hand refers to socially constructed roles, behaviours, activities, and attributes that a given society considers appropriate for men and women. Although sex and gender are inter-related, sex is concerned with characteristics in the physical realm that distinguish between male and female (e.g. women give birth, have breasts and menstruate; men have testicles and larger muscles than women) while gender relates to the identities associated with what it means to be a man or a woman. Because gender roles are defined by social norms, what is acceptable as "male" and "female" behaviour, roles and attributes varies across societies and shaped by ideological, religious, ethnic, economic and cultural factors they are dynamic, changing constantly in response to multiple factors. For example:

- In most traditional African societies, women retain their names when they marry but "Westernized" women adopt their husband's surnames
- In Saudi Arabia men are allowed to drive cars while women are not
- In many matrilineal African societies, inheritance runs through the female line
- In most of the world, women do more housework than men
- In most parts of Africa, women are responsible for cooking in the home but men are often employed as cooks in the formal sector

Understanding gender roles as being socially constructed means that they *can* change so a more equitable relationship can exist between men and women, with both genders having equal access to resources and opportunities.

Often people mistakenly believe that the concept of gender refers to women when in fact, **gender refers to the relationship between men and women and how the social construction of roles, responsibilities, behaviour, activities and attributed affect each other**. However because women are typically more disadvantaged than men (in terms of access to resources, decision-making power etc.), the focus of most gender-related interventions is on women even though gender analysis takes into consideration the roles, responsibilities and position of both men and women in relation to each other.

Looking at the world from a gender perspective alone would overlook the existing complexities brought about by other forms of social differentiation. Diversity refers to differences between people along the lines of wealth, access to assets and resources, age, caste, race, ethnicity, marital status (single, monogamous, polygamous, widowed), type of household (male headed, female headed, child headed) education and other factors which characterizes all societies. When discussing gender, it is important to also consider diversity because, while men and women share common experiences by virtue of their gender, in no society are men or women a homogeneous group. Both genders have different access to assets and resources, belong to different wealth groups etc.

Important gender concepts

Gender equality refers to the equal rights, responsibilities and opportunities of women and men and girls and boys. Equality does not mean that women and men will become the same but that women's and men's rights, responsibilities and opportunities will not depend on whether they are born male or female. Gender equality implies that the interests, needs and priorities of both women and men are taken into consideration, recognizing the diversity of different groups of women and men. Gender equality is not a women's issue but should concern and fully engage men as well as women. Equality between women and men is seen both as a human rights issue and as a precondition for, and indicator of, sustainable people-centred development.

Gender mainstreaming is a means to an end. It requires that attention is given to gender perspectives as an integral part of all activities across all programmes. This involves making gender perspectives – what women and men do and the resources and decision-making processes they have access to – more central to all policy development, research, advocacy, development, implementation and monitoring of norms and standards, and planning, implementation and monitoring of projects.

Empowerment of women: The empowerment of women concerns women gaining power and control over their own lives. It involves awareness-raising, building self-confidence, expansion of choices, increased access to and control over resources and actions to transform the structures and institutions which reinforce and perpetuate gender discrimination and inequality. The process of empowerment is as important as the goal. Empowerment comes from within; women empower themselves. Inputs to promote the empowerment of women should facilitate women's articulation of their needs and priorities and a more active role in promoting these interests and needs. Empowerment of women cannot be achieved in a vacuum; men must be brought along in the process of change. Empowerment should not be seen as a zero-sum game where gains for women automatically imply losses for men. Increasing women's power in empowerment strategies does not refer to power over, or controlling forms of power, but rather to alternative forms of power: power to, power with, and power from within which focus on utilizing individual and collective strengths to work towards common goals without coercion or domination.

Source: UN Women http://www.un.org/womenwatch/osagi/conceptsandefinitions.htm

11.2 Why gender and diversity issues are important in agriculture and in sweetpotato enterprise

It is estimated that women farmers produce more than 50% of all food grown in the world. In many parts of Sub-Saharan Africa, women make up 50% of the agricultural labour force. Yet women everywhere face more severe constraints than men in accessing productive resources, markets and services. FAO asserts that one of the key reasons why the agricultural sector is underperforming in many developing countries is because "women do not have equal access to the resources and opportunities they need to be more productive". This "gender gap" in agriculture results in:

- less food being grown,
- less income being generated, and
- higher levels of poverty and food insecurity

For agriculture to fulfil its potential as a catalyst for development and growth, gender disparities in accessing productive resources, markets and services must be addressed and effectively reduced. It is estimated that if women had equal access to productive resources, yields on their farms would increase by 20 to 30 percent. This could raise total agricultural output in developing countries by 2.5

percent, which could reduce the number of hungry people in the world by 12 to 17 percent. In addition, it is important not to overlook the importance of women's rights as a human rights issue and how this is linked to the fight against hunger.

Another reason for focusing on women in agriculture is related to the multiple roles they play as not only farmers but processors, income earners and care providers. By meeting the practical needs of women in carrying out their multiple responsibilities, improving their control over agricultural produce and increasing their decision-making power in the home where food is distributed and consumed, development efforts benefit not only women, but all household members and society in general. There is considerable research evidence showing that when women gain access to additional income, they spend more of it than men on food, health, clothing and on educating their children.

In Sub-Saharan Africa, gender considerations are important when considering the production of most crops because of the involvement of both men and women in agriculture generally and the dominant role women play in this sector. Specifically, for sweetpotato gender issues are important for the following reasons:

Control of resources: Men control productive resources including land, water, labour saving technologies such as plough and draught animals and household labour while in many parts of the continent, sweetpotato is traditionally grown, sold and processed in small quantities by women. This situation coupled with women's limited access to technologies, education, and financial services due to their lack of decision-making power within households contributes to low sweetpotato yields.

The crop tends to be controlled by women: Sweetpotato is often one of the crops women control because it is considered a food security crop with limited market value. The situation changes when the crop becomes commercialized, often leading to men adopting sweetpotato production and large-scale intensive systems evolving.

Women are key nutrition decision-makers: Because women in Sub-Saharan Africa are typically responsible for child feeding and household nutrition, regardless of who in the household produces sweetpotato, efforts to promote OFSP for improved child and maternal nutrition should focus on them. However, as men play an important role in decision making regards which crops to plant and which foods to purchase it is also important that men are involved in any nutrition learning activities. The approach used by the Towards Sustainable Nutrition Improvement (TSNI) project to work with existing gender roles and nutrition is described in Box 11.1.

In short, achieving the goals of improved child and maternal nutrition, food security and income by promoting SP/OFSP will be determined to a great extent by gender roles and responsibilities in a given society. Gender roles and responsibilities can be assessed by asking the following questions:

- Who grows sweetpotato (i.e. manages the farm): men or women or both?
- Who provides labour on sweetpotato farms?
- Who controls the sweetpotato harvest and how it is allocated?
- Who in the household is responsible for providing food?
- Who in the household is responsible for making decisions regarding household nutrition and child feeding?
- How do men and women allocate income for household welfare expenditures such as food, education, health, clothing?

Box 11.1 Case study from the Towards Sustainable Nutrition Improvement (TSNI) project

The nutrition extension activities in the TSNI project in Mozambique, covered a range of topics including breastfeeding, hygiene, signs and consequences of malnutrition, and what foods, when, and how to feed infants and young children, men and women and other influential people were targeted with community theatre and radio spots as well as training sessions. This approach aimed to create an environment where women were given information and skills to improve their children's diets, and where behavioural change such as infant feeding practices was supported by the other influential individuals due to them being well informed.

The approach used by the TSNI project involved women in identifying constraints to their adoption of new behaviours, related to women's work, time use and roles. The women then identified practices which they could adopt. The project actively worked with nutrition extensionists who were themselves mothers, so that the women would 'respect' their advice. Over time, the number of men participating in nutrition sessions declined (except for cooking demonstrations), and the number of women participating in agriculture sessions declined. The explanation was that one household representative at each was enough due to other time demands. In response, the project periodically arranged to send the nutrition extensionist to agriculture sessions and the agriculture extensionist to nutrition sessions.

Vitamin A deficiency amongst children dropped from 60% to 38% in the projects intervention areas, and remained the same in the control areas. In addition to OFSP, families also increased their consumption of papaya and dark green leaves – two other easy-to-grow sources of vitamin A. Women and men's nutritional knowledge increased significantly in the project areas.

The project recommended that men as well as women's nutritional needs are addressed in future, to help prevent the activities unintentional causing men to think of nutrition as just a woman's concern. Men often purchase foods and are often key decision makers in which crops and how much of each are plants. Increasing their interest in nutrition is likely to result in spill over benefits for the nutrition of women and young children. The project also recommended that the specific benefits of animal source vitamin A rich foods should also be emphasised more in future initiatives to encourage their purchase.

Women's formal educational levels were typically much lower than men's, and this meant more repetitions and simpler explanations were needed. The women preferred and probably gained more from cooking demonstrations, growth monitoring and community theatre activities than from lecture style lessons. Access to radio listening opportunities and as a result its efficacy as an information source may differ between men and women, and should be investigated. Men are often more interested when marketing opportunities emerge.

All projects need gender-specific monitoring tools to help maintain the balance between desiring high buy-in from men and assuring sufficient access of women to the educational, nutritional and income benefits from participation.

Despite significant research attention and funds having been dedicated to sweetpotato, few studies assess in detail the roles and responsibilities of men and women along the sweetpotato value chain in Sub-Saharan Africa and how they change in response to different factors and no large scale cross-country gender and diversity analyses have been undertaken for sweetpotato. A summary of the studies that exist on gender roles and responsibilities in sweetpotato production and associated constraints and needs is presented in sections 11.3 and 11.4. In order to help address and reduce the sweetpotato gender knowledge gap in the future, suggestions of best practices for incorporating gender into the different aspects of sweetpotato programs are presented in Section 11.5.

11.3 Gender roles and responsibilities in the sweetpotato value chain

Male and female ownership/ management of sweetpotato fields in most parts of Sub-Saharan Africa can be grouped into three categories:

- Sweetpotato is traditionally a female crop; few or no men grow it
- Sweetpotato is traditionally a male crop; few or no women grow it
- Sweetpotato is grown by both men and women on individually owned plots or family plots

It is important to distinguish between farm ownership in an ideological sense, management (the person who "initiates" the farm and makes most production decisions) and labour input in production activities. Typically in Africa, because men are considered the "head of the household" and land is "owned" and controlled by men, at one level, all agricultural fields are considered to "belong" to the male head of household regardless of whether or not he works or make decisions about that farm. It is useful to define the farm "manager" as the person who "initiates" the farm and makes most production decisions.

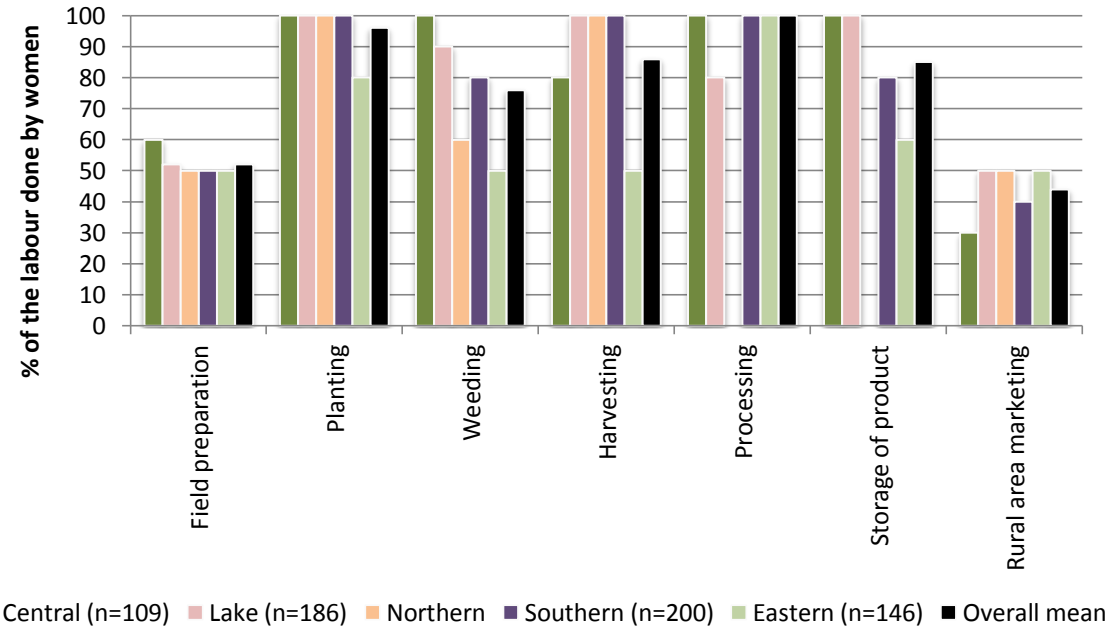
As described below, gender roles in sweetpotato production are dynamic, varying across regions of a country and changing over time.

Sweetpotato as a female crop

In many parts of Sub-Saharan Africa including Kenya, Tanzania, Uganda and Mozambique, sweetpotato, like many other food security crops, is traditionally grown, sold and processed in small quantities by women. Women often grow the crop on their own, with little or no input from men. Very often children, will provide some labour. Sweetpotato production in many parts of Tanzania, including the Lake Zone, is characterized by a female dominated production system. A survey carried out in the mid-1990s in several regions of Tanzania showed that women are responsible for finding suitable land for planting sweetpotato, obtaining planting material, selling vines for fodder, planting sweetpotato and harvesting. Tasks done jointly by men and women include land preparation, and weeding of intercropped fields (see Figure 11.1). Marketing was done jointly or predominantly by women. Studies carried out in the Lake Zone of Tanzania in 2010 and 2011 confirmed that sweetpotato was still regarded as a "woman's crop". In some areas, people would laugh at a man who grew sweetpotato. Women were the key actors in land preparation, ridging, planting, weeding, harvesting, selling and securing planting materials. Men sometimes helped with land preparation, ridging and transport and sale of sweetpotato roots at the local market. Local management and exchange of sweetpotato planting materials was done by women, and sweetpotato vines are perceived to belong to women. Occasionally men had been known to purchase sweetpotato vines. Both the 1995 and 2011 study reported that women were typically helped by their children in their sweetpotato activities.

The 1995 study found that across Tanzania nearly all the households interviewed were producing sweetpotato primarily for home consumption, and some were additionally selling some sweetpotato roots. Where commercialised sweetpotato production was common, such as in Eastern Zone and Kiteto district men had become more actively involved in sweetpotato production and marketing.

Figure 11.1 Percentage of sweetpotato activities done by women in different zones of Tanzania



Source: Adapted from Kapinga *et al*., 1995

Even where men provide no labour in sweetpotato production, they often play a critical role in its production by allocating women land for growing the crop, since land is typically owned by men in many African societies.

A study carried out in May 2012 however suggests that in some parts of the Lake Zone of Tanzania the situation is rapidly changing, with men becoming increasingly interested and involved in sweetpotato production. Men are now contributing more labour and working together with their wives on sweetpotato fields. Factors contributing to increased male involvement in sweetpotato production include: declining yields of traditional male crops such as maize and cassava due to erratic rainfall, diseases and pests and declining soil fertility; increased market demand for sweetpotato and greater awareness of the nutritional value of the crop due to project interventions.

In some parts of Nigeria, including Ebonyi and Benue States, sweetpotato is considered a female crop. Both men and women in these areas grow other staple crops such as yam, cassava and cocoyam on separate farms. A study carried out in May 2013 in three communities in Ebonyi State found that women constituted 60-85% of sweetpotato producers. Most men only started producing the crop around 2000 when road access and commercialization improved. In the study communities, mounding is a task done exclusively by men, while only women are involved in weeding. Women typically weed their husbands' sweetpotato farms which they intercrop with vegetables and other minor crops as a labour saving strategy. Women rely on their husbands or hired male labour to prepare mounds. In Ebonyi State the sweetpotato planted by a woman typically belongs to her. Women obtain land for farming from their husband or his family, from their own families or by purchasing.

Sweetpotato as a male crop

In some areas of Sub-Saharan Africa, such as parts of Nigeria, men traditionally produce sweetpotato assisted by women and children. In these largely Muslim areas, men are traditionally responsible for feeding their households; women may help to feed their families if they choose to.

Sweetpotato as a crop grown by both men and women

The situation in Nassarawa State, Nigeria shows the dynamic nature of gender roles and responsibilities. Traditionally, men grow the main staple food crops including yam, rice and sweetpotato. In the past 10 years, increased market demand for sweetpotato has brought about changes in the traditional roles and responsibilities related to sweetpotato production in areas of the state. As men began to sell a greater proportion of the sweetpotato harvest, women decided to grow the crop on their own plots to ensure enough food for the household and to earn income for themselves (Table 11.1).

Table 11.1 Farm ownership and labour provision, Obi LGA, Nassarawa State, Nigeria, 2012

Crop	Who manages?	Who provides labour
Yam	Men only	Men + hired male labour
Vegetables	Men/Women depending on the season	Women+ male and female children
Cocoyam	Women only	Women+ children+ men
Cassava	Men/Women	Men, women+ children + hired male labour
Sweetpotato	Men mainly/ some women	Men+ women+ hired female labour for harvesting, peeling (for those selling)
Maize	Men only	Men+ male and female children for transporting
Rice	Men mainly/some women	Men+ women +hired male and female labour for transporting
Sorghum	Men mainly/some women	Men + women (for transporting and winnowing)+ children
Millet	Men/Women+ family farm	M+ women+ male and female children
Sesame	Men only	Men +women(for transporting)
Cowpea	Men mainly/some women	Men +women (for transporting)
Bambara nuts	Women only	Women
Groundnuts	Women only	Women+ men(for ridging and planting)+ male and female children
Soybeans	Women mainly/some men	Women
Egusi	Women only	Women+ men + children

Source: David and Madu, 2012

Sweetpotato processing and marketing

There has been limited gender analysis of other parts of the sweetpotato value chain. In most parts of Sub-Saharan Africa, processing of sweetpotato for home consumption and retail trade is done by women.

A value chain study carried out in Nigeria documented a clear gender division of labour in the sweetpotato trade, with men dominating the larger end of the retail and wholesale trade, while women are concentrated in the small-scale retail end of the market. Male traders make gross earnings of N9,300 per week on average, compared with N2,000 made by small-scale female retailers.

A study in Zambia found women were involved in the sweetpotato value chain as producers, sellers as well as buyers at both wholesale and retail levels and especially at retailing in urban markets. Important quantities of sweetpotato are transported by Zambian women to Livingstone, Kazungula and Sesheke for cross-border sales to Botswana, Zimbabwe and Namibia. In Zambia, sweetpotato is an increasingly important cash crop for women living in the vicinity of urban markets and highways. A high proportion of female-headed households are involved in producing and selling sweetpotato.

11.4 Constraints, needs and priorities of male and female sweetpotato farmers

Because men and women have different roles and responsibilities in the household and have unequal access to assets, resources and opportunities, they face different constraints in growing sweetpotato and often have different needs and priorities. For example, women in areas of the Lake Zone of Tanzania identified lack of labour as a major constraint which limits the size of their farms and contributes to lower productivity. Due to their subordinate social position, women are unable to control male labour and even in households with ploughs, have no access to these implements which are controlled and used by their husbands. In Obi and Adogi LGAs in Nasarawa State, Nigeria, men's sweetpotato plots are larger than women's because men "own" land, whereas women have to rely on men to allocate them land, have access to credit and communal labour and devote more time to farming.

Similarly, wealth status, age, ethnicity and other factors affects individuals' and households' access to productive resources such as land, labour and water. For example, in Adogi LGA a high status, older man used his position to access to land around a water pump for producing sweetpotato vines.

Depending on male and female involvement in producing and processing sweetpotato, who consumes sweetpotato and the extent of commercialization of the crop, men and women sweetpotato farmers may have different interests in varietal characteristics and preferences. Both men and women farmers are concerned about root yields and size, disease and pest resistance, and drought tolerance but women are more likely to mention cooking qualities such as taste of roots and leaves, dry matter content, absorption of oil when frying, while men tend to emphasize market related characteristics such as size of roots.

11.5 Best practice for incorporating gender in sweetpotato programs

The following pages contain suggestions which development workers can use for incorporating gender into sweetpotato programs. It should also be noted that each topic of this manual includes a section highlighting the specific gender and diversity aspects relevant to that topic.

Start-up

- Before starting a sweetpotato program, it is critical to carry out a gender situation analysis to get a general understanding of gender roles and responsibilities. Ideally, this analysis should be carried out as part of a wider situation analysis or community needs assessment. Key topics for a gender situation analysis should include:
    - Gender roles and responsibilities in agriculture and sweetpotato production specifically. If both men and women are involved in an activity determine their proportional roles (e.g. 50♂:50♀ or 90♀:10♂ etc.) regards the doing of the activity and the decision making for on the activity.
    - Access to land, labour and other resources for agricultural production and sweetpotato production specifically
    - Sweetpotato and livelihood strategies (role of sweetpotato in food security and income generation)
    - Power and decision-making within the household
    - Gender differences in sweetpotato knowledge (varieties, diseases/pests, planting method, nutritional attributes etc.) and practices (vine production/sourcing, labour use).

  Methods for gender situation analysis: Group and key informant interviews (see gender situation analysis checklist), with both men and women of different ages and backgrounds, using participatory rural appraisal tools (e.g. ranking, village walks, calendar, wealth ranking to understand wealth and status differences in a community).

Take time to understand the existing gender roles and responsibilities along the sweetpotato value chain in your focal location

Targeting

- Ensure that participant selection and criteria for activities that require specific resources (e.g. land, water, literacy) do not exclude women. For example, where women do not have access to irrigation technologies for vine multiplication schemes, provide credit for them to be able to purchase the necessary equipment.
- Where appropriate, use gender quotas.
- Try and encourage mechanisms to be put in place which ensure that the benefits can be retained by the intended beneficiaries.

Service provision and training

- OFSP related technologies, training and services must be gender-relevant and responsive. These interventions also provide an entry point for capacity development training to promote women's empowerment, education and behaviour change.
- Explore together with men, women, youth and elder farmers opportunities for communication strategies which they think would be effective.
- Design training programmes to enable women, men, young, old, poor and middle income farmers to all benefit from the training experience.
- Include a diverse range of participants, and make sure the selection criteria and course arrangements do not prevent or reduce any particular groups' attendance. For example: the course timing fits with women's other household duties or offers childcare arrangements and avoids residential training to reduce gender associated problems; is attractive to youth who may not own land but who could offer other sweetpotato related services to their communities; criteria such as minimum landholding size, or literacy levels which count against women and youth are not included.
- Are separate training courses needed for men and women, or youth or the poorest households in order to better meet their needs?
- Promote the training course in such a way that both women and men can see the opportunities (health, income and labour wise) that will arise from participating in it.

- The trainers not only need to be competent in the technical content of the course but should also be strong facilitators who empathise with the needs and aspirations of rural women, and do not hold fixed assumptions about gender norms. When using several facilitators a mix of men and women should be included. Where possible facilitators should have both practical and theoretical knowledge of gender issues and a session on gender and use of participatory training techniques should be included in all pre-training courses for facilitators.
- The training materials and facilitator should use gender-neutral language (e.g. chairperson not chairman), and not promote stereotyping. See section 1.3 for further discussion of gender and diversity aspects of helping adults to learn.

Varietal development and testing

- Sweetpotato improvement programs need to understand gender roles and responsibilities in sweetpotato production in order to decide which farmers to work with when developing new varieties and technologies. If sweetpotato is largely grown and sold by women, plant breeders should work closely with women farmers to understand their varietal preferences and carry out on-farm trials. If the crop is mainly sold by male traders, breeders should also involve them in evaluating new varieties.
- Since breeding programs have a national focus, it is important for breeders to have a broad understanding of gender roles and responsibilities across the whole country and to be able to monitor changes in gender roles over time. One quick way to get information on gender roles and responsibility is to interview field extension agents (although it should be noted that not all extension workers have an accurate understanding of the relevant socio-cultural issues in their locations). Such information can be used to produce a sweetpotato gender map which shows who is involved in growing, processing and selling the crop in different areas of a country.

  Methods: Gender situation analysis; Participatory varietal selection and evaluation involving women and men farmers and traders; Gender mapping based on interviews with key informants.

- Females and males are often interested in different characteristics of sweetpotato. For example: women tend to be more interested in cooking qualities of the roots such as low oil absorption during frying and the tendency of cooked roots to crumble compared with men. In situations where men are responsible for root sales, they are more likely than women to be interested in market-related characteristics.
- Based on the findings of the needs assessment, the situation analysis and the project's goals, on-farm trials can then be developed involving a diverse and representative group of the community at all stages of the planning and implementation. The farmers involved in the trials should be selected on the basis of gender with regards to the roles they play, wealth status, ethnicity and age. This does not mean involving just one woman or man. The proportion of gender representation should be representative of those growing sweetpotato in the community. This also applies to ensuring the farmers selected are representative of the local wealth structure e.g. 30% poor households, 60% medium wealth households, and 10% wealthy. Where women are the major producers of sweetpotato but men contribute some labour, it is important to work directly with women rather than men in their role as head of households. However, their husbands should be invited to the planning meeting in order to get their buy-in and alleviate any suspicions about the proposed trials.
- Meetings and field activities should be arranged at locations and times that are convenient and safe for those involved, including women.

Vine multiplication

- Carrying out a rapid seed systems analysis is an important first step for deciding how to design a sustainable seed system. Such an analysis should incorporate gender elements outlined in the gender situation analysis (see checklist in Appendix 11). Specifically, the following topics should be addressed:
    - Sweetpotato planting material multiplication practices: differences between male/female SP farmers; gender analysis of division of labour, resource allocation, decision-making; different strategies farmers use for accessing planting materials, what constraints are faced, how could these be overcome, and how do different types of farmers cope if they do not access sufficient planting materials.
    - Explore female and male farmers' perceptions of qualities of a good sweetpotato vine multiplier and seed system
    - What resources do existing women and men multipliers use for vine conservation and multiplication?
        - Who has access to these resources in terms of gender, wealth, status etc.?
        - What constraints would women face in accessing these resources?
        - What strategies would be needed to ensure that women could access these resources?
        - What would women and men multipliers need to reach more clients?

  Methods: Use a mixture of qualitative survey tools such as: checklists/ semi-structured interviews with gender disaggregated farmer focus groups and key informants (existing vine (and possibly other crop) multipliers, extensionists, NGO workers, sweetpotato traders), observation, calendars, field walks/ transects; and a trans-disciplinary team.
- Decentralised vine multiplier (DVM) selection criteria need to be evaluated to understand whether they inadvertently lead to the exclusion of any types of people (e.g. do criteria related to literacy, land ownership, labour requirements, training arrangements exclude women), and if so, is there a case for adjusting the criteria to make them more inclusive (e.g. if DVMs could include existing farmer groups would it help alleviate some of these issues).

Crop management

- As part of your gender situation analysis it is important to find out how understanding of sweetpotato pest and disease, and crop management practices vary amongst different groups in the community (men, women, older, younger farmers, different ethnic groups etc.). Their different understanding may be due to experiences they have had while growing sweetpotato, the different roles they have in the production of sweetpotato, the resources they have access to, their information networks and access to training, the importance of sweetpotato in their livelihoods.
- As explained earlier, it is important for development workers to understand who typically does which aspects of sweetpotato production and management, when these activities are done, how they are done, what constraints are typically faced by those doing them, and what activities there are that compete for that labour or the land itself; and what information pathways different people have access to. For example: if women are typically involved in monitoring, weeding and harvesting the sweetpotato crop they may have a great deal of experience in having observed pest behaviours in the field or the patterns of disease spread, and may have evaluated different pest management practices. If men have attended extension trainings on pest and disease management, they may have knowledge about appropriate pest management strategies. The gender cropping calendar in Appendix 11b can be a useful tool in building this understanding.

- It is also important to understand who owns, control access to and makes decisions regarding the resources required for sweetpotato production. This would include which area of land the sweetpotato is grown on, the order of priority in planting and caring for different crops, whether the sweetpotato can be intercropped, the labour available for activities such as land preparation, ridge or mound formation, planting, harvesting, transporting and processing, access to irrigation to preserve planting materials, access to manure or fertilisers, and who keeps or can decide on the use of any income generated from sweetpotato sales.
- These factors are all relevant in deciding what type of information to share, who to share it with, which people to target, what information pathways to target and when. The perceived importance of the crop in local livelihoods (which may differ by household type and between men and women), will influence the investment levels farmers are prepared to make in terms or time and resources.
- Such information can then be used to develop a training programme, targeting those who undertake the crop activities during the periods when pest and disease or other crop management strategies can occur and those who make the decisions regards what needs to be done in the field or store. For example: many farmers are unaware of the different stages of insect lifecycles or how plant diseases spread, by sharing this knowledge and helping farmers to make relevant observations one is empowering them to start experimenting with different practices. In some situations women may have limited access to irrigated areas in which to preserve and produce clean sweetpotato planting materials resulting in delayed planting, use of diseased planting materials, low yields, late harvesting and high weevil infestation. By helping these women and their husbands experiment with use of cleaning planting materials it may help influence decision-making around planting material conservation and quality and lead to higher productivity and reduced losses for the household.
- Pesticides are poisons and children should be kept away from them. It is generally advised that women and children should not be involved in spraying pesticides; as women may be pregnant or breastfeeding, and are also usually the ones responsible for food preparation. Care must be taken in storing pesticides and ensuring they are not stored in food or drink containers which children or adults may accidentally consume.
- In most parts of Sub-Saharan Africa, men are considered the owners of land and make all decisions regarding land allocation even when the crop such as sweetpotato is largely grown and controlled by women. It is critical for development workers to be sensitive to male control over land and ensure that men are consulted about project activities even where they are not directly involved.

Post-harvest management, processing, and utilisation

- Attention needs to be paid to postharvest gender roles and how processing may impact on them, including appropriateness of equipment and whether the introduction of machines or technologies affect gender roles and income benefits in any way.
- Nutritional requirements including vitamin A requirements and dietary preferences vary by age, sex and workloads. Some sweetpotato recipes will be more appealing to certain groups, it is important to find out about the local food culture and see how new nutritious recipes could be combined with it.
- Attention needs to be given not only to imparting appropriate and practical information to those who will be involved in preparing the food (mothers, women) or doing the postharvest or processing activity, but also to those who control access to the raw materials (husbands) and who influence consumption patterns (grandmothers, husbands, traders, community leaders).Timing, duration, location, delivery language, approach and participant composition of training events also need to be considered to ensure certain groups are not unintentionally prevented from accessing it.

Food security, marketing and decision making

- It is important for development workers to understand who is typically involved in which aspects of the sweetpotato value chain, as well as what these players do, when and how, and what constraints they typically face. In addition to understanding who does which tasks it is also important to understand who makes the decisions, and who reaps what benefits at each stage of the value chain.
- As market demand for OFSP increases, devise approaches that support the production activities of both genders so that women are not consigned to subsistence production of OFSP for household consumption, but have equal opportunity to engage in commercial production.
- At household level it is important to devise approaches that can help ensure that sufficient quantities of harvested OFSP are set aside for household consumption and that OFSP income is used equitably.

  Methods for understanding gender roles in the value chain and ensuring gender equitable intra-household decision-making: Gender sensitive value chain analysis combined with a participatory exercise on what the benefits and challenges of women playing the different roles in the value chain. Training both men and women on food security planning and decision-making. It is important to be aware of typical food access strategies, who is involved in the decision making and actual doing of their different strategies (growing, purchasing, borrowing etc.) and what criteria do they use.

Vitamin A nutrition messaging

- Nutritional requirements including vitamin A requirements vary by age, sex and workloads.
- When working with OFSP it is critical to develop nutritional messages that focus on how OFSP provides vitamin A and reduces deficiency among young children and pregnant and breastfeeding women.
- The content of nutrition messaging should be gender and culturally specific. It is important to understand local nutritional practices and beliefs and how these can be combined with improved nutritional behaviours and outcomes.

- Target women with both nutrition and production messages using a combination of approaches including behaviour change communications.
- Nutrition messaging should also target men as they often play an important role in deciding on child feeding practices, purchasing food and use of health care facilities. Grandmothers, traders, local leaders may also be influential regarding nutrition and food consumption behaviours and it may be worth involving them to help increase nutritional awareness and understanding in order to bring about behavioural change.
- It is important to monitor and evaluate nutrition activities in order to learn whether promotional messages and activities are being correctly understood, and utilised by the target audiences for whom they were designed; and if not what changes are needed in order to improve their effectiveness.

Demand creation and promotion

- It is important to be aware of differences between men and women in terms of availability and timing of free time, mobility (e.g. ability to travel), literacy and access to information channels such as radio and television.
- Village meetings, religious meetings, and town criers are a good way to provide information to communities but it is important to hold such meetings at a time convenient for women. Special effort should be paid to getting women to attend community meetings
- Use schools to increase awareness about OFSP or new SP varieties among children who will take the message home. Women can be registered through their children to receive vine cuttings
- Use "market storms" and market day promotions to increase awareness of both men and women
- Advertise vine dissemination days according to your gender target e.g. at water points and other areas where women gather; at bars and local meeting places where men gather
- While radio is a cheap channel for widely disseminating information, often women do not have the time to listen to radio or don't own one.
- Since women tend to be less literate than men, written extension materials are likely to be biased toward men.

Monitoring and evaluation

- Females and males have different development priorities, needs and constraints, and are therefore affected differently by development projects, programs, and policies.
- Timely and systematic collection of sex disaggregated and gender information helps to inform managers and other stakeholders whether the intervention is benefiting both males and females. Such information allows for appropriate refining of project design to improve overall development effectiveness, when an adverse impact on either sex is identified.
- Interest in the gender and diversity aspects of the project's outcomes and impacts needs to begin at the start of the project, gender should be integrated throughout the program logic.
- Subsequent evaluation questions might then aim to understand:
    - To what extent did the intervention increase the participation of women in sweetpotato economic activities?
    - To what extent did the intervention reduce the incidence of vitamin A deficiency in under 5 year old (girls and boys)?
    - To what extent did the intervention increase awareness of the importance of vitamin A rich food consumption for children and pregnant and breastfeeding women amongst grandmothers?
    - To what extent did the intervention influence institutional changes that support the advancement of women?
    - To what extent did the intervention help to reduce gender and diversity disparities in the health and agriculture sectors?
- Some common gender challenges faced in M&E include: the assumption that M&E frameworks are gender neutral; inadequate inclusion of gender aspects during the initial project planning; limited gender awareness and capacity of M&E staff; barriers to free and open participation by female respondents due to under-representation of women in evaluation and interview teams.

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TOPIC 12: MONITORING OF ORANGE-FLESHED SWEETPOTATO DISSEMINATION AND UPTAKE

IN

EVERYTHING YOU EVER WANTED TO KNOW ABOUT SWEETPOTATO

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Topic 12: Monitoring of OFSP Dissemination and Uptake

12.1 Monitoring and evaluation

Monitoring and evaluation (M&E) are processes for helping you and others to find out how well your project is progressing, whether it is meeting its intended action plans and goals, whether any changes are required, and to judge whether the investments are providing value for money, and whether your project is '*making a difference*'.

The terms monitoring and evaluation, are often mistakenly used interchangeably. Whilst they are related, they are not identical. Key elements of and differences between monitoring and evaluation are highlighted in Table 12.1.

Table 12.1 Key elements of and differences between monitoring and evaluation

Monitoring	Evaluation
• Ongoing systematic collection and analysis of information/data during implementation of a project • Performed during implementation to improve project design and functioning (efficiency and effectiveness) • Is typically based on targets set and activities planned during the planning phases of work • Provides early indications of progress and achievement of goals against plans • Measures project outputs • Enables project team to determine whether the resources and capacity they have are sufficient, appropriate and being well used • Can help alert managers to things that are going wrong • Undertaken more frequently than evaluation • Can be used as a base for evaluation	• Comparison of actual project impacts against the agreed strategic plans • It can be formative (occurring during the life of a project, with the aim of improving the strategy or way of functioning of the project) [*like a check-up*] • It can also be summative (drawing lessons from a completed project) [*like an autopsy….*] • Examines longer term results • Identifies how and why activities succeeded, failed or were changed • Studies the outcome of a project with the aim of informing the design of future projects • To have an effective evaluation, one must conduct a baseline assessment at the beginning of the project.

Both monitoring and evaluation are focused on learning from what you are doing and how you are doing it.

To recap:

- *Monitoring* is a systematic process of collecting, analysing and using of information for the purpose of management and decision-making that accompanies the implementation of an action, project or program. Its goals are (a) to ensure that inputs, work schedules, and outputs are proceeding according to plan (in other words, that implementation is on course), (b) to provide a record of input use, activities, and results, and (c) to warn of deviations from expected outputs.
- *Evaluation* is a systematic process of collecting and analyzing information that determines to what extent an action, project or program has achieved its defined goals and objectives. It is a periodic assessment to explain the results and outcomes of an action. It assesses relevance, efficiency, effectiveness, sustainability and impact of delivered outputs to the outcome/purpose.
    - *Relevance* refers to the appropriateness of outputs in relation to the outcome/ purpose.
    - *Efficiency* refers to the cost-effectiveness of activities in delivering expected outputs.
    - *Effectiveness* refers to the degree to which the purpose has been achieved.
    - *Sustainability* refers to the extent to which benefits continue after the external development assistance has come to an end.
    - *Impact* assesses the value of the achieved purpose to the goal. It refers to the effect of the project on the wider environment and its contribution to the overall project goal.

Within sweetpotato promotion projects (which might be focused on various objectives such increasing smallholder farmers access to clean planting materials, or improving household nutrition and income generation), M&E has a major role to play in accountability, decision-making and learning.

Accountability

- Routine reporting – *efficiency in input utilisation*
- Assessing impact – *effectiveness in delivering outputs and achieving objectives*

Decision-making and learning

- Improving implementation – *corrective action as required*
- Periodic review – *to assess the continued relevance of project objectives*
- Improving planning – *based on lessons learned*

- *Accountability* refers to the responsibility of an individual or an organization to account for the proper use of resources. Accountability requirements have traditionally been met through periodic reports on resource use and activities; however, there is a growing demand for increased effectiveness in delivering expected results.
- M&E should help with *decision-making* during planning, implementation, and periodic reviews of activities. *Decision-making* refers to the thought process in identifying and selecting a course of action among several alternatives. It reduces uncertainty by weighing the positives and negatives of each option thus facilitating making choices of best options. M&E should therefore provide the information to facilitate the choice of the best option. M&E provides opportunities for all those involved in the project to learn about the impacts of their activities in the project from other peoples' perspectives. This improved knowledge and understanding can then be used to help direct project activities in different ways or directions as necessary to improve the impacts of the activities from beneficiaries and other stakeholders perspectives. Including opportunities for *participatory learning and reflection* in a project can help improve the relevance of the project, increase ownership of the project by beneficiaries and local stakeholders and thereby improve the sustainability of the project.
- *Accountability, decision-making and learning* should be linked. For example, information provided by a scientist or an organization to meet accountability requirements may be used by managers at higher levels to determine future course of action in the focal project or other similar projects.
- An ongoing project is supervised to ensure that schedules for inputs, activities, and outputs are on target; and to allow managers to correct problems in a timely manner. M&E systems should meet accountability and decision-making needs.

12.2 Developing an M&E system for a sweetpotato project

Monitoring and evaluation should not be thought of as things which only happen when a donor insists on them, they are invaluable internal management tools to ensure that you are using the project's resource (staff, time, funds, equipment) efficiently and effectively, and learning how to do things better.

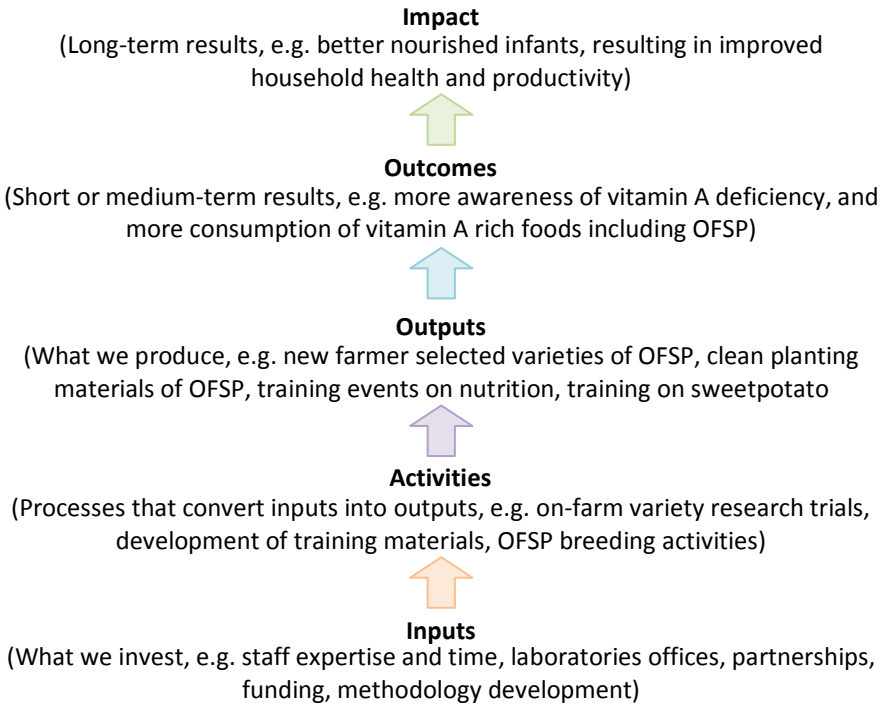
12.2.1 Understanding the project's logic

In order to design a meaningful M&E system, you need to be familiar with the project's logic. What did the planning team intend would happen when they designed the project, what were the envisaged links between each element (inputs, outputs, outcomes, impacts) of the project's logic. An example of the project logic of a sweetpotato nutrition improvement project is shown in Figure 12.1.

In brief:

- *Inputs*: What financial, material and human resources do you need to do your work? This can include people, partners, equipment, operational costs. M&E becomes important to assess whether resources are adequately allocated to address the desired objectives (e.g. staff with: sweetpotato breeding skills; training skills; gender skills); whether resources have been allocated and spent on the targeted activities; and whether the allocation of resources is achieving the desirable objectives.
- *Activities*: What are the processes (tasks/ services) that convert inputs into outputs (hiring of staff; meetings, field trials, disbursement of funds etc.)? M&E of activities is necessary to assess whether activities are efficient, and contributing to the desired objectives (e.g. whether farmers are involved in selecting the OFSP varieties, whether women as well as men are involved and consulted).
- *Outputs:* These are products and services produced (deliverables) from your activities. Some outputs may be tangible and physical. Tangible outputs would include a new OFSP variety or a new type of farm equipment; while non-tangible outputs might include a new policy, publication, or study. Note that in all cases, the output is always something "new," in the sense that it was not there before. The output alone cannot achieve the objective (purpose) of the project. But it will contribute to it.
- *Outcomes*: What are the medium/ short-term results? Outcomes are the results that would be necessary to achieve the operational objectives. There may be many outcomes and one needs to select and prioritise which outcomes need to be measured. For example, in order to increase income of women sweetpotato producers, the project might aim to: enhance productivity through provision of clean planting materials, enhance capacity through training courses; strengthened social capital through working groups or associations, or improved bargaining capacity.
- *Impact*: What are the long-term results? These are often difficult to measure during the life of the project and are often related to long-term goals and not to goals achievable in the medium or short-term. There will likely be other factors contributing to the achievement of the overall goals. Impacts often require sustained behavioural change, and can be measured through qualitative assessments. Many project M&E systems therefore focus on the outcome level.

Figure 12.1 Defining the project logic



12.2.2 Designing a project's M&E system

Six key steps for designing an M&E system for a sweetpotato project are shown in Table 12.2 below.

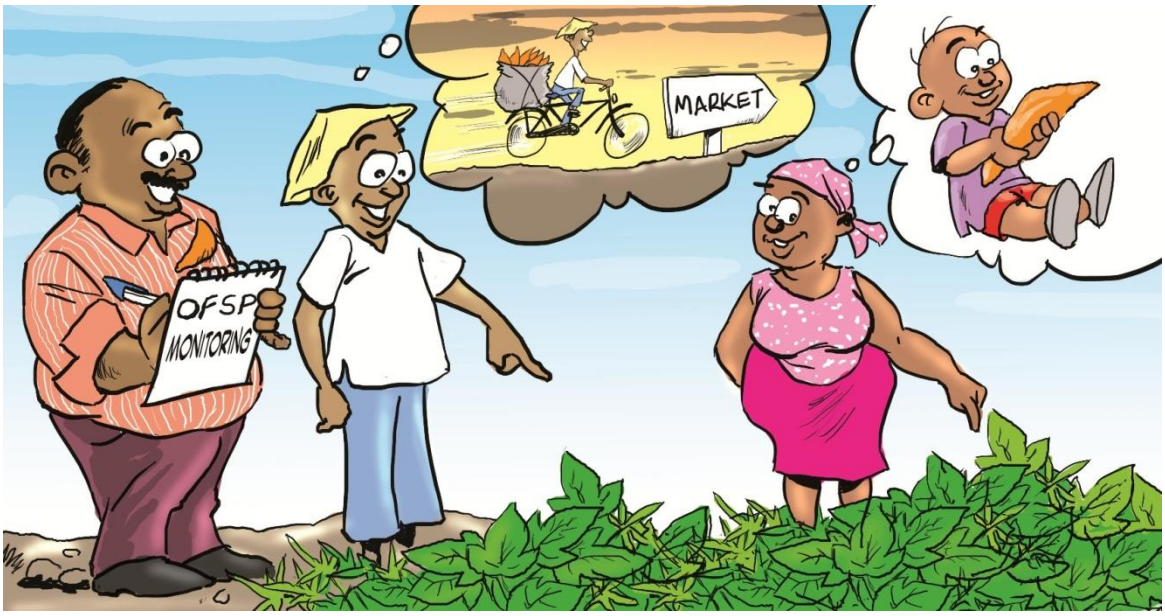
Table 12.2 Six steps to setting up an M&E system

Step	Design element	Description
1	**Preliminary phase**: How do you prepare to launch your M&E function? Scope and purpose	Project proposal documents usually contain a brief description of how the Project intends to manage the key M&E elements. Therefore immediately after your project is funded, you need to: ○ Conduct an M&E capacity assessment of partner organizations (in case of a multi-partner project) ○ Draft an evaluation policy for your organization ○ Develop an M&E plan. This should include your "theory of change" (e.g. using your project's logic which inputs lead to which activities, what outputs these activities are expected to generate, and what outcomes these outputs will cause, and what impacts are likely to result from these outcomes (see Figure 12.1)), project *indicators* (see section 12.3.2 below), performance M&E matrix/framework, roles and responsibilities, draft individualized partner work-plans (with clear milestones and deliverables) and budget
2	**Gather indicator information and targets**	During this phase: ○ Conduct the baseline survey including a concrete counterfactual (especially in cases of Random Controlled Trial design projects) ○ Finalise the evaluation policy in consultation with partners ○ Finalize partner work plans including clear, measurable targets accompanied with budgetary annual estimates ○ Populate the performance M&E matrix/ framework with baseline figures for each indicator and targets ○ Build capacity of partners and staff to carry out result-based M&E functions (based on the outcome of capacity assessment exercise in phase 1 above)
3	Operationalize **monitoring** mechanisms	During this phase: ○ Develop tools to facilitate the gathering of routine information to track progress of indicators (see examples of the tools in the templates in 12.5 below) ○ Train staff, partners and beneficiaries on how to use the tools ○ Set up and operationalize efficient data collection and analysis mechanisms ○ Implement a progress reporting mechanism
4	Operationalize **evaluation** mechanisms	Objective and systematic assessment of the extent to which the project is achieving its goals and objectives. With a focus on: ➢ Generating lessons learned for improving programming for better results, and for making changes to the current project's activities. ➢ Documenting success stories and best practices for replication. ➢ Demonstrating accountability Therefore: • Conduct concrete baselines. • Consider annual internal reviews/assessments • Conduct an objective mid-term evaluation *NB: Rethink/revise indicators and plans based on the outcome of these evaluations*
5	Plan for timely and quality **communication and reporting mechanism**	This should ideally cut across all the 6 phases. Reports (which could be activity reports, quarterly progress reports, financial reports etc.) are basically tools for monitoring. However, without a communication strategy, reporting may become counterproductive and more often than not, consume valuable human resource hours. A communication strategy will help your organisation to plan what information to report on, to whom, why and when.
6	Plan for **critical reflection processes and events**	This aspect is especially important for multi-partner projects. The idea is that M&E is not an end in itself and the custodians of the system are the implementers and beneficiaries of the project. Therefore put in place mechanisms such as joint monitoring/learning/reflection events, quarterly review meetings and joint data quality

	assessments so that stakeholders can appreciate the progress of activities and sample outcomes and know that their views and concerns are being recognised and incorporated into the project. Provide opportunities to celebrate results or agree on a change of course.

12.3 How to monitor a sweetpotato project

It is important to think about your M&E right from the beginning of the design of the project or activity. Your situation analysis will highlight what information you need to collect in your baseline survey in order to assess improvements over time. However, you should remember it is relatively easy to collect a lot of data, but its analysis can be very time consuming and therefore careful planning is required to ensure straightforward analysis methods have also been thought about as a key part of the design of the monitoring and evaluation system.



Monitor to find out where the planting materials were planted, how they are performing and in what ways they are being used by different members of the household

12.3.1 Approaches and tools for monitoring

A wide range of M&E approaches, techniques and tools exist. These may include combinations of: recorded observation, review of diaries (written or oral, video), multi-stakeholders workshops, sample surveys, structured questionnaires, systematic review of official statistics, logic models, interviews, focus groups, case studies, recording or analysis of important incidents. You may also be able to review existing reports, minutes, and attendance registers or financial statements as a source of monitoring and evaluation data (means of verification). These tools help you collect data on indicators.

Depending on the intended use of the information you may decide that the collection of quantitative (*how much or how many*) or qualitative (*descriptive, e.g. what people know or believe about something, how people feel about something, why and how things are done the way they are*) data or more likely a mixture of the two would be most meaningful. The project also needs to decide on what degree of beneficiary and partner participation and ownership in the M&E process would be most meaningful.

12.3.2 Developing indicators

Indicators measure tangible signs that something has been done or something has been achieved, often indicating the progress made in delivering an output or achieving an objective. Indicators of the adoption of OFSP in a community might include: Number of households growing/obtaining OFSP and other kinds of sweetpotato; OFSP crop area; OFSP planting material sales and gifts to others; OFSP root sales/distribution. Indicators of capacity on OFSP being built might include: Number of farmers or trainers that have been trained on various aspects of OFSP; Number of Extension Officers trained on OFSP. Indicators of consumption of OFSP and nutritional awareness might include: Frequency of young child consumption of OFSP and other sources of vitamin A rich foods; Understanding of nutritional benefits of OFSP; Levels of intake of vitamin A, and vitamin A deficiency levels.

Depending on which indicators your sweetpotato project wishes to focus on, monitoring tools can be developed to collect and track data on your focal indicators.

Many monitoring forms and tools already exist for sweetpotato, in Section 12.5 you will find examples for monitoring the following aspects:

Tool 12.5.1 is for monitoring the dissemination of sweetpotato planting materials from a mass multiplication process

http://sweetpotatoknowledge.org/projects-initiatives/reaching-agents-of-change-rac/rac-tot-course-forms/Form_12.5.1_sheet1-2_Mass_Dissemination_Data_Collection_Sheet.xls/view

Tool 12.5.2 is for monitoring the dissemination of sweetpotato planting material from a voucher system (Form A), and includes details of who received the planting material vouchers, and follow up visits to verify whether the planting materials were planted (Form B) and whether further spread of the planting materials to other farmers/households has occurred (Form C).

http://sweetpotatoknowledge.org/projects-initiatives/reaching-agents-of-change-rac/rac-tot-course-forms/Form_12.5.2_A_B_and_C_Monitoring_PM_dissemination_using_VOUCHER_systems.xls/view

Tool 12.5.3 is for monitoring the performance of disseminated planting material

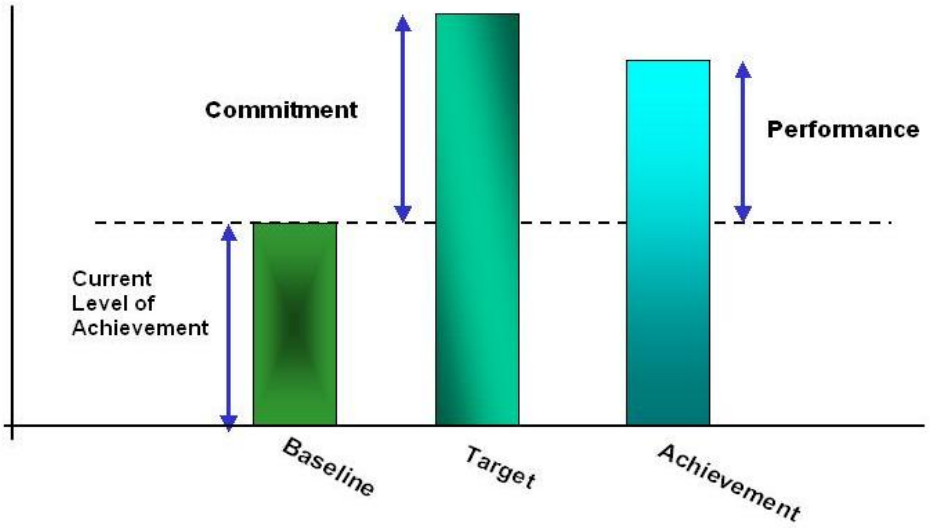
Tool 12.5.4 is for monitoring the use of disseminated planting material

Tool 12.5.5 is for monitoring who has received sweetpotato training and what they plan to do as a result of it

http://sweetpotatoknowledge.org/projects-initiatives/reaching-agents-of-change-rac/rac-tot-course-forms/Forms_12.5.5a_b_c_M-E%20of%20TRAINERS_FARMER_RECIPIENTS_-_COURSE_EVALUATION_FORM.docx/view

Through the indicators you can then find out details about: Who? How many? How often? How much? However, if you are going to use such indicators as a measure of change you need to know what the starting point was at the beginning of the process (baseline data). A baseline survey which at the start of the project collects relevant data from the area or groups where the project will intervene as well as from an area or groups where the project will not intervene (which can be used as the counterfactual or control situation) will enable you to demonstrate change in a scientific and easy way. An example of a baseline survey form used to collect data prior to or at the start of an OFSP promotion project is presented in Appendix 12 and available in excel on the Sweetpotato Knowledge Portal http://sweetpotatoknowledge.org/projects-initiatives/reaching-agents-of-change-rac/rac-tot-course-forms/Appendix_12_Sweetpotato_Baseline_Data_Collection_Form.xls/view , you may want to build on or adapt it to suit your needs. Both the mid-term and summative evaluations should demonstrate the change compared to the baseline for the different indicators. This is illustrated in Figure 12.2.

Figure 12.2 Comparison of the situation at the time of the baseline, the target (commitment), and the change achieved (performance) during the time period

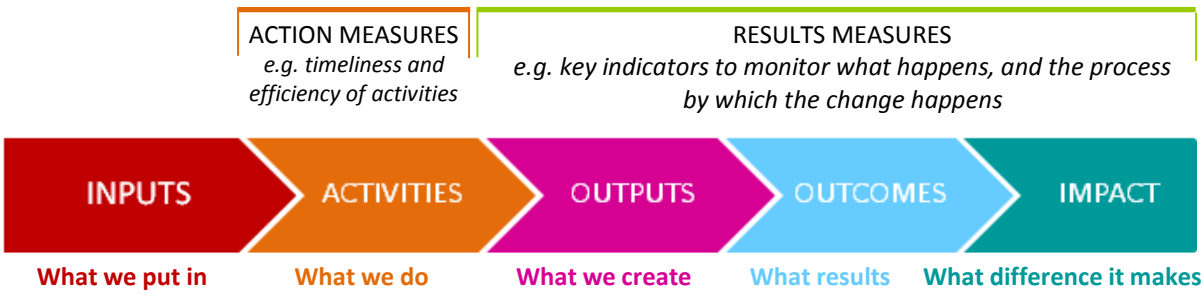


It is important to figure out how much it will cost to collect each indicator. It is better to collect data on a few indicators well, than to collect everything poorly. It is often advisable to focus on a few key indicators. However, you need to recognise that changes in your indicators may also be taking place as a result of other factors, not just your project's activities.

During the planning stages it is helpful to develop a *vision* of how you would like the problem areas to be/ look; which will help you to identify and develop impact indicators, such as intake levels of vitamin A. It is also important to develop a *process vision* for how you want the things to be achieved (the method). This understanding will help you to develop your process indicators. You also need to develop your effectiveness indicators and your efficiency indicators. In other words, each result level (outputs, outcomes, impact - see Figure 12.3) must have key indicators to monitor what is put in, and what happens and the process by which the inputs and change happens.

If you come up with a long list of indicators, you will need to do a prioritisation exercise to choose your final key indicators. Make sure the selected indicators: cover a fair representation of outputs, outcomes and impacts; cover all important causal chains in your project's logic; are not more than about 12-20 indicators in total.

Figure 12.3 Different aspects of a project's logic model which need monitoring and evaluating



12.3.3 Sampling

While thinking about your indicators and approach to monitoring and evaluation you also need to decide on how your sampling will be done to collect relevant data. Sampling is one of the most important elements to consider regardless of the choice of method you will adopt. Basically, sampling will help you decide on how confidently you can generalise your findings to the entire population.

If you are going to do a monitoring survey involving individual interviews you will also need to think about how you decide who to interview. Will you use random sampling across the whole community, will you try and interview someone from every 10th house along a transect line through the community, will you ask the village government to randomly select houses, do you have a list of households from which you could make a randomised selection? You need to think about the resources you have to do the survey, how will you cover as many interviews as possible from as representative a group of your target beneficiaries as you can find? These decisions will be influenced by the length of the questionnaire, your sampling scheme, your number of enumerators, your transport arrangements, and your budget.

If you are going to hold checklist guided focus group discussions with groups of 5-20 individuals knowledgeable about the subject you want to discuss, you will have to decide whether to have one male and one female focus group discussion at each target site, or whether to disaggregate the community by different wealth groups or age. You will need to think about how to ensure the focus group participants are as representative as possible of the community. Will you pick villages that are easy to access (convenience sampling) or those you think have benefitted the longest from the project (purposive sampling)? How will you ensure the participants are representative of the village and not just the people who live closest to the local government office, etc.?

Each project differs and therefore your sampling will be affected by the goals of your specific project, what you want to monitor and evaluate, the interval since the project began, and your project's resources.

There are many excellent references on survey design (see references at the end of this Topic) which can help you. Note that sampling is very important in setting up a good evaluation, and for most studies consulting a statistician to ensure that your sample size and strategy is adequate, is a wise investment of your time.

12.4 How to evaluate a sweetpotato project

Evaluations of sweetpotato endeavours may range from simple and quick initiatives to more complex rigorous ones. The immediate objective of the initiative, the timing, skill level of the key M&E staff and the level of funding are some of the factors to consider in the choice of the evaluation method to adopt.

The design of the evaluation(s) should ideally be outlined from the start of the project in the M&E plan.

Key evaluation questions can be identified, and the baseline survey should be designed to ensure that it includes data on variables that correspond to key outcomes and impacts, the baseline survey method and team should be developed and clarified and must include the collection of sex-disaggregated data. Individual or household surveys are often valuable sources of baseline data, and can be repeated during or at the conclusion of the project. An example of a baseline survey that has been used by several sweetpotato projects is provided in Appendix 12.

In addition to the repeat of household or individual surveys, other evaluation tools can be developed and incorporated. Multi-stakeholders audits of the project can be undertaken, and random checks and data quality assessments.

The opportunities for outcome and impact evaluations (mid-term and summative) and approximate dates should be identified early on in the project. It is also useful to know whether there will be a post-implementation evaluation of the project to examine the long term effects of project.

The most common methods used in evaluation include: appreciative inquiry, story-based methods other than the Most Significant Change (MSC) technique; outcome mapping; Most Significant Change (MSC) technique; participatory evaluation methods; randomised control trials (RCT); and stakeholder analysis.

Most of these require a certain level of technical experience. The choice of method will depend on factors such as your immediate objective, the timing, your skill level and the resources you have. Depending on the intended use of the information you may decide that the collection of quantitative (*how much or how many*) or qualitative (*descriptive, e.g. what people know or believe about something, how people feel about something, why and how things are done the way they are*) data or more likely a mixture of the two would be most meaningful. The project also needs to decide on what degree of beneficiary and partner participation and ownership in the M&E process would be most meaningful.

Development and selection of indicators, and a discussion on sampling are presented in sections 12.3.2 and 12.3.3 of this topic, and are relevant to both monitoring and evaluating.

12.5 Sweetpotato dissemination and uptake monitoring tools and examples

Some examples of data collection approaches and sheets developed by existing OFSP promotion projects are given below.

Two examples are given for the monitoring of planting material dissemination processes, the first was designed for use with the dissemination of planting material from centralised mass multiplication processes (see section 12.5.1), the second sheet was developed to use vouchers to help with monitoring the dissemination (Sheet 12.5.2 A) and subsequent planting of planting materials (Sheet 12.5.2B) and further spread of planting materials (Sheet 12.5.2C) from each decentralised vine multiplier (see section 12.5.2). These forms are available in excel format on the Sweetpotato Knowledge Portal http://sweetpotatoknowledge.org/projects-initiatives/reaching-agents-of-change-rac/rac-tot-course-forms

You will note that on these forms, there is space to write out the identification information as well as boxes to enter the codes. Having both kinds of information helps one check to see if no errors have been made in coding. Having coded information, will make data entry and analysis easier. A useful and free data entry program from the United States Bureau of Census on the internet is CSPro http://www.census.gov/population/international/software/cspro/. The program is designed for surveys and permits one to double-enter the data easily, which eliminates typing errors. Labels and data can be subsequently exported to the common statistical packages of SPSS, SAS, or STATA or as ASCII files.

It is also important to monitor the performance of the disseminated planting materials (see section 12.5.3), and the uses of the disseminated planting materials (see section 12.5.4).

Additionally, when training is provided, it is important to keep a record of who has received training, the gender of the trainee, and who they have subsequently trained and what changes have occurred as a result (see section 12.5.5). These forms are also available on the Sweetpotato Knowledge Portal http://sweetpotatoknowledge.org/projects-initiatives/reaching-agents-of-change-rac/rac-tot-course-forms

12.5.1 Monitoring the dissemination of planting material from mass multiplication processes

MASS MULTIPLICATION VINE FIELD DISSEMINATION PLANNING SHEET 1

(NOTE: THIS SHEET SHOULD BE FILLED AT SUPPLY POINT (MASS MULTIPLICATION PLOT)

Sheet ID

Name of Mass multiplication site _____ Code

District _____ Code Village _____

Field Location (GPS reading)	Latitude		Longitude		Altitude (Meters)
	Degrees	Minutes	Degrees	Minutes	
		.		.	

Key staff inspecting the field	First Name	Last Name	Code	Designation	Code	Signature	DD	MM	YR
							/	/	

Date of Harvesting DD / MM / YR

Planned dissemination date DD / MM / YR

	Polista	Ukerewe	Ejumula	Kabode	Jewel	Total
Number of bags harvested						
Estimated number of cuttings/bag						

	Village	Code	Village	Code	Village	Code
Targeted villages for dissemination						
Targeted no of HH to be reached						

Name of staff Involved in Coordination of Harvesting, Packing and Shipment		Code	Designation	Code	Signature	DD	MM	YR
First name	Last name							
						/	/	
						/	/	
						/	/	
						/	/	

MASS MULTIPLICATION VINE FIELD DISSEMINATION SHEET 2

Sheet ID

(Note: This sheet should be filled at the point of Dissemination)

Partner (IP) _____ Code ____ District _____ Code ____

Ward _____ Code ____ Village _____ Code ____

Delivery Date (DD/MM/YR) ____/____/____ No of cuttings / bag delivered

Polista	Ukerewe	Ejumula	Kabode	Jewel	Total

Date of Dissemination (DD/MM/YR) ____/____/____

Name of local authority present at delivery point	Name of key staff person involved in dissemination	Code	Signature

Details of those receiving planting materials				age (years)		SEX 1-M 2-F	HH with under 5 0-No 1-Yes	Village (if different from above)	Code		No of cuttings received (of each different variety)					
No	First Name	Middle name	Last Name								Polista	Ukerewe	Ejumula	Kabode	Jewel	Signature
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																

12.5.2 Monitoring the dissemination of planting material using voucher systems

A. VOUCHER REDEMPTION TRACKING FORM District: ☐ Division: ☐

Location: ☐☐ Sub-location: ☐☐ Village: ☐☐☐☐

Vine multiplier: ☐☐ Year: ☐☐☐☐ Month: ☐☐ Sheet Number: ☐

Date Gotten		ANC #	Name of Recipient on Voucher		Who redeemed voucher?		Village on Voucher		Where will you plant?		Name of Variety #1		Name of Variety #2		Signature of person picking up vines
Day	Mon		First	Surname	Code	Sex 1-F 2-M	Name	Code	1- Upland 2-Lowland	Code	Voucher Number	Amount given	Voucher Number	Amount given	

Relationship to voucher recipient: 1-Voucher recipient; 2-Mother-in-law; 3-Daughter-in-law; 4-Husband; 5-Parent, 6-Child; 7-Other HH member; 8-Not a HH member

Health Facilities: 1- Sinoko 2- Mihuu 3-Naitiri 4-Ndalu

B. VISITS TO VERIFY PLANTING

District: ☐ Division: ☐ Location: ☐☐ ☐

Sub-location: _____ ☐☐ Village: _____ ☐☐☐☐☐☐

Extensionist: _____ ☐☐☐ Year: ☐☐☐☐ Month: ☐☐ Sheet Number: ☐

Date of Visit		Identification Number	Name of Person Visited		Sex	Village					*Questions to answer if VINES have been picked up*								Has your family grown any type of OFSP before this project? 0-No 1-Yes	Has kitchen garden? 0-No 1-Yes	*If yes,* is OFSP in garden? 0-No 1-Yes	*If no,* why no kitchen garden? (below)	Signature of woman or other family member
											Month of 1st vine pickup	Type of new plot 1-upland 2-lowland	For new plot with voucher vines									
													Date of planting			Observation (codes below)	Estimated area in meters					
Day	Mon		First	Surname	1-M 2-F	Name	Code						Day	Mon	Year		Length	Width				

Observation

1-Not planted, no crop on the ground

2-Good, well maintained plants, free from pests and disease

3-Fair, modestly maintained, some pest or disease problems

4-Poor, not weeded and/or serious pest or disease problem

5-Other issue, describe

9-Not able to observe

Why no garden

1-Does not see need

2-Not right type of land

3-No time to do it

4-Would need fence

5-no nearby water

6-Someone else decides land use

7-Other

Other comments from visits:

C. FURTHER SPREAD OF OFSP VINES District: _____ Division: _____ Location: _____

Sub-location/ward: _____

Extensionist: _____ Year: ____ Month: __

Date of Visit		Name of Person Visited		Sex	Village	Coverage								Indirect reciepient households					Telephone No.
						Month of 1st vine pickup	Type of new plot 1-upland 2-lowland	Date of planting			Obser-vation (codes below)	Estimated area in meters			Has any other household collected vines from you? N/Y	If yes How many?	Name and telephone No. of indirect beneficiary Household 1	Name and telephone No. of indirect beneficiary Household 2	Name and telephone No. of indirect beneficiary Household 3	of person visited
Day	Mon	First	Surname	1- F 2- M	Name			Day	Mon	Year		Length	Width	variety *use code						

Observation

Name of variety: 1- kakamega 2- Kiegea 3-Mataya 4-Amelia 5-Melinda 6-Irene 7-Bela 8-Namanga 9-Gloria 10-Tio

1-Not planted, no crop on the ground

2-Good, well maintained plants, free from pests and disease

3-Fair, modestly maintained, some pest or disease problems

4-Poor, not weeded and/or serious pest or disease problem

5-Other issue, describe

9-Not able to observe

Other comments from visits:

12.5.3 Monitoring the performance of disseminated planting material

If you want to collect data on the performance of the disseminated planting materials from farmer's field, it is best to decide on where you are going to collect it from at the beginning of the season as many farmers harvest piecemeal (remove a few roots whenever they are needed) and hence, yield can easily be underestimated.

For yield assessments of disseminated planting materials in Uganda, farmers were randomly selected from a list of vine recipients. The selected farmers were asked to plant their varieties in separate plots. The local variety plot was planted at the same time as the OFSP plots. Then at the time of assessment, the following steps were taken:

- find the centre of each plot (variety) estimated visually.
- take 3 - 4 foot steps in different directions to get 5 mounds for sampling.
- collect data on storage root, vine and biomass weight; weevil damage to roots was also recorded.

12.5.4 Monitoring the use of the disseminated planting material

OFSP promotion projects will most likely differ in some of their specific aims. However, it is likely that most projects will be interested in finding out about the immediate and evolving use of the OFSP planting materials that their project has disseminated. Some typical areas of interest might include:

- Whether the OFSP is being included in infant feeding practices and if so, in what ways, forms and quantities? What feedback do families using it have? Have health clinics noticed any changes which might be due to the OFSP or the associated nutritional or improved infant feeding knowledge? Do families using OFSP in infant feeding have any important outstanding knowledge gaps or needs?
- In what ways is OFSP being used by the households growing it? Which of these ways do they think they will continue to use it or increase their use of it for, and why? Which ways of using it will they not continue and why?
- How is OFSP being accepted by consumers who purchase the OFSP roots? What feedback do they and the market traders selling the OFSP roots have? What knowledge gaps or needs do they and the market traders selling the OFSP roots have?

Questionnaire forms (similar to those in sections 12.5.1 and 12.5.2) or checklists for use in focus group discussions or case studies can be developed to learn about the use of the disseminated planting materials. It is likely that monitoring of this aspect would be repeated after different time intervals to understand how use of OFSP develops as its initial novelty wears off.

12.5.5 Monitoring who has received sweetpotato training and what they plan to do as a result of it

It is well understood that the adoption of new crops and varieties can be enhanced if the dissemination of planting material is accompanied by training on all aspects of its crop management, as well as its process, utilisation and marketing.

Whilst at the start of any training, the expectations of the participants are usually discussed using a brainstorming exercise to ensure that the participants and facilitators have a common understanding of what will be done during and learnt from the course. Whether these expectations are met is typically discussed at the end of the course. However it can also be useful at the end of the course to ask the participants what they think will happen within the next 1 year or 5 years etc. as a result of the training they have received and to both document this and use it during follow up monitoring and evaluation exercises.

In order to document and understand what training has occurred and what its impacts have been and where further emphasis is still required, data needs to be collected and kept on all these aspects.

In order to stream line the monitoring process of what training has occurred and how it went, a system can be set up to ensure that the trainers payment is only triggered once a good quality training report and copies of the training materials have been received by the management. The following forms are suggestions of what might be recorded and monitored about the trainers who are trained (Form 12.5.5a), and then the farmers who these trainers subsequently train (Form 12.5.5b).

The training report should capture at least the following aspects:

- who participated in the training (name, age, gender, current place of abode, place of origin, wealth group, how they were selected to participate process)
- when the training occurred and how this correlates to the local agricultural calendar
- what topics were covered in the training (this should include a version of the final programme followed, the facilitators training notes, and any hand out notes)
- what the participants thought of the training (e.g. a summary of the participants evaluation of the training, copies of the course evaluation forms)
- suggestions for improving the training in future (e.g. what worked well and what didn't regards content, participants, timing, organisation and other factors)

Additionally, most training courses include a short session for the participants to evaluate the training at the end of the course. The form (Form 12.5.5c) shown below is a typical training course evaluation form. The form can be anonymous, but the trainer should ensure all participants complete and submit a copy of it. Note that the form includes some questions where the participants have to explain and provide reasons for their answers, and others where they just have to tick against a score. Combining these two techniques is useful to help ensure participants engage with the form and provide the facilitators with more qualitative information on their experience as opposed to just ticking the same column without thinking about the questions. The quantitative data can be useful in looking at the percentage of respondents who felt the course was highly relevant etc. However, it should be noted that an evaluation like this typically evaluates just the delivery, content and organisation of the training course, and does not usually assess the actual learning outcomes.

Form 12.5.5a Monitoring the TRAINERS who are trained by the project

Training course title:					Location:			When is sweetpotato typically planted here:					
Date of course:					Duration (days)			Facilitators name and mobile number:					
	Participants details								During the next 12 months how many of the following types of people does each participant expect to train?				
	First name	Surname	Sex. 1 = M 2 = F	Name of employer	Position held	Geographical location of work	Cell phone contact details	Email address	Extensionists	NGO/ CBO workers	Farmers	Others (give details)	Signature
1													
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
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24													
25													

Form 12.5.5b Monitoring the FARMERS who are trained by the project

Training course title:					Location:			When is sweetpotato typically planted here:				
Date of course:					Duration (days)			Facilitators name and mobile number:				
	Participants details											
	First name	Surname	Sex. 1 = M 2 = F	Year of Birth	Village	District	Cell phone contact details	Name of household head	Wealth group 1= very poor 2= poor 3= middle 4= high	Age range of children	Area under sweetpotato (acres or ha or sq meters)	Signature
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
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25												

Form 12.5.5c Evaluating the training course

'EVERYTHING YOU EVER WANTED TO KNOW ABOUT SWEETPOTATO' **TRAINING COURSE EVALUATION FORM**						Date: Location:
Questions						
1. Which aspects of the training did you find **most useful**?						
2. Which aspects of the training did you find **least useful**?						
3. Was there anything you found **confusing**? If yes, please explain what.						
Tick the number that applies	1 Not at all/ None	2	3 Partially/ Medium	4	5 Greatly/ High	**Your specific comments on this aspect**
4. Will the **knowledge and skills** from this training help you **in your sweetpotato production, utilisation and marketing**?						
5. What **level of understanding** did you have regarding the **course content**?						
6. Was the course information **relevant to your livelihood**?						
7. Was **enough time allocated** for the course?						
8. How would you rate the **facilitators' level of knowledge on the topic**?						
9. Were the facilitators **clear and confident in their tasks and presentations**?						
10. Did you have enough **opportunity to practice the skills** as opposed to just hearing about them or watching them being demonstrated?						
11. Were there enough opportunities to **ask questions**?						
12. Were **satisfactory answers** given by the facilitators?						
13. Were the **timing, length and venue** of the course convenient?						
14. On a scale of 1 (low) to 10 (high), how confident are you that the training will **translate into:** - **improved OFSP production**? Please briefly explain your answers.						
15. - **increased OFSP processing and utilisation**?						
16. - **increased OFSP marketing**?						
17. How could a training course like this **be improved**?						
18. Any **other comments**?						

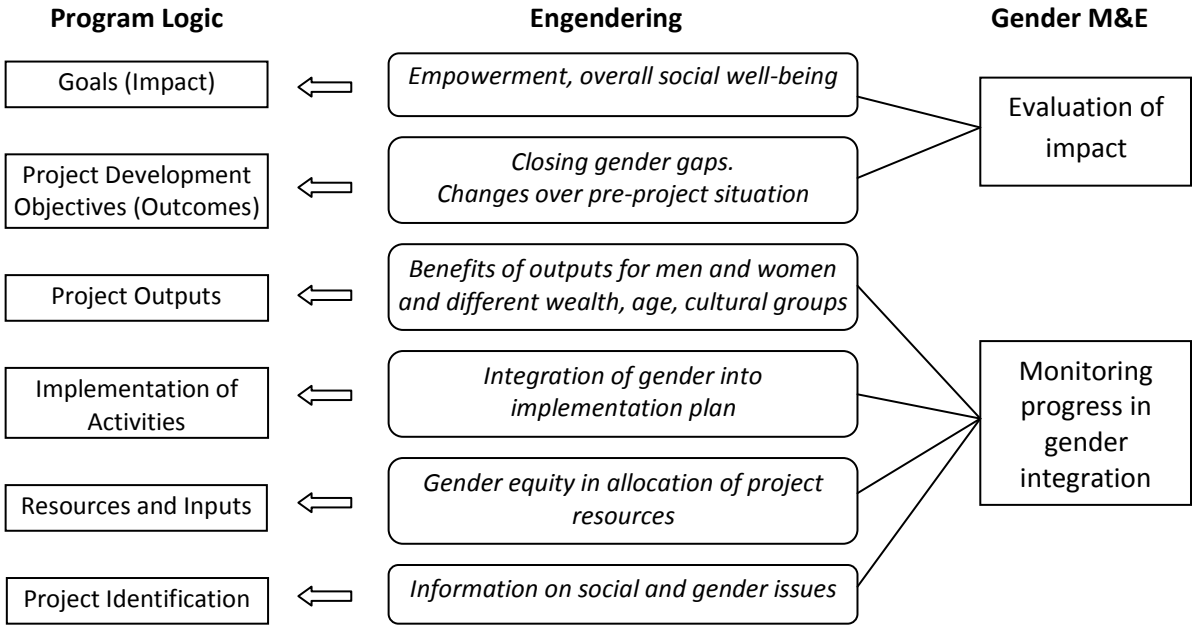
12.6 Gender and diversity aspects of sweetpotato M&E

A thorough discussion of gender and diversity aspects in relation to sweetpotato is presented in Topic 11. However, key gender and diversity issues relevant to M&E are discussed below.
Females and males have different development priorities, needs and constraints, and are therefore affected differently by development projects, programs, and policies.

Timely and systematic collection of sex disaggregated and gender information helps to inform managers and other stakeholders whether the intervention is benefiting both males and females. Such information allows for appropriate refining of project design to improve overall development effectiveness, when an adverse impact on either sex is identified.

Interest in the gender and diversity aspects of the project's outcomes and impacts needs to begin at the start of the project. Figure 12.4 shows how gender can be integrated throughout the program logic.

Figure 12.4 Integrating gender into the project logic



Subsequent evaluation questions might then aim to understand:

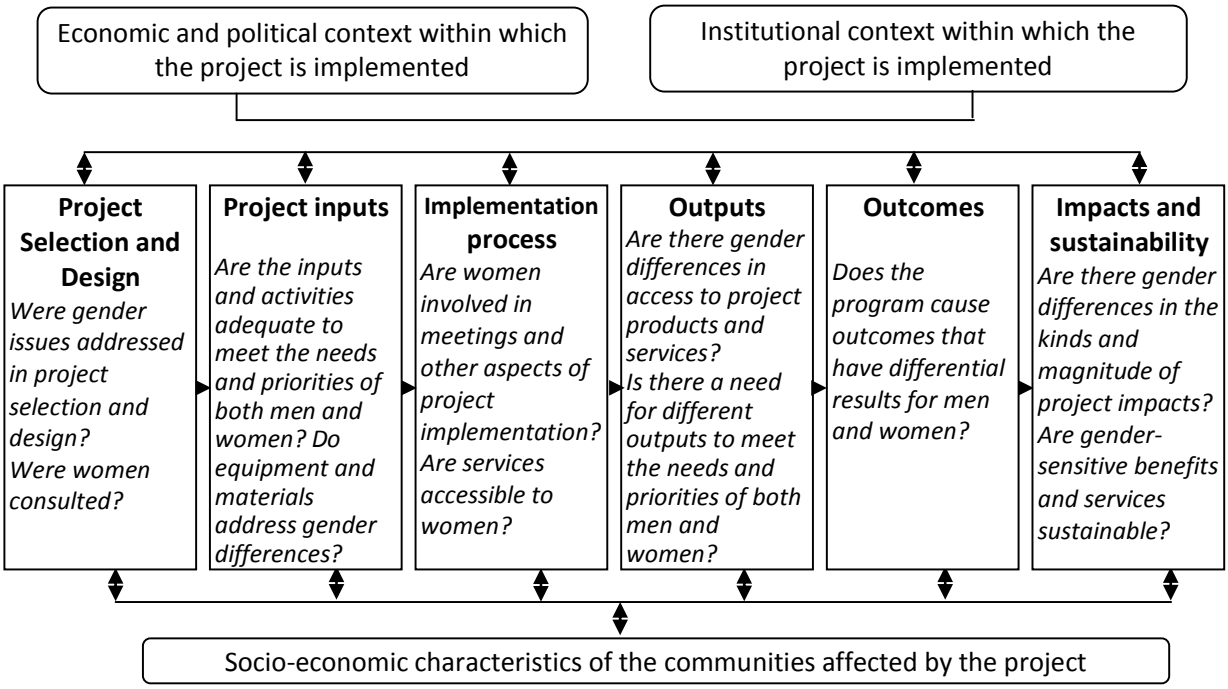
- To what extent did the intervention increase the participation of women in sweetpotato economic activities?
- To what extent did the project address constraints faced by women?
- To what extent did the intervention reduce the incidence of vitamin A deficiency in under 5 year old (girls and boys)?
- To what extent did the intervention increase awareness of the importance of vitamin A rich food consumption for children and pregnant and breastfeeding women amongst carers and those who influence them?
- To what extent did the intervention influence institutional changes that support the advancement of women? Provide examples.
- To what extent did the intervention help to reduce gender and diversity disparities in the health and agriculture sectors?

The M&E indicators used by the project should be:

- Sex disaggregated indicators – e.g. a signal that helps measure change for men and women separately.
- Gender indicators – e.g. a signal that helps to measure gender-related changes.

The analysis of project M&E data can then involve a gendered assessment. Examples of questions that might be studied in such an analysis are given in Figure 12.5.

Figure 12.5 Suggestions for the gendered analysis of a project



Some common gender challenges faced in M&E include: the assumption that M&E frameworks are gender neutral; inadequate inclusion of gender aspects during the initial project planning; limited gender awareness and capacity of M&E staff; barriers to free and open participation by female respondents due to under-representation of women in evaluation and interview teams.

12.7 Ideas for sweetpotato monitoring of OFSP dissemination learning-by-doing activities

These learning by doing activities have been designed to provide hands-on discovery learning opportunities. The following activities occur on day 7 of the 10 day ToT course (see Topic 13).

Day	Topics	Intended Learning Outcomes	Activities
7	Planning a planting material dissemination program	*Participants will:* - Understand all of the key steps and possible bottlenecks that may emerge in planning a mass multiplication or DVM approach dissemination exercise - Practice designing a dissemination program for their area to reach 5,000 households - Understand why it is important to monitor and evaluate projects - Practice monitoring the dissemination of planting materials	- *Presentation 5b.* Key principles of sweetpotato planting material multiplication and dissemination - *Activity 5.10.3: Planning your multiplication and dissemination strategy.* Practical exercise. [3 hrs] - *Group discussion*: comparing the strategies for different scenarios - *Activity 5.10.4: Working with DVMs.* Practical exercise. [2.5 hrs] - *Presentation 5c.* Costing out the dissemination exercise [10 mins] - Presentation 12. Introducing M&E [20 m] - *Activity 12.7.1: Where did it go?* Practice monitoring the dissemination of planting materials. [45 mins] - *Homework problem:* to figure out costs of dissemination strategy

12.7.1 Where did it go?

Intended Learning Outcome: Participants will: practice monitoring the dissemination of planting materials; understand why we monitor and evaluate

Timing: 30 mins

Materials: 200 completed planting material vouchers which have the information required for Table 12.5.2 on them; 40 photocopies of form 12.5.2, pens.

Advanced preparations: Collect or complete 200 completed planting material vouchers.

Suggested steps:

1. This activity could be done in several ways, if the facilitator feels it would be useful for the participants to practice completing vouchers then each group of 4 participants could spend 5 minutes completing 40 vouchers. All the vouchers can then be collected and shuffled by the facilitator, and then each group given 40 vouchers to record the details of in their voucher redemption tracking form (12.5.2). If the participants do not need practice in completing vouchers then the same exercise can be done using already completed vouchers. [15 mins]
2. Ask the groups to swap their forms and vouchers with their neighbouring group who will then check through them. [5 mins]
3. Facilitate a discussion about why it is important to monitor the dissemination of planting materials; what difficulties they had while completing the vouchers or the voucher redemption tracking form; what mistakes were noticed by those checking the forms; and what improvements they could suggest. [10 mins]
4. Using either the forms and explanations in Section 12.5 of the manual or *Presentation 12a*, briefly review the main reasons for using M&E in projects and then discuss the need to monitor the performance and use of disseminated planting materials and the receipt and use of training. [15 mins].

12.8 References used

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Notes on: ***Monitoring of OFSP Dissemination and Uptake***