

# Development of business capacity and organization of commercial business of farmer based organizations in the northern intervention zone in Ghana: A case study of nine-farmer based organizations

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## ABSTRACT

The Agricultural Component of the Millennium Challenge Account Ghana Compact was to alleviate poverty and improve livelihoods of farmers through commercial development of farmer organizations in the intervention zones in Ghana. In Ghana, there were three intervention zones as Southern Horticultural Zone, Afram Basin Zone and Northern Horticultural Zone. Nine Farmer Based Organizations (FBO's) of 450 farmers consisting of 65.1% males and 34.9% females in the West Mamprusi district of the Northern Horticultural Zone were trained by authors under the Millennium Development Authority (MiDA) Agricultural Project. Farmers of the FBO's were trained on nine modules on Business Capacity Building and five modules on Organization of Commercial Business over a period of six weeks. Age range of trainee farmers was 30 - 39 years for males representing 37.54% and 40 - 49 years for females representing 29.94%. Educational level of trainee farmers was 9.90% males and 1.91% females who completed primary school. Trainee farmers who completed senior high school were 2.73% and 0.64% for males and females, respectively. There were no university graduates among the trainees of the nine farmer groups trained. Among the educated trainee farmers was 81.91% male illiterate and 91.72% illiterate. Trainees' farm

size was 0.4 - 2.0 hectares representing 57.43% males and 66.45% females. Attendance of male trainees over the period of six weeks was 89.76% and 10.24% absentees, whereas attendance of females over the same period was 88.96% and 11.04% absentees. Nine Action Business Plans were developed for the nine FBO's to access financial support from the MiDA participating financial institutions in the horticultural zone for the commercial development of farmers' organizations. This paper presents a case study analysis of Business Capacity Building and Organization of Commercial Business modules provided in the Northern Horticultural Zone to nine Farmer Based Organizations (FBO's).

## KEYWORDS

Farmer Based Organization; Millennium Challenge Account; Millennium Development Authority; Horticultural Zone

## 1. INTRODUCTION

The Agricultural Component of the Millennium Challenge Account Ghana Compact was to alleviate poverty and improve livelihoods of farmers through commercial development of farmer organizations in the intervention zones in Ghana. The Millennium Challenge Account Ghana Compact was implemented by the Millennium

Development Authority (MiDA) in three intervention zones as Southern Horticultural Zone, Afram Basin Zone and Northern Horticultural Zone. The essence of the Ghana Compact was to develop the business capacity and organization of commercial business of the nine Farmer Based Organizations (FBOs) with emphases on developing business plan which will enable the organizations to access the Millennium Challenge Account (MCA) Ghana Compact Funds as loans from participating banks. The loans were to enable the organization function as commercial farmer organizations. Nine Farmer Based Organizations (FBOs) in the West Mamprusi District of the Northern Region were trained in Business Capacity Building from October 2008 to December 2010. The nine trained FBOs were located in the West Mamprusi district, which was among the five participating districts in the Northern Horticultural Zone.

According to Stefano *et al.* [1] in much of Africa where educational levels of farmers are low, illustrated materials are not widely used tool in agricultural extension. In variance to earlier studies by Zimmerman *et al.* [2], the authors stated clear evidence that people retain information better if it is presented in picture or written form compared to hearing it verbally. Garforth and Lawrence [3] noted that in both print and broadcast mass media, often few efforts are made to involve the user in the design and production of media content, which was a very important step if information was to become more relevant, useful and accessible. Similar extension challenges were observed by Nokiema [4]. The authors recommended participatory approach using both illustrated materials and verbal presentations in extension training [5-8].

The Millennium Challenge Account Ghana Compact Agriculture Project consisted of three stages. Stage 1: Business Capacity included: Training to develop draft business vision and business plan; Introduction to value chains and how to work with them; Identification of FBO technical requirements (training needs assessment) as base for access to Stage 2 and/or Stage 3 activities; Support for analysis of financial situation and preparation of a bankable business plan to access agriculture credit; Support for business as plan completion; Access to incentives. Stage 2: Technical Training; Access to farm management; Production; Post harvest and storage training for members; Access to technical assistance for development of post-harvest facilities-if good investment backed by bankable business plan; Access to technical assistance and support for design of irrigation facilities-requires development of water users association; Creation of horizontal linkages; Preparation of bankable business plan. Stage 3: Maximizing sales; Training to responds to the requirements of the various markets; Training in use of marketing and sales techniques; Tech-

nical assistance to develop new linkages with buyers and negotiate new contracts; Technical assistance to develop linkages to other FBOs in order to expand bargaining power; Technical assistance to support definition of packaging and presentation to expand marketability.

Farmers' lack of access to technical information stands out as a major obstacle to improving food production in Ghana. Generally, lack of technical information for farmers, which is hampering crop production, had been observed by different authors [5,9-12]. Similarly, a typical information and signing of contract farming assist in reduction of transactions costs caused by market limitations and creates better environment to integrate primary producers with marketers and agro-industries [13-16]. Lack of contract denies farmers' access to appropriate market information, technology, inputs, credit facilities and in some instances legal expertise and insurance [15-18]. Additionally, Farmer Base Organizations (FBO) presents collective actions appropriate for negotiations and regular supply of produce as food to meet human energy requirement [19,20]. However, the cost of managing these organizations cannot be underestimated [21,22]. Therefore, this paper highlights the study analysis of Business Capacity Building and Organization of Commercial Business modules provided in the Northern Horticultural Zone in Ghana for nine Farmer Based Organizations (FBO's).

## 2. METHODOLOGY

### 2.1. Training Locations

The nine FBO's trained were located in the West Mamprusi District of the Northern Region, which was among the five participating districts in the Northern Horticultural Zone. Trainings were conducted in classrooms, churches, mosques, chief's palaces and under trees within the FBO's communities.

### 2.2. Training Sessions

The training days were Mondays, Tuesdays and Thursdays and each training session lasted for four hours. A total of 72 hours of training (4 hours  $\times$  3 days  $\times$  6 weeks) were conducted for each FBO.

### 2.3. Training Policy

A code of conduct was spelt out to each FBO in order to ensure discipline during the training sessions. These included respecting individual rights of farmer trainees to make contributions during the training sessions, confidentiality between trainers and trainees, punctuality at training sessions, time frame and schedules for sessions. Members were warned against carrying bitterness among themselves as a result of opposing views expressed dur-

ing training to their homes. Members were encouraged to make submissions and discussions freely and frankly. Participants were to thump-print against their names during registration at every training session.

## 2.4. Validation

The names, ages, and sexes of trainee farmers of the FBO's were validated using their identification cards. Discrepancies on the MiDA submitted group members list were then corrected before training.

## 2.5. Training Topics

Lectures, discussions, demonstrations and evaluation of topics were the training methods adopted for the FBO's. The nine modules on the Business Capacity Building were delivered to each FBO within the stipulate times.

### 2.5.1. Module 1

The MCA Ghana Compact and course objectives of Module 1 included a training policy, analysis of the FBO's organizational structure and activities of the group, training needs assessment of the FBO's, MCA Ghana Compact and course objectives. Emphases on the Ghana Compact included its approach to rural development in the target areas in Ghana with emphases on the importance of the Ghana Compact to FBO's and the significance of their contributions to Ghana's drive towards expanded economic growth and concerted attack on poverty.

### 2.5.2. Module 2

The Module 2 addresses the FBO's, Rural Development and Commercialization with emphasis on topics such as Importance of FBO's for Rural Development, Functions of Producer Organizations, Functions as Member Services, Unique Characteristics and Challenges of the FBO's, Elements of a Strong FBO's, Commercialization and Best Practices and a Reality Check of the FBO's on their starting position. By the end of the module, trainee farmers must be in a position to identify some of the commercialization challenges faced by their own organization.

### 2.5.3. Module 3

In Module 3, emphases was placed on Value Chain Thinking including Why Value Chains Are Important for the Ghana Compact, Value Chain Frame Work, Elements of the Value Chain, Why Value Chain Growth Was Important to FBO's and Value Chain Thinking as a Tool for Business Strategy. By the end of the module trainee farmers must identify ways in which value chains can provide a tool for defining their FBO business strategies.

### 2.5.4. Module 4

Module 4 was on Business Vision through a Value Chain Lens, which comprises topics such as Business Vision for an FBO and Who Needs It, How FBO's Benefit from Business Vision, Business Vision vis-à-vis Business Plan, Developing Vision for the FBO (visioning process), Employ Value Chain Thinking and Practice Using the Value Chain Lens and Drafting the Vision Statement.

### 2.5.5. Module 5

Under Module 5, trainees were taken through topics such as Leadership, Governance and Management consisting of topics on Reviewing Concepts of Leadership, Management and Governance, Basics of Board Operations, Review of Key Organization Documents, Defining Duties and Responsibility of Office Holders, Importance of Member Services and Meetings and Approaches to Financial Management.

### 2.5.6. Module 6

Module 6 was on Developing Business Expansion Strategies with topics such as Organization Self-assessment and Team Building, What Is SWOT Analysis and How to Use It, Defining Attributes and Challenges, Brainstorming Strategies, In-Depth Technical Assessment (Production Practices, Harvesting Practices, Approach to Harvesting, Post-Harvest Handling Practices, Primary Processing, Storage, Value Added Practices, Organization and Management Practices), Sources and Uses of Funds, Identifying Tactics, Finalizing Strategies, Final Check on Vision, Target and Strategies.

### 2.5.7. Module 7

In Module 7, Developing the Action Agenda included topics such as From Strategy to Action (Review Strategies and Tactics, Identify Requirements for Change, Move to Taking Stock), Defining Resources Requirements (Strategies, Tactics, Requirement for Change, Actions to Tactics and Implement Change), Resources Requirement, Customizing Training and Technical Support (Technical Training and Maximizing sales), A Note About Performance Monitoring, From Action Agenda to Business Plan.

### 2.5.8. Module 8

Module 8 addresses Driving the Organizational Change consisting of topics such as Requirements for Change Identified by the Business Planning Process, What Organization Changes Need to Be Made of, Change Agenda Components, Defining Tasks/Steps (Member level, Organization level), Assigning and Agreeing on Responsibilities (Completing the Plan, Developing Work Plan Per Strategy, Ensuring Carrying out of the Agreed Actions in

the Business Plan.

### 2.5.9. Module 9

Finally, under Module 9 an Action Business Plan was delivered encompassing topics such as Directions for Completing the Business Plan (Background to Action Business Plan, the Action Business Plan). Using information generated during the training, the draft Action Business Plan was developed for completion in Week 6 by successfully finalizing the group's vision and targets. The strategies, tactics and actions to achieve their vision were finalized during the week under study. The vision statement and targets were agreed for completion in Week 6.

Completing the Draft Action Business Plan: Trainee farmer's concise information into an Action Business Plan and define the steps they will take to carry their planning activities forward. Next steps for completion and moving into implementation were identified, evaluation of the 6 weeks training.

## 2.6. Organization Capacity Building

The Organization Capacity Building Modules covered the varied topics as:

- Module 1: Group Formation and Development;
- Module 2: Credit Management;
- Module 3: Contract (Content and negotiation of con-

tracts with input suppliers, banks, commodity, buyers) and procurement;

Module 4: Business and Technical Communication;

Module 5: Methods for Tracking FBO's Progress.

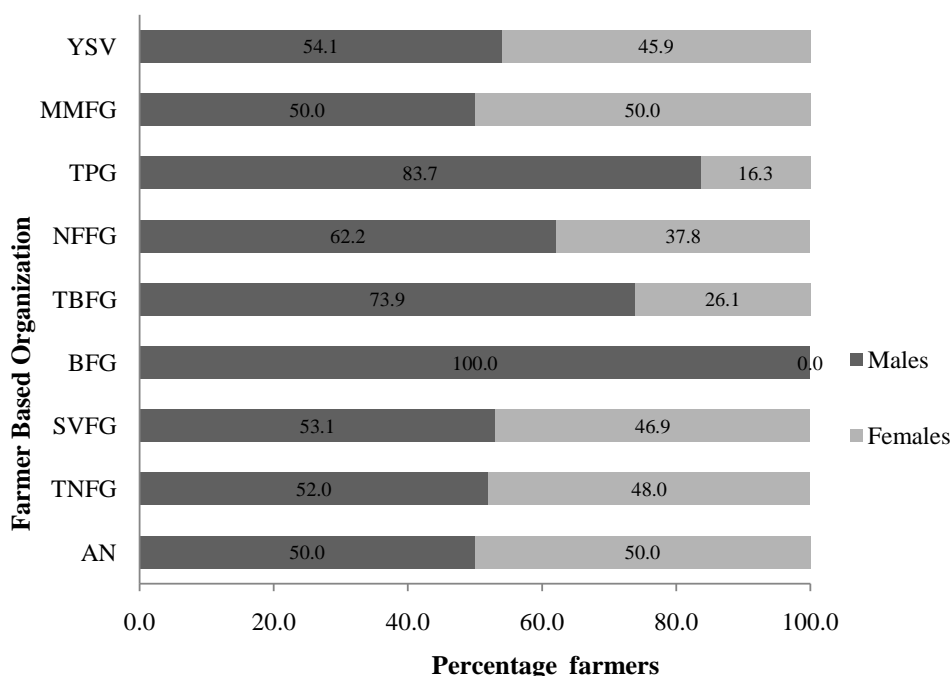
## 3. RESULTS

### 3.1. Demography of Trained Farmers

The trained Farmer Based Organizations (FBO's) were 450 farmers consisting of 65.1% males and 34.9% females (**Figure 1**). The highest male members per FBO were 55 members, which was an all-male FBO, whereas the lowest was 20 members (**Table 1**). The highest number of female per FBO was 28 members compared to 8 members as the lowest per FBO.

The number of trained farmers in the age range of 30 - 39 years was observed as the highest (37.54%) for male farmers compared with age 40 - 49 years for female farmers (29.94%) (**Table 2**). No female farmer was within the age range of 15 - 19 years. However, 0.34% male farmers were aged between 15 - 19 years. The age ranges of members of the FBO's were significant differences ( $p < 0.05$ ) within the sexes.

Illiteracy among trained farmers was highest among females (91.72%) compared to males (81.91%) as represented in **Table 3**. Educational levels of trainee farmers were 9.90% males and 1.91% females who



**Figure 1.** Percentage distribution of farmers by sex of nine Farmer Based Organizations in the West Mamprusi District in the Northern Region (AN: Anye Nua; TNFG: Tiwalsi Nya Farmers Group; SVFG: Suguru Vaala Farmers Group; BFG: Bomanga Farmers Group; TBFG: Tuvuu Behigu Farmers Group; NFFG: N-Ningbani Felia Maize Farmers Group; TPG: Tichemtoni Production Group; MMFG: Malimanga Maize Farmers Group; YSV: Yizebisi Sunga Veila).

**Table 1.** Percentage distribution of farmers by sex of nine farmer based organizations in the West Mamprusi District of the Northern Region.

Farmer Based Organization	Community	Distribution of Farmers by Sex	
		Males	Female
Anye Nua	Kunkwa	25	25
Tiwalsi Nya Farmers Group	Kperiga	26	24
Suguru Vaala Farmers Group	Tampulungu	26	23
Bomanga Farmers Group	Loagri No. 2	55	0
Tuvuu Behigu Farmers Group	Tuvuu	34	12
N-Ningbani Felia Maize Farmers Group	Wumtubri	46	28
Tichemtoni Production Group	Kperiga	41	8
Malimanga Maize Farmers Group	Kpatusi	20	20
Yizebisi Sunga Veila	Yizebisi	20	17

**Table 2.** Mean and percentage distribution of farmers by age and sex of nine farmer based organizations in the West Mamprusi District of the Northern Region.

Age	Mean Distribution of Farmers $\pm$ SE		Percentage Distribution of Farmers	
	Male	Female	Male	Female
15 - 19	0.11 $\pm$ 0.10a	0	0.34	0
20 - 29	5.44 $\pm$ 1.16c	3.56 $\pm$ 1.63ab	16.72	20.38
30 - 39	12.22 $\pm$ 1.55c	5.11 $\pm$ 1.22b	37.54	29.3
40 - 49	8.11 $\pm$ 3.69d	5.22 $\pm$ 1.14b	24.91	29.94
50 - 59	4.33 $\pm$ 0.90bc	2.44 $\pm$ 0.77a	13.31	14.01
60+	2.33 $\pm$ 1.07b	1.11 $\pm$ 0.45a	7.17	6.37

Means within each column followed by a different letter are significantly different by ( $p < 0.05$ );  $n = 9$ .

completed primary school. The highest level of education of farmers was 2.73% and 0.64% at senior high school for males and females, respectively. There were no university graduates among trainees of the nine farmer groups trained. The proportion of females and males with middle, junior high, senior high did not varied significantly ( $p > 0.05$ ) within the sexes.

None of the trained females had a farm size greater than 10 hectares compared to 2.03% male farmers of farm size greater than 10 hectares (Table 4). Majority of the trained female farmers (66.45%) and males (57.43%) had 0.4 - 2.0 hectares farm sizes. The farm sizes of both sexes varied significantly ( $p < 0.05$ ).

### 3.2. Food Production and Agriculture Practices Prior to Training

Farmers cultivate maize and rice during the wet season and cowpea and watermelon during the dry season. Crop production volumes of the FBO's are presented in Table 2. Traditional methods and farming implements such as

cutlasses, hoes, sickles and knives were used for farming. The farmers lacked adequate knowledge on appropriate time of harvesting and use of maturity index. Harvesting was done manually either using hired labour or exchanged labour from members of the group. Group members stored their produce in barns, jute sacks and mud silos. Pest infestations in barns were high and presently stored for only 2 months for cowpea and 3 to 4 months for maize, which are the most cultivated crops. There were irregular vehicular services to cart produce to marketing centers. Produce were conveyed to market centers often as head loads and on bicycles and motorcycles. Vehicular services were irregular and unreliable due to the poor nature of the roads and this affects marketing of the farmer's produce, especially for the more perishable produce like watermelon. Farmers lack improved seeds, agrochemicals and fertilizers due to financial constraints for farming. Modern production technologies were not available for farmers. They depended on indigenous technologies handed down over the years.



**Table 3.** Mean and percentage educational level distribution of farmers by sex of nine farmer based organizations in the West Mamprusi District of the Northern Region.

Educational Level	Mean Distribution of Farmers $\pm$ SE		Percentage Distribution of Farmers	
	Male	Female	Male	Female
Illiterate	26.67 $\pm$ 3.73c	16.0 $\pm$ 2.91b	81.91	91.72
Primary	3.22 $\pm$ 1.26b	0.33 $\pm$ 0.24a	9.9	1.91
Middle	1.22 $\pm$ 0.40a	0.44 $\pm$ 0.24a	3.75	2.55
Junior high	0.56 $\pm$ 0.24a	0.56 $\pm$ 0.24a	1.71	3.18
Senior high	0.89 $\pm$ 0.31a	0.11 $\pm$ 0.11a	2.73	0.64
University	0	0	0	0

Means within each column followed by a different letter are significantly different by ( $p < 0.05$ );  $n = 9$ .

**Table 4.** Mean and percentage distribution of farmers by total farm size and sex of nine farmer based organizations in the West Mamprusi District of the Northern Region.

Total Farm Size (hectare)	Mean Distribution of Farmers $\pm$ SE		Percentage Distribution of Farmers	
	Male	Female	Male	Female
0.4 - 2.0	18.89 $\pm$ 4.77e	11.44 $\pm$ 3.01d	57.43	66.45
2.4 - 4.0	7.56 $\pm$ 2.15d	2.11 $\pm$ 0.72c	22.47	12.26
4.4 - 6.0	1.56 $\pm$ 0.56b	1.89 $\pm$ 1.25b	4.73	10.97
6.4 - 8.0	2.56 $\pm$ 1.42c	1.44 $\pm$ 0.96b	7.77	8.39
8.0 - 10.0	1.67 $\pm$ 1.11b	0.33 $\pm$ 0.24a	5.07	1.94
10.0+	0.67 $\pm$ 0.44a	0	2.03	0

Means within each column followed by a different letter are significantly different by ( $p < 0.05$ );  $n = 9$ .

### 3.3. Trainee Attendance to Training Sessions

Attendance to the training sessions over six weeks period was very excellent in the range of (86.69% - 92.15%) for males and (80.89% - 93.63%) for females (Table 5). Total attendance over the six weeks period average attendance over the six weeks period was highest for male farmers (89.76%) than female farmers (88.96%). Absentee farmers at the training were 10.24% for male farmers and 11.04% for female farmers. Attendance at training sessions was highest on week 6 for both sexes at 92.15% male farmers and 93.63% female farmers, respectively.

## 4. DISCUSSION

Initially, trainee farmers did not envisage MCA Ghana Compact as an opportunity for economic growth and poverty reduction for farmers. They were not aware of the training modules delivered to them.

Postharvest technologies were not available for farmers and they depended on indigenous technologies, similarly indicated by other authors [9-12]. Markets accessibility was difficult for farmers due to unavailability

of transport and inaccessible roads. Farmers were at the mercy of traders and often cheated on producer prices. Several challenges were faced by farmers of the FBO's in their farming activities including gradual reduction in soil fertility, lack of adequate capital to commercialize agriculture, lack of reliable tractor services at the appropriate time, non-readily availability of improved seeds/seedlings, lack of inputs including farming implements, improved seeds, pesticides, weedicides and storage chemicals, infestation of crops by insect/pest/rodents, lack of irrigation facilities (pumps), lack of good agriculture practices, inadequate harvesting methods, inadequate post-harvest handling methods, non-availability of storage facilities, lack of reliable transport services, poor market information, monopoly over produce price by market women. Arguably, without a group contract the farmers were at the mercy of market women unable to break the monopoly over produce price of the market women. Accordingly farmers' can break market monopoly only through group contract [15,17,23].

The FBO's biggest commercialization challenges were unavailability of produce markets, improper pricing, monopoly over pricing by market women, poor market

**Table 5.** Mean and percentage distribution of farmers training attendance by sex of Nine-Farmer Based Organizations in the West Mamprusi District of the Northern Region.

Week	Mean Distribution of Farmers $\pm$ SE		Percentage Distribution of Farmers	
	Male	Female	Male	Female
1	28.56 $\pm$ 3.97a	14.11 $\pm$ 2.84a	87.71	80.89
2	29.56 $\pm$ 3.84b	15.00 $\pm$ 2.86b	90.78	85.99
3	29.56 $\pm$ 3.79b	16.00 $\pm$ 3.01c	90.78	91.72
4	28.22 $\pm$ 4.47a	15.56 $\pm$ 3.01b	86.69	89.17
5	29.44 $\pm$ 3.61b	16.11 $\pm$ 2.90c	90.44	92.36
6	30.00 $\pm$ 3.83c	16.33 $\pm$ 2.89c	92.15	93.63
*Ave	32.56 $\pm$ 4.11	17.44 $\pm$ 3.06	89.76	88.96

Means within each column followed by a different letter are significantly different by ( $p < 0.05$ );  $n = 9$ . \*Ave: Average of total attendance of male and female during the six weeks training sessions.

information, lack of credit facilities, non-availability of storage facilities and reliable transport services to market centers. These challenges were similar to those facing farmers in extension studies reported in literature [13-15, 18]. Notably, technologies adoption by poor farmers [12] and farm innovations [11] of well institutional farmer organizations [21] often increases their production levels gear towards human energy requirement [20].

The low percentage educational level of farmers is typical of Africa where farmer educational levels are very low and most are traditional farmers producing for local consumption, local exchange and sales [1,5]. Farmers often relied on indigenous or low-in-put production technologies and maintain traditional or simple post-harvest management practices as observed by earlier authors [11,12,16]. Often labour is provided by family members or hired. Therefore the Stage 1 training comprising of nine modules of Business Capacity Building and five modules of Organization of Commercial Business of the MCA provided for the 450 farmers excellent technical information for improving food production similar to that presented by David [9] and Dorman *et al.* [10]. Nine Action Business Plans were developed for the nine FBO's to access financial support from the MiDA participating financial institutions in the horticultural zone for the commercial development of farmers' organizations.

Evaluation of the effectiveness of the training modules was done by employing KAP's system, where knowledge, attitude and practice of trained farmers were assessed [24,25]. Generally, farmers agreed that the training was excellent, its methodology was excellent and modules were well presented and excellently understood. Trainees scored the training modules as very relevant to farmers. The training timelines were fully meet with excellent delivery. Farmers' knowledge and skills increased

after the training. The training had positive impact on trainee farmers and successfully changed their attitude and practices on farming. Trainers were very enthusiastic, helpful, understanding and were role models for the farmers. Body language was well utilized during training and it conveyed enthusiasm for farmers. Training was well attended and participants were well behaved during training sessions. The use of local language was very innovative and translation was excellent. Trainee farmers disagreed with the training period in the months of November or December and suggested February or March when farming activities in the community were at their lowest level as the most appropriate period to conduct training. On completion of the training, trainee farmers understood well the MCA Ghana Compact and accepted it as an opportunity for economic growth and poverty reduction for farmers in the northern intervention zone of Ghana.

## 5. CONCLUSION

The Business Capacity Building and Organization of Commercial Business of the MCA modules delivered were embraced wholeheartedly by trainee farmers as a tool to alleviate poverty, improve livelihoods and rural developed in the Northern Horticultural Zone in Ghana. The contents of the modules were very relevant and well understood by trainee farmers. Farmer's knowledge and skills increased after training and affected their thinking, attitude, practice and behaviour towards commercial farming. The training was well attended although it coincided with farmers harvesting period for cereals. All the Nine Action Business Plans developed for the nine FBO's were successfully funded by MCA accredited commercial financial institutions within the FBO's communities.

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