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MASTER FARMERS TRAINING AND EXTENSION SERVICES



FEBRUARY 2014

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The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

CONTEXT

Agricultural productivity in Haiti is generally very low. Most Haitian farmers use antiquated agricultural practices and have little knowledge of modern methods. Furthermore, the agricultural extension system of the Ministry of Agriculture is virtually non-existent, leaving small farmers with little opportunity to learn new methods and practices. Over the past four years, the Feed the Future West/WINNER project has been implementing a Master Farmers program to train small farmers in its areas of intervention on modern agricultural techniques. The main objectives of the Master Farmers program are to:

- Inform farmers on the consequences on poor agricultural practices on yields and on the environment;
- Transfer alternative methods and technologies for a more efficient agriculture;
- Assist farmers in improving their knowledge on how to apply appropriate methods and technologies to local conditions;
- Improve small farmers understanding of the factors of production; and
- Provide farmers with the technical knowledge to better manage their farm, and to transmit best practices to others within their communities.

Overall, the knowledge imparted to Master Farmers includes more efficient agricultural practices and the use of technical itineraries that are sustainable and respectful of the environment.

FEATURES OF THE MASTER FARMERS PROGRAM

Because FtF West/WINNER worked with farmer associations to reach smallholders, the master farmer candidates were selected by the associations in each of the project's areas of intervention. The candidates to the program have to meet the following criteria to be admitted:

- Commit to continue living and working in their community;
- Have the capacity to exchange and share, listen and assimilate new information, and show the ability to transmit acquired knowledge and skills to others;
- Be sociable and have a good reputation within their community;
- Be a member of a farmer association or be recommended by local authorities;
- Have an adequate level to be able to understand the training content; and
- Pass a pre-qualification test in order to register for the program.

Once Master Farmers are enrolled, the FtF West/WINNER training staff organizes training sessions at one of our Sustainable Rural Development Centers (CRDDs).

The Master Farmer program includes four compulsory courses and two elective courses. The compulsory courses are:

- General agricultural principles
- Small farm management
- Family planning and nutrition
- Sustainable environmental management

The elective courses include:

- Cereals and legume production
- Vegetable production
- Agricultural mechanization
- Livestock
- Agro-forestry and soil conservation
- Post-harvest techniques
- System of Rice Intensification (SRI)
- Protected and vertical agriculture
- Flower production

TRAINING STRATEGY

The trainers in the Master Farmers program are either University Professors from Faculté d'Agronomie et de Médecine Vétérinaire (FAMV), Université Quisqueya, or other universities; specialized FtF West/WINNER staff; or specialized consultants. In addition to in-class training, master farmer candidates also received field training with practical applications at the CRDDs. In particular, courses on good agricultural practices include on-farm training through the implementation of demonstration plots where the prescribed technical itineraries are compared to traditional practices.

CERTIFICATION OF MASTER FARMERS

After having completed their course of study, Master Farmer candidates have to pass a final exam. If they are successful they receive a certificate that is signed jointly by the Ministry of Agriculture, the Ministry of Environment, and FtF West/WINNER. At the graduation ceremony, they receive a toolkit that will enable them to have some tools to work in their communities.

In order to be able to disseminate the proper technical itineraries for crops, master farmers set up demonstration plots in their communities. These plots are used to show other farmers how to obtain higher yields through: proper soil preparation, the use of quality inputs, the proper management of water, the judicious and environmentally-conscious application of fertilizer and pesticides; proper planting techniques, proper weeding techniques, and proper harvest techniques. Master farmers also show other how to reduce post-harvest losses. They are also better able to assess the costs of inputs vs. the revenues generated through higher yields.

RESULTS

As of December 31st 2013, a total of 2,809 Master Farmers have graduated from the FtF West/WINNER program as shown in Table 1 below.

Table 1
Summary of graduated Master Farmers by region

	Cul de Sac plain	Kenscoff	Matheux	Gonaives	Mirebalais	Total
2010						
Female	14	3	-	-	-	17
Male	37	6	-	-	-	43
Total	51	9	-	-	-	60
2011						
Female	49	49	16	14	38	166
Male	118	86	95	96	77	472
Total	167	135	111	110	115	638
2012						
Female	41	83	53	20	33	230
Male	128	127	202	118	53	628
Total	169	210	255	138	86	858
2013						
Female	136	79	81	21	-	317
Male	318	121	182	53	-	674
Total	454	200	263	74	-	991
2014						
Female	51	-	22	12	-	85
Male	101	-	48	28	-	177
Total	152	-	70	40	-	262
Total						
Female	291	214	172	67	71	815
Male	702	340	527	295	130	1,994
Total	993	554	699	362	201	2,809

As the table shows, a total of 815 women graduated as Master Farmers (29% of the total). Figure 1 below shows the graduated Master Farmers by year. It is worth noting that, even after the closure of the FtF West/WINNER office in Gonaïves in 2011, training of master farmers continued through the Eben Ezer Foundation that took over the Gonaïves CRDD. Overall, 114 master farmers, including 33 women were graduating in Gonaïves since the departure of FtF West/WINNER.

Figure 2 shows the graduated master farmers by region. The Cul-de-Sac plain graduated the most master farmers (993 or 35% of the total), followed by the Matheux region (699 or 25 % of the total).

Figure 1 Certified Master Farmers by Year

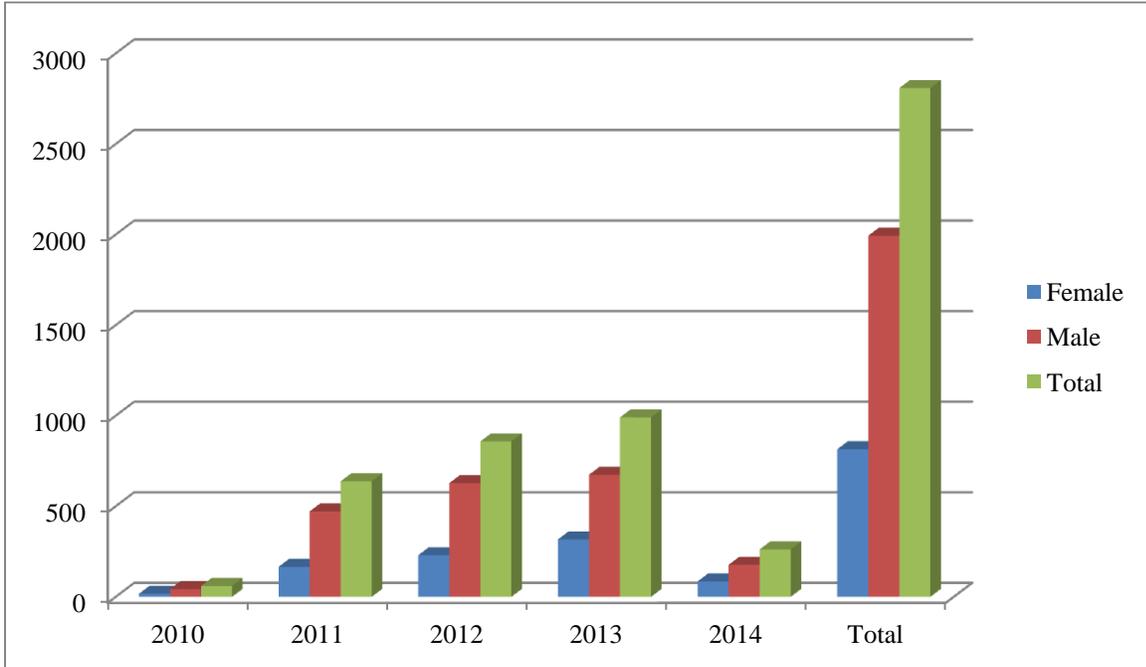
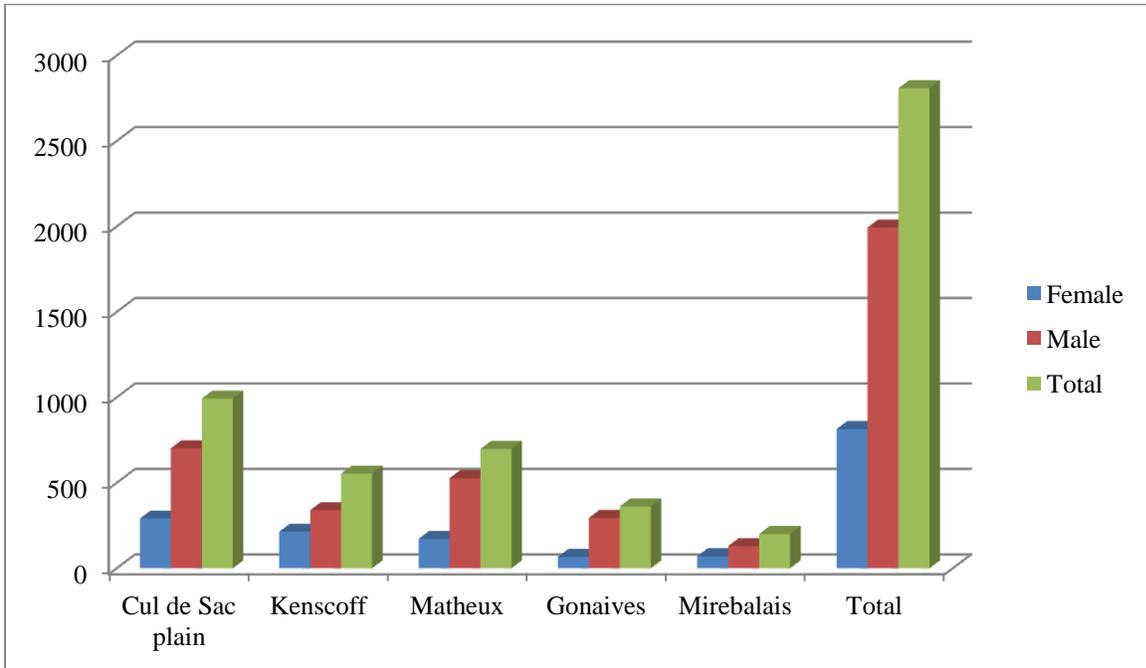


Figure 2 Certified Master Farmers by Region



EXTENSION ACTIVITIES OF MASTER FARMERS

After graduating from the program, master farmers installed demonstration plots in their communities to demonstrate best practices in order to facilitate their adoption on a larger scale. Although they already belonged to farmer associations, several groups of master farmers decided to create their own associations. To date, six associations have been created by master farmers:

- Paysans Vulgarisateurs pour le Développement de l'Arcahaie et de Cabaret (PVADAC). This group has installed several demonstration plots to show the double row plantain plantation technique and participated in agro-forestry activities. They organize regular training sessions on their communities and participate in the "Mache Peyizan" (farmers market organized by FtF West/WINNER).
- Mouvement des Paysans Vulgarisateurs pour le Développement Agricole (MPVDA). This group organizes training sessions for farmers in its area.
- Programme des Paysans Vulgarisateurs pour le Rehaussement et l'Agriculture de Cabaret (PROP AVRAC). This group has implemented two demonstration plots (plantain and beans) in the area of Fovau.
- Organisation des Paysans Vulgarisateurs de la Commune de Gonaïves (OPVCG). This group currently supporting the Ministry of Agriculture with the winter bean campaign in Gonaïves. They were also employed last year by the Ministry at a rate of 5,000 Gourdes per month.
- Association des Paysans Vulgarisateurs de la Promotion Octobre – Décembre 2013 (APVPOD). This group is currently getting its official recognition from the Municipality.
- Association Solidarité des Paysans Vulgarisateurs des Gonaïves (ASPVG). This group is currently getting its official recognition from the Municipality.

All of these groups participate in agricultural extension in their area. They report that the lack of funds and access to credit of farmers prevent them from applying all of the prescribed technical itineraries. However, farmers still obtain significantly higher yields by applying some of the new methods and management practices transmitted by the master farmers.

Also, after receiving their certificate, some master farmers have found employment. Two of them work at the Gonaïves CRDD with the Eben Ezer Foundation; four have been engaged by Mercy Corps; two are working with OXFAM; and four have been engaged to work on the fertilizer subsidy program (PSF) run by the Ministry of Agriculture.

Master farmers have also distinguished themselves through the installation of demonstration plots that showcase the prescribed technical itineraries. Among the achievements of master farmers, we can note:

- Regis Sabine of the OJDS (Matheux) farmer association has put in place two demonstration plots for beans and plantain. For plantain, she has obtained yields of 23 tons/ha (as opposed to 13 tons/ha in the FtF West WINNER 2011 baseline).
- Ertilus Brinel of the APC (Matheux) farmer association has set up a unit to produce compost and manure.
- Ginette Fleurgiste, Lionel Saint Hilaire and Bois Souvent Jean Louis distinguished themselves in their mastery of technical itineraries during a practicum for master farmers.
- Thirty two (32) master farmers, including 10 women, participated in an agricultural land survey in the Cul-de-Sac plain to facilitate irrigation water management.
- Eleven (11) master farmers participated in agricultural research projects in the Cul-de-Sac plain.
- Seven (7) master farmers specialized in agro-forestry and soil conservation in Chaha participated, through the plantation of vetiver, in the program of conservation of the protection structures of the Rivière Grise, implemented by the Ministry of Agriculture in October 2013.
- Two master farmers worked in family planning programs implemented by Save the Children and the Ministry of Public Health for two years.
- More than ninety (90) master farmers are shareholders in the following organizations: COPACLA, OPDMO (5), OPTDC (11), ACPDD and OJUDO (8), PHASS (11), GFVCT (6), AAS, AJPD, ATRADEM, GRAPIHIDGRAF, OJEUDEC, and ACIDEVT.
- Many master farmers participated in the farmer market (Mache Peyizan) organized by FtF West/WINNER, and are selling agricultural products from their communities directly to customers.
- Esther Saint-Hilaire, the deputy treasurer of SOHARDEK states that the organization now requires that each new candidate follow at least five courses before becoming a member of the association. SOHARDEK is an association in Kenscoff with more than 6,000 members, of which 30 are certified master farmers. All the master farmers transmit their knowledge through training sessions organized for other association members. Some members were able to double their yields as a result of this training. According to Pierre Paul Jules, President of SOHARDEK, some master farmers have become models in their communities. For example, Chérilien Eliancy, whose potato production went from two to four tons; or Eliacin Pierre who more than doubled his bean yields.
- Thirty (30) master farmers from GADCODEM are now working with CARITAS in Duvier on soil conservation activities.

With the training they received, master farmers have been able to increase yields in all target crops.

Rice

Table 2 presents the yields from demonstration plots of the system of rice intensification (SRI) established by master farmers in Thomazeau.

Table 2. Rice yields obtained by master farmers in Thomazeau (Fall 2012)

Name	Locality / Association	Surface area (m²)	Quantity of seeds (kg)	Yield (t/ha)	% Increase in yield over baseline
Dieuseul Saint Louis	Pont Janvier	1,200	0.72	5.4	145%
Adner Raymon	Laperiere	1,200	0.72	7.0	218%
Edner Raymond	Bas Merceron	1,200	0.72	5.4	145%
Adner Raymond	Merceron	1,200	0.72	5.7	159%
Lenord Joseph	Bas Merceron	1,200	0.72	5.4	145%
Charlemagne Cadet	OPDMO	N/A	N/A	5.5	150%
Ysalma Jean	APEAPACT	N/A	N/A	5.3	141%
Dilus Jean	GRAPIDGRAFT	N/A	N/A	5.1	132%

These rice yields are substantially higher than the baseline yield of 2.2 tons per hectare measured in 2009.

Corn

Table 3 below shows the corn yields obtained by master farmers in the fall of 2013. The baseline yield was 0.8 tons/ha

Table 3. Corn yields obtained by master farmers in the Cul-de-Sac plain (Fall 2013)

Name	Commune	Association	Yield per hectare	% increase in yield over baseline
Nady Selisca	Thomazeau	OPVH	4.8	500%
Jean Ronald Felisme	Thomazeau	OPTDC	4.89	511%
Jean Felix	Thomazeau	ATRADEM	3.9	388%
Makendy Ceresier	Ganthier	LEA	2.5	213%

Beans

Table 4 below shows the bean yields obtained by master farmers in the winter 2012-2013 bean campaign in the Cul-de-Sac plain.

**Table 4. Bean yields obtained by master farmers in the Cul-de-Sac plain
(winter 2012 – 2013 season)**

Name	Commune	Surface area (Ha)	Yield per hectare	% increase in yield over baseline
Jean Ronald Felisme	Thomazeau	0.42	1.45	142%
Miguel Siméon	Thomazeau	0.09	1.42	137%
Lesly Simonice	Thomazeau	0.14	1.47	145%

CONCLUSION

The master farmers program implemented by Feed the Future West/WINNER has been very successful. By the end of the project in May 2014, more than 3,000 master farmers will have been trained, including 30% women. These master farmers are engaged in their communities to disseminate agricultural best practices and to show other how to plant and harvest better. The dissemination of knowledge and modern techniques among smallholders will have a multiplier effect in increasing agricultural productivity in Haiti.

The Ministry of Agriculture has already started using some master farmers as extension agents. However, there is a need to significantly expand extension services in Haiti and the master farmers trained through USAID are an excellent resource for that purpose.

Another important result of the master farmers program is that young farmers that have learned modern agricultural techniques are now convinced that there is a future in agriculture and are less inclined to leave rural areas to seek opportunities in cities.

The training of master farmers will continue through the CRDDs at the end of FtF West/WINNER. It is essential to closely coordinate these future training sessions with the Ministry of Agriculture in order to revamp extensions services on a broader scale.