

GENDER-RESPONSIVE DEMONSTRATION PLOTS AND FIELD DAYS FOR THE PROMOTION AND ENHANCED ADOPTION OF IMPROVED MAIZE SEED IN AFRICA



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Table of Contents

Acknowledgements	i
Foreword	ii
1 Introduction	1
2 Defining Agricultural Demonstration Plots or Farms: their Relevance in the Promotion and Adoption of New, Improved Varieties	3
2.1 The purpose of agricultural demonstration plots – the standpoint of maize researchers and farmers	4
3 Why Gender and Social Inclusion Matters in Agricultural Demonstration Plots	5
3.1 Defining gender-related concepts	5
3.2 The importance of gender and social inclusion in agricultural demonstration plots	7
4 The Selection Matrix for Situating Demonstration Plots	11
4.1 The landscape of demo locations	11
5 Gender-Responsive Demos for the Promotion and Enhanced Adoption of Improved Maize Seed	16
5.1 Gender and social inclusion considerations when designing demos plots	16
6 Monitoring and Evaluation of Gender-Responsive Demonstration Plots	21
7 Defining Field Days: their Relevance to the Promotion and Adoption of New, Improved Seed Varieties	23
7.1 What is a field day?	23
8 Gender-Responsive Field Days	25
9 How to Successfully Collect Information During Field Days	30
References	31
ANNEX 1: Demonstration Plot Data Collection Sheet	33
ANNEX 2: Field Day Attendance Form	36

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The current on-going project, Stress Tolerant Maize for Africa (STMA), was launched in 2016. The project aims to help farmers mitigate the combined effects of multiple stresses such as drought, heat, poor soil fertility and diseases that affect maize production and farming, in order to improve food security and smallholders' livelihoods across sub-Saharan Africa. STMA builds on strong partnerships formed in the Drought Tolerant Maize for Africa and Improved Maize for African Soils (IMAS) projects that achieved major successes in African maize seed systems. For more information, visit <https://stma.cimmyt.org/>.

CIMMYT - The International Maize and Wheat Improvement Center - is the global leader in publicly-funded maize and wheat research and related farming systems. Headquartered near Mexico City, CIMMYT works with hundreds of partners throughout the developing world to sustainably increase the productivity of maize and wheat cropping systems, thus improving global food security and reducing poverty. CIMMYT is a member of the CGIAR System and leads the CGIAR Research Programs on Maize and Wheat and the Excellence in Breeding Platform. The Center receives support from national governments, foundations, development banks and other public and private agencies. For more information, visit www.cimmyt.org.

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Foreword

Maize farmers in sub-Saharan Africa face formidable challenges such as low maize yields, stresses such as heat, drought, diseases and pests, and low adoption of improved varieties. It is therefore critical that farmers access and adopt stress-tolerant varieties to increase yields and incomes and foster more productive and sustainable maize farming in the region. Through collaborative research, partnerships and trainings, CIMMYT works alongside other research organizations, national agricultural research institutes (NARS), seed companies and non-governmental organizations (NGOs), to reach in particular the 40-50 percent of smallholders that do not have regular access to improved maize seed. In 2017, CIMMYT released 79 new maize varieties, of which 44 were released in sub-Saharan Africa. Majority of farmers cannot access or afford high quality seed, especially women who have less access to quality seed of improved varieties than men. CIMMYT is committed to improving women's access to improved maize seed from the formal seed sector. Through research undertaken by the Stress Tolerant Maize in Africa (STMA) and other projects, CIMMYT is working to close

the gender gap in agricultural productivity through increased adoption rates.

This publication is a guide for research institutions, seed companies, NARS and NGOs, who often plan and conduct demonstration plots and field days to scale up the awareness and adoption of new varieties. This manual provides insights as to why considerations of gender and social inclusion are important in agricultural demonstration plots and field days, and provides suggestions on how to incorporate these considerations when designing demonstration plots and conducting field days. This will ensure that both men and women farmers are selected to take part in demonstrations and field days as hosts and participants.

CIMMYT is proud to contribute through this publication to the development of gender-responsive demonstration plots and field days for the promotion and enhanced adoption of improved maize seed.



Martijn Kropff
Director General

1

Introduction

In sub-Saharan Africa (SSA), maize is the most important staple crop and source of farm income for millions of farming households. Despite its importance, gains in maize yields on farmers' fields remain low, owing to abiotic (heat and drought) and biotic (diseases and pests) stresses, low levels of fertilizer use, and low adoption of improved varieties. The development of new, improved seed that provides farmers with higher yields, resistance to abiotic and biotic stresses, increased incomes and improved agricultural livelihoods is therefore imperative. The maize-breeding program at the International Maize and Wheat Improvement Center (CIMMYT) works towards the development of stress-tolerant, disease-resistant, nutrient-use efficient and nutritional quality maize varieties to replace old, less productive ones. However, adoption of new, improved varieties is relatively low within smallholder farming communities in SSA. Often, farmers are reluctant to invest in new varieties, and prefer to continue to cultivate the same variety that assures them expected returns in terms of quality and quantity from their harvest (Magorokosho, 2018). Adoption of maize hybrids is not enough to improve maize productivity effectively; it is instead necessary to replace the old hybrids with new hybrid varieties. This means that the production and distribution of newly-released improved varieties, farmer awareness about them, and access to and use of them, are important prerequisites to

increasing agricultural productivity through crop improvement (Kamau et al., 2018; Smale and Olwande, 2011).

Demonstration plots and field days are among the most important extension approaches for promoting awareness; they provide farmers with reliable and timely agricultural information that accelerates the diffusion and adoption of newly developed varieties amongst farmers. Demonstration plots (demos) and field days showcase new technologies, create awareness and enhance the adoption of new improved maize varieties by encouraging farmers to try them on their farms (Khan et al., 2009; Kondylis and Mueller 2013; Kamau et al., 2018). Demos are more effective at influencing farmers' decision-making than any other promotional approach, such as radio, leaflets, etc. (Kandiwa et al., 2018). Farmers' awareness is a necessary condition for the sustained adoption of new, improved varieties. However, farmers' awareness of new agricultural technologies and access to agricultural information are not gender-neutral. Gender plays a key role in determining the adoption of new agricultural technologies. Men and women may have different levels of access to agricultural information and training, or may have different preferences for the various promotional approaches, which will have an impact on technology adoption (Doss, 2001). Women's access to agricultural information

and training is more constrained than men's, as a result of existing gender-specific barriers and socio-cultural restrictions. Demo plots and field days must be designed and conducted to consider carefully the different ways in which men and women will participate in and benefit from these two extensions approaches equally. For instance, women may have equal access to demonstration plots, but their participation may be limited because of language barriers or restrictions because of male trainers.

This manual provides guidance for considering gender and social inclusion when

designing and conducting demonstration plots and field days, to enhance the effectiveness of these two approaches in improving farmers' knowledge and adoption of new, improved varieties. The first section of the manual defines key concepts, including agricultural demonstration plots, and gender and social inclusion, among others. The second section focuses on the importance of gender and social inclusion in the selection matrix for situating and designing demo plots. The final section reviews why gender matters when planning and executing field days.

2. Defining Agricultural Demonstration Plots or Farms: their Relevance in the Promotion and Adoption of New, Improved Varieties

Agricultural demonstration plots or farms are an effective extension tool because they are at the intersection of adaptive agricultural research (testing and evaluation) and agricultural extension (outreach) (Mbure and Sullivan, 2017; Khan et al., 2009). They provide an opportunity for farmers to test and evaluate new varieties grown under similar local conditions and to learn about their benefits. According to Mbure and Sullivan (2017), an agricultural demo is a site set aside to achieve two main concepts:

a) 'Seeing is believing'

A demonstration of innovative agricultural technologies and practices under local conditions provides farmers with first-hand experience, clear evidence, and a chance to evaluate their performance. Farmers can see how new varieties out-perform old traditional varieties. An ideal demo should convince farmers and increase their confidence to try out new varieties. For many resource-poor farmers whose livelihoods largely depend on a successful harvest, purchasing improved seed is an investment that must pay off in terms of quality and quantity. As such, demos are an effective means of reducing the risks that farmers perceive in trying out new varieties (Mbure and Sullivan, 2017; Koutsouris et al., 2017).

b) 'Learning by doing'

Demos provide an opportunity for hands-on learning, enabling farmers to learn about innovative agricultural technologies and best practices side-by-side with traditional methods (Diagram 1). Learning is most effective when it is based on practical, hands-on experience. Individuals are likely to remember more of what they learn practically than of what they learn orally or visually (Mbure and Sullivan, 2017; USAID, 2018; Mathinda, 2015).



Diagram 1: A woman and a man farmer are receiving training on better farming practices from an agricultural specialist.

2. 1 The purpose of agricultural demonstration plots – the standpoint of maize researchers and farmers:

Demonstration farms or plots enable maize researchers to showcase effectively and create awareness of new and exciting varieties to farmers; to demonstrate the performance of improved varieties under alternative management practices; to create effective demand for and enhanced adoption of varieties among farmers; and to foster brand recognition. Demos are geared to reach as many diverse people as possible. A demo plot showcasing new maize varieties that perform better in terms of yield and have a high resistance to abiotic and biotic stresses than older varieties can influence a farmer's decision to try out the new varieties. From a maize researcher's standpoint, it is important that new varieties perform well under similar local conditions to farmers fields. Demonstration plots help maize researchers to capture men's and women's trait- and varietal preferences, and to incorporate feedback from farmers into their breeding programs and end products. They provide a learning platform for maize farmers to interact actively with scientists, agronomists, seed company representatives, NARS, NGOs and agricultural extension workers. Moreover, selected farmers with a demo plot have a chance to host a field day, and this provides them with a chance to engage with their peers in the community to whom they can relate freely.

3.

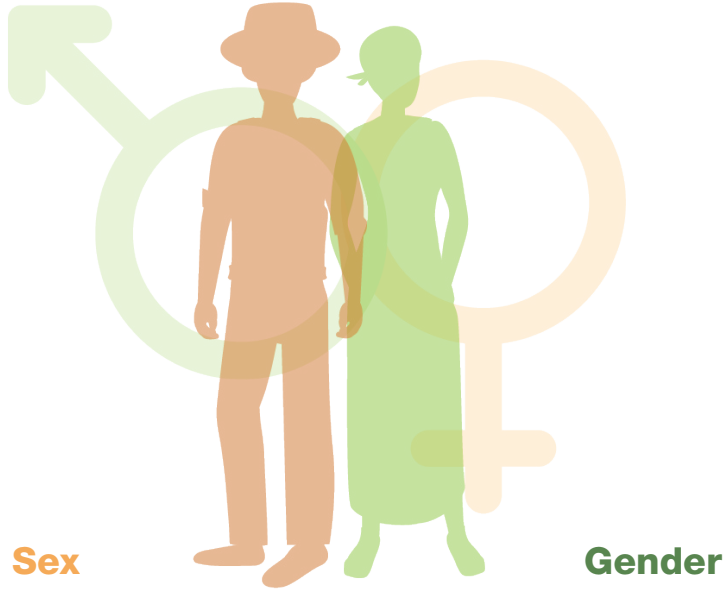
Why Gender and Social Inclusion Matters in Agricultural Demonstration Plots

Once a new maize variety is released, seed companies work closely with their partners such as research organizations, seed multipliers and agro-dealers to multiply, promote and disseminate it widely. This section discusses how to ensure that gender is addressed in seed multiplication and promotion.

3. 1 Defining gender-related concepts:

Gender refers to learned social roles and responsibilities associated with what it means to be a man or a woman in a given society and context. Gender is often misconstrued as being a woman's issue only, and there are arguments as to why there are more discussions about women when talking about gender. It is important to understand that gender is not about women but about the relationship between men and women. Sex refers to the biological and physiological characteristics that define men and women. Sex and gender are not the same, although some sex characteristics may influence gender roles; gender refers to learned social roles and identities associated with what it means to be a man or a woman (Box 1: Sex and gender are not the same thing). Gender roles are shaped by culture, religion, and economic, political and social factors. They determine how responsibilities and resources such as land and livestock are distributed between men and women. The concept of gender sees inequality between men and women as a problem rooted in power at both the personal level and at the level of society. Because gender is defined by society based on traditions and practices and shaped by economic and political factors that change over time, gender roles and responsibilities can and do change. The concept of gender also recognizes that all men and women are not the same: they differ in terms of factors such as age, ethnicity, wealth, education, marital status, religion etc. Social inclusion can be defined as the process of improving opportunity, participation, and the rights of marginalized people of different ages, socio-economic status, religion, ethnicity, educational levels, and disabilities. For example, wealthy producers, whether men or women, may have enough land, labor and cash, whereas poor men and women producers may not have enough of these resources to host demonstration plots. In some societies, women, whether wealthy or poor, are not allowed to travel on their own or go to secondary school because of cultural norms. Most gender-related development interventions target women, and many will therefore ask why we focus on women if gender means both men and women. In order to ensure that women have equal opportunities and personal freedom, development programs and efforts tend to focus first on women to make sure that there is a 'level playing field'. At the same time, it is important to engage with and involve men, even where activities primarily target women, to ensure their cooperation and involvement in transforming unequal gender relations.

Box 1: Sex and gender are not the same thing



Sex

Gender

Determined by biology: women give birth, have breasts and menstruate; men have testicles, facial hair and higher muscle mass.

Constructed by society; in many societies, it is mainly women who are responsible for cooking and looking after the home

Universal for all human beings

Differs between and within cultures: in many societies, both men and women can only have one spouse; in other societies, men are allowed to marry more than one woman, while in a few societies, women can have more than one husband

Unchanging, although surgery and other treatments can change sex characteristics

Changes over time; in the past in many societies, only men were allowed to vote, run for political office or drive

3. 2 The importance of gender and social inclusion in agricultural demonstration plots

Women are the major contributors to Africa’s agricultural workforce (nearly 50%), with huge differences in this figure among countries and by crop. For example, women make up 36% of the agricultural labor force in Côte d’Ivoire and Niger, and 60% in Lesotho, Mozambique and Sierra Leone (FAO, 2011). Women’s contribution to cereal production in Uganda, Tanzania, Malawi, southern and northern Nigeria and Niger ranges between 21-55% (see figure 1 below).

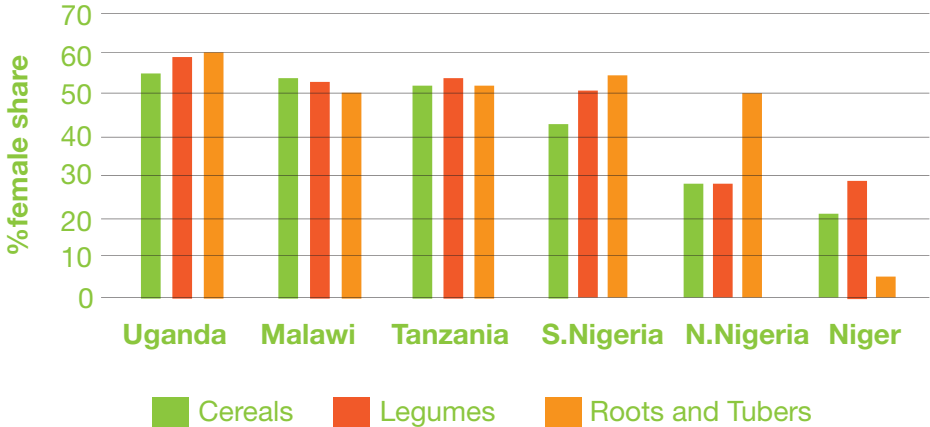


Figure 1. Female share of agricultural labor in cereals, legumes, and root and tuber crops in selected African countries, 2009-2011. Source: Palacios-Lopez et al., (2017).

Despite women’s important contribution to agriculture, women lack access to agricultural inputs and to information and training on innovative technologies, hence women are less likely to use improved seed than men. The existing gender gaps in the adoption of new agricultural technologies have implications for women’s empowerment, overall productivity and food security, and for poverty reduction and the well-being of households. FAO estimates that closing the gender gap in access to resources would enable women to increase yields on their farms by 20-30%; this would increase agricultural output in developing countries by 2.5-4% and reduce the number of hungry people in the world by 12-17% (FAO, 2011). Doss and Morris (2001), found that women were less likely to adopt improved maize seed than men. This was because the adoption of modern maize varieties was intrinsically linked to the gender-related differences in men’s and women’s access to inputs. Gender adoption gaps exist because of the differences in men’s and women’s access to agricultural resources, inputs, information and training. Women have less access than men to extension and advisory services that provide information and training, inputs and credit. In Malawi, for example, the

adoption of modern maize varieties was 12% lower for wives in male-headed households, and 11% lower for women farmers in female-headed households than for male farmers (Fisher and Kandiwa, 2014). Women in female-headed households tend to have less access to information about modern technologies, which lowers their adoption rates, hence affecting their productivity. Gender influences women's access to agricultural inputs (such as seed of improved varieties) and services (information and trainings) (Murage et al., 2016; Doss and Morris, 2001). As farmers, men and women have different agricultural roles and priorities that are often defined by culture and are context-specific, and that shape their access to and control over resources and services.

Given women's important contribution to agriculture and food security in sub-Saharan Africa, considering gender in extension dissemination methods such as demonstration plots is essential for the successful adoption of new agricultural technologies. Gender-based constraints and socio-cultural barriers may exclude women from participating effectively in agricultural demonstrations either as participants or as hosts. Specific types of gender-based constraints that limit women's participation in demos include access to and control over productive resources and services, limited mobility, time constraints and language barriers. These constraints limit women's access to the information and training on new varieties provided by agricultural extension during demonstration plots. The identification of key gender-based constraints has the potential to increase women's participation in demonstration plots as participants or as hosts.

An important criterion for selecting demo hosts includes access to and control over land; this places women in a precarious position because of their limited access to and control over land. In many African countries, land is more usually owned by men, and women's access to and decisions about the use of land are determined by their relationship with the men. Land tenure



Women make up nearly

50%

of the agricultural labor force in Africa



Improving women's access to land, information, improved seed and other resources would enable women to increase yields on their farms by

20-30%

This would reduce the number of hungry people in the world by

12-17%

can be a potential barrier to women's participation as demo hosts. Women only represent 15% of landowners and often have smaller plots and land with poorer soil quality (FAO, 2011). Teklewold et al., (2015) state that the plot area allocated for a demo plot is determined by availability of land, seed, and labor. They further state that a larger plot size allows for good comparison of old and new varieties, although a larger plot may be harder to manage. However, if the plot size is small and there is limited access to seed, the minimum size of plot should be at least 10 m × 10 m (although this is not recommended).

Time constraints owing to women's multiple productive and reproductive responsibilities such as planting, harvesting, weeding, preparing food, and caring for the family often make women too time-poor to participate effectively in demos as participants or as hosts. As indicated in figure 2, women are solely responsible for fetching firewood, preparing food and cooking, and cultivating certain crops (millet, sorghum and sweet potatoes). More women than men are engaged in harvesting. According to FAO (2011), rural women can spend up to four hours a day walking to collect fuel and water for the household. Women's work burden and limited control over their own labor may affect their participation as demo hosts, especially if some demo-related activities require additional labor and time.

In Malawi, for example, the adoption of modern maize varieties was

12%

lower for wives in male-headed households, and

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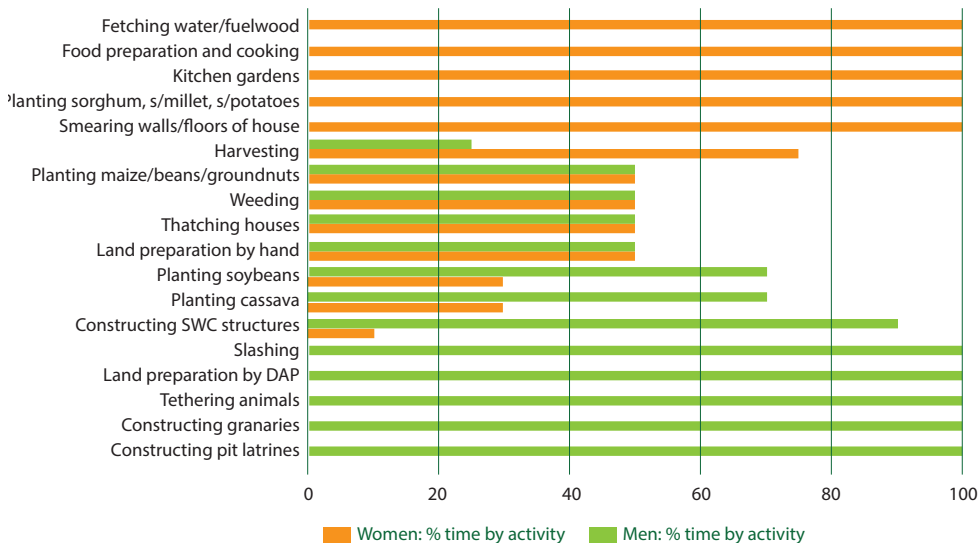
lower for women farmers in female-headed households than for male farmers



Women represent only

15%

of land owners and often have access to smaller plots and land with poorer soil quality



SWC: soil and water conservation structures such as lama juu, trash lines, cutoff drains, diversion dishes and boundary bunds. Source: Bishop-Sambrook, 2003:22 (data source: community estimates during fieldwork).

Figure 2. Gender division of labour in Nandafubwa, Busia District, Kenya. Source: Grassi et al., (2015) and Bishop-Sambrook (2003).

Mobility constraints may limit women’s access to public transport, training and thus gaining the information provided at demo plots. Women may not be able to travel to access demos that are far from them without being accompanied by a male partner. Even in cases where women participate in demos as host farmers, owing to the uneven power dynamics they may not have decision-making power over the selection of improved maize seed to demonstrate, as such decisions remain in the hands of the men. Women have less access to cash than men, and are more likely to be affected by the cost of inputs such as seed of improved varieties and fertilizers, hence their chances to host demos are limited.

Socio-cultural barriers may have implications for women’s participation in demos. This is because of cultural restrictions that limit women’s interaction with male extension workers. For instance, cultural norms restrict married women from communicating with male extension agents without their husbands being present. This may be a lost opportunity for women to host demos, and more importantly, to receive the technical support required to successfully manage the demo.

The inclusion of poor and marginalized groups in demonstration plot activities should also be considered, to ensure that the specific needs of men and women of different socio-economic status, educational levels, ages and ethnicities are addressed. It is important not only to increase the proportion of women-led demo-plots, but also to increase the proportion of demos hosted by marginalized groups. Increased recruitment and use of female field assistants during demos and field days can increase the proportion of women farmers participating in demos. Social inclusion considerations are important because they help take into account, for example, the needs of people living with physical disabilities who may face mobility challenges in accessing demos.

4.

The Selection Matrix for Situating Demonstration Plots

4. 1 The landscape of demo locations:

The selection of a demonstration plot is important for effective demonstrations (Koutsouris et al., (2017). An ideal demonstration plot should be situated in an area with a good chance of reaching as many of the targeted farmers as possible (Kamau et al., 2018). A well-established demo plot should ideally be close or accessible to farmers, thus allowing them to visit the plot frequently to evaluate the performance of the variety at different stages. Farmers hosting demos should allow other farmers to observe and learn throughout, from preparing the land to harvesting the maize (Mbure and Sullivan, 2017; USAID, 2018). Moreover, demos located next to farmers' fields show farmers that the variety will perform as well on their own farms because the conditions are the same (soil, weather etc.). Often, demo locations are along major roads owing to the high number of passers-by, or along a well-visited pathway or tarmac road, or on farms next to marketplaces (Kamau et al., 2018), or located at institutions (Diagram 2).

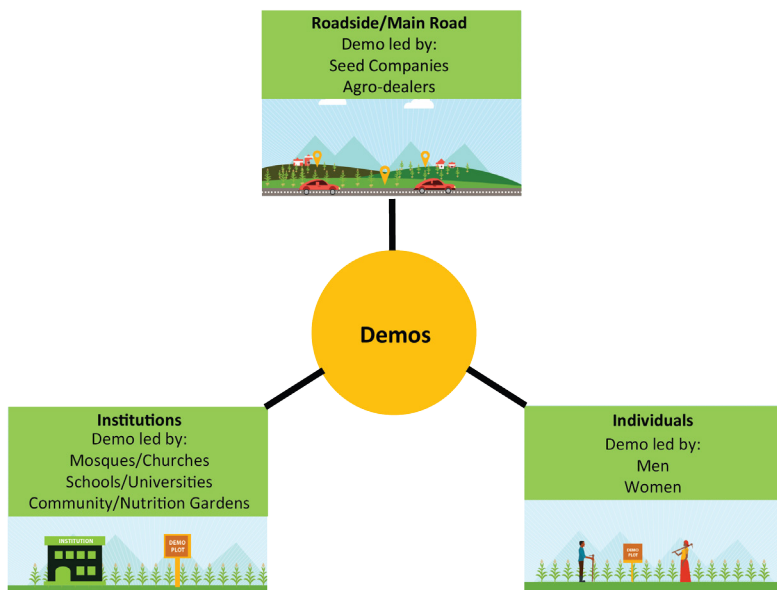


Diagram 2: The Landscape of Demo Locations.



Diagram 3: Demonstration plots hosted along the roadside of a main road.

4.1.1 Demonstration plots hosted by the roadside: Gender considerations and implications

Roadside demos can be established by seed companies, agro-dealers, agricultural extension workers, research institutions, NARS and NGOs. Demonstration plots hosted along the roadside provide better exposure and higher visibility of the varieties (Diagram 3). Roadside demos are more accessible to people who frequently pass along the road. The roadside demo is considered to be relatively more accessible to men and young people than to women, owing to women's triple roles (home and childcare, farming, and community work) that affect their time and freedom of mobility. Often, plots along the roadside are considered to be prime land and are most likely to be controlled by men. The preference for having demo plots by the roadside can narrow the choice of farmers who are able to host demos, since not all farmers will have land with such desirable locations (Mbure and Sullivan, 2017). Some of the limitations of roadside demos are that they are only visible to those who pass along the road, and that often there is no one available to answer questions or provide an explanation once an individual has evaluated the plot. To achieve impactful demos, there should be proper signage (e.g. name of variety, planting date and seed rate etc.) and literacy constraints and language barriers should also be considered. However, since women tend to be less literate than men, information on a demo sign should be written in the local language, and simple wording should be used with plenty of illustrations.



Diagram 4: Demos hosted by individual farmers.

4.1.2 Individual host farmers: Gender considerations and implications

According to Miller and Cox (2006), farmers will have more confidence and be more receptive to innovations if a new practice is shown by a fellow farmer. One important approach that host farmers can use to influence their peer farmers effectively, is to set aside a piece of their land to cultivate old varieties following old agricultural practices, and new, improved varieties using new agricultural practices. Men and women rely on their social networks to access agricultural information, and it is important to note that they have different social networks (Diagram 4). Women rely more on their social networks to learn about new agricultural technologies. Women's groups for instance, can influence other females within their network to learn about and adopt new, improved varieties. Therefore, demonstration plots should be led by both men and women in order to increase the impact of the information diffused. Women's groups should also be allowed to lead demo plots so that these have a greater, larger-scale impact. Women's groups provide women with access to important extension information and training. This is especially important in circumstances where women farmers tend to be overlooked by rural advisory services, on the assumption that their husbands are the 'real' farmers and will pass on information to them. In Ghana, data revealed that in male-headed households, only two percent of spouses received an extension visit (Croppensted et al., 2013). It is important to recognize that women in male-headed households are farmers in their own right, and that they may have different preferences as regards to varieties and technologies from those of their husbands. Individual host farmers who have a chance to host a field day can provide farmer-to-farmer learning and information-sharing, which may enhance the scaling-up and adoption of new varieties by other farmers.

The selection of individual farmers to host demo plots should be a participatory process. The composition of the selection team or committee does matter! The team may include NARS, research institutions, seed companies, extension agents, NGOs, farmers' organizations and local community leaders. It should include a social scientist and/or gender expert, and both men and women should be represented in the team. For instance, the team may include men

and women extension agents, or men and women breeders, or men and women technicians and agronomists, or men and women lead farmers. This may, to some extent, ensure that the process for selecting individual host farmers will be fair for all and inclusive not only for women farmers, but also for marginalized groups. Transferring agricultural information through traditional, male, extension workers may perpetuate the existing gender inequities in agriculture and adoption (Kondylis et al., 2017). Regrettably, the selection of team members may not tackle the deeply rooted issues of the current power relations within households and communities.

The geographic characteristics of the host farmers are important for effective demonstrations: the land area should be representative, in that it should contain the biophysical conditions of a given locality. The topography of the area is also important, meaning that the site should not be too sloping. Soil color, texture and drainage properties are also important characteristics (Teklewold et al., 2015). The area should be accessible to other farmers, and poor, marginalized groups must also be able to access the plot. Individual host farmers should have the following characteristics: a relatable personality that allows his or her peer farmers to approach and engage with them easily; a good social standing within their community; the ability to communicate in the local language; and the willingness to cooperate, learn, and welcome regular site visits to the plot by extension agents, researchers, and farmers. He or she should be an active and hands-on farmer, perhaps a leading farmer in the community or a leader in a farmers' organization; he or she should understand the socio-cultural barriers that exist within the community, and be sensitive to and able to accommodate issues that may arise due to the social differences of men and women farmers (Mbure and Sullivan, 2017; Koutsouris et al., 2017).

One major challenge for an individual host farmer is that demonstration plots require considerable time, finance, knowledge, skills, labor, and effort in order to make them well-established and more effective. Mbure and Sullivan (2017) state that it is necessary to know exactly who is responsible for meeting the costs of implementing the demo. This is important, especially if we want to include socially marginalized groups. Finances, time, and labor can be a challenge for women who plan to host demonstration plots. How can we do away with the assumption that poor people are unable and unwilling to try new technologies owing to limited capacities such as finances and may therefore not want to participate as demo hosts? Some of the costs associated with hosting a demo include the following: seed, fertilizers, pesticides, labor, fencing, demo signage, and field days (speakers, chairs, refreshments, written materials etc.) (Mbure and Sullivan, 2017). How can we support marginalized farmers to participate as host farmers? Providing or supporting marginalized farmers with agricultural inputs (seeds and fertilizers), trainings and demo signage can encourage them to participate as hosts. Women's groups can be selected to host demos, and this can help to reduce the cost of seed, fertilizers and labor.



Diagram 5: Demos hosted by institutions.

4.1.3 Demonstration plots hosted at institutions: Gender considerations and implications

Institutions such as government or private research institutions, educational institutions (schools/universities), non-governmental organizations (NGOs), health clinics, religious centers (churches and mosques), community and nutrition gardens can all serve as venues for established demo plots that will target potential farmers with information about new, improved maize varieties and good agricultural practices (farm management, timely and proper weeding, correct spacing, and control of pests and diseases) (Diagram 5). Institutions where farmers gather on a regular basis, for instance religious centers, are accessible to a large number of people. Farmers and potential farmers can observe the performance of varieties over the entire growing period. Institutions can be a means to transmit information and showcase new or improved varieties through organized field days. Older women and young women with children often visit health clinics, and therefore demos can be established at nearby health clinics. The two main limitations of hosting demo plots at institutions is that the individuals who visit may not include the target farmers who the demo plot is intended to reach. Churches are limited to specific denominations or faith groups and may fail to reach farmers who do not go to churches. Higher-learning institutions such as colleges and universities can establish demos to reach young men and women.

5.

Gender-Responsive Demos for the Promotion and Enhanced Adoption of Improved Maize Seed

5. 1 Gender and social inclusion considerations when designing demos plots

Gender-responsive agricultural demo plots entail:



Diagram 6: Women and men farmers of different socio-economic status, religion, age group and education level viewing a demonstration plot hosted by a woman.

a) Moving towards an inclusive selection criterion

When considering gender differences in access to and control over critical resources and services, it is also important to consider that women and men are not homogeneous groups. This means that we need to move beyond 'including women' and move towards asking which women – young, married, poor, educated, Muslim? All women are not the same: some women for instance will face greater deprivation than other women. Women may differ in economic status, social status, marital status, age, ethnicity, education and religion. For example, wealthy maize producers, whether men or women, may have enough land, labor and cash to become demo hosts, whereas poor men and women maize producers may have less of these resources. Demos on family-managed demonstration plots are hosted by a man or woman within a household; this is an inclusive approach (sometimes called a household approach) which can be applied in order to engage both spouses in the establishment and management of the demo. This household approach may influence a change of attitude in men and to some extent transform unequal gender relations within households. The selection of farmers to host demonstrations is often biased toward men and people of high socio-economic status. The inclusion of host farmers of different ages, socio-economic status, educational levels and income should be ensured (Diagram 6 & Figures 3 and 4).

Towards an Inclusive Selection Criteria

Suppose you want to place 10 demos

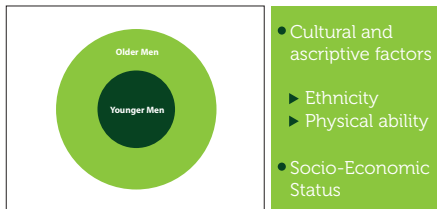


Figure 3

Towards an Inclusive Selection Criteria

Suppose you want to place 10 demos

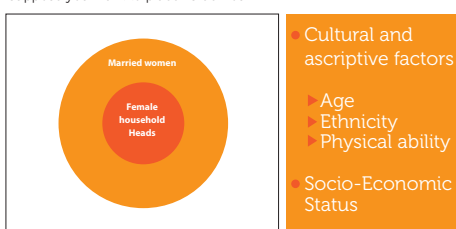


Figure 4

Figures 3 and 4. Moving towards an inclusive selection criterion

b) Appreciation of how gender norms condition women’s access and potential participation as demo hosts

Women may face an array of challenges in hosting demos: they face limited access to and ownership of land on which to establish the demonstration plot, cash constraints to purchasing agricultural inputs, and cultural restrictions when engaging with male extension workers offering advice and technical support (Diagram 7). Without control over land, women may have less bargaining power in the household to make decisions on allocating a portion of the land to establish a demo. In addition, women may face time and labor constraints because of their triple roles, and because of cash constraints, hiring the necessary labor to prepare and cultivate their demo plot may be a challenge.



Diagram 7: A woman farmer facing challenges in hosting a demo plot: lack of land title deed, cash constraints, cultural constraints when engaging with male extension workers and time.



Diagram 8: The support that a woman farmer would need in order to host a demonstration plot: knowledge of better farming practices, improved varieties of seeds and other agro-chemicals, finance to purchase other inputs, social network of female farmers, among others i.e., land.

c) Effective strategies to increase women's participation as demo hosts

Women should be encouraged to host demonstrations so that they can learn about the technology and its benefits directly from extension agents, and then transfer their knowledge to other women (Diagram 8). Ideally, half of all demo plots should be hosted by women. To increase women's participation as demo hosts effectively, we should use effective strategies, for example by supporting women-managed demonstration plots in male-headed households. Influencing behavioral and attitude change in men can enhance women's participation as demo hosts. Men can allow their spouses to learn and be trained about new varieties and farmer practices so that they can have well-established demos. Because of women's role in securing food and nutrition for their households, they should be persuaded to host demos so that they can see at first-hand the benefits of the new, improved varieties on their own plots. Female-headed households should be encouraged to establish and manage demonstration plots as they often have limited access to information about modern technologies, which lowers their productivity. Women depend largely on their female social networks to learn about new agricultural technologies and practices, therefore women's groups or women's farmer associations will facilitate better access to a wider range of women in a given community. By situating demos with women and women's groups, one increases the chances of reaching more women, who would otherwise be missed if all demos were hosted by men.

Women are usually more cash, time and mobility constrained, hence they have less access to inputs; they may therefore require support when establishing demonstration plots. Some strategies to support women will include delivering seed and other inputs to women in a timely manner to ensure that their plots have all the necessary inputs to ensure performance of the demo. Providing technical and agronomical support to women will also improve the performance of their demo plot, but the trainings should be at convenient times for women, considering the constraints that they face because of their multiple responsibilities. Farmer selection needs to be done at least a month ahead of the season's onset.

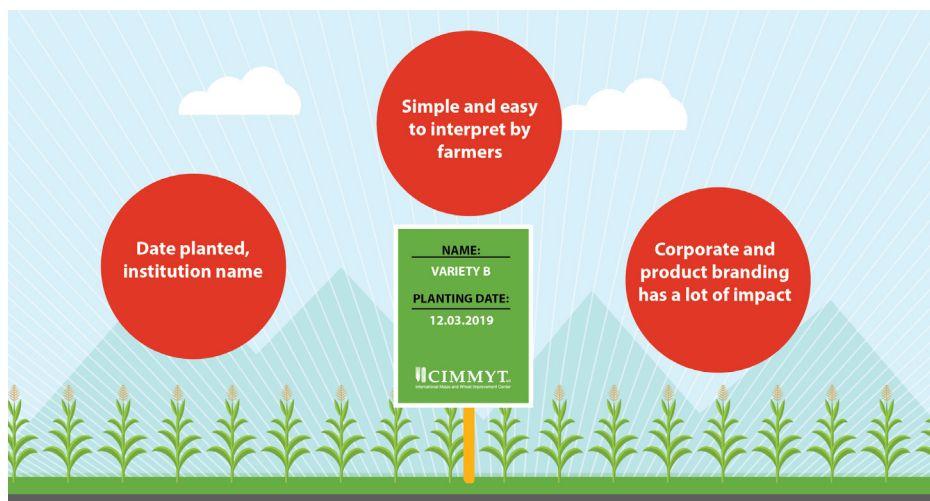


Diagram 9: Appropriate signage at the demos, in order to create awareness of the seed varieties.

d) Gender-aware geographical spread and demo signage

Demonstration plots tend to be located in ‘high visibility’ areas such as along major roads and highways. Motorists and individuals who pass along these roads can view the performance of specific varieties. However, roadside demos have a number of limitations; firstly, they are not accessible to individuals with limited mobility, especially women. Secondly, both men and women farmers seldom get the opportunity to interact with the demo host, extension officers, agronomists and representatives from seed companies, to learn about the specific varieties. Therefore, in order to build awareness among all demographic groups within a locality, those managing demos need to carry out a situation analysis to ensure the even distribution of demos in all possible areas where farmers are located. Awareness creation using demos can only be successful with appropriate signage at the demos – it should be kept simple and visible (Diagram 9). In order to capture the interest of both men and women farmers, it is imperative that demo signage is clearly visible from a reasonable distance, up to 20 meters away. The language used in the signage should be simple and easy to interpret by farmers. Corporate and product branding has a lot of impact on creating interest in a specific improved seed variety, particularly in demos where multiple products from several seed companies are being demonstrated. Some of the questions to consider when developing demo signage should include the following: will the signage enable ease of understanding of the seed products among smallholder farmers? What language is best understood by the target audience for the demo? What symbols would best represent the product among the target clientele? After visiting or seeing the demo, will farmers be able to remember the seed product?

5.1.2 Gender-responsive selection matrix for hosting demo plots

If you intend to host ten demo plots, ensure that five of them are hosted by men and five are hosted by women with different socioeconomic status (SES) for instance age, marital status and religion etc. (Figure 5).

Five men:

- Demo 1: Old, married, rich (SES 1)
- Demo 2: Old, single, poor (Male-headed households/MHH 1)
- Demo 3: Young, married, rich (Male-headed households/MHH 2)
- Demo 4: Young, single, poor (Men in female-headed households (MFHH))
- Demo 5: Young or old, of different ethnic origin (SES 2)

Five women:

- Demo 1: Old, married, rich (SES 1)
- Demo 2: Old, single, poor (Female-headed households/FHH 1)
- Demo 3: Young, married, rich (Women in male-headed households (WMHH))
- Demo 4: Young, single, poor (Female-headed households/FHH 2)
- Demo 5: Young or old, of different ethnic origin (SES 2)



Figure 5. Gender-Responsive Selection Matrix for Hosting Demo Plots

6

Monitoring and Evaluation of Gender-Responsive Demonstration Plots

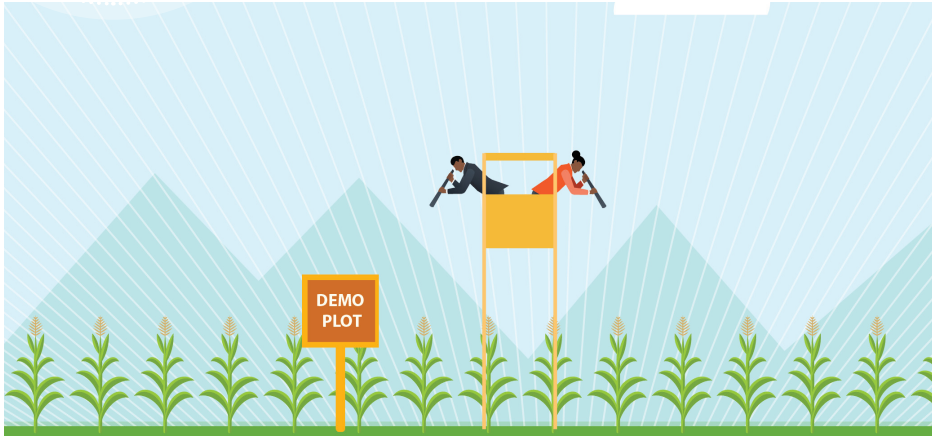


Diagram 10: Monitoring and evaluation of the demonstration plots is the key for successfully creating gender-responsive demos.

Frequent monitoring and evaluation of the demonstration plots should be done by research organizations, institutions, seed companies, NARS, NGOs, and farmers implementing the demos (Diagram 10). It is important to note down the selection process of the site, the number of host farmers and their details, and the demo-related activities such as preparing and cultivating the land, and to record the vegetative, grain-filling, harvest and post-harvest stages, the number of plot visits, the trainings provided and the inputs used, the agronomic practices adopted (weeding, fertilizer and pesticide application dates) and the costs relating to the establishment and management of the plot (See Annex 1 for more details). There should be a record of the proportion of demos managed by men, by women, by young farmers and by women's groups (Figure 6). If farmers are hosting the demonstration plot, they should keep a record of the number of men and women who visit their demo site, and consider noting down key questions and evaluations from other farmers. Host farmers should be free to give their opinions about the challenges and lessons they have learned about the varieties they have cultivated. See also Table 1 suggests tips for hosting demos with gender considerations.

Figure 6: Selection Process and Monitoring and Evaluation.

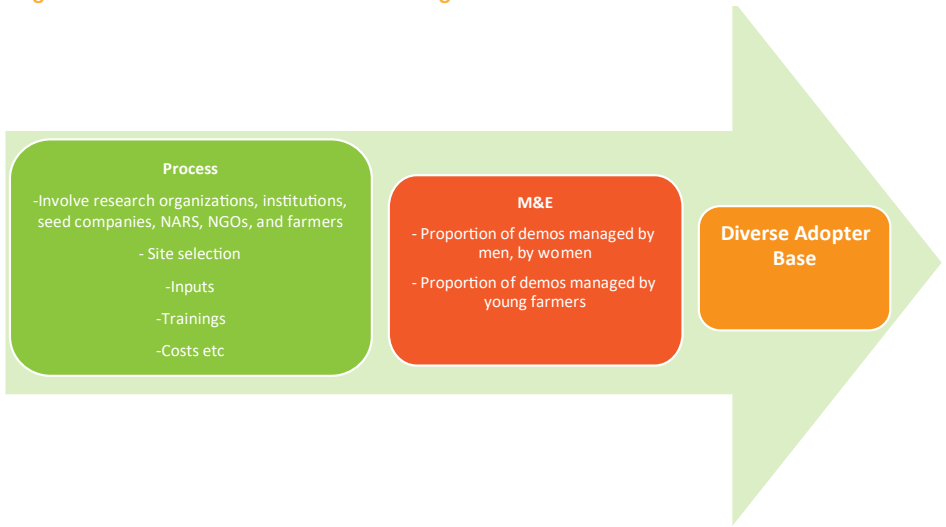


Table 1: Tips for hosting gender-responsive demonstration plots

MUST DO	MUST AVOID
Begin process early	Gender bias
Ensure diverse set of demo hosts	Lead farmer bias
Provide support to all farmers	Repeat/professional demo hosts
Maintain sex-disaggregated data	Age and ethnicity bias

Defining Field Days: their Relevance to the Promotion and Adoption of New, Improved Seed Varieties



Diagram 11: Field days are used to create and build farmers awareness and promote or showcase the performance and success of new, improved varieties to farmers.

7. 1 What is a Field Day?

Field days are an agricultural extension approach employed to build the capacity and stimulate the interest and awareness of as many farmers as possible about an agricultural innovation. They showcase the performance and success of new, improved varieties. A field day is usually an event conducted at a demonstration plot to demonstrate on a large scale new agricultural management practices and technologies (Diagram 11). It showcases the effectiveness of the technology as well as its utilization on a demo plot (Koutsouris et al., 2017; Sustainable Agriculture Research and Education (SARE), 2017). Both farmers and extension staff ranked field days as the most important extension approach, because of their effectiveness in delivering information to audiences according to a report by National Agricultural and Livestock Extension Program of Kenya (NALEP) in 2011. Field days can be conducted during the vegetative, grain-filling, pre-harvest and post-harvest periods to showcase performance of the variety at these critical stages. Demonstration plots selected for field days should successfully convince and motivate farmers that the varieties have been able to perform well under different stresses (heat, drought, diseases and pests) with good management practices (Teklewold et al., 2015). Other promotional approaches should be provided during field days, such as small seed packs, hats, t-shirts, wrap clothes, leaflets, brochures, posters, videos and documentaries. The field day participants usually include farmers, farmer organizations, local leaders, NARS, NGOs, seed companies, research institutions and media.

7.1.1 Why are field days relevant?

Hosting field days at demonstration plots is an important extension approach used to train and educate farmers, especially those from marginalized groups who are proportionately disadvantaged in accessing agricultural information and training. Field days are as effective as demos at building awareness because they adapt the same concepts: ‘seeing is believing’ and ‘learning by doing’. Field days combine visual and hands-on training about the technology; they give farmers an opportunity to learn by seeing the actual performance of the new, improved varieties being tried by other farmers on their farms. Field days are effective in transferring knowledge, as farmers can discuss with fellow farmers and with field facilitators while they evaluate the performance of the improved varieties. They are often convened at a subset of demo locations, and are mainly relevant for farmers because they provide an opportunity for interaction and knowledge-sharing about new maize varieties with researchers, extension agents, seed companies and other men and women maize farmers. Maize researchers use field days to demonstrate to farmers the actual performance of different types of improved maize seed, and to collect information about the performance of a variety from farmers; for instance, what do farmers like or dislike about the variety? Would they adopt the variety? (these are questions included in the field day tool, see Annex 2). Field days bring farmers together to evaluate collectively and enquire about new, improved varieties. They equip farmers with new agricultural knowledge and skills to help them move from growing old varieties to cultivating new, improved varieties that will make their farms more profitable and sustainable. Purchasing improved maize seed is an investment, because nearly all farmers need to get the most out of the land they farm. During field days, farmers can access agricultural inputs (e.g. free seed samples of the variety under demonstration to try on their farms). During field days, seed companies may consider providing women farmers with wraps and bags, and men with hats and t-shirts with branded details of the variety being demonstrated; this will help with brand recognition for the company as well. Farmers with demonstration plots can host a field day that can enhance farmer-to-farmer knowledge-sharing and promote the adoption of new varieties. Field days have the potential to increase a seed company’s market share, as well as to enhance brand recognition with customers or potential customers.

PROMOTIONAL APPROACH



GENDER CONSIDERATION

Common branded clothing such as t-shirts and caps/hats are usually worn by men, while women may prefer branded wrap cloths (kitenge, chitenje, lappa, wrappers), head gear/ties and cloth shopping bags. It is important to find out what men and women prefer.

8

Gender-Responsive Field Days

Gender relations or norms in the households and communities, cultural norms, religion, ethnicity, socio-economic status, marital status, education and income levels, and age may all influence attendance at and participation in field days (Bello-Bravo et al., 2011). Gender considerations are important when planning field days because of the existing gender-specific constraints and socio-cultural barriers that may limit women's attendance and participation. Women's agricultural work is perceived as auxiliary and as an extension of their household roles (Chocholata et al., 2016). Women's intensive labor burden, especially the unpaid care work in the household, has resulted in women having less time to practice in their farming activities the learning, knowledge and skills gained from groups according to Grassi et al., (2015). Women's assigned triple roles may therefore leave them with insufficient time to attend and actively participate in field days, or to plan and host field days (Box 2: Gender considerations are important when planning field days especially for women because). Moreover, women with small children are less mobile, which may affect their attendance and participation. Women are also more cash-constrained than men and this affects their ability to travel to attend field days or even to host field days. Resource-poor farming households also have limited opportunity to host and participate in field days, which is why socio-economic considerations are important when planning them. In many African farming societies, women often have less access than men to education, which affects their literacy and their capacity to receive and internalize information, hence, Murage et al., (2016), argues for the need of simplified messages when sharing agricultural information to women during field days. A demo signage with field day schedules, for instance, should take into account the fact that women are less literate than men, and therefore such important details should be written in the local language. Announcements of the field day should be planned well in advance, and regularly and widely publicized through multiple channels in order to reach both men and women. Women may have less time than men to listen to radio or watch television, and may not even have access to these communication channels. Moreover, mass-messaging media should be in local languages and aired during times that are convenient to both men and women audiences.

Cultural norms or barriers generally discourage or prohibit male-female engagement, and it is important to consider the interactions that women farmers have with field day hosts. In many cultures, women do not often speak or state their opinions in public. Field days hosts

or organizers should ensure that women feel comfortable enough to express their opinions freely. Considering how to include vulnerable groups or socially marginalized groups is also important when executing field days. For instance, ensuring clear, safe and well-planned paths around demos allows easy access and movement for people with disabilities, and for older participants who may require help to move around the plots. In addition, the demonstration plots should not be far apart, to ensure the effective participation of people with disabilities and older farmers. In contexts where specific demographic groups (for instance young men and women) are unrepresented as field day hosts or participants, organizing teams should establish reasons for their low numbers and develop strategies for making sure that they attend; for example, by inviting young people to share their experience of improved varieties, and by using social media to reach as many young men and women as possible with the dates and timing of field days.

Men and women farmers may derive different benefits from attending and participating in field days. Women may prioritize field days because they want to learn about new, improved varieties that contribute to increased food and nutrition security because of their assigned role as food providers. On the other hand, men may prioritize field days to learn about new, improved varieties but may focus on production yields to determine their market participation and income, because of their role as household providers.

Appealing to women customers farmers

Consider providing the following:



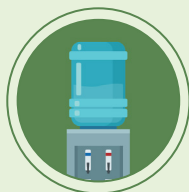
Clean bathroom facilities



An area where women can breastfeed



Seats that can be used by parents with small children and the elderly



Clean drinking water



Small gifts for children

Box 2: Gender considerations are important when planning field days especially for women because

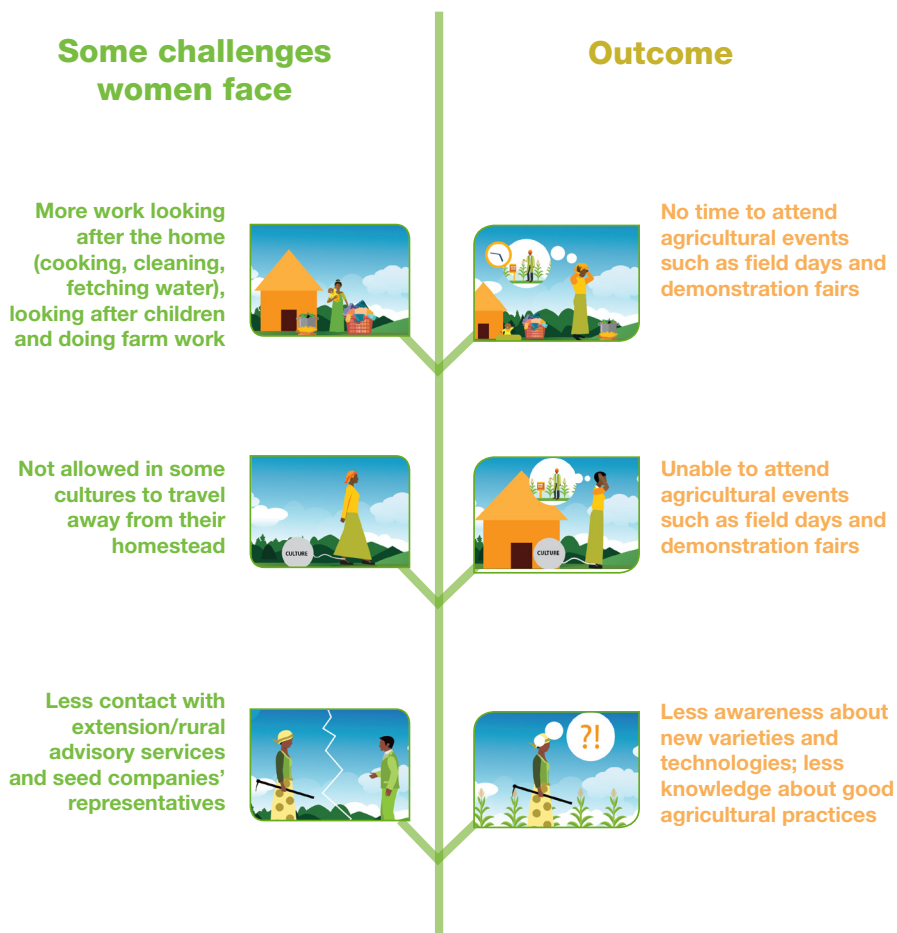




Diagram 12: Men and women should have equal opportunities to host, attend and participate in field days.

8.1.1 Gender considerations for encouraging women farmers to host and participate in field days:

At least half of field days should be convened on women-managed demo plots to maximize the opportunities for women (Diagram 12). With cultural restrictions concerning female and male interactions, field day organizers could consider organizing women-only field days with women trainers or women-led demo hosts. Women extension workers play a critical role in cultural contexts that limit the interaction of women and male extension workers. Engaging husbands and convincing them to bring their wives to attend the field days can increase the likelihood of women hosting field days. Establishing field days led by women's groups will also motivate women to participate in the field day as hosts or participants. Field day organizers can strategically target institutions such as churches, hospitals and clinics that women visit frequently, to engage women and encourage them to attend field days. Organizing field days at a time and on a day that is convenient for women may increase their participation. Women hosting field days should have an opportunity to share their perspectives and views on the performance of various varieties and their experience of hosting a demo. Women are often cash-constrained and may have challenges in meeting the costs related to conducting a field day; they may need financial support to plan and implement a field day effectively. If necessary, providing transport should be considered to enable farmers, especially women, to attend field days.

Women's socio-economic factors such as age, education and marital status are key factors that may determine their role in hosting and participating in field days, and these should be considered. For instance, older women with adult children may have more opportunities to participate in field days or be targeted by community leaders to attend field days than mothers with young children. Field day organizers should consider providing childcare and child feeding arrangements, to encourage nursing mothers and mothers with small children to attend. Distribution of agricultural inputs such as small seed packs during field days to men and women at minimal cost or for free encourages farmers to try new varieties with little or no risk.



Diagram 13: Women's assigned triple roles may affect their time to attend and actively participate in field days, or to plan and host field days.

8.1.2 Timing and execution of field days: gender and social inclusion considerations

Considerations of day and time are important in order to maximize the number of women and men attending the field day. Considering men's and women's busy schedules, the organizers should consider whether the field day will be a half day or a full day event. Timings do matter! Women are time-poor, and owing to gender norms, long field days may not be ideal as they may disrupt women's role in the household (Diagram 13). To ensure inclusivity, a few men and women lead farmers of different socio-economic status should be involved to deliberate on a suitable time and day for hosting a field day. Market days are considered to be an important time for farmers to sell and buy agricultural products or conduct other business and are therefore not appropriate days for hosting a field day. It should be decided who the target audience is, and the number of people who should attend. Time should be allowed for engagements (questions, clarifications and discussions) for effective interaction between the various stakeholders. Language barriers should be considered: simple language should be used for labelling the maize in the field to ensure easier understanding for those with low education. It is important that women feel comfortable enough to express their opinions and not feel excluded.



How to Successfully Collect Information During Field Days

9.1.1 Objectives of a gender-responsive field day toolkit:

1. Track attendance between men and women
2. Track attendance between young and old farmers
3. Track patterns of field day attendance
4. Investigate parameters that may determine attendance: (time, day, distance and cost of travelling)

9.1.2 The Process of developing a field day toolkit:

1. Filling in the participants details should take FIVE (5) minutes maximum
2. Make sure that the devised tool has gotten views from various stakeholders i.e., agronomists, gender specialists, seed company owners, NGOs etc.
3. Welcome comments that will improve the tool

9.1.3 Data collection modalities:

1. The team of data collection officers should include men and women
2. Minimize the amount of time it takes to complete each form
3. Minimize the amount of time each person must wait to be interviewed
4. Link interview completion with issuing a refreshment voucher

9.1.4 Managing attendance and data collection:

1. How do you normally estimate the number of field day attendees?
2. How do you manage data collection when people arrive in mass?
3. How do you collect data from dignitaries (e.g. ministry representatives)?

9.1.5 Data entry and archiving:

1. Only one person should enter all data
2. Data should be entered on an Excel spreadsheet
3. A field officer should check the quality of the data
4. Copies of clean data should be forwarded to the gender specialist, within 14 days of the field day

References

- Bishop-Sambook, C. (2003). Labour saving technologies and practices for farming and household activities in Eastern and Southern Africa: labour constraints and the impact of HIV/AIDS on rural livelihoods in Bondo and Busia Districts, Western Kenya. Rome, IFAD and FAO.
- Bello-Bravo, J., Seufferheld, F. and Agunbiade, T. (2011). Gender and Farmer Field Schools in Agricultural Production Systems in West Africa.
- Chocholata, L., Allara, M., Impiglia, A., and Tagliati, E. (2016). Farmer Field Schools and Empowerment. Community empowerment, social inclusion and gender equality, experience from Jordan and Tunisia. FAO.
- Croppenstedt, A., Goldstein, M. and Rosas, N. (2013). Gender and Agriculture Inefficiencies, Segregation and Low Productivity Traps. Policy Research Working Paper 6370. The World Bank.
- Doss, C. R. (2001). Designing Agricultural Technology for Women: Lessons from twenty –five years of experience. *World Development*, 29(5): 2075-2092.
- Doss, C. R. and Morris, M. L. (2001). How does gender affect the adoption of agricultural innovations? The case of improved maize technology in Ghana. *Agricultural Economics*, 25(1): 27–39.
- Fisher, M. and Kandiwa, V. (2014). Can agricultural input subsidies reduce the gender gap in modern maize adoption? Evidence from Malawi. *Food Policy*, 45: 101–111.
- Food and Agriculture Organization (FAO) of the United Nations. (2011). The state of food and agriculture: women in agriculture; closing the gender gap for development. Rome: FAO.
- Grassi, F., Landberg, J. and Huyer, S. (2015). Running out of time: The reduction of women's work burden in agricultural production. Food and Agriculture Organization (FAO) of the United Nations.
- Kamau, M.W., Bagamba, F., Riungu, C., Mukundi, J. and Toel, R. (2018). Early changes in farmers' adoption and use of an improved maize seed: An assessment of the impact of demos and field days. *African Evaluation Journal* 6(1), a278.
- Kandiwa, V., Adam, R., Lweya, K., Setimela, P., Badstue, L. and Muindi, P. (2018). Gender-Responsive Approaches for the Promotion of Improved Maize Seed in Africa. Mexico, CIMMYT.
- Khan, A., Pervaiz, U., Khan, N., Ahmad, S. and Nigar, S. (2009). Effectiveness of demonstration on plots as extension method adopted by AKRSP for agricultural technology dissemination in district Chitral. *Sarhad Journal of Agriculture* 25(2): 313–319.
- Kondylis, F. Muellerb, V. and Zhuc, J. (2017). Seeing is believing? Evidence from an extension network experiment. *Journal of Development Economics* 125: 1–20.

Koutsouris, A., Papa, E., CHiswell, H., Cooreman, H., Debruyne, L., Ingram, J., Marchand, F. (2017). The Analytical Framework: Demonstration Farms as Multi-Purpose Structures, Providing Multi-Functional Processes to Enhance Peer to-Peer Learning in the Context of Innovation for sustainable Agriculture.

Magorokosho, C. (2018). Switching to Drought-Tolerant Maize gives Zimbabwean Farmers a Boost in Food Security. The International Symposium on Agricultural Innovation for Family Farmers: Unlocking the potential of agricultural innovation to achieve the Sustainable Development Goals, held at the Food and Agriculture Organization of the United Nations (FAO) Headquarters in Rome, 21-23 November 2018.

Mathinda, C. (2015). Principles of Adult learning: A unit for a module on learning theories and adult education.

Mbure G. and Sullivan, C. (2017). Improving the Management of Agriculture Demonstration Sites in Food Security Programs: A Practitioner's Guide.

Miller, R. and Cox, L. (2006) Technology Transfer Preferences of Researchers and Producers in Sustainable Agriculture. *Journal of Extension* 44(3).

Murage A., Pittchar J., Midega C., Onyango C., Pickett, J. and Khan, Z. (2016). Gender appropriateness of field days in knowledge generation and adoption of push-pull technology in Eastern Africa. Invited paper presented at the 5th International Conference of the African Association of Agricultural Economists, September 23-26, 2016, Addis Ababa, Ethiopia.

National Agricultural and Livestock Extension Program (NALEP). (2011). A guide to effective extension method for different situations.

Palacios-Lopez, A., Christiaensen, L. and Kilic, T. (2017). How much of the labor in African agriculture is provided by women? *Food Policy*, 67: 52–63.

Smale, M. and Olwande, J. (2011). Is older better? Maize hybrid change on household farms in Kenya. Tegemeo Institute of Agricultural Policy and Development, Nairobi. Selected paper prepared for presentation at the International Association of Agricultural Economists (IAAE) Triennial Conference, Foz do Iguacu, Brazil, 18-24 August 2012.

Sustainable Agriculture Research and Education (SARE). (2017). Farmer Field Day Toolkit Share Your On-Farm Innovations.

Teklewold, A., Wegary, D., Tadesse, A., Tadesse, B., Bantte, K., Friesen, D. and Prasanna, B.M. (2015). Quality Protein Maize (QPM): A Guide to the Technology and Its Promotion in Ethiopia. CIMMYT: Addis Ababa, Ethiopia.

United States Agency for International Development (USAID). (2018). Feed the Future Mozambique Agricultural Innovations Activity (FTF Inova) Findings from a Qualitative Study on Gender Norms in Farming, Input Use, and Distribution in Manica Province.

ANNEX 1: Demonstration Plot Data Collection Sheet

The demo data collection sheet can serve as a record keeping tool that can be used by research organizations, national agricultural research institutes (NARS), seed companies and non-governmental organizations (NGOs) to document the geographical selection of the demo, the farmer selection criteria, the demo host characteristics, demo plot characteristics and activities and support once the demo is established (e.g. field days) (see Annex 1).

Annex 2: Field Day Attendance Form

Date:			Enumerator:			Supervisor:		
Name:			Sublocation:			Village:		
Mobile No:			Marital Status			Are you a Farmer?		
Sex	Age Group: ____		Primary and secondary occupation			Language		
Spouse Resident in area	1=Yes	2=No	Spouse Attendance		1=Yes	2=No		
1st Field Day Ever	1=Yes	2=No	# FDs Last Year		# FDs This Year			
Distance to Field Day (km)			Means of Transport		Education			
Info Source			Community/religious Leadership					
Private Sector Rep			Government Official/Political Leader					

Codes

Marital Status: 1=Married 2=Single, never married; 3=Divorced; 4=Widowed

Farmer: 1=Yes 2=No;

Age: 1= < 18; 2= 19-35; 3=36-60; 4=>60

Means of transport: 1=Walk; 2=Bicycle; 3=Motorbike/Tuk-tuk; 4=Bus/minivan; 5=Cart; 6=Other;

Education: 1=No formal education; 2=Primary; 3=Secondary; 4=College/University

Information Source: 1= Government extension; 2=NGO; 3=Friend/Neighbor; 4= Spouse; 5= Farmer cooperative; 6=Research Institution; 7=Agro-dealer; 8=Radio; 9=Newspaper; 10=Mobile Phone/text message; 11=Flyer; 12=Seed Company; 13=Farmer Group; 14 =Church/Mosque; 15=Public meeting called by local authorities; 16=Other.

Community/religious Leadership: 1=Farmer; 2=Village leader 3= Chief or leader at higher level; 4= Local/National Political Leader; 5=Business/company Representative 6=Other

Private Sector Representative 1=Yes; 2=Non-Government Official/Political Leader 1=Yes; 2=No



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