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The U.S. Government's Global Hunger & Food Security Initiative

NAFAKA STAPLES VALUE CHAIN ACTIVITY

TASK ORDER NO. AID-621-TO-11-05000

ANNUAL PERFORMANCE REPORT
(October 1, 2014 – September 30, 2015)



September 30, 2015

This publication was produced for review by the United States Agency for International Development. It was prepared by ACIDI/VOCA in compliance with the terms and conditions of Task Order No. AID-621-TO-11-05000.



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LIST OF ACRONYMS

AIRD	Associates for International Resources and Development
ARI	Agricultural Research Institute
BCC	Behavior Change Communications
BDS	Business Development Services
CAADP	Comprehensive Africa Agriculture Development Programme
CRS	Catholic Relief Services
DCO	District Coordination Officer
EMMP	Environmental Management and Monitoring Plan
FA	Field Agent
FIPS	Farm Input Promotions-Africa
FtF	Feed the Future
GAP	Good Agricultural Practices
HQ	Head Quarter Office
IFDC	International Fertilizer Development Center
KATI	Kizimbani Agricultural Training Institute
KATRIN	Kilombero Agricultural Training and Research Institute
KFS	Kibaigwa Flour Supplies Limited
KPL	Kilombero Plantation Limited
KVTC	Kilombero Valley Teak Company
M&E	Monitoring and Evaluation
MSME	Micro, Small, and Medium Enterprises
MVIWATA	Mtandao Wa Vikundi Vya Wakulima Tanzania
PASS	Private Agriculture Sector Support
PERSUAP	Pesticide Evaluation Report and Safe Use Action Plan
PMP	Performance Monitoring Plan
QDS	Quality Declared Seeds
RUDI	Rural and Urban Development Initiative
RYMV	Rice Yellow Mottle Virus
SACCO	Savings and Credit Cooperatives
SARO 5 (TXD 306)	Semi-Aromatic Rice Organelles 5 (Tanzanian Cross Dakawa 306) Improved Rice Seed
SILC	Savings and Internal Lending Community
SUAP	Safe Use Action Plan
TAPP	Tanzania Agriculture Productivity Program
TOT	Training-of-Trainers
TZS	Tanzanian Shillings
UDP	Urea Deep Placement
USAID	United States Agency for International Development
USD	United States Dollar
USG	United States Government
VBAA	Village-Based Agricultural Advisor
WOG	Whole of Government Indicator
ZARI	Zanzibar Agricultural Research Institute

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NAFAKA Annual PMP Data Matrix

SR/ NO	FtF/ NAFAKA	Performance Indicator	PY 2015 Target	PY 2015 Achieved ¹	PY 2015 % Achieved	Cumulative To-Date ²	LOP Target	LOP % Achieved
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IR_1: Improved Agricultural Productivity

IR_1.1: Enhanced Human and Institutional Capacity Development for Increased Sustainable Agriculture Sector Productivity

1	FTF 4.5-16, 17, 18	Gross margin per hectare (RiA) (Outcome)						
		Maize	112	74³	66%		112	66%
		Rice	685	460	67%		689	67%

Gross margin per hectare is a net income obtained by comparing gross income and cost of production for a unit area of production. An increase or decrease in gross margin depends on the way the five data points that are used to calculate the gross margin behave relative to one another in a given year, and major factors are yields, cost of production and price of produce. Low yields due to drought and high input costs are the major factors in the drop in gross margins. However the gross margin figure given here is preliminary, the final (and perhaps higher) value is provided in March after the market survey when marketing activities intensify and prices are more favourable. However, for this PY the current average price for maize has increased by 40% although the average yield has decreased by 33% compared to last year's AOS. In rice areas the average price has decrease by 10% as well as yields by 6%. More accurate gross margin deviations can be re-visited after the market survey in March 2016.

2	USAID Tanzania	Yields: kg per hectare						
		Maize	1,235	815	66%		1,248	65%
		Rice	3,170	2,937	93%		3,202	92%

There is a slight drop in both maize and rice yields from last PY to this PY (rice from 3139 kg/ha last year to 2,937 kg/ha this year; and maize from 1223gk/ha last PY to 815kg/ha this PY). Most maize-growing areas experienced drought (especially maize growing areas of Kiteto and Kongwa). Unfavorable weather conditions also happened in some rice growing areas where erratic rains, and often flooding, were experienced. The only rice growing areas where yields were encouraging are those with access to irrigation water for rice production.

3	FTF 4.5.1-27	Score, in percent, of combined key areas of organization capacity amongst USG direct and indirect local implementing partners (S)		52%				
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This is the first (and only) capacity assessment on our local associations after four years of NAFKA operations – being the first it can be considered a baseline by default. However the 52% score, although low, is considered good in the Tanzania context. The result illustrates that the four-year investment on strengthening associations has paid off taking into account the number of years required to strengthen smallholder farmer organization to reach a stage where they can provide services to their members. There are several lessons learned in this assessment and they will guide us and other upcoming projects on how capacity strengthening of association should be conducted for sustainability their future and benefiting their members.

¹ PY Achieved figures are the sum of all unique beneficiaries during the current reporting year. Disaggregation for all indicators can be found in the NAFKA FTFMS.

² Cumulative-to-Date figures are the sum total of all final Year-to-Date figures for each reporting year. Note that this calculation methodology was adjusted in Q3 FY 2014.

³ Exchange rates are 1924Tshs=1USD

NAFAKA Annual PMP Data Matrix

SR/ NO	FtF/ NAFKA	Performance Indicator	PY 2015 Target	PY 2015 Achieved ¹	PY 2015 % Achieved	Cumulative To-Date ²	LOP Target	LOP % Achieved
4	FTF 4.5.2-7	Number of individuals who have received USG supported short-term agricultural sector productivity or food security training (RiA) (WOG) (OUTPUT)	65,641	119,516	182%	212,181	207,175	102%
<p>Capacity building for increased farmer productivity through formal and on-farm training was still a major project activity in year 4. All our beneficiaries reached in this PY have gone through NAFKA trainings, and more than 849 demonstration plots were established as training platforms, offering farmers the opportunity to test these technologies and management practices in their own adoption/training demos. The significant increase in the number of people trained is a result of the expansion that includes Mbeya (four districts and Iringa (two districts) increasing our coverage on the mainland from four to ten districts. A larger percentage of individuals trained come from the VBAA and grantee program (9 hub agro dealers and 4 processors, and one agro-inputs supplier). The training numbers jumped from 60,842 (last PY) to 119,516 this PY (a 96% increase).</p>								
5	FTF 4.5.2-5	Number of farmers and others who have applied improved technologies or management practices as a result of USG assistance (RiA) (WOG)	60,753	102,560	169%	183,803	185,070	99%
<p>The project monitors this indicator each season for the purposes of determining the rate of application of new technologies and management practices by farmers on their plots. This indicator has a link with the training indicator - hence application is a change of behaviour that is stimulated by acquisition of new knowledge. Since trained individuals have increased significantly this year, those that are applying new technologies have increased as well.</p>								
6	FTF-4.5.2-11	Number of food security private enterprises (for profit), producer organizations, water users associations, women's groups, trade and business associations and community-based organizations (CBOs) receiving USG assistance (RiA) (WOG) (OUTPUT)	1,016	1,192	117%	2,392	3,430	70%
<p>Increased number of grantees, PSPs have resulted in the mobilisation of community groups, women and youth groups and producer associations for the purpose of collective storage, marketing and service provision.</p>								
7	FTF-4.5.2-42	Number of private enterprises (for profit), producer organizations, water users associations, women's groups, trade and business associations, and community-based organizations (CBOs) that applied improved technologies or management practices as a result of USG assistance (RiA) (WOG) (OUTCOME)	910	910	100%	1847	2,758	67%
<p>This indicator tracks participating organizations/associations that have applied new technologies or management practices availed by the project and is a smaller subset of the more general FTF-4.5.2-11 above. Due to a more aggressive program in the expansion area as well as the original ZOI we expect that most of the remaining LOP numbers for this indicator will be achieved in the coming PY.</p>								

NAFAKA Annual PMP Data Matrix

SR/ NO	FtF/ NAFKA	Performance Indicator	PY 2015 Target	PY 2015 Achieved ¹	PY 2015 % Achieved	Cumulative To-Date ²	LOP Target	LOP % Achieved
IR_1.2 Enhanced Technology Development, Dissemination, Management, and Innovation								
8	NAFAKA	Number of beneficiaries reached (direct and indirect combined) (OUTPUT)	352,487	525,360	149%	1,006,407	1,151,234	87%
<p>NAFAKA beneficiary numbers increased from 325,154 (last PY) to 525,360 (this PY), a 62% increase. The total number of beneficiaries is determined by adjusting the total number of direct beneficiaries (119,516) by the downward multiplier .967 to account for multiple beneficiaries living in the same household. The cluster-specific, household-level multipliers are then applied to determine the number of indirect beneficiaries – as defined by household members – the project reaches. For this PY NAFKA recruited approximately 211,563 new beneficiaries from VBAA's network, hub agro dealers, SILC members, assisted by the NAFKA expansion to Mbeya and Iringa. This has a direct effect on the increased number of individuals who receive training, those who accessed finance, market linkages, capacity building, business skills, and technical assistance from NAFKA supported VBAA's, Lead Farmers, agro-dealers, processors, SILC groups, formal banks, or from a variety of BDS providers with whom NAFKA works.</p>								
9	FTF-4.5.2-13	Number of rural households benefiting directly from USG interventions (S) (OUTPUT)	73,435	115,571	157%	227,519	238,979	95%
<p>The direct beneficiary count used above (#8) provide us numbers for this indicator. Total direct beneficiaries (119,516) are adjusted by .967, the downward multiplier from internal estimates based on the NAFKA Annual Outcome Survey. When the number of beneficiaries are increased, it will increase the number of households.</p>								
10	FTF-4.5.2-2	Number of hectares under improved technologies or management practices as a result of USG assistance (RiA) (WOG) (OUTCOME)	95,545	170,959	179%	303,311	295,639	103%
<p>Formal and field training, demonstration plots, expanding availability and access to inputs, etc. are collectively designed to improve farmer productivity. Increased hectares under improved technology and management practices has a link on number of individual adapting as well number of individuals trained. Since these number have increased, it will impact on the number of hectares under improved technologies. NAFKA collects this data through its Annual Outcome Survey (AOS).</p>								
IR_2: Expanded Markets and Trade								
11	FTF 4.5.2-23	Value of incremental sales (collected at farm-level) attributed to FTF implementation (RiA) (OUTCOME)	██████████	██████████7	91%	██████████	██████████	304%
<p>Incremental sales is determined by the value (in USD) of the total amount of targeted agricultural products sold by smallholder direct beneficiaries relative to the adjusted base year value. This is one of the indicators that is mainly focused on volume of sales and value of sales. The deviations can be explained further after the market survey in March 2016. Value of Incremental Sales has been part of an on-going discussion with USAID, and we reviewed baseline numbers and adjusted calculations for this target that is now more legitimate (and approved by USAID).</p> <p>Previously, targets were negative for both maize and rice; now, targets for rice are positive (though maize is still negative, based primarily on high baseline data). The value of incremental sales (-32,596,987) is negative because the average sales figures for maize and rice in the baseline year were abnormally high (USD 637 and 719 respectively) compared to the average sales for the PY3 as well as this PY4 year. For that reason the value of incremental sales and LOP target are still negative.</p>								

NAFAKA Annual PMP Data Matrix

SR/ NO	FtF/ NAFKA	Performance Indicator	PY 2015 Target	PY 2015 Achieved ¹	PY 2015 % Achieved	Cumulative To-Date ²	LOP Target	LOP % Achieved
12	NAFAKA	Number and Value of buyer agreements (informal or formal) (OUTPUT)						
		Number	102	157	154%	222	284	78%
		Value	██████████	██████████	53%	██████████	██████████	26%

This indicator relates with the volume (MT) sold by producer associations (#13), the assumption being whoever is selling or buying they must have some formal or informal agreements. However the number of buyers have no direct relationship with value, this will consider other factors like volume sold and the on-going market price which will affect the overall value. Note that value is for combined maize and rice sales at request of USAID. (Maize= \$1,847,581 and rice=\$4,829,994). The value in terms of price/kg has already improved since this figure was obtained during the August output survey and may continue to climb during the off season up until we conduct a follow-up market survey in April 2016. NAFKA has embarked on an aggressive private sector marketing program in 2016 in conjunction with over 200 farmer associations and will move significantly towards meeting our LOP \$30 million target.

13	NAFAKA	Volume (MT) sold by producer associations (OUTPUT)	28,654	21,031	73%	24,297	69,170	35%
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The target for this indicator anticipated strong marketing volumes by the private sector participants –especially those operating on NAFKA grants. The grant milestones for marketing were designed to be reached by November – after this reporting period. We anticipate improving on the LOP percentage to date significantly in 2016. Note that volume is for combined maize and rice tonnage at request of USAID.

R_2.1: Improved Market Efficiency

R_2.2 Improved Access to Business Development and Affordable Financial and Risk Management Services

14	FTF 4.5.2-29	Value of agricultural and rural loans (RiA) (WOG) (OUTPUT)	██████████	██████████	139%	██████████	██████████	76%
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This significant positive deviation reflects the value of loans to producers, input suppliers, processors, and other MSMEs in rural areas. It has increased from 249,793 in the last PY to 623,532 in this PY (a 150% increase; and 39% over target). The increase is attributed to expansion of NAFKA to Mbeya and Iringa as well as an increase of participating micro financing institutions that are providing loans in rural areas. Grantees like the University of Iringa is providing interest free loans to SACCOS in Iringa Region providing much needed capital credit to on-lend to their members. Opportunity and CRDB, long-time FI partners, have intensified their loan activities in NAFKA's original area of operation as well as starting new operations in our new areas.

⁴ Quarterly exchange rate 2132 Tshs = IUSD

NAFAKA Annual PMP Data Matrix

SR/ NO	FtF/ NAFKA	Performance Indicator	PY 2015 Target	PY 2015 Achieved ¹	PY 2015 % Achieved	Cumulative To-Date ²	LOP Target	LOP % Achieved
15	FTF 4.5.2-30	Number of MSMEs, including farmers, receiving USG assistance to access loans (S) (OUTPUT)	10,899	12,055	111%	22,125	30,233	73%
<p>This positive deviation reflects the increase in number of MSMEs receiving assistance to access loans via financial institutions such as CRBD, OTL, University of Iringa as well as all SILC lenders (who contributed up to 87% of all farmers with access to loans).</p>								
16	FTF 4.5.2-37	Number of MSMEs, including farmers, receiving business development services from USG assisted sources (S) (OUTPUT)	30,930	24,095	78%	40,088	95,873	42%
<p>Given the project's strong business-orientation, this indicator help NAFKA to gauge number of farmers/enterprises receiving services from FTF-supported enterprise development providers. This year's numbers are not encouraging due to the following reasons; NAFKA reduced a number of interventions with associations in the original ZOI thereby reducing numbers that contributed to this indicator e.g. the SMFM training which contributed to this indicator. We signed contracts with a number of grantees who had among their milestones the procurement of maize and rice products from their affiliated groups, individuals and associations. Unfortunately their milestone on procurement was set for November, two months after the end of this PY.</p>								
IR_3: Increased Investment in Agricultural or Nutrition Related Activities								
17	FTF 4.5.2-12	Number of public-private partnerships formed as a result of FTF assistance (S) (OUTPUT)	15	29	193%	57	80	71%
<p>There has been an increase in the number of grantees including hub agro dealers, processors, and input supply companies. NAFKA will not be working exclusively with private sector grantees as has been the past practice but will include all interested firms in the target regions in the marketing and business development programs.</p>								
18	FTF 4.5.2-38	Value of new private sector investment in the agriculture sector or food chain leveraged by FTF implementation (RiA) (OUTCOME)	████████	████████	198%	████████	████████	105%
<p>This indicator is important given SAGCOT and FtF emphasis on supporting and leveraging private-sector investment. This year's increase in the value of investment is the result of a higher investment in leveraged contribution by grantees in our expanded areas as well as original ZOI; including non-grant leverage related investment made by participating input supply companies.</p>								

NAFAKA Annual PMP Data Matrix

SR/ NO	FtF/ NAFKA	Performance Indicator	PY 2015 Target	PY 2015 Achieved ¹	PY 2015 % Achieved	Cumulative To-Date ²	LOP Target	LOP % Achieved
R 5: Increased Resilience of Vulnerable Communities and Households (Corresponds to NAFKA Component 4 Activities)								
19	FTF 4.5.2-14	Number of vulnerable households benefiting directly from USG assistance (S) (OUTPUT)	10,967	10,852	99%	22,260	31,727	70%
99% of target met for 2015 and a more aggressive program has been planned for 2016 to meet our LOP target.								
20	NAFAKA	Value of savings accumulated by SILC groups under NAFKA (OUTCOME)	████████	████████	76%	████████	\$████████	60%
The 2015 target and the LOP target were increased to current levels in the PMP based on the planned expansion into two new regions in early 2015; a process that started five months later in 2015 than anticipated. Meeting LOP target is expected with the maturity of SILCs in the original zone of operation and expected increase in savings, and the addition of new groups in the expansion area.								
21	NAFAKA	Number of beneficiaries with access to home gardens or alternate crops as proxy for access to nutritious foods and income (OUTCOME)	8,717	7,136	82%	16,166	20,350	79%
M&E counts the number of home gardens, applies the downward multiplier (.967) to account for direct households, then applies its household-level, cluster-specific multipliers to arrive at the number of beneficiaries with access to home gardens, which is a formula approved by USAID. Formerly only specific number of farmers with gardens were counted. "Beneficiaries with access to home gardens" is now considered the entire household. The targets were adjusted upward to account for the PY 2016 expansion to Iringa and Mbeya and it is expected that we will meet our LOP target in 2016.								

I. EXECUTIVE SUMMARY

The NAFKA Staples Value Chain Activity is a six-year Task Order issued by USAID under the Tanzania Feed the Future (FtF) Initiative and administered by ACDI/VOCA. NAFKA integrates agricultural, gender, environmental, and nutritional development efforts to improve smallholder farmer productivity and profitability within the rice and maize value chains in Morogoro (Kilombero and Mvomero districts), Dodoma (Kongwa district), Manyara (Kiteto district), Mbeya (Mbozi, Mbeya Rural, Mbarali, and Rungwe districts), and Iringa (Iringa Rural and Kilolo districts) on the mainland, as well as Pemba and Unguja in Zanzibar. NAFKA's goal is to sustainably reduce poverty and food insecurity by increasing incomes for smallholder farmers, including men, women, and youth.

This Annual Performance Report for the period October 1, 2014 – September 30, 2015 contains the following sections consistent with the quarterly reporting format requested by USAID/Tanzania: (Front Annex) PMP Annual Indicator Matrix; (1) this Executive Summary; (2) Introduction; (3) Implementation Progress; (4) Activities Implemented in Zanzibar (Unguja and Pemba); (5) Activities Implemented in Expansion Regions Mbeya and Iringa; (6) Key Achievements and Results; (7) Problems/Challenges; (8) Planned Activities Linked to Relevant Indicators; (9) Special Issues; and (10) Cross-Cutting Issues. Quantitative information on performance against PMP indicators is presented as a front annex, with narrative summaries included below each indicator. Two Success Stories for the fourth quarter can be found in relevant sections within the report. Financial information for the reporting period is submitted under separate cover.

Project Scale-Up

In February 2015, the NAFKA Task Order was officially modified to expand activities into Mbeya and Iringa regions and to extend the project until March 31, 2017. During this reporting year, NAFKA focused on identifying new districts and initiating activities in expansion regions Mbeya and Iringa; integrating the work of sub-contractors to re-calibrate and sustain activities in existing geographic project areas; and building more sustainable input supply networks by facilitating market linkages amongst hub agro-dealers, Village-Based Agricultural Agents (VBAs) as agro-dealer agents, and rural farmers who previously lacked access to inputs. In both existing and new geographic areas, NAFKA continues to build on the successful methodologies it has implemented since project inception, scaling successful interventions along the rice and maize value chains on the mainland and deepening rice productivity activities in Zanzibar.

Key activities of this reporting year included:

SNAPSHOT OF NAFKA

- Value Chains: Rice and Maize
- Program Approach: Association Development, Demonstration Plots, Savings and Internal Lending Communities, Farmer Field Days, and Market Linkages
- Program Extension Service Providers: Village-Based Agricultural Advisors, Lead Farmers, and Agro-Dealers
- Cross-Cutting Activities: Gender Integration, Environmental Compliance and Natural Resource Management, Monitoring & Evaluation, and Behavior Change Communication
- FtF Partners: Mwanzo Bora Nutrition Program, iAGRI – Innovative Agricultural Research Initiative, TAPP – Tanzania Agriculture Productivity Program, TUBOCHA – Tuboreshe Chakula Project, SERA, and Infrastructure Project – CDM Smith
- Public-Private Partnerships: Kilombero Plantation Limited, Kilombero Valley Teak Company, and Rice Council of Tanzania

- Launch of activities in Mbeya and Iringa, including establishment of satellite offices; execution of a baseline study; issuance of private sector grants to three processors, one agro-input supplier, and one micro-finance institution; and identification of producer associations with which to work
- Initiation of Hub Agro-Dealer Grant Program, linking hub agro-dealers to sub agro-dealers, VBAs, and rural farmers without previous access to input supply, while simultaneously creating expanding economic opportunities for agro-dealers and VBAs
- Training of 107,813 farmers (52% M / 48% F) in Good Agriculture Practices (GAP)
- Training of youth groups in integrated pest management (IPM) in Kilombero and Mvomero to build capacity to offer spraying services to farmers, broadening economic opportunities in non-farming agricultural activities
- Support of Rice Council of Tanzania (RCT) and its advocacy campaign
- Conducting of the Human Rights Campaign to equip individuals with knowledge and awareness of gender and human rights issues within their communities by discussing topics such as the definitions of human rights and gender, their origins, their cultural significance, and their impact on communities.

Results

This reporting year, not only did NAFKA expand its geographic zone of intervention to include regions Mbeya and Iringa, but it transitioned activities in the original project area to continue in a sustainable fashion. Through this expansion and the launch of several new private sector co-investment grants combined, NAFKA results have largely surpassed annual targets. More detailed information on project performance can be found under *Section 6: Key Achievements and Results*.

NAFKA tracks 21 indicators – 10 as outcome indicators and 11 as output indicators. Three of these indicators have disaggregations, totaling 24 data points altogether. Of these 24 data points, one did not have an annual target, as PY 2015 was a baseline year; 15 exceeded the annual target or fell within the 90% achievement range; and 8 met less than 90% of the targeted goal.

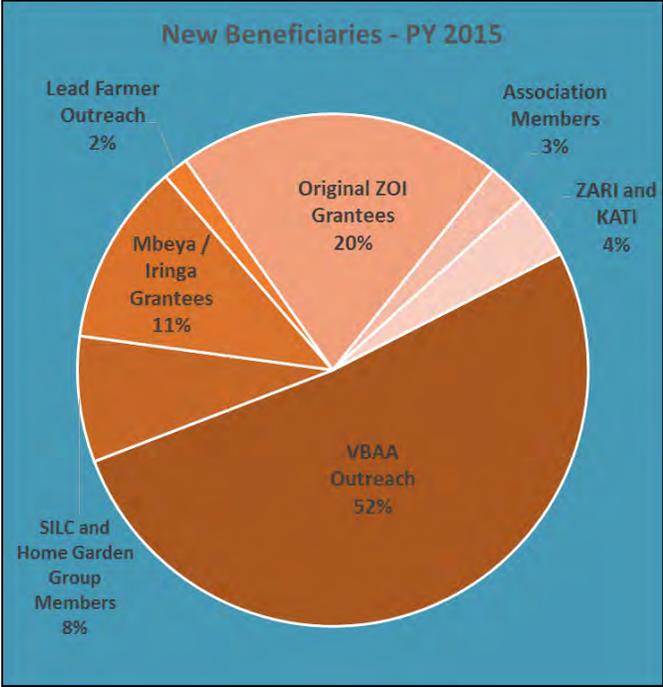
In most cases of deviation greater than 10% above target, NAFKA had anticipated a reduction of “countable” activities within the original zone of intervention as it expanded into new regions; however, the project was able to sustain interventions at past levels quite well, resulting in numbers that, in some cases, far exceed targets – especially for number of beneficiaries, rural households, and beneficiaries receiving training. Based on the Annual Outcome Survey, improved technology application rates were much higher than last year – pushing number of hectares under improved technology and number of farmers who have applied improved technology far above target. The number of public-private partnerships formed and the value of private investment were both driven up by the co-investment grants that have proven to be so successful this year.

On the other hand, for those indicators in which deviation is greater than 10% below target, explanations range from extremely poor weather conditions that reduced yields to delays in Mbeya and Iringa that transferred some targeted activities into the beginning of PY 2016. The weakened Tanzanian Shilling affected all indicators reported in USD units, as targets were set using an exchange rate of 1,600 TZS : 1 USD, while the annual average has been closer to 1,934 TZS: 1 USD.

During this reporting year, NAFKA reached 119,516 direct beneficiaries (52% M / 48% F), 48,004 of whom were new (51% M / 49% F), and 71,512 (52% M / 48% F) of whom were continuing from a previous reporting period. Out of the 119,516 total direct beneficiaries reached this project year, 57,368 (48%) were maize farmers and 62,148 (52%) were paddy farmers. The 48,004 new direct beneficiaries were introduced to NAFKA as customers of new agro-dealer or processor grantees in both the original Zone of Intervention (ZOI) and in Mbeya; through

SILC or home garden groups; as association members; through VBAA or Lead Farmer outreach; or by ZARI or KATI in Zanzibar.

Chart, Table 1: New Beneficiaries – PY 2015



Beneficiary Type	Male	Female	Total
Association Members	547	683	1,230
SILC and Home Garden Group Members	1,298	2,516	3,814
Grantee Customers (Mbeya / Iringa)	3,632	1,894	5,526
Grantee Customers (Original ZOI)			
Hub Agro-Dealer Customers	4,279	3,925	8,204
Processor Customers	703	955	1,658
VBAA Outreach	13,016	11,797	24,813
Lead Farmer Outreach	267	495	762
ZARI and KATI	735	1,262	1,997
TOTAL	24,477	23,527	48,004

While NAFKA actively considers only direct beneficiaries under its project beneficiary count, it is required to populate a custom output indicator that includes both direct and indirect beneficiaries. Since NAFKA interventions impact all members of a beneficiary household by facilitating improved economic status, family members within each beneficiary household are counted as *indirect* beneficiaries under this NAFKA custom indicator.⁵ This reporting year, there were 525,360 combined direct and indirect beneficiaries. Of these total direct and indirect beneficiaries, 211,563 were new to the project.

⁵ Indirect beneficiary numbers are estimated by adjusting the direct beneficiary count slightly downwards – to account for the fact that some direct beneficiaries live in the same household – then applying a household-size multiplier for each of NAFKA’s geographic clusters. Kongwa, Kiteto, Mvomero, Mlimba, North Ifakara, Mang’ula, Kilombero Plantations Ltd., KVTC, Mbeya, and Iringa clusters are in the mainland; Pemba and Unguja clusters are in Zanzibar.

Table 2: Beneficiaries Reached – PY 2015

<u>NAFAKA Outreach</u>	PY 2015 New	PY 2015 Continuing	PY 2015 Total	Cumulative- to-Date ⁶
Direct Beneficiaries (Farmers, Service Providers, or Clients of Service Providers)	48,004	71,512	119,516	224,297
Total Beneficiaries (Direct and Indirect Combined)	211,563	313,797	525,360	1,006,407

Improved Value Chain Productivity

- **Demonstration Plots and Good Agricultural Practices (GAP) Training:** This reporting year, 849 demonstration plots were established (380 maize; 469 paddy). GAP technologies for maize and rice were promoted to 107,813 farmers on these demonstration plots through GAP training and technical assistance by VBAAAS, Lead Farmers, agro-dealer and processor grantees, and ZARI and KATI in Zanzibar.
- **Technology Application:** 91% of NAFAKA farmers apply at least one improved technology – an application rate that continues to increase annually, as more and more beneficiaries have worked with the project for several years in a row and see the clear benefits of improved techniques. In terms of total hectares under improved technologies, maize farmers plant an average of 2.17 improved hectares, while paddy farmers plant an average of 1.25 improved hectares – a difference primarily related to general land availability in the two value chains.
- **Yields and Gross Margins:** Poor weather conditions – severe drought in key maize-growing regions and irregular rain patterns, including flooding, in rain-fed paddy areas – had a negative effect on yields for both maize and rice this reporting year. Maize yields were more affected than paddy at only 815 kg per hectare, only 66% of the targeted yield. Paddy yields met 93% of the projected target at 2,937 kg per hectare. Low yields, in addition to increased input costs – driven mostly by the weakened Tanzanian Shilling – contributed to gross margins that were 33% lower than anticipated for both commodities.
- **Service Provider Development:** NAFAKA continues to support networks of private sector service providers – 126 agro-dealers, 216 VBAAAs, and 349 Lead Farmers – by providing training and technical assistance. This reporting year, NAFAKA placed special emphasis on building input supply networks in the most rural areas by providing grants to hub agro-dealers to link with sub agro-dealers, VBAAAs, and farmers. Through the Hub Agro-Dealer Grant Program, an additional 1,597 MT of agro-inputs were purchased from these grantees by 8,081 farmers, valued at \$1,964,950.
- **Engaging Agricultural Research and Training Institutes:** NAFAKA continues its technical collaboration with research institutes ARI (Agricultural Research Institute) KATRIN (Kilombero Agricultural Research and Training Institute) and Cholima Research Centre Dakawa on UDP fertilizer validation trials, as well as with Zanzibar Agricultural Research Institute (ZARI) and Kizimbani Agricultural Training Institute (KATI) to train Zanzibari farmers and extension workers.

⁶ Cumulative-to-Date figures are the sum total of all final Year-to-Date figures for each reporting year. Beginning Q3 PY 2014, NAFAKA revised its methods for calculating cumulative beneficiaries per USAID approval.

Expanding Markets and Trade

- **Formation and Registration of Associations:** NAFKA continues to work with 125 associations and nine apex associations. Of these, 85 producer associations and six apex associations have finished the registration process. An association assessment on approximately half of the NAFKA associations was conducted in the fourth quarter to evaluate development in six key areas. The average score of 52% was reasonable, given that many of these associations were formed since project inception.
- **Aggregation and Collective Marketing:** A total of 157 buyer agreements, worth ██████████, were entered into this reporting year between producer associations and various buyers, including processor grantees. Through these agreements, 21,031 MT of produce were purchased – 13,717 MT of rice, and 7,314 MT of maize.
- **Strengthening Input Supply:** NAFKA provided grants to nine hub agro-dealers to build their supply networks in the most rural areas. As a result of these grants, an additional 1,589 MT of agro-inputs were purchased, worth an estimated ██████████.
- **Strengthening Market Access:** Through co-investment grants, five processors improved their linkages with smallholders by providing GAP training to outgrowers to improve quality and quantities produced and by guaranteeing markets through contract farming. A total of 8,882 MT were purchased by these processors from 343 smallholders and producer groups, valued at ██████████.
- **Access to Finance:** This quarter, NAFKA collaborated with CRDB, Opportunity Tanzania Limited, and Iringa University who provided loans to 1,522 farmers worth a total of ██████████.

Increased Private Investment in Agriculture

- **Public-Private Partnerships:** NAFKA established 29 new public-private partnerships this reporting year. In addition to NAFKA private sector co-investment grantees, NAFKA has established strong working relationships with several input supply companies who make regular investments in demonstration plots to build customer knowledge and demand ██████████ as well as formal banks that provide loans to smallholder farmers.
- **NAFAKA Grants:** NAFKA continues to monitor 19 private sector grants worth ██████████ to support local businesses, associations, and individual farmers: 1) Association Development Grants (KINNAPA); 2) Private Co-Investment Grants (KPL); 3) Enterprise Development Co-Investment Grants (Current Geographic Districts: 1 Processor – Kibaigwa; and New Geographic Districts: 3 Processors – Khebhandza, Mtenda, and Raphael; 1 Agro-Inputs Supplier – Kilawa; and 1 Micro-Finance Institution – University of Iringa); 4) Agro-Dealer Grants to nine grantees (BABU, GABE, Kiteto, Michael, NOKWIM, PALUKI, S. Majembe, TVC, and William); and 5) Seed Production Companies (TANSEED and Tropical Seeds).

Increased Resilience for Vulnerable Smallholders

- **Savings and Internal Lending Community (SILC) Members:** NAFKA reached 11,223 SILC members in 10,852 vulnerable households by building the capacity of local savings and lending groups through mobilization and training; 667 of these households were new. Of all the SILC members 66% are women.
- **Savings and Lending:** An additional ██████████ in savings was accumulated by all SILC members this year, 89% of which belongs to women. From the start of the project, the cumulative value of savings for all members is \$617,088. Additionally, a total of ██████████ in informal agricultural loans was issued internally to 10,533 SILC group members this year – 66% of whom are women.

⁷ Quarterly exchange rates were used to calculate quarterly loans, then totaled together for the annual figure.

2. INTRODUCTION

Project Description

NAFAKA aligns with the Feed the Future (FtF) goal to harmonize regional hunger- and poverty-fighting efforts in countries with chronic food insecurity and insufficient production of staple crops. NAFKA works with rural communities, the Government of Tanzania, and the Revolutionary Government of Zanzibar to analyze local rice and maize value chains and to develop strategies to strengthen them. NAFKA represents a commitment to Tanzania's country-led Kilimo Kwanza initiative to reinvigorate agricultural growth emerging from the Comprehensive Africa Agriculture Development Programme (CAADP) process. The NAFKA team is composed of a consortium of subcontractors that include:

- *ACDI/VOCA* – Overall project management, operations, and technical leadership.
- *Rural and Urban Development Initiative (RUDI) and Mtandao Wa Vikundi Vya Wakulima Tanzania (MVIWATA)* – Local service providers focused on developing farmer associations in target locations.
- *Farm Input Promotions-Africa (FIPS)* – An East African organization developing village-based extension.
- *International Fertilizer Development Center (IFDC)* – Providing technical expertise in rice production, irrigation, and agro-dealer networks.
- *Danya International* – Providing technical expertise in behavior change communication.
- *Catholic Relief Services (CRS)* – Addressing the needs of the most vulnerable in target regions.
- Short-term technical support from *Associates for International Resources and Development (AIRD)* on policy issues in collaboration with the FtF SERA project.

Goals and Objectives

The goal of NAFKA is to sustainably reduce poverty and hunger by improving the productivity and competitiveness of value chains that offer job and income opportunities for rural households. The goal aligns with the Feed the Future Initiative (FtF) overall goal, “to sustainably reduce poverty and hunger.” NAFKA promotes growth by facilitating productivity and competitiveness of the smallholder-based rice and maize value chains. To sustainably reduce hunger and poverty, NAFKA is:

- Improving the competitiveness and productivity of the rice and maize value chains.
- Facilitating improved domestic and regional trade in rice and maize.
- Expanding the depth and breadth of benefits from the growth of the rice and maize subsectors, including increased benefits to women and youth.
- Enhancing rural household nutrition by promoting women-focused value chain development and improved consumption of a quality diet.

Geographic Zones of Influence

With expansion during the reporting year, NAFKA is now implemented in 10 districts in five regions on the mainland and two islands in Zanzibar, Pemba and Unguja. Key areas of intervention and activity are described below:



- **Kilombero District:** a paddy-growing area in the south of the Morogoro region with five clusters. In Ifakara North, Mlimba, and Mang'ula clusters, NAFKA is engaged in association development and increasing productivity in 56 villages (20 in Ifakara North, 16 in Mlimba, and 20 in Mang'ula), focused mainly on rain-fed production. NAFKA continues to facilitate KPL outgrower schemes in 10 villages and NAFKA worked with KVTC employees and some teak outgrowers to develop their own rice operations in 12 villages.

- **Mvomero District:** a paddy- and maize-growing area in the north of the Morogoro region. NAFKA is developing associations and increasing productivity with both paddy (rain-fed and irrigated) and maize producers in 48 villages (43 rain-fed and 5 joint rain-fed/irrigated).

- **Kongwa and Kiteto Districts:** maize-growing areas in Dodoma and Manyara regions. NAFKA is developing associations and

increasing productivity with maize producers in 112 villages (61 in Kongwa and 51 in Kiteto).

- **Zanzibar:** NAFKA is focused on increasing productivity with both rain-fed and irrigated paddy producers in 74 wards/shehias (37 in Unguja and 37 in Pemba).
- **Iringa and Kilolo Districts:** paddy and maize-growing areas in Iringa region. NAFKA has signed a grant agreement with University of Iringa to increase access to finance for 770 smallholder farmers.
- **Mbarali, Mbeya Rural, Mbozi, and Rungwe Districts:** paddy and maize-growing areas in Mbeya region. NAFKA has signed agreements to facilitate increased productivity and market access in 47 villages through four grantees – Kilawa Enterprises, Khebhandza Marketing Co. Ltd, Mtenda Kyela Rice Supply Co. Ltd, and Raphael Group Ltd.

3. IMPLEMENTATION PROGRESS

This section presents NAFKA's progress in implementing activities according to the key result areas as per the NAFKA project document, which include:

- IR-1 Improved value chain productivity
- IR-2 Expanding markets and trade
- IR-3 Increased private investment in agriculture
- IR-5 Increased income for vulnerable smallholders

Cross-Cutting Issues are addressed under Section 10 of this report, which include gender and youth integration, behavior change communication, environmental and natural resource management, and monitoring and evaluation.

IR.1. Improved Value Chain Productivity

1.1 Build Capacity of Local Implementing Partners

RUDI and MVIWATA, both contract partners, have been receiving capacity-building services from NAFKA on a regular basis through a combination of customized training workshops and on-site technical assistance. Capacity-building action plans (CBAPs) were drafted to support the capacity development efforts of local partners Rural Urban Development Initiatives (RUDI) and Mtandao wa Vikundi vya Wakulima Tanzania (MVIWATA).

The process of identifying a capacity-building consultant to complete a financial manual review and revision for MVIWATA is still ongoing, however the development of RUDI's strategic plan for the period 2015-2019 was finalized and endorsed by the RUDI Board in May. It included a review of RUDI's core values, leadership, and operations activities; an assessment of stakeholder needs and internal and external SWOT analyses; and the formulation of immediate and long-term goals. The official launch of the strategic plan with stakeholders is scheduled to take place on October 6, 2015 in Dar es Salaam with support from NAFKA.

NAFKA sponsored MVIWATA technical staff to participate in two high-level trainings during the reporting year. In December, the MIS International Training was held in Arusha to build capacity in improving MIS operations and upgrading strategies for better performance of the MVIWATA Agricultural Marketing Information System (MIS). In June, the Structured Trading Financing (STF) training, held in Morogoro, increased knowledge and skills on facilitating financing for structured trading in the context of warehouse receipts and international trade systems.

This enhanced capacity is especially important in NAFKA's new regions – Mbeya and Iringa – where these local partners will serve as key catalysts and have already identified geographic areas and farmer groups with which to work. RUDI will focus its efforts on the maize value chain in Iringa and has already begun to work in 27 villages (15 in Kilolo; 12 in Iringa Rural), supporting farmer organizations by linking them with buyers, processors, and agro-dealers. MVIWATA will work in the rice value chain in Mbeya and has already identified and conducted project inception workshops with 20 producer associations (10 in Mbarali; 10 in Mbozi). From initial registration of these association members, there will be around 3,300 prospective beneficiaries through farmer groups, associations, and AMCOs who will be trained on association/group management and crop banking operations and management.

ICT Technical Assistance to MVIWATA: The BCC ICT Manager conducted an ICT capacity assessment of local partner MVIWATA to identify areas that could benefit from technical assistance. As a result, the association membership database and organization website were both revived, and a formal set of organizational ICT policies were established to create guidelines for improved security, maintenance, and professionalism regarding document storage, electronic mail protocols, and hardware protection.

1.2 Producer Associations and Group Strengthening

During the reporting year, NAFKA's primary activities under association development focused on registration of unregistered associations. The association development unit facilitated the formation of 13 new producer associations and continued capacity-building efforts to the 112 associations established in previous years – including the existing water user associations Mgongola and UWAWAKUDA – covering topics such as GAP, human rights, credit access, and management training.

NAFAKA plans to reach 4,000 farmers in new regions Mbeya and Iringa by building the capacity of associations to improve collective aggregation, collective sales, collective access to inputs, and access to credit. These activities will be implemented by local partners RUDI and MVIWATA, and four of their field officers have already been stationed Mbeya and Iringa. In Mbeya, MVIWATA has identified 20 existing associations in Mbarali and Mbozi districts. In Iringa, RUDI's target is 2,000 association members in the identified 27 villages in Kilolo and Iringa Rural districts, as discussed above.

1.3 Engaging Agricultural Research and Training Institutes

NAFAKA continued its collaborative efforts with four research and training institutions: Agricultural Research Institute (ARI) Kilombero Agricultural Training and Research Institute (KATRIN), Cholima Research Centre Dakawa, Zanzibar Agricultural Research Institute (ZARI), and Kizimbani Agricultural Training Institute (KATI).

Partnering with Agricultural Research Institute (ARI) KATRIN and Cholima Research Centre Dakawa

In the first quarter of this reporting year, NAFKA initially completed the work it began in PY 2012 on Urea Deep Placement (UDP) verification trials with ARI KATRIN and Cholima Research Centre Dakawa. These trials were conducted to determine the benefits and suitability of UDP on Tanzania mainland soils in conjunction with SARO 5 (TXD 306) improved rice variety – and are required by the government prior to approved use by farmers.

However, in February, NAFKA, ARI KATRIN, and Cholima Research Centre Dakawa decided to extend the completed trials by an additional year to enhance the evidence base that will be presented to the Tanzania Fertilizer Regulatory Authority (TFRA) in November 2015. More information on these trials can be found under *Section 1.2.4: Verification Trials – Urea Deep Placement (UDP)*.

Partnering with Zanzibar Agricultural Research Institute (ZARI) and Kizimbani Agricultural Training Institute (KATI)

The Ministry of Agriculture of the Government of Zanzibar has been an excellent partner to NAFKA in improving rice productivity in Zanzibar through activities implemented in collaboration with ZARI and KATI. ZARI and KATI both work with farmers to improve productivity – ZARI through direct training and KATI indirectly by training Lead Farmers and extension workers who pass the trainings along to farmers.

In the first quarter, ZARI and KATI were issued new grants to undertake core implementation activities under the supervision of NAFKA, details of which can be found in *Section 4: Activities Implemented in Zanzibar*. ZARI and

KATI developed demonstration plots and conducted GAP and System for Rice Intensification (SRI) trainings for 1,997 (37% M / 63% F) direct beneficiaries this year across Unguja and Pemba in Zanzibar, including farmers, government extension workers, and Lead Farmers. This brings the total number of Zanzibari beneficiaries to 7,713 (49% M / 51% F) since NAFKA began implementing activities there in 2013.

1.4 Training on Good Agricultural Practices (GAP)

NAFKA’s agricultural productivity activities are designed to facilitate positive changes in farmer practices through the integration of core behaviors in farm activities. A combination of training approaches is employed that includes on-farm cascade training in GAP, demonstration plots, residential trainings, farmer exchange visits, and Farmer Field Days to instill these key behaviors. The trainings are facilitated by NAFKA agronomists, VBAs, agro-input companies, agro-dealer extension agents, and government extension agents.

GAP Training Program: For farmers to achieve maximum impact on yield and quality improvement, NAFKA has designed a productivity training program – comprised of land preparation, proper spacing, use of fertilizer and improved seeds, water management, pest and disease control, and pre-harvest/harvest/post-harvest practices – intended to equip farmers with skills and knowledge in GAP. Such training is the initial step for producers in building their capacity to adopt improved practices and, in turn, to increase marginal sales and yields. This reporting year, 107,813 farmers (52% M / 48% F) were trained in various GAP technologies by NAFKA’s network of VBAs, Lead Farmers, and hub agro-dealers with technical support from NAFKA agronomists and district coordinating officers (DCOs).

Table 3: GAP Training by Trainer – PY 2015

Trainer	Female	Male	Grand Total
VBAAs	28,070	30,645	58,715
Lead Farmers	5,848	6,872	12,720
Agro-Dealer Grantees	6,894	7,146	14,040
Processor Grantees	2,849	4,335	7,184
ZARI	1,262	735	1,997
Other	6,504	6,653	13,157
TOTAL	51,427	56,386	107,813

The GAP training program promotes 14 different technologies in three modules that are introduced on demonstration plots and cover the entire crop production cycle for both the rice and maize value chains. The status of each GAP training module is highlighted below:

Module 1—Mwanzo: Input selection, land preparation, planting, first top dressing

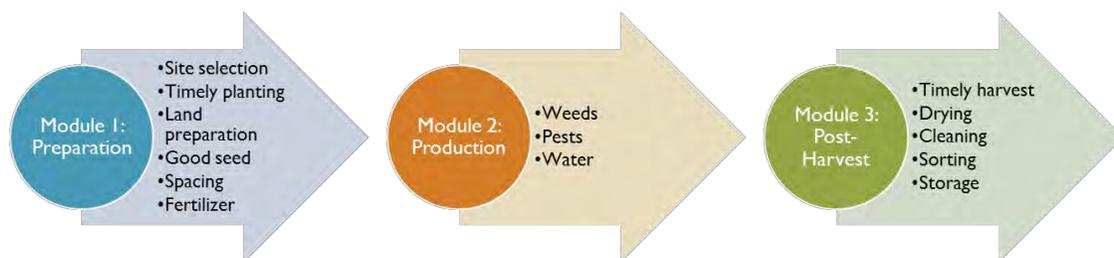
A total of 317 Lead Farmers were trained in GAP Module 1 during the first and second quarters of this reporting year, either through refresher trainings or initial trainings for new Lead Farmers. All 349 Lead Farmers and 216 VBAs were expected to deliver this module of the GAP training program directly to farmers during the first and second quarters with technical support from NAFKA agronomists and DCOs.

Module 2—Nufaisha: Weed and pest identification and management, second top dressing

This module was also offered to a total of 295 Lead Farmers and 213 VBAs in PY 2015, either through refresher trainings or initial trainings for new participants. All 349 Lead Farmers and 216 VBAs were expected to deliver this module of the GAP training program directly to farmers with technical support from NAFKA agronomists and DCOs.

Module 3—Imarisha: Pre-harvest, harvest, and post-harvest practices

GAP Module 3 was delivered to 205 Lead Farmers through refresher trainings. All were expected to deliver this module directly to farmers during the third quarter of this implementing year with technical support from NAFKA agronomists and DCOs.



I.5 Developing Extension Service Providers

NAFAKA has established a continuously growing sustainable network of VBAs, Lead Farmers, and agro-dealers to increase farmer access to improved services and inputs, such as seed, fertilizer, and agro-chemicals. NAFKA builds the capacity of these individuals by facilitating Training of Trainers (TOTs) that cover topics ranging from GAP to business management – and by creating linkages amongst various service providers and between the service providers and farmer customers.

NAFAKA also collaborates directly with district extension officers in training VBAs, Lead Farmers, and farmer associations in GAP, in the establishment of demonstration plots, and in QDS production. The district extension officers assist NAFKA in the selection of villages for NAFKA intervention, identification of VBAs based on criteria set by NAFKA, and organizing trainings for VBAs. They also assist in the acquisition of trading licenses for VBAs who want to become agro-dealers. Seed Specialists from district councils assist in training VBAs who serve as QDS producers, and they also conduct required field visits and inspections for VBA QDS producers. Although relationships with district extension officers can vary from district to district, NAFKA values its partnerships with these public officials and works hard to strengthen collaborative opportunities.

A. Village-Based Agricultural Advisors (VBAs)

VBAs are farmers based in rural areas who are selected by their community to provide training, extension services, and inputs to other farmers in the same village. After receiving extensive GAP training themselves, VBAs establish demonstration plots that are used as teaching platforms to showcase GAP techniques and impact. While VBAs are not certified agro-dealers, many serve as agents of agro-dealers, reselling inputs to farmers in their village for a small commission and providing valuable access to inputs in areas too remote for most agro-dealers to serve.

The 216 VBAs (78% M / 22% F) who work through NAFKA are closely monitored by 5 DCOs who provide support and oversight. NAFKA provides various trainings to VBAs throughout the year on topics ranging from GAP refreshers to business development to QDS production. The NAFKA VBA network is comprised of 52 in Mvomero (81% M / 19% F), 21 in Mang'ula (60% M / 40% F), 23 in Ifakara North (72% M / 28% F), 18 in Mlimba (94% M / 6% F), 50 in Kiteto (66% M / 34% F), and 52 in Kongwa (77% M / 23% F).

Table 4: VBAs by District – PY 2015

District	Female	Male	Grand Total
Kiteto	15	35	50
Kongwa	12	40	52
Ifakara North	5	18	23
Mang'ula	6	15	21
Mlimba	1	17	18
Mvomero	10	42	52
TOTAL	49	167	216

GAP Training by VBAs: This reporting year, 58,715 farmers (52% M / 48% F) received GAP training from VBAs across the five regions in mainland Tanzania.

VBA Small Grants Program: In one of many efforts to ensure that VBAs are satisfied serving their fellow farmers, NAFKA conducted a needs assessment in PY 2014 to determine the challenges and opportunities that exist for VBAs within their communities. Based on the findings, 10 VBAs with potential as wholesalers or retailers of farm inputs were identified. Early this reporting year, NAFKA introduced the VBA Small Grants Program under the umbrella of the NAFKA Enterprise Grant as both a strategy for incentivizing VBAs, as well as for improving input availability at the village level by training promising VBAs to more formally participate in the input supply chain. Unfortunately, most of the identified VBAs did not meet criteria during the pre-award assessment, and the VBA Small Grants Program was cancelled. However, as a result, NAFKA strengthened the incorporation of VBAs into the activity objectives of the Wholesale Agro-Dealer Grant Initiative, discussed below.

VBAs as Agro-Dealer Agents: This reporting year, NAFKA launched the Wholesale Agro-Dealer Grant Initiative, in which nine highly qualified hub agro-dealers were selected to receive support from NAFKA in developing their supply networks to more efficiently and expansively deliver inputs to farmers in the most rural areas. While NAFKA has linked the hub agro-dealers to VBAs, Lead Farmers, and sub agro-dealers, NAFKA has specifically focused on strengthening the use of VBAs by hub agro-dealers as agro-dealer agents, bulking orders from farmers and making a small commission on sales.

This arrangement not only provides access to inputs by farmers who otherwise would not have it, it also encourages VBAs to foster the relationships already built with their farmers, who have now become a source of economic income. This model was highly successful in its first implantation year; however, this success brought about an unanticipated challenge: Demand for inputs by farmers has been so high, VBAs often struggle to meet the capital requirements required by hub agro-dealers as deposits on bulk orders. While some consignment sales are currently taking place, NAFKA is also working to link VBAs to financial institutions (e.g. SACCOs) to improve access to finance.

SUCCESS STORY: TSH 20 MILLION WINNER OF MAMA SHUJAA WA CHAKULA CREDITS USAID-NAFAKA

Caroline was selected from among 26,500 women who joined the competition.



Photo: Natharine Ugulumo

Agricultural Practices (GAP) of rice crop and new technologies which greatly contributes to higher rice yields.

“Without USAID NAFKA I wouldn’t have known about seed ... the victory I achieved is because of NAFKA project interventions, the knowledge I acquired helped me to understand..... This is our victory, thank you NAFKA”. Caroline

Telling Our Story

U.S. Agency for International Development
 Washington, DC 20523-1000
<http://stories.usaid.gov>



Caroline Chelele, a 49 years old woman farmer from Kikwawila village in Kilombero district, Morogoro region recently won the Tsh 20 million “Mama Shujaa wa Chakula” (*woman food hero*) competition, a national ‘reality TV-style’ competition hosted by Oxfam aimed at raising awareness of the achievements of female food producers across the country whose contributions to society often go unrecognized. Caroline was selected from among 26,500 women participants. On receiving her Tsh 20 million prize Caroline said on live TV, *“Without NAFKA I wouldn’t have known about seed ... the victory I achieved is because of NAFKA project interventions, the knowledge I acquired helped me to understand..... This is our victory, thank you NAFKA”*.

Caroline struggled for years with low rice yields due to traditional farming practices and in 2012 joined the USAID NAFKA Staples Value Chain Activities as a Village Based Agriculture Advisor (VBAA). She trained on good agricultural practices and new technologies which resulted in improved rice yields and being an early adopter, she managed to improve yield from 0.8 mt/ha of paddy to 2.5 mt/ha valued at Tsh 1.7 million in 2012. As a VBAA and a project certified trainer Caroline has been able to train over 4,500 smallholder farmers in her village on GAP, safe handling of chemicals, and use of new and improved agro-input inputs. This has resulted in a large demand for inputs in her village and through her VBAA business, she supplied 17.5 mt (350 bags) of fertilizer to smallholder farmers during the 2014/2015 production year earning a commission of Tsh 75,000 as a sales agent of the hub- agro dealer.

Caroline was also trained by NAFKA on Quality Declared Seed Production. As a certified QDS production trainer she has been growing the new higher yielding variety TXD 306 (SARO 5) since 2012. In the 2012/2013 production season she harvested 6.25mt earning Tsh 9,375,000 from the sale of QDS seeds to fellow farmers. In 2013/2014 production season she harvested 9.6 mt of seed generating Tsh 14,000,000 in gross sales of QDS seeds.

Demand of TXD 306 variety in Caroline’s village of Kikwawila has significantly increased due to Caroline’s influence. Because she cannot meet this new demand by herself she is now working with 11 other farmers in her village to produce rice QDS on 8 hectares (20 acres) of land.

Caroline has also opened her own agro-inputs shop in her village to enable farmers to more easily access improved inputs. Caroline declared that she will use the whole awarded amount to invest in her agro input shop.

VBAA Videography Product: NAFKA engaged a videographer to design and produce a short video to showcase the VBAA model and its potential for replication. After meeting with NAFKA field staff, VBAAAs, and farmer beneficiaries early in the reporting year to develop a more thorough understanding of the VBAA model and how it is integrated into NAFKA activities and achievements, the team returned to film in March. The final video, produced in both English and Swahili, will be distributed to NAFKA beneficiaries and other audiences, in conjunction with the other videos being produced by the BCC team.

B. Agro-Dealers

Agro-dealers are generally based in semi-urban areas and are certified and registered as private inputs dealers. Although demand for improved seed, fertilizer, and agro-chemicals has increased at the field level due to NAFKA interventions, farmers in remote areas continue to lack access to affordable, high-quality inputs and the necessary technical knowledge to use them properly. This hinders their ability to increase productivity and to diversify into higher-value agriculture production. To address this, NAFKA supports a network of 126 certified agro-dealers by providing GAP training, encouraging the use of improved inputs to farmers throughout its zone of intervention, and creating linkages between and amongst agro-dealers, hub agro-dealers, VBAAAs, and farmer customers.

Out of the 126 agro-dealers (68% M / 32% F) that NAFKA supports, 19% serve the maize clusters of Kongwa and Kiteto, 65% serve the rice clusters of Mang'ula, Ifakara North, and Mlimba; and the remaining 15% serve the combination maize/rice cluster of Mvomero.

Table 5: Agro-Dealers by District – PY 2015

<i>District</i>	<i>Female</i>	<i>Male</i>	<i>Grand Total</i>
Kiteto	4	5	9
Kongwa	3	9	12
Mvomero	1	14	15
Kilombero	34	56	90
TOTAL	42	84	126

GAP Training: In Kilombero and Ulanga, NAFKA collaborated with input supply companies to train 28 agro-dealers on product technical knowledge with the understanding that the information would be passed on to farmers before or at the point of sale. One of the major causes of low farm productivity is the lack of familiarity by smallholder farmers regarding use of various inputs. It is important for agro-dealers to have technical knowledge of inputs so that they are able to accurately and confidently pass this information along to farmers and to control counterfeit products along the supply chain. Participants from five input supply companies participated in product knowledge training: Suba Agro-Trading and Engineering Company Ltd. (SATEC), Crop Life Tanzania Ltd., Glycel Crop Science, Tanzania Crop Care, and Syngenta.

Agro-Dealer Workshop: In the first quarter of the reporting year, NAFKA and the African Fertilizer and Agribusiness Partnership (AFAP) organized an Agro-Input Stakeholders Linkage Workshop to devise strategies to strengthen linkages and support the agro-inputs supply chain in the four districts of Mvomero, Kiteto, Kongwa, and Kilombero. Sixty-two participants attended the workshop in Morogoro: 23 agro-input company representatives, 15 hub agro-dealers, five VBAAAs, three farmer association leaders, two development partners, and 14 NAFKA staff.

Key issues discussed included the need for greater involvement by key partners (e.g. associations, local government authorities) to encourage increased demand for quality inputs and the development of a sustainable input supply network through hub agro-dealers in semi-urban towns with closer proximity to rural agro-dealers and VBAs. It was suggested that associations should serve the role as aggregators and input suppliers in locations without VBAs and agro-dealers, while local governments should channel input subsidies through the farmer associations. The participants discussed scaling up existing partnerships by developing MOUs for consignment and by continuing to showcase best practices and lessons learned through demonstration plot management.

Hub Agro-Dealers: Within NAFKA’s network of 126 agro-dealers are hub agro-dealers – wholesalers of fertilizer, seeds, and other agro-chemicals who supply bulk products to retail agro-dealers and farmer associations for direct sale to farmer customers. Earlier this year, the Wholesale Agro-Dealer Grant Initiative identified nine hub agro-dealers within the current network of agro-dealers to receive a total of ██████ in grant funds and technical assistance from NAFKA. NAFKA provides technical backstopping in the establishment and management of hub agro-dealer demonstration plots and links them with networks of VBAs, farmer associations, and local government authorities. The overall aim of the activity is to encourage efficient, timely, and increased distribution of inputs to rural areas.

VBAs and farmer associations consolidate orders from their farmers and serve as agents for hub agro-dealers whose outreach often does not extend to the more remote areas. NAFKA also provides GAP and product knowledge training to enhance the hub agro-dealers’ ability to build customer awareness. The grants allow grantees to acquire larger volumes of inputs from supply companies through credit contracts, to provide more timely delivery of inputs to smallholder farmers through well-established networks and organized transport, and to create demand for improved inputs through the use of demonstration plots for training.

Table 6: Hub Agro-Dealers by District – PY 2015

District	Female	Male	Grand Total
Kiteto	1	2	3
Kongwa	0	1	1
Mvomero	0	2	2
Kilombero	0	3	3
TOTAL	1	8	9

Overall, excellent progress has been made by the nine hub agro-dealer grantees. Since the hub agro-dealer grant activity began, 14,040 farmers (51% M / 49% F) have been trained in several GAP technologies (seed varieties, land preparation, weeding, planting, fertilizer application) by VBAs, Lead Farmers, and the agronomists employed by hub agro-dealers through their grant agreements. Directly linked to this grant, an additional 1,597 MT of agro-inputs was purchased from these hub agro-dealers by 8,081 farmers, valued at ██████. In terms of input sales, the hub agro-dealers originally made arrangements to sell inputs to VBAs on credit with a required deposit. Although the process worked well at first, as orders grew larger, VBAs began noting concern that they did not have enough capital to secure the growing volumes of inputs demanded. Most hub agro-dealers need a minimum deposit of 50% of the sales price to release inputs to VBAs; as sales volumes grow, the deposit requirement also grew – often too large for what most VBAs are able to financially manage. While this marks an obvious success, it also highlights a significant challenge. In addition to encouraging consignment sales, NAFKA is also identifying financial institutions (e.g. SACCOs) to link directly with VBAs.

Since most of the relationships between hub agro-dealers and VBAs are new, as time continues, improved trust will build greater confidence between partners and potentially allow for more flexible payment terms. Additionally, one of the hub agro-dealer grantees – ██████████ – has even loaded his truck and driven out to the villages of some of the VBAs he serves, allowing them to sell directly from the truck and pay immediately without the need to provide a deposit. Although this level of direct sales is not possible for all hub agro-dealers, it demonstrates the type of entrepreneurial ingenuity that builds a more robust input supply chain and a more sustainable private sector.

Table 7: Supply Networks Established by Hub Agro-Dealers – PY 2015

Hub Agro-Dealer	Network Type and Number			No. of Villages
	Rural Agro-Dealers	VBAs	Lead Farmers	
S. Majembe Agroveter & Agrochemical	13	3	8	10
TVC Agrochemical Input Investment	12	5	7	10
NOKWIM Investment Co. Ltd	16	4	10	10
William Agrochem Centre	12	6	10	12
PALUKI Agro-Dealer and General Supply	7	5	12	12
Michael Agro-Business and General Supply	12	4	15	15
Kiteto Agro-Business Co. Ltd	5	3	10	10
GABE Milling Enterprises	8	4	18	12
BABU Agro-Dealer	9	8	9	13
TOTAL	94	42	99	104

Farmer Field Days: Farmer Field Days are held at the end of the cropping season during harvesting when farmers are best able to learn by observing activities at demonstration plots and exchanging experiences with their fellow farmers. These events provide an opportunity for farmers to celebrate successes, share lessons with other farmers, and network with input supply companies, government officials, and other farmers. Farmer Field Days are also a good platform for sensitizing farmers who did not participate during demonstration plot establishment and management in their villages. Farmer field days in Kilombero, Kongwa, and Kiteto, organized by hub agro-dealers in collaboration with farmer associations, VBAs, and village governments, were attended by 2,830 farmers.

C. Lead Farmers

Of the farmer associations that have demonstration plots, one Lead Farmer is chosen by association members to manage the plot and provide guidance to others. Throughout the year, NAFKA provides initial and refresher GAP trainings to Lead Farmers, as well as general support on improving the agricultural services that Lead Farmers provide their association members. This reporting year, NAFKA continued to work with its network of 349 Lead Farmers (59% M / 41% F) to establish and manage 198 demonstration plots (45 maize; 153 rice) used to train 12,720 association members (54% M / 46% F) in GAP.

Table 8: Lead Farmers by Cluster – PY 2015

Cluster	Female	Male	Grand Total
Kiteto	20	24	44
Kongwa	10	35	45
Mang'ula	17	32	49
Mlimba	13	19	32
Mvomero	28	30	58
Ifakara North	27	34	61
Kilombero Valley Teak Plantation	6	16	22
Pemba	16	11	27
Unguja	6	5	11
TOTAL	143	206	349

I.6 GAP Behavior Change Communication (BCC) and Material Development

NAFAKA designs various BCC materials to foster behavior change and the application of key agriculture practices that allow farmers to realize an increase in yields and/or incomes. Throughout the reporting year, the NAFKA BCC team developed, disseminated, and monitored a series of materials to promote both GAP adoption and the benefits of association membership.

GAP Input Promotion Campaign: In the first quarter of this reporting year, the Phase II Input Campaign was designed, pre-tested, and rolled out. The campaign built on last year’s seasonal campaign that promoted quality certified inputs and aims to both reinforce those messages and incorporate new messages to promote good farming practices, such as proper land preparation and line spacing.

The approved posters and radio spots were launched in December 2014. Posters (1,000 maize and 1,000 rice) were disseminated through VBAs and association leaders for placement in areas with maximum visibility within the respective communities and to be used during demonstration plots lessons, classroom trainings, Farmer Field Schools, and other field events.

In addition to print materials, radio remains an important channel to reach large numbers of farmers in isolated areas to increase their awareness of different NAFKA messages and activities. For this campaign, radio spots and live talk shows to promote the use of agriculture inputs such as certified seeds, fertilizers, pesticides, and herbicides were produced. Six community radio stations were selected to air the radio spots – Pambazuko Radio (Ifakara); Mwangaza Radio and Nyemo FM (Dodoma for Kiteto and Kongwa); Abood Radio and Planet FM (Morogoro); and Ulanga FM (Mahenge). The spots began heavy rotation in the second quarter with each station broadcasting a total of 720 spots between January and March. The spots were aired during primetime and regular hours based on feedback from informal surveys of farmer listenership conducted during the Public Service Announcement (PSA) pre-test.



Association Membership Campaign: To promote membership in farmer associations, BCC created and distributed brochures promoting the value of association membership and posters promoting GAP techniques in maize or rice to VBAs, Lead Farmers, association leaders, agro-dealers, district offices, village offices, and individual farmers for display in community buildings, offices, and marketplaces. The brochures detailed the benefits of association membership, including bulking of input orders and collective marketing. More information on this campaign can be found below under *Section 2.2.1: Strengthening Producer Marketing Associations*.

GAP Calendars: Building on previous BCC campaigns, the BCC team designed calendars with creative prompts to encourage farmers to ask questions to VBAs and association leaders about best farming practices. The monthly farming messages correspond to the activities that should be taking place at that time within the growing season and are intended to reinforce best practices at each stage of the rice and maize production cycles. Almost 20,000 rice and maize calendars were distributed to VBAs, Lead Farmers, association leaders, agro-dealers, district offices, village offices, and individual farmers throughout the reporting year.

Table 9: Distribution of BCC Campaign Materials by Cluster – PY 2015

Cluster Name	Fliers	Calendars	Posters	Brochures
Kongwa	3,440	6,040	416	2,716
Kiteto	2,260	2,630	251	1,316
Mvomero	1,660	3,300	297	1,617
Mang'ula		1,750	185	910
Ifakara North		2,100	222	1,092
Kilombero Plantations Ltd		770	33	308
Kilombero Valley Teak Plantation		1,290	93	588
Mlimba		1,420	141	721



GAP Training Manuals: Training manuals for GAP Modules 1, 2, and 3 for both paddy and maize production were finalized this reporting year. The manuals include GAP technical information and visual aids that allow various trainers to deliver consistent messages to the farmers with whom they work.

BCC Training Video: Throughout the entire reporting year, the BCC team worked on a time-lapse training video that demonstrates proper application of GAP techniques for maize. In collaboration with the NAFKA Productivity Team, a demonstration plot was established with two sections: one planted and maintained by traditional methods and the other using GAP technologies. Using installed photography equipment, the video captured growth stages and the visible differences between the use of GAP and traditional farming techniques on maize. For each stage of preparing, planting, and harvesting, a brief tutorial was given, explaining key points and steps for farmers to understand. Results from this six month experiment were impressive and telling particularly the difference in actual yield between the GAP and traditional sides with the GAP plot yielding roughly four times as much maize as the traditional side. A behind-the-scenes video was also produced for submission to USAID.

This training video was packaged with other videos produced in PY 2014 and shown to farmers in project intervention areas to increase awareness of the benefits of improved farming practices. All BCC videos have been extremely well-received as effective and engaging training and motivational tools for NAFKA beneficiaries.

Roadshow: In September, the BCC team rented the RUDI mobile video van to air its set of four videos to project beneficiaries in eight villages across Kilombero, Kiteto, Kongwa, Mvomero, and new regions Mbeya and Iringa. In addition to showing the videos, the team distributed various print materials from its annual campaigns that promote inputs use and association membership. Almost 5,000 beneficiaries were reached during this first round, and a second road show is planned for early October.



1.7 Demonstration Plots for Improved Technologies and Management Practices

NAFAKA uses demonstration plots as a teaching and experimentation tool to allow farmers to visually observe the benefits of GAP application and to compare various combinations of GAP techniques. These demonstration plots promote up to 14 technologies and practices that include land preparation, proper spacing, appropriate use of fertilizer and improved seeds, water management, pest and disease control, intercropping with food security crops (pigeon peas, cowpeas, green grams, and/or soybeans), and pre-harvest/harvest/post-harvest techniques.

Demonstration plots are managed by VBAs, Lead Farmers, and agro-dealers who use them to provide direct training to farmers with technical support from NAFKA agronomists and DCOs. NAFKA developed a total of 849 successful demonstration plots (469 rice; 380 maize) this reporting year. Through GAP training, dissemination of promotional seed packs, and maintenance of demonstration plots, VBAs and Lead Farmers are raising awareness by community farmers of the agronomic benefits of improved seed and fertilizer.

More than 100 plots – not included in the total 849 – were adversely affected by drought or flooding conditions across NAFKA project districts and were closed.

Table 10: GAP Demonstration Plot Establishment by Partner – PY 2015

Cluster	Lead Farmers	VBAs	Grantee	ZARI	KATI	KPL	MVIWATA	Grand Total
Kilombero Plantation Ltd						104		104
Kiteto	45	71	43					159
Kongwa		75	60					135
Mang'ula	53	35	11					99
Mbarali			4					4
Mbeya Rural			8					8
Mbozi			20					20
Mlimba	12	25						37
Mvomero		35	29				39	103
North Ifakara	55	30	13					98
Pemba				20				20
Rungwe			9					9
Teak Plantation	33							33
Unguja					20			20
Grand Total	198	271	197	20	20	104	39	849

1.8 Private Sector Input Supply Engagements

NAFAKA recognizes that private sector investment in agricultural supply chains contributes to sustainable development. Through demonstration plots and TOTs, NAFKA has created a platform for input companies to showcase and demonstrate seeds, fertilizers, and agro-chemicals to build customer awareness and demand. Throughout the reporting year, through stakeholder workshops, Farmer Field Days, and introductions to new customer networks, NAFKA continued collaborative efforts with the following input supply companies:

- **Agro-Chemical Companies:** Arysta Life Science, Glycel Crop Care, Meru Agro-Tours and Consultancy, Monsanto, Positive International, Suba-Agro Engineering Ltd. (SATEC), Syngenta, Tanzania Crop Care, and TATA Africa
- **Fertilizer Companies:** China Pesticides, Export Trading Group (ETG), Mea Fertilizer, Minjingu Mines and Fertilizer Ltd., Positive International, Tanzania Fertilizer Company Ltd. (TFC), TATA Africa, and YARA Tanzania Ltd.
- **Seed Companies:** Aminata Seed Ltd., Bytrade, East-West Seed Company, Kibo Seed Company, Meru Agro-Tours and Consultancy, Monsanto, Pannar Seed Company, Seedco, Starn Seed Company, Suba-Agro Engineering Ltd. (SATEC), TANSEED International, Tropical Seeds East Africa, and Zambia Seed Company

VBAA Seed Initiative: In the second quarter of the reporting year, four seed companies (Bytrade, Monsanto, Pannar, and Seedco) loaned 70 metric tons of improved maize seed to 14 VBAs with no interest charged. Average cost of the seeds for VBAs was around 3,820 TZS/kg, and sales prices to farmers ranged from 4,250-4,500 TZS/kg. Through this new initiative to strengthen the use of VBAs as input suppliers, the 14 VBAs were able to sell 60 tons of the hybrid maize seeds to farmers, offering VBAs a risk-free opportunity to explore consumer demand.

Table 11: Contributions of Inputs by Private Sector Companies – Q1 PY 2015

Input Type	Input Name	Quantity (Kg, Liter)	Unit Price (TZS)	Value (TZS)	Value in USD (1,600:1 XR)	Company Name
Fertilizer	Mazao Plus	4,700	800	3,760,000	2,350	Minjingu Mines and Fertilizer Ltd
Fertilizer	Minjingu Top Dressing	4,700	760	3,572,000	2,233	Minjingu Mines and Fertilizer Ltd
Fertilizer	YaraMila Cereal	3,850	1,200	4,620,000	2,888	YARA Tanzania Limited
Fertilizer	YaraBela Sulfan	2,350	920	2,162,000	1,351	YARA Tanzania Limited
Fertilizer	YaraVera Amidas	2,900	1,080	3,132,000	1,958	YARA Tanzania Limited
Foliar Fertilizer	Yara Vita Tracel BZ	46	12,000	552,000	345	YARA Tanzania Limited
Foliar Fertilizer	POSITIVE Booster	12	6,000	72,000	45	Positive International
Herbicide	MUPA 2,4-D Amine	10	8,500	85,000	53	Positive International
Herbicide	OTIL (Glyphosate)	30	10,000	300,000	188	Suba Agro-Trading Engineering Limited
Herbicide	Ripanil (Propanil)	17	10,500	178,500	112	Suba Agro-Trading Engineering Limited
Herbicide	Pendiment (Pendimenthanil)	20	6,500	130,000	81	Suba Agro-Trading Engineering Limited
Insecticide	Lambdacyhalothrin	10	18,000	180,000	113	Positive International
Maize Seed	TZH 538 FARU	300	4,250	1,275,000	797	Suba Agro-Trading Engineering Limited
Maize Seed	PHb 3253	851	4,500	3,827,700	2,392	Bytrade
Maize Seed	PHb 30G19	1,880	4,500	8,461,800	5,289	Bytrade
Maize Seed	Meru HB 513	200	4,500	900,000	563	Meru Agro-Tours & Consultant Co. Ltd
Maize Seed	NATA H 105	100	4,500	450,000	281	Aminata Seed Limited
Maize Seed	NATA H 104	35	4,500	157,500	98	Aminata Seed Limited
Maize Seed	NATA K6Q	50	2,000	100,000	63	Aminata Seed Limited
Maize Seed	WH505	3,420	4,250	14,535,000	9,084	Starn Seed Company
Maize Seed	Pan 4m-19	120	4,500	540,000	338	Pannar Seed Company
Maize Seed	Pan 4m-21	210	4,500	945,000	591	Pannar Seed Company
Maize Seed	Pan 3m-01	270	4,500	1,215,000	759	Pannar Seed Company
Maize Seed	Shoka	50	4,500	225,000	141	Suba Agro-Trading Engineering Limited
Maize Seed	Lubango	66.4	4,250	282,200	176	Suba Agro-Trading Engineering Limited
Maize Seed	SITUKA -I	50	2,000	100,000	63	Aminata Seed Limited
Maize Seed	ZMS 606	100	4,250	425,000	266	Zambia Seed Co. Limited
Maize Seed	ZMS 405	100	4,250	425,000	266	Zambia Seed Co. Limited
Rice Seed	SARO 5 (TXD 306)	3,820	2,200	8,404,000	5,253	TANSEED Intl Ltd
				61,011,700	38,132	

1.9 Quality Declared Seed (QDS) and Certified Seed Production

Quality Declared Seed (QDS): Local access to high-quality seed is integral to increasing yields for smallholder farmers. In rural areas too challenging for agro-dealers to reach, QDS is produced by local, approved QDS farmers and sold to other farmers within the same village. NAFKA supports the efforts of QDS producers by providing GAP training for QDS production, as well as marketing strategies to distribute the seed they produce.

Since VBAs and Lead Farmers have a ready customer base in the farmers they train, becoming a QDS producer provides them with both a revenue source for their efforts and an incentive to continue in the role. After training and confirmation that the VBAs and Lead Farmers can produce QDS within the specified national guidelines, they receive start-up basic seed and authorization from Agricultural Seed Agency (ASA) to produce QDS. They are then expected to multiply the basic seed within specified guidelines and increase the availability of quality seeds in their respective communities, while simultaneously strengthening their own resilience by increasing their incomes.

During the reporting year, NAFKA supported a total of 81 VBAs and 26 Lead Farmers by providing GAP training and technical assistance in QDS production in conjunction with relevant District Agricultural, Irrigation, and Cooperatives Offices (DAICOs) under the Ministry of Agriculture, Food Security, and Cooperatives. While Lead Farmers began training last reporting year, VBAs began training this reporting year. Although the original target was 100 VBAs, 19 were unable to qualify as QDS producers due to various issues, such as lack of community support for the particular VBA or inability to meet isolation distance requirements.

Of the 107 trained, only 85 managed to plant QDS fields, due to issues like migration from conflicts between pastoralists and farmers or delayed rains. And of those that planted, only 55 were able to harvest because of the prolonged droughts, especially affecting maize QDS producers. These issues are not unusual in agribusiness; they are unfortunately quite representative of the types of challenges farmers face in any given season.

Table 12: VBAs and Lead Farmers Trained as QDS Producers – PY 2015

Cluster	VBA and Lead Farmer QDS Producers Able to Harvest		
	Female	Male	Total
KPL	0	4	4
Mlimba	1	8	9
Ifakara North	1	12	13
Mang'ula	8	8	16
KVTC	0	4	4
Mvomero	1	8	9
Kongwa	0	0	0
Kiteto	0	0	0
TOTAL	11	44	55

NAFKA's Seed Specialist and the Kilombero District Seed Inspector – working under the Ministry of Agriculture, Food Security, and Cooperatives – collected samples of QDS rice from 22 QDS producer fields from the

2013/2014 growing season and submitted them to Tanzania Official Seed Certification Institute (TOSCI) for assessment of purity, viability, and seed health. TOSCI approved 20 of the QDS producers to sell seed to their neighbor farmers in the 2014/2015 season. NAFKA plans to eventually assist all interested QDS producers in becoming certified seed producers (those that produce directly for national seed companies) by offering additional training and facilitating the certification process.

NAFKA procured a total of 200 kg of maize varieties (30 kg of Staha; 170 kg of Sikuka M1) from Agricultural Seed Agency (ASA) and distributed to VBAs in Kongwa, Kiteto, and Mvomero clusters as basic seed to be multiplied as QDS during the 2014/2015 season. In Kilombero and KVTC clusters, 390 kg of SARO 5 (TXD 306) and Supa India rice varieties were procured and distributed to the VBAs for QDS multiplication. Originally, the goal was to produce 200 MT of QDS rice seed and 25.5 MT of QDS maize seed in PY 2015, capable of planting 5,400 ha in rice and over 1,000 ha in maize and allowing almost 6,000 farmers access to QDS seeds. However, QDS production was severely affected by drought, resulting in production of only 66 MT of QDS rice seed and 970 kg of QDS maize seed.

Separate from QDS work through VBAs and Lead Farmers, NAFKA continued to strengthen the capacity of 30 QDS producers in Zanzibar through ZARI to produce the Supa BC rice variety and to improve timely access to appropriate and affordable seed, discussed further in *Section 4: Activities Implemented in Zanzibar*. Separately, KPL plans to introduce a local QDS production plot to evaluate the performance of SRI QDS, SARO 5 (TXD 306) QDS, and seven aromatic local landrace on which they began initial purification this reporting year. The seven varieties include Supa India, Kisegeese, Zambia, Kalimata, Lawama, Mbawa mbili, and Nahuruka. Although these aromatic varieties are known to produce lower yields than SARO 5 (TXD 306), they have a higher consumer demand due to their aromatic and palatability qualities. Sources for these varieties have not been confirmed but ASA, ARI KATRIN, and Cholima are potential partners in the program. ARI KATRIN and Cholima will oversee the purification, expected to be finalized by September 2016. Until finalization, KPL cannot produce QDS for the local landrace without pure seeds.

Certified Seed: While QDS producers sell directly to local customers in their village area, certified seed producers sell directly to national seed companies that have contracted them in advance. Currently, NAFKA works with more than 167 certified seed producers by offering training and technical assistance.

To increase the availability and adoption of commercially-bred, certified rice and maize seed, NAFKA designed a grant based on the success of the TANSEED outgrower program that concluded last year with 14 certified seed producers continuing to supply to TANSEED. Tropical Seeds East Africa and TANSEED International were selected to receive grants to work closely with the Government of Tanzania and local research institutes to identify certified seed varieties suitable for Kilombero, Mvomero, Kongwa, and Kiteto. The selected rice variety for the program is SARO 5 (TXD 306) due to its high yields, drought resistance, high tillerage, and short pre-harvesting life. Staha is the selected maize variety because of its suitability to the climate characteristics in NAFKA's maize-growing areas. NAFKA will facilitate further market linkages between certified seed producers and the national seed company grantees Tropical Seeds East Africa and TANSEED International that purchase from them. One hundred and sixty-seven smallholder farmers have been engaged to produce up to 584 MT of certified seed.

1.10 Verification Trials – Urea Deep Placement (UDP)

Consistent with our strategy to increase the availability of inputs to local producers, NAFKA continued its collaboration with ARI KATRIN (Kilombero) and Cholima Research Centre Dakawa (Mvomero) to conduct trials

on the use of Urea Super Granules (USG) fertilizer⁸. During the first quarter of the reporting year, NAFKA completed the UREA Super Granules (USG) through UREA Deep Placement (UDP) method on-station trials. The trials were conducted to determine the benefits and suitability of USG on Tanzanian soils and rice lowland ecology by using the SARO 5 (TXD 306) rice variety.

Overall, application of UREA Super Granules (USG) through the UDP method recorded superior performance on growth parameters (number of tillers and plant height) and yield-attributing parameters (number of panicles, spikelets per panicle, and weight of 1,000 grains) for SARO 5 (TXD 306) over prilled UREA and control treatments. In general, Urea Super Granules proved significant superiority over the normal form of Urea and the control, specifically in grain yield and grain weight.

However, in February, NAFKA staff met with ARI KATRIN and Cholima Research Centre Dakawa and decided to add an additional year of trials to more rigorously establish findings. New trials were conducted in three sites – two in Ifakara North at ARI KATRIN and one in Mvomero at Cholima – and both on-station and on-farm trials were used for this final round of trials. In November, the final scientific report will be sent to the Tanzania Fertilizer Regulatory Authority (TFRA). After approval, TFRA will send its recommendation to the Ministry of Agriculture and Cooperatives (MAFC) / Technical and Fertilizer Registration Committees, who will decide whether UDP will be approved for commercialization and use in Tanzania mainland.

1.11 Ripping Technology

Ripping is a conservation agriculture technique that is beneficial to farmers facing low rainfall because it improves soil fertility by significantly reducing soil erosion and improving water retention within the soil, allowing the deep penetration of crop roots to access water reserves. NAFKA has integrated sensitization of the value of ripping into its training tools to develop both the supply of and demand for ripping services. Ripping technology was widely promoted by NAFKA in Kongwa and Kiteto in the first quarter through training to 484 farmers in ripping and conservation agriculture.

Maize Fliers on Ripping: NAFKA's BCC team finalized a flier that demonstrates the steps for ripping and highlights its benefits compared to traditional tilling methods. The flier also explains other GAP techniques for maize farming, including correct spacing and the use of improved seeds and provides contact details for VBAs in Kongwa, Kiteto, and Mvomero. The fliers were distributed in Kongwa (4,000), Kiteto (4,000), and Mvomero (2,000) through VBAs, Lead Farmers, and farmer associations.

⁸ Urea fertilizer comes in the form of either prills, which are spherical in shape and about 1 or 2mm in diameter, or granules. UDP uses Urea in the form of a briquette (1.8 and 2.7 grams per briquette), which allows for placement deep within the soil, making it less likely to evaporate like prilled Urea or Urea granules.



Left: A5-sized maize flier, demonstrating the steps for ripping and its benefits compared to traditional tilling methods.

1.12 Water Management and Irrigation

In order to develop sustainable irrigation infrastructure that farmers will own and manage beyond the lifetime of the project, NAFKA conducted a rapid assessment of select local water management systems to identify the most cost-effective approach to the development or strengthening of existing irrigation infrastructure. A total of 42 farmers and VBAs in the lowland rain-fed rice areas of Ifakara North, KPL, Mlimba, and KVTC clusters were interviewed, along with other relevant stakeholders.

Together with Africa RISING, NAFKA has developed demonstration plot protocols for lowland irrigated ecosystem water management practices and will establish 25 water management demonstration plots in Kilombero, Mvomero, Iringa Rural, and Mbarali in Mbeya in the next reporting year.

IR.2. Expanding Markets and Trade

2.1 Strengthening Producer Marketing Associations

Formation and Registration: NAFKA’s association development component aims at improving competitiveness and trade by encouraging collective activity and economies of scale. As of the end of PY 2015, the total number of associations under NAFKA was 125, comprised of 20,506 members (54% M / 46% F). Eighty-five total associations have been registered with the government, and documents for seven additional association registrations remain at the Ministry level.

Apex Associations: Apex associations are comprised of several producer associations to form a larger, more unified collective voice for advocacy efforts. They also enhance market efficiency by acting as an aggregation unit for the member associations. This includes bulk purchasing of inputs at pre-negotiated discounted prices, as well as aggregation and proper storage of output produce to meet both the quality and quantity demands of the market, including large commercial buyers such as National Food Reserve Agency – NFRA (maize), TAMAGRASAI – Tandale Market Grain Sellers Association Investment (milled rice), TANRICE (paddy or milled rice), or KPL (paddy).

NAFKA’s work with apex associations includes technical assistance at every stage – formation meetings, constitution drafting, leadership and management training, grades and standards training, access to finance through

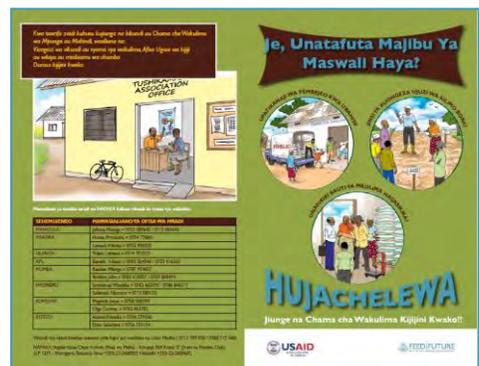
SACCOs, and developing market linkages. This reporting year, NAFKA facilitated the formation of two apex associations – one in Kilombero for rice associations and one in Kongwa for maize associations. Currently through support from NAFKA, six apex associations are fully registered, and three are in the process of registration with Business Regulatory and Licensing Authority (BRELA).

Organizational Capacity Assessment for Associations: Over the last four years, NAFKA has supported rice and maize farmers in forming 125 associations, of which 83 are now formally registered. An additional 10 to 20 associations have joined together to form apex associations, intended to facilitate enhanced advocacy efforts and collective bargaining. In the fourth quarter, NAFKA contracted TRACE OD and Capacity Building Center to conduct an assessment of 62 of these associations in Kilombero, Mvomero, and Kiteto and on apex associations in Kongwa and Dakawa (UWAWAKUDA). Using a modified version of the Organizational Capacity Assessment Tool (OCAT), the assessment gauged progress in six areas: governance, operations/management, human resource development, financial management, business service delivery, and external relations/networking. Results will also provide data to populate the USAID cross-cutting indicator “CBLD (5) Score, in percent, of combined key areas of organization capacity among USG direct and indirect local IPs.”

Given that NAFKA associations are all relatively new, NAFKA modified the OCAT to better address the maturity levels of our associations. Out of 215 possible points, the 62 associations averaged a score of 111, or 52%. NAFKA feels that this score is an accurate reflection of the capacity of most of our young associations. While much progress has been made in establishing the organizations, their management, business, and leadership capacities need to be strengthened. Preliminary findings indicate that most associations are strongest in governance and operations/management, which is not surprising given the natural stages of association development. The draft report of the assessment was submitted to NAFKA in September for review by NAFKA technical staff, and the full report will be available in the first quarter of PY 2016.

BCC Campaign to Promote Association Membership: The BCC Team designed, pre-tested, and rolled out an association membership campaign to promote the benefits of farmer group membership. Together with the ‘Know Your Market’ campaign, these two campaigns encouraged the sustainability of existing associations by recruitment of new members and encouraging associations to link to new markets for their produce. The multi-channel campaign included print materials (2,000 campaign posters and 8,000 brochures), a radio spot series, and radio talk shows.

The radio spots provided information on “why, how, and where” farmers can join associations. Four community radio stations were selected to air the radio spots – Pambazuko Radio (Ifakara), Mwangaza Radio (Dodoma for Kiteto and Kongwa), Abood Radio (Morogoro), and Ulanga FM (Mahenge). Each station broadcasted a total of 672 spots from January through March both during prime time and regular hours. The spots were rotated along with those for the input promotion campaign.



2.2 Storage and Warehouse Management

After harvest, farmers associations began aggregating maize and paddy for storage in anticipation of higher prices that usually come later in the season. Some associations use crop banking to provide access to credit for members by allowing the stored produce to be used as collateral. Since crop prices vary during the year depending on market volumes – usually from the lowest price just after harvest to a potential doubling or tripling in times of crop scarcity – a crop bank purchases grain in bulk at its lowest price after harvest, then provides the supply at a constant price

throughout the year with a small profit margin incorporated. Low yields in both value chains this year – due to weather conditions – resulted in production, and subsequent sales volumes, that were lower than expected.

Maize Aggregation and Collective Marketing: This reporting year, 7,314 MT of aggregated maize were sold to NFRA by producer associations and to processor grantees by smallholder farmer groups, valued at ██████████.

Although this is impressive, total sales to NFRA did not meet the original target of 6,300 MT for a number of reasons. On the part of NFRA, in some cases, NFRA purchased from private buyers in advance of smallholders or delayed purchase beyond the negotiated contract time, resulting in higher costs to producers. On the part of smallholders, some did not have the operating capital to pay for transport to the NFRA sales site. NAFKA is working with SACCOs to strengthen their ability to better serve members through partnership with VESTFARM, a private sector company specializing in farmer management platforms for payment systems, aggregation, and procurement of inputs. However, NAFKA will have to resolve the contractual issues with NFRA before linking financial institutions to such contracts.

Paddy Aggregation and Collective Marketing: This reporting year, 13,717 MT of aggregated paddy were sold to KPL and local traders by producer associations and to processor grantees by smallholder farmer groups, valued at \$4,829,994.

Table 13: Volumes of Maize and Paddy Sold by Producer Associations (MT) by District – PY 2015

District	Maize Sold (MT)	Paddy Sold (MT)
Mvomero	1,675	191
Kongwa	2,448	0
Kiteto	1,610	0
Kilombero	0	7,119
Mbeya (all clusters)	1,581	6,407
TOTAL	7,314	13,717

Warehouse Upgrading Grants: During this reporting year, NAFKA closed out its Warehouse Upgrading Grants, which procured weighing scales, image equipment, computers, office furniture, warehouse fittings, and fire extinguishers for 15 associations that were selected to receive warehouse upgrading grants. These grants were designed to contribute to building the institutional capacity of associations and to promote collective marketing using warehouse receipt systems principles. More information on the Warehouse Upgrading Grants can be found under Section 3.2: NAFKA Innovation and Capacity-Building Grants.

2.3 Rice Council of Tanzania

The Rice Council of Tanzania (RCT) was established in June 2014, prompted by the detrimental effects of the importation of Asian rice into Tanzania that should have been levied with the Common External Tariff (CET) –

⁹ XR 1,924 TZS : 1 USD

¹⁰ XR 1,924 TZS : 1 USD

but was not. Consequently, prices were driven down for local producers. Additionally, EAC neighbors Uganda, Rwanda, and Burundi began levying CETs on Tanzanian rice in response.

The rice industry's private sector felt the need to develop a common voice with which to enter into dialogue with the Government of Tanzania (GoT) on governance issues relating to the industry. This move was supported by the Government of Tanzania. RCT has gained considerable recognition and legitimacy within both the private sector and the Government of Tanzania.

Earlier in the reporting year, NAFKA supported RCT by providing a TCN Rice Value Chain Coordinator and local-hire Executive Director. As a sustainability measure, NAFKA transferred management responsibility of RCT to RUDI through a subcontract modification, and two local-hire positions were created: the Rice Value Chain Coordinator and a Logistics Associate. These two individuals will continue to be housed in the NAFKA offices, similar to other RUDI subcontract employees. Although RCT has received substantial support from NAFKA, it is driven and administered by the private sector, a factor critical to assuring its future sustainability.

In addition to serving as a platform for dialogue amongst government officials and key private-sector stakeholders in the Tanzanian rice industry, RCT has provided substantial input in the revision of the GoT's National Rice Development Policy, as well as the National Rice Seed Development Policy. In conjunction, RCT is developing a transparent data and information management system for the Tanzanian rice sector.

Despite these achievements, it is important to recognize that RCT has been operational for just over a year, and there is need for continued development and support. RCT will continue to engage with the USAID-FTF-SERA project to develop and adopt a Strategic Development Plan that will be the basis for annual workplans.

In the third quarter, RCT conducted a rapid assessment of rice stocks across the country, done in collaboration with the Feed the Future SERA project and the Ministry of Industry and Trade. Findings were presented to USAID and used in the stakeholder meeting. Additionally, RCT prepared a position paper on the impact that the illegal importation of duty-free rice has had on the local rice industry and organized a rice stakeholder advocacy workshop to launch the position paper "Rice for Health, Rice for Wealth: Say 'NO' to Smuggled Rice." A press release on the negative impact of smuggled rice on Tanzanian rice producers was published on fourteen mainstream media sites (*Tanzania Daima*, *Daily News*, *The Guardian*, *The Citizen*, *Nipashe*, *Mwananchi*, Radio Clouds, EA Radio, Radio Free Africa, Azam TV, Radio One, ITV, Channel 10, and Capital TV).

2.4 Increased Access to Agricultural and Rural Loans

This reporting year, NAFKA monitored formal loans received by our smallholder farmers from banks and micro-finance institutions at a total value of ██████████. NAFKA continued collaboration with Opportunity Tanzania Limited (OTL) for disbursement of loans in Mvomero and Kilombero, and CRDB loans under the Private Agriculture Sector Support (PASS) guarantee continue to proceed well at UWAWAKUDA in Dakawa with plans to scale up. University of Iringa / Iringa Hope is a new micro-finance grantee in expansion region Iringa.

New collaborations included arrangements with TUR-SACCO to provide loans to three associations to cover market operations when trading with NFRA and a partnership with VESTFARM – a private sector company specializing in farmer management platforms for payment systems, aggregation, and procurement of inputs. Through TUR-SACCO, NAFKA linked 12 maize associations with this local financial institution to access loans to cover market operations when trading with NFRA. These associations were also linked to a transport company called NASAI for transportation loans. Of the twelve, three associations were able to access loans worth ██████████. The interest rate of the SACCO loans is 1.5% per month, while interest for the transport company loan is covered by transport costs. These association loans are not included in the total formal loan value, since the activity links entire associations and not individual farmers.

VESTFARM began scoping surveys in Kongwa, targeting approximately 5,600 farmers for input aggregation and output marketing services. A scoping survey was also done in Mbeya and Iringa by VESTFARM to identify potential millers and traders who could be assisted to increase access to markets for smallholder farmers. The collaboration with VESTFARM aims to increase the efficiency of business transactions between farmer associations and agro-dealers regarding purchase of inputs, as well as to capture data on aggregation volumes linked to processing and value-added products sold. The VESTFARM partnership will also enhance credit management at the SACCO level and improve access to financial services through SACCOs, banks, and micro-finance institutions (MFIs). The primary finance challenge faced by NAFKA beneficiaries continues to be collateral requirements by banks and MFIs. Hopefully, through the new collaboration with VESTFARM to strengthen and enhance linkages with SACCOs, as well as campaigning for recognition of crop banking as a collateral mechanism, farmers will gain access to much-needed access to formal credit.

Opportunity Tanzania Limited: Input credit loans amounting to ██████████ were disbursed to 1,229 (56% M / 44% F) farmers in Kilombero and Mvomero. Farmers from the two districts received a package of agricultural inputs on credit including certified seeds, herbicide, Yara Mila fertilizers, and Thunder insecticide. The loan term is six months, and farmers are required to pay back directly after harvesting at an interest rate of 3% per month.

CRDB Loans: CRDB/PASS loans were disbursed to 56 farmers (71% M / 29% F) who are members of the UWAWAKUDA cooperative in Dakawa. The total value of the loans is ██████████¹¹. An up-scaling process is underway between CRDB and PASS, who are willing to provide guaranteed funds again for the next loaning cycle, especially since UWAWAKUDA borrowers have such impressive repayment rates.

University of Iringa / Iringa Hope: Through new grantee University of Iringa / Iringa Hope SACCOs, 237 beneficiaries (52% M / 48% F) received loans for farming activities.

Table 14: Value of Formal Loans – PY 2015

Loan Provider	Female			Male			Total		
	Value (USD)	Number	Average Value (USD)	Value (USD)	Number	Average Value (USD)	Value (USD)	Number	Average Value (USD)
CRDB/PASS	63,641	16	3,978	146,542	40	3,664	210,183	56	3,753
Opportunity Tanzania Limited	132,088	535	247	204,931	694	295	337,019	1,229	274
Iringa University / Iringa Hope	36,344	114	319	39,986	123	325	76,330	237	322
TOTAL	232,073	665	349	391,459	857	457	623,532	1,522	410

2.5 Increased Access to Business Development Services (BDS) for MSMEs

During the reporting year, NAFKA facilitated access to business development services (BDS) for 24,095 Micro, Small, and Medium Enterprises (MSMEs), including individual farmers, by supporting enterprise development providers, such as agro-dealers, processors, and SILC Private Service Providers, to provide these services.

¹¹ TZS 2,050 = 1 USD

NAFAKA supports the delivery of BDS in four primary service areas – market access, input supply, training and technical assistance directly related to business development, and access to formal or informal finance.

- **Market Access Services:** NAFKA has assisted one or more enterprise development providers in identifying or establishing new markets for MSME or farmer products; or has facilitated the creation of linkages between all actors in a given market and enabled buyers to expand their outreach to, and purchases from, MSMEs, including farmers. The 343 MSMEs that received these services are listed below:
 - 325 farmers sold produce to Mbeya processor grantees
 - 18 farmers sold produce to grantee Kibaigwa Flour Supplies in Kongwa
- **Input Supply Services:** NAFKA has assisted one or more enterprise development providers in helping MSMEs, including farmers, improve their access to raw materials and production inputs; or has facilitated the creation of linkages between MSMEs and suppliers and enabled suppliers to both expand their outreach to MSMEs, including farmers, and to develop their capacity to offer better, less expensive inputs. The 10,177 MSMEs that received these services are listed below:
 - 8,081 new farmers purchased inputs from hub agro-dealer grantees
 - 867 continuing farmers purchased inputs from hub agro-dealer grantees
 - 1,229 farmers purchased inputs from VBAAAs
- **Training and Technical Assistance Services:** NAFKA has assisted one or more enterprise development providers in developing the capacity of MSMEs, including farmers, to better plan and manage their operations and improve their technical expertise. NAFKA only counts training and technical assistance directly related to business development under these services, received by 830 MSMEs, listed below:
 - 28 agro-dealers received training in input product knowledge
 - 66 VBAAAs received training in business development
 - 22 VBAAAs received QDS training
 - 170 farmers received “Farming as a Business” training
 - 48 association members received training in marketing
 - 13 SILC Field Agents (FAs) and Private Service Providers (PSPs) received follow-up trainings to improve their service delivery
 - 483 farmers purchased ripping services
- **Finance Services:** NAFKA has assisted one or more enterprise development providers in helping MSMEs, including farmers, to identify and access funds through formal and alternative channels. The 12,745 MSMEs that received these services are listed below:
 - 1,522 farmers accessed formal loans
 - 1,229 from Opportunity Tanzania Limited
 - 56 through CRDB/PASS
 - 237 through University of Iringa / Iringa Hope SACCOs
 - 11,223 farmers accessed saving and lending services through SILC groups

IR.3. Increase Private Sector Investment in Agriculture

3.1 Develop Strategic Partnerships with Lead Private Sector Firms

NAFAKA is committed to working with private sector firms to build partnerships, leverage investment, and create lasting outcomes. These public-private partnerships are a key component of the NAFKA strategy to build local capacity and ensure sustainability.

NAFAKA continues its partnerships with Kilombero Plantations Limited (KPL) and KINNAPA Development Programme in Kiteto, in mutually developing outgrower programs that promote private sector involvement in the provision of agricultural inputs and crop marketing within the rice value chain. KPL outgrowers continue to experience substantial increases in paddy yields using System for Rice Intensification (SRI) technology, compared to previous yields using more traditional practices. KINNAPA continued to focus on promotion of improved practices and technologies; organizing farmer groups into associations; aggregation; service provision; development of linkages with market actors and financial institutions; and training farmers on the warehouse receipt system.

Additionally this reporting year, NAFKA signed grant agreements with a number of new private sector partners, leveraging private investment to strengthen the maize and rice value chains. Kibaigwa Flour Supplies Co. Ltd. received a grant to strengthen the maize value chain by training smallholder farmers in Kongwa on GAP techniques and promoting access to input and output markets through input provision and contract farming. Nine hub agro-dealers received grants to build broader input distribution networks in Kiteto, Kilombero, Kongwa, and Mvomero districts, increasing the supply of agriculture inputs to the most rural farmers – Babu Agro-Dealer, Gabe Milling Enterprise, Kiteto Agro-Business Company Ltd., S. Majembe Agro-Vet and Agro-Chemical, Michael Agro-Business and General Supply, NOKWIM Investment Company Ltd, PALUKI Agro-Dealer and General Supply, TVC Agro-Chemicals Input Investment, and William Agrichem. Two national seed companies, TANSEED International and Tropical Seeds East Africa, also received new grants to facilitate access to improved seeds by training more certified seed producers. Finally, one agro-inputs supplier and three processors in Mbeya – Kilawa Enterprises, Khebandza Marketing Co. Ltd, Mtenda Kyela Rice Supply Co. Ltd, and Raphael Group Ltd; and University of Iringa / Iringa Hope Micro-Finance Institution in Iringa – entered into grant agreements to strengthen outgrowers and their access to inputs and markets.

3.2 NAFKA Enterprise Development Co-Investment and Association Strengthening Grants

NAFAKA Enterprise Development Co-Investment Grants aim to leverage private sector investment in agricultural value chains with a particular focus on innovative integration of smallholder producers into staples value chains. Association Strengthening Grants assist qualifying producer associations engaged in the maize or rice value chains to upgrade business development services offered to smallholder farmers and to expand market linkages throughout the value chain.

As of the end of PY 2015, NAFKA was administering 21 active grants. Details on grant agreements signed with 19 private sector firms worth ██████████ are provided below. See *Section 4: Activities Implemented in Zanzibar* for information on grants signed with ZARI and KATI in Zanzibar, both of which are public institutions.

Original Geographic Districts

This reporting year, NAFKA renewed grant agreements with 2 continuing grantees (KPL and KINNAPA) and entered into new agreements with 12 partners in Dodoma, Manyara, and Morogoro regions.

A. Building Outgrower Capacity

Kibaigwa Flour Supplies Limited (KFS): In November 2014, NAFKA committed ██████ to Kibaigwa's contribution of ██████ to strengthen the maize value chain by training 2,500 smallholder farmers in Kongwa on GAP techniques and promoting access to input and output markets through input provision and contract farming. This reporting year, KFS established 25 demonstration plots; trained 100 Lead Farmers on GAP technologies, record keeping, and harvest and post-harvest handling techniques; mobilized 1,250 farmers to attend GAP training at demonstration plot sites; helped facilitate contract farming with 50 farmer groups; conducted maize flour market research in Dar es Salaam, Congo (DRC), and South Sudan; and developed a new brand and packaging to promote fortified maize flour.

Kilombero Plantations Limited (KPL) Grant: NAFKA has contributed ██████, and KPL has committed ██████ to increase rice productivity and profitability among smallholder farmers surrounding KPL through improved farming practices, adoption of suitable inputs, and expansion of these improved practices. Activities through the life of the grant include provision of extension activities to 10 villages with an agronomist assigned to each village; increased availability of agricultural inputs for local purchase; building the capacity of newly formed associations comprised of members who have received SRI training; and access to finance for smallholder farmers. During this reporting year, NAFKA signed a second modification to reduce the total award value and to reallocate the costs of the loan officer and motorbikes to financial training and the purchase of 18 storage cocoons. KPL maintained a total of 106 demonstration plots that serve a total of 4,282 smallholder farmers in 10 villages. They also purchased five hermetic cocoons with a storage capacity of 60 MT for paddy aggregated from farmers.

KINNAPA Development Program Grant: In June 2014, NAFKA committed ██████ to KINNAPA's contribution of ██████ to increase maize productivity and profitability among smallholder farmers in Kiteto district. KINNAPA focuses on aggregation and service provision; development of linkages with market actors and financial institutions; promotion of improved practices and technologies at all harvest stages; quality processing' and marketing. The program will also work with farmers and agro-pastoralists in Kiteto to strengthen livelihoods and community development. This reporting year, KINNAPA organized farmers into 25 associations; trained 102 farmers on the warehouse receipt system; and held meetings with 25 SILC groups to link them with financial institutions.

B. Developing Agro-Dealer Networks

BABU Agro-Dealer: In January 2015, NAFKA committed ██████ to BABU Agro-dealer with grantee contribution of ██████ to strengthen and enhance the efficiency of the maize value chain through the commercially sustainable sale of farm inputs to 1,500 farmers in Kiteto district. During this reporting year, BABU identified 15 farmer groups with which to work; trained 1,508 farmers through 21 maize demonstration plots; collected farm inputs demand from 1,528 farmers; purchased and sold a total of 259 MT of farm inputs, an additional 139 MT due specifically to the grant's assistance; facilitated 865 farmers in attending 2 Farmer Field Days; assisted 30 farmers in attending Nane Nane agricultural exhibition; and entered into contracts with 6 sub agro-dealers and 7 VBAs to supply inputs.

GABE Milling Enterprises: GABE Milling Enterprises is an agro-dealer and processor based in Kiteto district, selling inputs to farmers and buying maize to mill. In January 2015, NAFKA committed ██████ to GABE with grantee contribution of ██████ to facilitate the sale of farm inputs and to expand market linkages for 1,800 smallholder producers. This reporting year, GABE identified and entered into farming contracts with 18 farmer groups and 12 SACCOs; trained 40 Lead Farmers on GAP technologies; trained 623 farmers through 18 maize demonstration plots; entered into contractual arrangements with input suppliers to purchase inputs and 2 sub

agro-dealers and 10 VBAs to sell inputs; purchased and sold a total of 528 MT of farm inputs, an additional 213 MT due specifically to the grant's assistance; trained 21 staff on financial management and monitoring and evaluation; conducted a maize market survey; and prepared a maize business plan.

Kiteto Agro-Business Co. Ltd: Kiteto Agro-Business Co. Ltd. is an agro-dealer and processor based in Kiteto district. In January 2015, NAFKA committed ██████ to Kiteto Agro Business with grantee contribution of ██████ to strengthen the maize value chain in Kiteto district through the commercially sustainable sale of farm inputs and improved market linkages. This reporting year, Kiteto Agro-Business identified 15 farmer groups with which to work; trained 1,335 farmers through 15 demonstration plots for maize; trained 46 Lead Farmers on harvest and post-harvest technologies; entered into contractual arrangements with input suppliers; collected input demand from 2,538 farmers; established a network of 3 sub agro-dealers and 12 VBAs; and purchased and sold a total of 261 MT of farm inputs.

Michael Agro-Business and General Supply: In January 2015, NAFKA committed ██████ to Michael Agro-Business with grantee contribution of ██████ to strengthen and enhance the efficiency of the maize value chain through the commercially sustainable sale of farm inputs to 1,500 farmers in Kongwa district. During this reporting year, Michael Agro-Business identified 15 farmer groups with which to work; trained 1,543 farmers through 18 demonstration plots; entered into contractual arrangements with 3 input suppliers; collected input demand from 1,423 farmers; purchased and sold a total of 305 MT of farm inputs, which is an additional 235 MT due specifically to the grant's assistance; facilitated 357 farmers in attending 2 Farmer Field Days; and entered into contract with 12 sub agro-dealers for input supply.

NOKWIM Investment Co. Ltd: In January 2015, NAFKA committed ██████ to NOKWIM with grantee contribution of ██████ to strengthen the rice value chain through the establishment of demonstration plots, farmer trainings, provision of extension services, and the commercially sustainable sale of farm inputs in Kilombero district. During this reporting year, NOKWIM identified 10 farmer groups with which to work; trained 1,020 farmers through 10 demonstration plots; organized a Farmer Field Day for 236 farmers and input suppliers; entered into contractual arrangements with input suppliers; collected input demand from 1,020 farmers; purchased and sold a total of 200 MT of farm inputs, which is an additional 150 MT due specifically to the grant's assistance; and established a network of 10 sub agro-dealers and VBAs.

PALUKI Agro-Dealer and General Supply: In January 2015, NAFKA committed ██████ to PALUKI Agro dealer with grantee contribution of ██████ to strengthen and enhance the efficiency of the rice value chain through the commercially sustainable sale of farm inputs to 1,200 farmers in Mvomero district. During this reporting year, PALUKI identified 12 farmer groups with which to work; trained 1,212 farmers through 13 demonstration plots; entered into contractual arrangements with input suppliers; collected input demand from 1,229 farmers; facilitated 251 farmers in attending 2 Farmer Field Days; purchased and sold a total of 185 MT of farm inputs, which is an additional 80 MT due specifically to the grant's assistance and entered into contract with 4 sub agro-dealers and 3 VBAs for input supply.

S. Majembe Agro-Vet & Agrochemical: In January 2015, NAFKA committed ██████ to S. Majembe with grantee contribution of \$25,065 to strengthen and enhance the efficiency of the rice value chain through the commercially sustainable sale of farm inputs in Kilombero district. During this reporting year, S. Majembe identified 15 farmer groups with which to work; trained 2,064 farmers through 17 demonstration plots; organized a Farmer Field Day for 305 farmers and input suppliers; entered into contractual arrangements with input suppliers; collected input demand from 2,056 farmers; purchased and sold a total of 584 MT of farm inputs, which is an additional 384 MT due specifically to the grant's assistance; and established a network of 17 sub agro-dealers.

TVC Agrochemical Input Investment: In January 2015, NAFKA committed ██████ to TVC with grantee contribution of ██████ to strengthen the rice value chain in targeted areas through the establishment of demonstration plots, farmer trainings, extension services, and the provision of farm inputs. During this reporting

year, TVC identified 10 farmer groups with which to work; trained 1,622 farmers through 14 demonstration plots; entered into contractual arrangements with 3 input suppliers; collected input demand from 2,651 farmers; facilitated 221 farmers in attending 2 Farmer Field Days; purchased and sold a total of 271 MT of farm inputs, which is an additional 191 MT due specifically to the grant's assistance; and entered into contract with 4 sub agro-dealers and 7 VBAs for input supply.

William Agrochem Centre: In January 2015, NAFKA committed [REDACTED] to William Agrochem with grantee contribution of [REDACTED] to strengthen and enhance efficiency in both the rice and maize value chains through the commercially sustainable sale of farm inputs to 1,200 farmers in Mvomero district. During this reporting year, William identified 12 farmer groups with which to work; trained 1,305 farmers through 18 demonstration plots (10 maize; 8 paddy); entered into contractual arrangements with 3 input suppliers; collected input demand from 1,098 farmers; facilitated 49 farmers in attending Nane Nane agricultural exhibition; assisted 317 farmers and 4 input companies in attending 2 Farmer Field Days; purchased and sold a total of 270 MT of farm inputs, which is an additional 197 MT due specifically to the grant's assistance; and entered into contract with 5 sub agro-dealers and 7 VBAs for input supply.

C. Increasing Production of Certified Seed

TANSEED International Ltd: In February 2015, NAFKA committed [REDACTED] to TANSEED with grantee contribution of [REDACTED] to improve rice productivity of 10,870 smallholder farmers through certified seed production in Mvomero and Kilombero districts by training outgrowers on certified rice seed production. Through this agreement, TANSEED will supply qualifying outgrowers with rice basic seeds; train agro-dealers, ward seed sellers, and VBAs on strategic seed sales; and purchase raw certified rice seed from outgrowers. This reporting year, TANSEED conducted stakeholder meetings in Kilombero and Mvomero districts for project initiation; trained 46 seed outgrowers on certified rice seed production in Kilombero and Mvomero districts; finalized contracts with and supplied 1.75 MT of rice basic seed to 46 certified seed producers; and maintained four demonstration plots and 70 hectares of rice seed.

Tropical Seeds East Africa Co. Ltd: In March 2015, NAFKA committed [REDACTED] to Tropical Seeds with grantee contribution of [REDACTED] to improve maize and rice productivity of 4,850 smallholder farmers in Kongwa, Kiteto, Mvomero, and Kilombero districts by training outgrowers on rice and maize certified seed production. Through this agreement, Tropical Seeds will supply outgrowers with rice and maize basic seed, train farmers on GAP technologies through demonstration plots, and purchase raw certified rice and maize seed from outgrowers. This reporting year, Tropical Seeds conducted stakeholder meetings in Kongwa, Kilombero, Mvomero, and Kiteto districts for project initiation; identified and selected 34 sites for seed production in 4 districts; conducted a baseline survey on the status of maize and rice production in these 4 districts; prepared a maize and rice business plan; conducted radio sessions to sensitize farmers on the use of certified seeds; trained 54 outgrowers on rice and maize seed production; finalized contracts and supplied 2 MT of rice and maize basic seeds to the 54 certified seed producers; supervised the performance of 167 acres of certified rice and maize seed; insured raw seeds purchased from farmers; and maintained 12 demonstration plots (4 maize; 8 paddy).

New Geographic Districts

This reporting year, NAFKA signed grant agreements in new geographic districts with three processors in Mbeya, one agro-inputs supplier in Mbeya, and one micro-finance institution in Iringa. NAFKA and grantee contributions below reflect updated figures based on recent modifications.

Kilawa Enterprises: In February 2015, NAFKA committed [REDACTED] to Kilawa with grantee contribution of [REDACTED] to strengthen the rice and maize value chains in Mbozi, Rungwe, and Mbeya districts through the commercially sustainable sale of farm inputs, GAP training, and contract farming with 1,440 maize and paddy smallholder farmers to purchase produce to mill. This reporting year, Kilawa identified 12 farmer groups as input supply customers; trained 95 Lead Farmers on GAP; trained 504 farmers through 15 demonstration plots; trained nine staff on record-keeping, customer service, sales, and marketing; prepared a company strategic plan; printed 300 T-shirts, 300 caps, and 2,000 brochures for GAP advocacy; advertised through Bomba FM (Mbeya region) and Chai FM (Rungwe district) radio stations; and maintained 12 farm input centers for input distribution.

Khebhandza Marketing Co. Ltd: In February 2015, NAFKA committed [REDACTED] to Khebhandza with grantee contribution of [REDACTED] to strengthen the maize value chain and ensure access to a sustainable and profitable market for 1,000 smallholder producers in Mbeya and Mbozi districts. Through this agreement, Khebhandza will train farmers on GAP, support access to both input and output markets by engaging in contract farming, train group leaders on leadership and records management, and improve quality and quantity of maize products offered by Khebhandza Marketing Co. Ltd. This reporting year, Khebhandza identified 20 farmer groups with which to work; trained 234 Lead Farmers on GAP, contract farming, and farming as a business; trained 80 Lead Farmers on harvest and post-harvest handling techniques; trained 1,078 farmers through 20 demonstration plots; prepared a maize marketing plan and quality assurance manual; and entered into contracts with 20 farmer groups.

Mtenda Kyela Rice Supplies Ltd: In February 2015, NAFKA committed [REDACTED] to Mtenda with grantee contribution of [REDACTED] to strengthen the rice value chain through farmer training, provision of extension services, enhanced input access, and strengthened market linkages for 1,290 paddy contract farmers in Mbozi and Mbarali districts. This reporting year, Mtenda conducted a baseline assessment of 8 wards; established 12 demonstration plots; trained 48 Lead Farmers on GAP, contract farming, and farming as a business; trained 1,298 farmers through 12 demonstration plots; prepared a rice marketing strategy; and entered into contracts with 12 farmer groups.

Raphael Group Limited: In February 2015, NAFKA committed [REDACTED] to Raphael with grantee contribution of [REDACTED] to increase income and food security for 1,025 paddy contract farmers in Mbozi and Rungwe districts through improved productivity and access to markets. Through this agreement, Raphael will train farmers on GAP and support access to both input and output markets. This reporting year, Raphael trained 15 staff on processing, hygiene, and machine maintenance; trained 1,027 farmers on harvest and post-harvest handling techniques; trained 1,027 farmers through 10 demonstration plots; prepared a rice marketing and strategic plan; entered into contracts with 26 farmer groups and linked those groups with farm input suppliers; conducted a rice market survey; and maintained 25 paddy collection centers.

University of Iringa – Micro-Finance Institute: In February 2015, NAFKA committed [REDACTED] to University of Iringa with grantee contribution of [REDACTED] to increase access to finance for 770 smallholder paddy and maize farmers in Iringa and Kilolo districts. Through this agreement, University of Iringa will provide loans to existing SACCOs; establish three new SACCOs; train 150 SACCO leaders from 38 SACCOs on record-keeping, financial management, business planning, and business expansion skills; and identify and register 20 AMCOS. This reporting year, University of Iringa identified and registered three new SACCOs; identified 15 AMCOS, 5 of which have already registered and 10 that are in the process; trained 152 SACCO leaders on record-keeping and leadership skills; provided loans totaling \$41,250 to twenty-five SACCOs; printed 100 T-shirts, 100 caps, and 6,000 brochures for marketing purposes; advertised services through Furaha FM radio station; and facilitated registration of three new SACCOs.

3.3 Input Supplier Engagements

During the reporting year, input suppliers invested [REDACTED] in demonstration plots and farm inputs such as small packs of seeds and fertilizer. Through demonstration plots and ToTs, NAFKA created a platform for input

companies to demonstrate their products to stimulate demand for improved inputs and tools from the private sector. See *Section 1.2.2: Private Sector Input Supply Engagements* for more detailed information on these input suppliers and their contributions.

IR.5. Increased Resilience for Vulnerable Smallholders

5.1 Savings and Internal Lending Community (SILC) Groups

New Member Mobilization: NAFKA organizes self-selected male and female members into Savings and Internal Lending Community (SILC) groups. Through these groups, members are trained and supported by SILC Field Agents (FAs) and Private Service Providers (PSPs) in group savings and lending principles, group fund collection and distribution policies, record-keeping, responsibilities of members, member self-selection criteria, and leadership selection. The SILC methodology targets the most vulnerable community members in NAFKA’s areas of influence. According to the vulnerability assessment study conducted at the beginning of the project, women were more vulnerable compared to men, which is reflected in the gender composition of the current SILC members.

During this reporting year, a total of 141 new SILC groups with 3,042 new members were formed and trained in SILC methodology. This brings the total number of SILC groups supported by NAFKA to 564. Over the life of the project, a total of 11,223 members (34% M / 66% F) have been reached by SILC FAs and PSPs who work directly with SILC members to organize and educate their groups.

Not only do SILC members enjoy the financial benefits of being members of these groups, NAFKA has begun to see a steady increase in various activities not related to finance in which groups are engaging. Not all SILC members are necessarily farmers, but for those who are, NAFKA has noticed interest by service providers, such as agro-dealers, in working with these groups directly, since they are well-organized, motivated, and cognizant of basic financial principles. NAFKA itself is better integrating SILC groups into other component areas: SILC groups are establishing group GAP demonstration plots and getting more involved in aggregation and collective marketing within associations.

Table 15: SILC Group Members by Cluster – Cumulative-to-Date

Cluster	Female		Male		Total
	Number	Percent	Number	Percent	
Kilombero Plantation Ltd	932	64%	520	36%	1,452
Kiteto	1,910	67%	956	33%	2,866
Kongwa	937	66%	477	34%	1,414
Mang’ula	1,022	62%	616	38%	1,638
Mlimba	1,216	64%	696	36%	1,912
North Ifakara	1,352	70%	589	30%	1,941
TOTAL	7,369	66%	3,854	34%	11,223

Development of SILC Field Agents (FAs) and Private Service Providers (PSPs): The SILC methodology ensures sustainability by graduating Field Agents to Private Service Providers, who provide support to more mature SILC groups on a fee-for-service basis. NAFKA currently has 42 SILC Field Agents (74% M / 26% F) and 63 certified SILC Private Service Providers (86% M / 14% F) whose primary activity is to mobilize and train SILC groups. During the reporting year, NAFKA staff sensitized SILC groups in Kilombero and Kiteto on the importance of paying fees for the services they receive from PSPs. Services are offered to newly formed groups and to members of farmer associations by PSPs for a small fee of TZS 500 (US \$0.26) per module. The SILC model has (9) modules that need to be completed by each member.

This reporting year, 10,533 SILC members accessed loans with an overall value of █████ up from █████ last year. Of these new loans, 66% were issued to women. Average loan values for women were \$137 (compared to \$75 last year), and average loan values for men were \$120 (compared to \$74 last year). These average loan increases for both men and women indicate that community members see SILC groups as a source of reliable access to finance at affordable interest rates, while the more impressive increase in average loan value for women is a good indication that the financial empowerment of females is being developed and sustained. Access to these short-term loans has allowed women to become more self-reliant in their households, improving the overall livelihood of their families.

5.2 Vegetable Gardening for Food Security

Home Gardening for Improved Nutrition: To help improve nutritional intake and to increase incomes for vulnerable households, NAFKA promotes home vegetable gardening activities. Selected SILC members are trained in establishing home gardens for income and nutrition improvements at the household level. Establishment of home gardens is on-going throughout the year, dependent upon weather conditions and other agricultural priorities. During the reporting year, a total of 3,978 (37% M / 63% F) SILC members were trained in vegetable gardening, organic gardening, and/or nutrition.

SILC FAs delivered the vegetable garden training program directly to SILC group members, covering sustainable organic farming and vegetable crop production through soil and water conservation techniques, pest and disease management using biological control methods, and crop rotation for those farmers using larger pieces of land to produce vegetables. Different gardening techniques, including sack gardening, double digging, raised beds, and preparation and use of compost and organically prepared pesticides, were introduced. Additionally, 27 FAs in Kongwa and 19 in Mvomero received refresher training on organic vegetable production to support this initiative.

To date, 16,166 beneficiaries now have access to improved nutrition because their households have established gardens in areas close to or around their homes. For this reporting year alone, 7,136 beneficiaries have gained access to home gardens.¹²

¹² Beginning PY 2015, methodology for reporting home garden activities changed. NAFKA now collects data on each home garden planted, then uses its cluster-level, household-size multipliers to estimate the number of beneficiaries who have access to each home garden as a proxy for improved nutrition.

Table 16: Home Gardens by Cluster – PY 2015

Cluster	Beneficiaries with Access to Home Gardens		
	Home Gardens	Cluster HH Multiplier	Beneficiaries with Access
Kiteto	253	4.8	1,170
Kongwa	835	4.9	3,957
Kilombero Plantation Limited (KPL)	40	4.5	174
Mang'ula	42	4.1	165
Mlimba	23	4.4	98
Mvomero	283	4.3	1,176
North Ifakara	93	4.4	396
TOTAL	1,570	N/A	7,136

Promotion of Nutrition and Diet Diversification: During the reporting year, nutrition training was provided to selected women from 41 villages in Kilombero and 20 community nutrition promoters in Mvomero districts. These women were identified as leaders from existing SILC groups and are expected to deliver the training program directly to their fellow SILC group members in Kilombero and vegetable producers in Mvomero. To date, a total of 1,411 community members have received training on nutrition in Kilombero and Mvomero combined. This nutrition training program has been introduced as a complement to vegetable production with the overall objective of improving household-level nutritional intake and has been well-received by SILC members.

For the nutrition training that took place in Mvomero, NAFKA partnered with Women Poverty Alleviation in Tanzania to promote and train communities in 20 villages on organic vegetable production both for home use and sale. The 20 community nutrition promoters were trained on nutrition education; processing of vegetables; dietary diversity; blending of high nutrient-value flour using soybeans and other locally available grains, such as maize and rice; and basic marketing skills. They cascaded these trainings to 762 of the 1,411 total community members trained on nutrition by NAFKA during the reporting year. 154 were trained on basic marketing skills, and 608 were trained on general nutrition through this partnership.

5.3 Collaboration with ATONU

In May 2015, representatives from the Bill & Melinda Gates Foundation project, Improving Nutritional Outcomes Through Optimized Agricultural Investments (ATONU), visited the NAFKA field team in Morogoro to discuss potential opportunities for collaboration. ATONU is a six-year project regionally based in Africa led by the Food, Agriculture, and Natural Resources Policy Analysis Network (FANRPAN) in South Africa and involves six additional consortium research and implementation agencies in Africa, the UK, and the US. ATONU's goal is to develop a body of guidance, tools, and best practices that will demonstrate how agricultural programs can integrate nutrition into their activities and improve nutritional outcomes. ATONU's research and experience will provide much-needed evidence to support agriculture and nutrition linkages. What makes ATONU different from other projects is that there is significant emphasis on *understanding and documenting the process* of integrating nutrition into agriculture. ATONU wants to test methodologies and tools that will allow agricultural practitioners to design and implement nutrition-sensitive agriculture activities.

The NAFKA and ATONU teams spent a day together sharing information about their respective projects before visiting four project sites including Mambo Ya Yesu: Rice Milling; Katundu Traders Limited; Msufini, a maize-based

integration association; and Mvomero rice irrigation projects. As ATONU moves forward, discussions are ongoing to determine potential entry points for ATONU to support the integration of nutrition-sensitive interventions into ongoing NAFKA activities.

4. ACTIVITIES IMPLEMENTED IN ZANZIBAR (UNGUJA AND PEMBA)

NAFAKA's activities on Zanzibar are channeled through two Zanzibari public institutions and are designed to improve the productivity of rice cultivation in order to raise the incomes of smallholder farmers and to support the Revolutionary Government of Zanzibar's rice development strategy. During the reporting year, the Zanzibar Agricultural Research Institute (ZARI) and the Kizimbani Agricultural Training Institute (KATI) received new grants to undertake core implementation activities under the supervision of NAFKA, working with a total of 1,997 beneficiaries. Since NAFKA project activities in Zanzibar, ZARI and KATI have worked with a total of 7,713 direct beneficiaries (49% M / 51% F).

IR.1. Improved Value Chain Productivity

1.1 Developing Extension Service Providers

Through grants to KATI and ZARI, NAFKA has established a continuously growing, sustainable network of government agriculture extension officers and Lead Farmers to increase farmers' access to training and to improved services and inputs, such as seed and fertilizer. NAFKA will continue to build the capacity of these individuals by facilitating ToTs that cover topics ranging from GAP to business management.

In November/December before land preparation takes place, there is an apex meeting between NAFKA staff, ZARI staff, Chief and Regional Extension Officers, and District Extension Officers to discuss both selection of sites for demonstration plot establishment and selection of farmers to participate in GAP training for that season. This network also includes trained local extension officers and Lead Farmers who train their farmer colleagues in the adoption of good agricultural practices. Within their individual localities, the local extension officers are responsible for inputs and technologies.

Although the extension officer model adopted by NAFKA makes good use of collaboration between public officers and donor-sponsored assistance, there are not enough extension officers to cover the farmers within their jurisdictions. Therefore, the model is not entirely successful. In principle, one extension officer should be responsible for around 350 farmers, however most villages have more than 2,000 farmers that an extension officer is responsible to advise on all crops. Due to restricted resources, mobility to reach farmers within the villages has been a greater challenge.

Grant Assistance to Public Institutions: NAFKA continued to provide support to two Zanzibari research institutions through grants and technical assistance to build the capacity of local extension workers and farmers. NAFKA assistance to Zanzibar is channeled through these two grants.

- **Kizimbani Agricultural Training Institute (KATI) Grant:** In December 2014, NAFKA committed ██████ to KATI's contribution of ██████ to build the capacity of 80 Lead Farmers and 40 extension workers who will train 2,000 farmers in Pemba and Unguja. This grant will increase the productivity and profitability of smallholder farmers in Zanzibar by developing a network of extension services and Lead Farmers. This reporting year, KATI conducted a training needs assessment; revised its training syllabus in response to the assessment; trained 40 local extension staff; trained 40 Lead Farmers selected by ZARI

on GAP Modules 5 and 6¹³; provided refresher residential training to 40 Lead Farmers on GAP Modules 1 and 2; and trained 1,002 smallholder farmers (48% M / 52% F) on GAP adoption through demonstration plots.

- **Zanzibar Agricultural Research Institute (ZARI) Grant:** In December 2014, NAFKA committed ████████ to ZARI's contribution of ████████ to build the capacity of 2,000 new farmers in both rain-fed and irrigated paddy production in Zanzibar. The grant will increase rice productivity and profitability amongst smallholder farmers through the provision of GAP training to farmers and extension staff, contributions towards scientific trials, and the production and distribution of improved seeds. This reporting year, ZARI conducted a sensitization meeting with 40 local extension officers; established 40 demonstration plots; trained 2,000 farmers in GAP Modules 1-3 via demonstration plots; trained 30 farmers on QDS production; and collected 150 soil samples of all GAP demonstration plots and fertilizer validation sites in Unguja and Pemba.

Training Needs Assessment and Training Syllabus Development: In collaboration with ZARI, KATI conducted a training needs assessment in the first quarter for the six newly selected project sites in Unguja and Pemba, providing each site with key information for designing residential and on-farm training syllabi. Sixty farmers were interviewed for the assessment (10% from irrigated areas; 90% from rain-fed areas).

Sensitization and Demonstration Plot Set-Up: Also in the first quarter, ZARI completed village identification and sensitization activities in 40 villages and sub-villages on Unguja and Pemba. A total of 40 plots were selected, and 2,000 farmers were identified for trainings along with 40 new extension staff and 80 new Lead Farmers for the new group of farmers.

Government Agriculture Extension Officers and Lead Farmers: Extension officers provide farmers with the knowledge, information, and technologies needed to increase and sustain productivity in their respective villages. The 40 extension staff and 80 Lead Farmers from PY 2014 received GAP refresher trainings and continued delivering GAP training directly to farmers, in addition to collecting data for ZARI on outreach activities to individuals that are not members of any farmer group. Through extension officers, KATI conducted monitoring activities to track 1,016 farmers who adopted GAP technologies after receiving training on demonstration plots.

GAP¹⁴ Training to Farmers: Over the course of the reporting year, ZARI conducted GAP Modules 1-4 training to 1,997 new farmer beneficiaries (37% M / 63% F) at a total of 40 demonstration plots.

Exchange Visit: In early July, 10 local extension officers from Unguja, accompanied by two ZARI officers, participated in an exchange visit to Morogoro to learn from other farmers. They were able to see vast land area under rice production, contrary to the norm in Zanzibar. Their key observations included the following: 1) Rivers as the main source of water for irrigation, while in Zanzibar, underground water reserves are the primary water source; 2) Farmer organizations are well-organized and can manage large farms of rice production like UWAWAKUDA in DAKAWA, while in Zanzibar, farmer organizations are very weak and are found only in irrigation schemes; 3) Associations have strong by-laws that support performance; and 4) NAFKA is also supporting processing and marketing activities for rice farmers.

¹³ Note that the GAP training program used in Zanzibar differs slightly from the one used in the mainland, and there are differences in module numbers and titles.

¹⁴ Note that ZARI and KATI use their own GAP training protocols. Although the practices are similar to GAP curriculum used on the mainland, the modules may be slightly different.

Although there are differences between Zanzibar and the mainland that may limit application of certain practices, this exposure for the Zanzibari extension officers to alternative systems was a true learning experience that NAFKA hopes to repeat.

1.2 Demonstration Plots for Improved Technologies and Management Practices

Demonstration Plot and Scientific Trial Plot Development: ZARI developed protocols and established 40 rice demonstration plots (20 in Unguja; 20 in Pemba) to use as training platforms for farmers. However, due to low rainfall in the third quarter, grain yields for all rain-fed demonstration plots were affected. Twelve demo-plots in Unguja and 11 demo-plots in Pemba produced yields above 2 MT/ha, while 8 demonstration plots in Unguja and 9 in Pemba produced yields below 1 MT/ha, less than national average. Farmers were trained in their respective demonstration plots, except for Pwani Mchangani, where there was no crop at harvesting.

Only four out of 40 demonstration plots were under irrigation – and the other 36 were rain-fed. However, one solution is to plant all future demonstration plots in rain-fed lowland areas, which preserve moisture for longer periods of time. ZARI also established five UDP and Yara Mila validation trial plots, discussed below.

Outreach Activity: To reach farmers without demonstration plots near their sites, ZARI organized an outreach training in Pemba and Unguja in July. 500 farmers from 50 farmer groups gathered at pre-arranged collection centers and were transported by hired bus to established demonstration plots where local extension officers trained them in GAP modules over three days. 250 farmers were trained from Pemba (50% M / 50% F), and 250 were from Unguja (38% M / 62% F).

After covering GAP modules and touring plots for active learning, farmers noted the following impressions:

- Technology of water harvesting through land bunding and levelling was impressive
- High interest in use of improved rice varieties and quality seed
- Line planting sped up weed control, a very serious problem in rain-fed rice cultivation
- The slow release of nitrogen by UDP in the soil allowed the crop to utilize the fertilizer for a longer period, contrary to urea, which either evaporates on dry soil or dissolves in water and releases ammonia gas

Soil Sampling: 150 soil samples were collected from all GAP demonstration plots and fertilizer validation sites in Unguja and Pemba during the third quarter. A team comprised of ZARI staff and soil laboratory staff from Government of Zanzibar took part in the collection exercise with staff from the government soil laboratory leading the team.

In general, all soils analyzed showed very low amounts of the most important elements – nitrogen, phosphorous, and potassium. Particularly low, total nitrogen content varied from 0.03 (very low) to 0.12 (medium) in Chaani (Unguja) and Mangwena (Pemba), respectively. Soil texture in all areas varied from sandy loam to clay loam, some even being clay. Organic carbon also ranged from low to medium (0.12 - 0.82%).

According to pH measurement, the soils are acidic to slightly acidic ranging from 4.2 at Donge Mbiji in Unguja to 6.8 at Wingwi and Kimbuni in Pemba. Soils of Shakai, Bandani, wawi, Tovuni, Weni, Bopwe, Mangwena, Saninga, Gae la Mtungi, Majomani, Ukutini, and Mvumoni – all in Pemba have pH values ranging from 7 to 8, suggesting that they are alkaline. Since these areas are in the vicinity of coastal lines, the alkalinity could be associated with sodium, high content of which raises pH values in the soil.

I.3 Quality Declared Seed (QDS)

Local access to high-quality seed is integral to increasing yields for smallholder farmers. In rural areas too remote for agro-dealers to reach, QDS is produced by local, approved QDS farmers and sold to other farmers within the same village. This provides farmers with timely access to appropriate, affordable seed. NAFKA supports the efforts of QDS producers by providing GAP training for QDS production, as well as marketing strategies to distribute the seed they produce.

NAFKA has engaged in a partnership with ZARI and the Zanzibar Seed Production Unit to increase the availability and adoption of improved rice seed by selecting 30 smallholder farmers from Unguja to participate in the QDS production program. The selected seed variety for the program is SUPA BC (SUPA Back Cross), developed by ZARI for its high yields, drought resistance, semi-aromatic nature, high tillering ability, and consumer preference in Zanzibar. Note that the mainland focuses on improved rice variety SARO 5 (TXD 306), which produces slightly higher yields and matures early but lacks some of aromatic qualities found in SUPA BC.

In the third quarter, farming sites for QDS production were established by 30 selected farmers in the rice irrigation schemes of Bumbwisudi (5 sites), Cheju (8 sites), Kibokwa (10 sites), and Mtwango (7 sites). The crops are at different stages of development, depending on when they were established, which was determined by availability of water at varying times in each scheme. Cheju and Kibokwa sites were established earlier than the other sites, and the crops are now at flowering and grain filling stages.

The contracted fields were inspected by ZARI and Seed Unit staff after planting, at harvesting, and also during buying. A total of 6 tons of QDS were produced by the 30 farmers, all of which were purchased by the Seed Unit. The Seed Unit will distribute the seed to farmers in the next cropping season, according to Department of Agriculture specifications.

I.4 Validation Trials – Urea Deep Placement (UDP)

At the end of PY 2014, NAFKA completed the Urea Deep Placement (UDP) trials and demonstrations that were conducted to determine the benefits and suitability of UDP on Zanzibar soils alongside various seed varieties. Compared to the traditional method of broadcasting Urea, results of the trials indicated that use of UDP briquettes resulted in 60% higher yields in rain-fed areas and 49% higher yields in irrigated areas.

These positive results encouraged the start of validation trials under various ecological zones in Unguja and Pemba throughout this reporting year, led by ZARI. Five fertilizer plots for this year's trial were selected: three in Unguja – Kizimbani, Uzini, and Mtwango and two in Pemba – Pujini and Mangwena. Results from the trials – which are required to take place for two to three years by the Revolutionary Government of Zanzibar – will influence the decision by the Ministry of Agriculture and Natural Resources to officially allow the technologies to be registered and used in Zanzibar.

5. ACTIVITIES IMPLEMENTED IN EXPANSION REGIONS IRINGA AND MBEYA

In December 2014, the NAFKA Task Order was officially modified to expand activities into Mbeya and Iringa regions. During the reporting year, NAFKA focused on identifying new field offices and personnel for satellite offices in Mbeya and Iringa; initiating activities under the recently awarded enterprise grants in Mbeya and Iringa; and integrating the work of sub-contractors to re-calibrate and sustain activities in existing geographic project areas.

Mbeya and Iringa Baseline Survey: NAFKA conducted a baseline survey in new regions Mbeya and Iringa in May to collect comprehensive, reliable, and comparable household-level data that will be used as a basis of comparison for future changes. NAFKA staff conducted the survey in Mbeya Rural, Mbarali, Mbozi, and Rungwe districts in Mbeya region and Iringa Rural and Kilolo districts in Iringa region.

IR.1. Improved Value Chain Productivity

Demonstration Plot Development: This reporting year, 41 demonstration plots were established by grantees in Mbeya to use as GAP training sites for the farmers with which they plan to work.

Training on Good Agricultural Practices (GAP) Training: Through these demonstration plots, 377 Lead Farmers were trained in various GAP techniques, cascading that training to 3,907 farmers.

'Know Your Market' Campaign: The NAFKA BCC Team designed a campaign to encourage farmers to actively seek market information, as discussed below.

Enterprise Development Co-Investment Grants: Through grants and technical assistance, NAFKA has developed relationships with three processors, one agro-input supplier, and one micro-finance institution, as discussed below.

IR.2. Expanding Markets and Trade

Producer Association Development: NAFKA local partners RUDI and MVIWATA will serve as key catalysts for producer association development in Mbeya and Iringa and identified geographic districts and farmer groups with which to work earlier in the reporting year. RUDI will focus its efforts on the maize value chain in Iringa (Kilolo and Iringa Rural districts) and has already begun to work in 27 villages (15 Kilolo; 12 Iringa Rural), supporting farmer organizations by linking them with buyers, processors, and agro-dealers. MVIWATA will work in the rice value chain in Mbeya (Mbarali and Mbozi districts) and has already identified and conducted project inception workshops with 20 producer associations (10 in Mbarali; 10 in Mbozi). From initial registration of these association members, there will be around 3,300 prospective beneficiaries through farmer groups, associations, and AMCOs who will be trained on association/group management and crop banking operations and management.

'Know Your Market' Campaign: Building on the rapid baseline assessment conducted by M&E in Mbeya and Iringa, the BCC team designed the "Know Your Market" campaign to target maize and rice farmers in new project regions Mbeya and Iringa. Through fliers and radio spots, the campaign encourages farmers to actively seek market

information for best sales prices and best market locations before selling their crops. It also suggests that farmers can plan to jointly store part of their harvest if necessary in anticipation of better prices.

Two radio spots were produced by the popular Tanzanian comedians known as “Orijino Komedi” and deliver the same message but with different dialect styles reflective of regional differences. Live radio talk shows also aired on select radio stations and introduced listeners to NAFKA and gave them a chance to learn more about better market information. In addition to the radio products, 10,000 printed fliers that provide key steps on profitable market decisions and contact details of the available marketing services partners were distributed. The campaign was implemented in July and August.

This campaign was an efficient and effective vehicle for introducing project interventions to farmers in new regions, in addition to bringing awareness to the services provided by NAFKA grantees, such as storage, purchasing, processing, and additional market linkages.

IR.3. Increase Private Sector Investment in Agriculture

Improving Access to Finance and Markets through Public-Private Partnerships: In February, NAFKA signed grant agreements with one agro-inputs supplier and three processors in Mbeya and one micro-finance institution in Iringa. To date, 7,988 MT of produce were purchased from smallholders by the three processors below. Specific progress on the grant agreements can be found under *Section 3.2 – NAFKA Enterprise Development Co-Investment and Association Strengthening Grants*; general grant descriptions are listed below.

- **Khebhandza Marketing Co. Ltd:** In February 2015, NAFKA committed ██████ to Khebhandza with grantee’s contribution of ██████ to strengthen the maize value chain and to ensure access to a sustainable and profitable market for 1,000 smallholder producers in Mbeya and Mbozi districts. Through this agreement, Khebhandza will train farmers on GAP, train group leaders on leadership and records management, support access to both input and output markets by engaging in contract farming, and improve quality and quantity of maize products offered by Khebhandza Marketing Co. Ltd.
- **Kilawa Enterprises:** In February 2015, NAFKA committed ██████ to Kilawa with grantee contribution of ██████ to strengthen the rice and maize value chains in Mbozi, Rungwe, and Mbeya districts through the commercially sustainable sale of farm inputs, GAP training, and contract farming with 1,440 maize and paddy smallholder farmers to purchase produce to mill.
- **Mtenda Kyela Rice Supplies Ltd:** In February 2015, NAFKA committed ██████ to Mtenda with grantee contribution of ██████ to strengthen the rice value chain through farmer training, provision of extension services, enhanced input access, and strengthened market linkages for 1,290 paddy contract farmers in Mbozi and Mbarali districts.
- **Raphael Group Limited:** In February 2015, NAFKA committed ██████ to Raphael with grantee contribution of ██████ to increase income and food security for 1,025 paddy contract farmers in Mbozi and Rungwe districts through improved productivity and access to markets. Through this agreement, Raphael will train farmers on GAP and support access to both input and output markets.
- **University of Iringa – Micro-Finance Institute:** In February 2015, NAFKA committed ██████ to University of Iringa with grantee contribution of ██████ to increase access to finance for 770 smallholder paddy and maize farmers in Iringa and Kilolo districts. Through this agreement, University of Iringa will provide loans to existing SACCOS; establish three new SACCOS; train 150 SACCO leaders from 38 SACCOS on

record-keeping, financial management, business planning, and business expansion skills; and identify and register twenty AMCOS.

Gender Integration Workshop to Grantees in Mbeya and Iringa: In the third quarter, a two-day gender integration training workshop was offered to local implementing partners in Iringa and Mbeya to develop a common understanding of USAID requirements and gender issues in NAFKA activities. The workshop raised awareness of gender-related human rights issues and enhanced the capacity of grantees to monitor and to report on gender issues and dynamics.

IR.5. Increased Resilience for Vulnerable Smallholders

CRS selected Caritas Mbeya, the coordinating body of Catholic Diocese in Mbeya, as its implementing partner in Mbeya after a competitive selection process. In collaboration with Mbozi district authorities, ward and village leadership, and other NAFKA components – and through a carefully planned mapping process – 30 villages in Mbozi District were selected for implementation of increased resilience activities.

Two field supervisors, both Caritas Mbeya staff, were selected to supervise and mentor 10 Field Agents. The selected and trained agents have begun mobilizing and forming groups in Mbozi.

6. KEY ACHIEVEMENTS AND RESULTS

Below is a summary of key achievements and results for PY 2015, compiled primarily from data regularly collected throughout the year as activities are taking place. Key outcome indicators related to technology application, yields, gross margins, and incremental sales are populated from data obtained in the NAFKA Annual Outcome Survey (AOS), administered in August 2015. The full NAFKA Annual Outcome Survey report will be submitted in early PY 2016. A brief deviation narrative has been included for those indicators that have deviated more or less than 10% from the annual target.

NAFKA tracks 21 indicators – 10 as outcome indicators and 11 as output indicators. Three of these indicators have disaggregations, totaling 24 data points altogether. Of these 24 data points, one did not have an annual target, as PY 2015 was a baseline year; 15 exceeded the annual target or fell within the 90% achievement range; and 8 met less than 90% of the targeted goal.

In most cases of deviation greater than 10% above target, NAFKA had anticipated a reduction of “countable” activities within the original zone of intervention as it expanded into new regions; however, the project was able to sustain interventions at past levels quite well, resulting in numbers that, in some cases, far exceed targets – especially for number of beneficiaries, rural households, and beneficiaries receiving training. Based on the Annual Outcome Survey, improved technology application rates were much higher than last year – pushing number of hectares under improved technology and number of farmers who have applied improved technology far above target. The number of public-private partnerships formed and the value of private investment were both driven high by the co-investment grants that have proven to be so successful this year.

On the other hand, for those indicators in which deviation is greater than 10% below target, explanations range from extremely poor weather conditions that reduced yields to delays in Mbeya and Iringa that transferred some targeted activities into the beginning of PY 2016. The weakened Tanzanian Shilling affected all indicators reported in USD units, as targets were set using an exchange rate of 1,600 TZS : 1 USD, while the annual average has been closer to 1,934 TZS: 1 USD.

Improving Value Chain Productivity

Project Beneficiaries: This reporting year, NAFKA worked with 119,516 direct beneficiaries by providing training or facilitating services to farmers, group or association members, local partners, and private business owners. Of the 119,516 direct beneficiaries, 48,004 were new, and 71,512 were continuing from a previous reporting period. Including household members as indirect beneficiaries, this translates to 525,360 total beneficiaries reached during the reporting period.

Since project inception, NAFKA has assisted 224,297 direct beneficiaries – 1,006,407 total beneficiaries, including household members. Fifty-two percent of beneficiaries participate in the rice value chain, while 48% percent are active in the maize value chain. Forty-eight percent are women; 27% are youth.

New Technology Application: The 2015 AOS findings estimate that 91% of farmers who have worked with NAFKA since inception applied at least one improved technology (e.g. GAP or SRI techniques) on their farms during the past growing season. Compared to a 53% application rate in 2012, a 62% application rate in 2013, and an 80% application rate in 2014, this steady increase in rates of application demonstrates the progressive success and sustainability of NAFKA’s strategy.

Overall, the survey observed a 94% rate of technology application by paddy farmers and an 87% rate of technology application by maize farmers. Since the technologies more commonly applied by farmers in the rice value chain have a labor-only cost, the higher application rate by paddy farmers is not surprising.

Hectares under Improved Technologies: According to 2015 AOS estimates, 170,959 hectares of beneficiary land are currently under at least one improved agricultural practice as a result of NAFKA assistance. Paddy farmers cultivate an average of 1.25 hectares under improved technology each, while maize farmers cultivate an average of 2.17 improved hectares each. In general, NAFKA maize farmers own or lease larger tracts of land than paddy farmers, so the differences in average hectares per farmer may be more a reflection of land availability.

Yields, Gross Margins, and Prices: This year’s average yield for paddy was 2,937 kg/hectare, falling 7% short of the target; Maize yields were significantly lower than the target at 815 kg/hectare, reaching only 66% of the target. While extreme weather conditions affected both crops, maize yields were more dramatically impacted due to drought conditions in NAFKA’s key maize-growing areas, Kongwa and Kiteto. For paddy farmers, irregular rain patterns, including flooding, resulted in somewhat lower production.

A product of yield, unit prices, and input costs, gross margins for both commodities were far short of targets – maize at only \$74/hectare compared to its target of \$112/hectare, and paddy at only \$460/hectare compared its target of \$685/hectare. For paddy, both yields and prices were lower than last year, while input costs were higher and served as the primary contributor to the under-achievement for paddy gross margins, most likely a product of the weakened Tanzanian Shilling relative to the US Dollar. It should be noted, however, that higher input costs may also be associated with farmers purchasing more inputs per hectare than in years past.

Maize gross margins also met only 66% of the target. Unlike paddy, maize prices were much higher than last year; however, yields were significantly lower and input costs were significantly higher. As discussed, maize production was impacted by drought conditions – reducing supply, thus increasing prices. As with paddy, higher input prices were likely due to the weakened Tanzanian Shilling, but increased purchases per hectare may also have played a role.

A follow-up market survey will be conducted in February 2015 to capture additional sales from those who stored their crop after harvest; this data will be used to update the gross margin and value of incremental sales for both commodities.

Figure 1: Progression of Yields

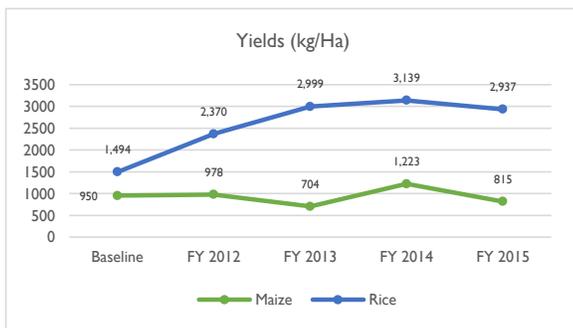
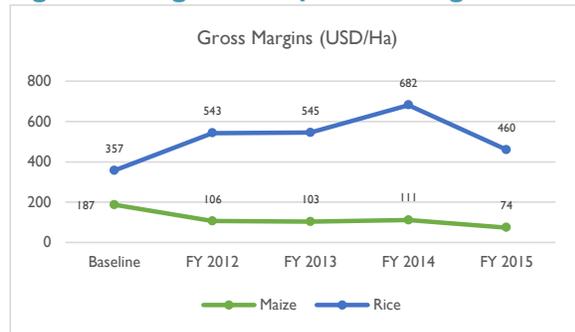


Figure 2: Progression of Gross Margins



Demonstration Plot and Good Agricultural Practices (GAP) Training: Fourteen GAP technologies for maize and rice are promoted on demonstration plots through GAP training and technical assistance by Lead Farmers, VBAAAs, agro-dealer and processor grantees, and ZARI and KATI in Zanzibar. NAFKA has installed 849 demonstration plots during the year – (469 paddy; 380 maize) and trained 107,813 farmers on one or more GAP modules.

BCC Activities: NAFKA's BCC team conducted three campaigns this year – 'Inputs Promotion' and 'Association Membership' in the original Zone of Intervention and 'Know Your Market' in new regions Mbey and Iringa – that included brochures, posters, and radio spots. Additionally, BCC designed fliers to promote maize ripping, GAP calendars for both maize and rice value chains, and a new GAP training video. BCC messaging activities have continually proven effective companions to support GAP training and promotion.

Service Provider Development: NAFKA continued to support its network of service providers by providing training, technical assistance, and/or grant support to 126 agro-dealers, 216 VBAs, 349 Lead Farmers, processor grantees, and public extension officers.

Expanding Markets and Trade

Associations: NAFKA expanded its network of producer associations this year to 125, 85 of which are formally registered. NAFKA builds the capacity of associations in leadership, operational management skills, and provision of service transactions to members. An association assessment was conducted this year on 62 associations, resulting in an average score of 52% - a fair reflection of the general development stages of these relatively new associations. NAFKA also works with 9 total apex associations, 6 of which are fully registered. Apex associations group several producer associations together in order to more effectively advocate on various issues related to the sub-sector.

Access to Finance: 12,055 beneficiaries had access to formal or informal loans this year - 1,522 from formal banks or micro-finance institutions and 10,533 through SILC groups.

Formal Loans: NAFKA facilitated ██████ in formal rural agricultural loans to 1,522 farmers through CRDB, Opportunity International Tanzania Ltd, and University of Iringa / Iringa Hope MFI.

Buyer Agreements and Volumes of Produce Sold: NAFKA facilitated 157 buyer agreements worth ██████ for paddy (13,717 MT) and ██████ for maize (7,314 MT).

Incremental Sales: The value of incremental sales is based off the number of farmers who have sold and at what value relative to the same data points in the baseline year. Since most farmers have not sold produce by the time the Annual Outcome Survey (AOS) is conducted in August, the value of incremental sales is always negative for annual reporting. However, NAFKA conducts a follow-up Market Survey in March/April and updates the annual outcome indicators that relate to value. Currently, the value of incremental sales for this reporting year is - \$32,596,987.

Business Development Services: Through assistance that NAFKA provided to various MSMEs, 24,095 MSMEs, including farmers, received business development services in the form of market access, input supply, training and technical assistance, or access to finance.

Increased Private Investment in Agriculture

Private Sector Investment: NAFKA facilitated ██████ in new private sector investment, primarily through the leveraged contributions of private sector grant recipients.

Public-Private Partnerships: NAFKA entered into 29 new public-private partnerships, including with processor and agro-dealer grantees, input supply companies, and one micro-finance institution.

Private Sector Engagement: Input supply companies invested ██████ in demonstration plots that will be established in partnerships with these companies. Additionally, NAFKA worked with 26 agro-chemical, seed, and fertilizer companies to arrange events and activities, such as Farmer Field Days, to promote product awareness and consumer demand.

NAFAKA Private Sector Grants: NAFKA administered 19 grants to support local businesses and associations, amounting to ██████. These grants were provided to Kilombero Plantations Limited (KPL), KINNAPA Development Program, Kibaigwa Flour Supplies Limited (KFS), BABU Agro-Dealer, GABE Milling Enterprises, Kiteto Agro-Business Co. Ltd, Michael Agro-Business and General Supply, NOKWIM Investment Co. Ltd, PALUKI Agro-Dealer and General Supply, S. Majembe Agro-Vet & Agrochemical, TVC Agrochemical Input Investment, William Agrichem, Tropical Seeds East Africa Co. Ltd, TANSEED International Ltd, Khebhandza Marketing Co. Ltd, Kilawa Enterprises, Mtenda Kyela Rice Supplies Ltd, Raphael Group Limited, and University of Iringa.

Increased Resilience of Vulnerable Smallholders

Expanded Savings and Internal Lending Communities: NAFKA worked with 11,223 SILC members through mobilization, training and support, of which 3,042 were new to the program this year. 66% of all SILC members are women. Using SILC members as a proxy for vulnerable populations, NAFKA reached 10,852 vulnerable households.

Food Security and Nutritious Crops: 3,978 SILC group members received training on sustainable organic farming, vegetable crop production, and/or nutrition to improve household-level nutritional intake. This year, 1,570 home gardens were established, providing access to an estimated 7,136 household members.

7. PROBLEMS/CHALLENGES

Weather Conditions: Uneven distribution and unreliable rainfall contributed to delays in demonstration plot establishment and/or failure of those already established, especially in northern maize areas. More urgently, drought conditions in primary project maize areas Kongwa and Kiteto dramatically affected annual yields – and, consequently, gross margins. Irregular rain patterns in paddy-producing areas, including flooding, affected the yields of rain-fed paddy producers, though to a much lesser degree than maize producers.

Access to Finance for VBAs: While the hub agro-dealer grants have proven extremely successful and have resulted in increased access to inputs for the most rural farmers, many VBAs do not have the capital needed by hub agro-dealers to secure the deposits required for the large orders being requested by farmer customers. While some agro-dealers are able to alleviate the problem by reducing deposit requirements or by selling inputs directly to farmers after receiving bulk orders, NAFKA is working to expand access to finance for the VBAs.

Staffing: After receiving its modified Task Order in February for expansion into the regions of Mbeya and Iringa, NAFKA began exploring ways to reduce budget outlays in order to maintain activities through April 2017. Consequently, an estimated 23% staff left the project, mainly due to budget limitations. While these staff reductions have posed challenges to the team, through internal promotions and modifications of scopes of work, all components have found ways to assure the delivery of targeted results. Additionally, this shift of responsibilities away from project staff and towards VBAs, Lead Farmers, and private sector partners encourages accelerated sustainability.

Vast Geographic Coverage: Expanded distribution of project sites has made it challenging for technical staff to monitor activities across the various districts and villages. In response, NAFKA has initiated a decentralization strategy, placing more staff in the four outlying field offices in Ifakara, Kongwa, Mbeya, and Iringa. M&E field officers have been placed at each field office to facilitate data collection and data entry, expediting the timeliness of NAFKA project data. This reorganization not only reduces travel-related costs but increases field presence for greater overall impact with rural partners.

Weakened Tanzanian Shilling: Since the beginning of the project, the exchange rate has been around 1,600 TZS : 1 USD until earlier this year when the Tanzanian Shilling began to weaken relative to the US Dollar. The average exchange rate for this reporting period is 1,924 TZS : 1 USD, which affects local prices for Tanzanian farmers in various ways.

8. PLANNED ACTIVITIES FOR THE NEXT REPORTING PERIOD

The NAFKA Annual Work Plan for PY 2016 was submitted to USAID on September 30, 2015, for review and comment. The comprehensive work plan incorporates PMP indicators and targets with the specific activities that link to them under various project components. Confirmed activities for the first quarter of PY 2016 are pending official approval of the PY 2016 Annual Work Plan.

9. SPECIAL ISSUES

Meetings and Events

Micro-Finance Providers Meeting: NAFKA's SILC work has met implementation challenges in Kongwa district due to the presence of other rural micro-finance providers also based there. To harmonize activities and better serve Kongwa communities, NAFKA and its partner, Diocese of Dodoma, met in Kongwa with other micro-finance providers in October. The meeting was organized by SEDIT, an NGO operating in Kongwa as a partner in the Global Sanitation Fund – Usafi wa Mazingira (GSF-UMATA project) consortium that promotes environmental sanitation with funding from United Nations Office for Project Support (UNOPS) and coordinated by Plan International in Tanzania. The meeting was convened to coordinate micro-finance activities with greater efficiency and to reduce activity overlap and confusion to community members from having so many providers with different options or methods.

Seed Development Strategic Plan Meeting: JICA and the Ministry of Agriculture, Food Security, and Cooperatives organized a meeting on the Rice Seed Development Plan (2014-2018) that included all stakeholders in the rice seed value chain. The meeting was held in October in Morogoro and was facilitated by a consultant from the Coalition for African Rice Development (CARD). The main objective was to develop concept notes for areas of weakness in rice seed development, such as challenges in the supply of rice seeds from research institutes (pre-basic seed) to Agriculture Seed Agency (ASA). Participants included USAID, Ministry of Agriculture (MAFC), AGRA – Scaling Seed and Technology Partnership (SSTP), NAFKA, and the Rice Council of Tanzania.

District-Level Stakeholders Learning Forums: In the second quarter of this reporting year, NAFKA initiated district-level Stakeholders Learning Forums to create platforms for all project stakeholders in the maize and rice value chains to share key achievements and to identify challenges faced in the implementation of project activities. During the forums, an overview of NAFKA interventions was provided, and government support to promote the adoption of GAP was solicited. Participants were encouraged to provide suggestions on how NAFKA support could be improved with the overall goal of developing sustainable strategies and beneficial linkages for future collaboration.

NAFKA held three forums with a total participation of 197 individuals (Kongwa 68; Kiteto 68; Kilombero 61), including 10 senior government officials in Kiteto, 24 government officials in Kongwa, and one government official in Kilombero. The participants in the forums were farmers, partners in maize and rice value chains, and government officials, all who were able to network with other stakeholders within their district. Key recommendations included requests to share project reports and survey findings and to strengthen coordination between project and government extension services.

International Women's Day: This year, International Women's Day festivities were held nationally in Morogoro Municipality at the Jamhuri Stadium from March 3-8 with the theme “*Empowering Women: Empowering Humanity. Make it Happen.*” The event, organized at the national level by the Government of Tanzania, brought more than 65 institutions from across the country to celebrate and honor women's accomplishments in Tanzania towards economic, social, and political empowerment.

NAFKA participated by hosting a pavilion and inviting six successful farmers – four women and two men – to answer questions and to share their experiences with NAFKA and the benefits of using the improved farming techniques promoted by the project. They displayed improved rice and maize seeds and demonstrated weeding tools. A total of 384 attendees (23% M / 77% F) visited the NAFKA pavilion, including Tanzanian President Jakaya Kikwete, who was drawn to the display because he recognized “Feed the Future.”

International Conference on Climate Change and Multi-Dimensional Sustainability in African Agriculture: NAFKA sent two representatives to the international conference on “Climate Change and Multi-Dimensional Sustainability in African Agriculture,” held in June in Morogoro. The conference was hosted by Sokoine University of Agriculture (SUA) and sponsored by USAID/iAgri. The conference, which ran for three days, attracted a total of 100 participants from Norway, US, Tanzania, and other African countries, including representatives from private companies. The conference addressed the complex issue of agricultural sustainability in the face of climate change with the following objectives:

- Review research related to agronomic, environmental, economic, social, and institutional sustainability of efforts to address agricultural productivity in the context of climate change
- Identify and discuss new, relevant concepts related to “climate smart” agriculture for sub-Saharan Africa (e.g. system resilience)
- Explore existing and potential contributions of the private sector to climate change adaptation and mitigation
- Discuss the roles of local, national, and international organizations in designing programs to meet agricultural production needs in the context of climate change

Nane Nane Agricultural Fair: This year, National Farmers Day celebrations, or Nane Nane, were held from August 1 – 8, 2015 at Nane Nane grounds in Morogoro. NAFKA had demonstration plots for maize and rice at the Nane Nane exhibition site, all planted in mid-May in preparation for the event. Maize plots were planted with three different types of seed from Monsanto Corporation – DK 9089, DK 8031, and DK 8053 – and has raised beds with tied ridges to display the rainwater conservation agriculture approach, all planted at a spacing of 25cm from plant to plant and 75cm from row to row.

NAFKA’s two rice plots displayed two planting/sowing practices. One plot was planted using a single row practice with spacing of 20 cm from plant to plant and 20 cm between rows. The other plot demonstrated a double-row practice with spacing of 40 cm from the double rows and 20 cm inside the two rows with a space of 10 cm between plants, altogether creating a 10 x 20 x 40 arrangement.

International Youth Day: International Youth Day, August 12, is an opportunity to celebrate the creative force and innovative motivations that young people bring to society – and to draw attention to the cultural and legal issues surrounding youth. This year’s theme was “*Youth Civic Engagement*.” NAFKA celebrated the day by organizing an event in Michenga village, Kilombero and inviting six youth groups from paddy-growing areas in Kilombero district to participate. More information can be found under *Section 10: Cross-Cutting Issues – Gender and Youth Integration*.

Annual Work Plan Meeting: NAFKA’s Annual Work Plan Meeting was conducted September 1-3. All project staff attended the three-day workshop to review annual performance results and progress against targets before identifying challenges and solutions for improvement. Based on the discussions, each component streamlined activities for PY 2016 to align with overall project objectives. NAFKA submitted its PY 2016 Annual Work Plan to USAID on September 30.

Collaboration with FTF Partners and Other Partners

Africa RISING: Africa RISING is a three-year joint project with NAFKA to fast-track the delivery and scaling of selected agriculture technologies in Kilombero, Mvomero, Kongwa, Babati, and Kiteto districts – and to mainstream these technologies into wider rural development programs beyond current zones of influence. This project focuses the expertise of Africa Rising partners that have been drawn from local and international research

institutions and mobilizes the efforts of NAFKA. FTF Tuboresha Chakula Activity was also part of the original team before that project ended.

The management team is comprised of members from NAFKA and Africa RISING and will meet twice a year. The role of the Project Management Team is to oversee coordination between project components and partners, advise on the annual work-plan and budget, monitor progress of implementation, and offer assistance to overcome constraints and provide guidance to project leads to ensure conformity with the proposed strategy.

Together, this partnership will demonstrate improved varieties of maize, rice, groundnuts, beans, and soya beans and will promote good agricultural practices in intercropping systems. The program is scaling six improved maize and three legume (soybean, groundnuts, and beans) varieties. For common beans, Jeska, Uyole Njano, and SUA Njano with high yield averages were selected; Line 8, an improved soybean variety, was selected; and for groundnuts, Pendo and Mnanje were selected. Twenty-two demonstration plots in 20 villages managed by NAFKA farmer groups were established to serve as the basis for scaling up of technology packages in adaptation demonstration plots in the second and subsequent years.

Also, this partnership is introducing and promoting post-harvest management technologies to reduce losses and bring quality up to market standards. In the third quarter, 150 NAFKA Lead Farmers (53% M / 47% F) in Mvomero, Kongwa, and Kiteto were trained by Africa RISING scientists in post-harvest handling. Africa RISING donated 6 diesel maize-shelling machines and 6 electric maize-shelling machines to farmer associations in 6 villages in Kongwa, Mvomero, and Kiteto. In each village, 5 youth were trained as technicians in maintenance and repairs. The diesel machines have the capacity to shell 1.5 MT of maize/hour (equivalent to 15 bags/hour), and the electric machines have the capacity to shell 0.6 MT of maize/hour (equivalent to 6 bags/hour). The diesel machines cost TZS 1.3 million each, and the electric machines cost TZS 280,000. NAFKA and Africa RISING are conducting more demonstrations of the mechanical maize shellers and developing a rural retailer network for them.

Lead Farmers were also trained in solar drying of food using collapsible dryer cases that have the capacity to reduce moisture content of maize grain from 18% to 13% in 5 hours of exposure to sunlight. Six collapsible drier cases were donated to 6 farmers associations in Mvomero, Kongwa, and Kiteto.

Poverty Counts Assessment Tool: NAFKA hosted the training for the Poverty Counts Assessment Tool at the NAFKA Conference Hall for two weeks in October. A total of 12 trainees from various FTF activities attended. The tool was field tested from October 27-30 in Mvomero and Kibaigwa.

Mbeya and Iringa Partnerships: NAFKA field activities are always carried out in collaboration with district-level agriculture advisors and cooperative development specialists. However, during our recent expansion into Mbeya and Iringa, GOT district and regional advisors were particularly helpful in assisting in the identification of eligible village-level partners and existing NGOs.

Collaboration with the Private Sector

Through Grant Agreements:

- NAFKA continues its collaboration with Kilombero Plantation Limited (KPL) and KINNAPA Development Programme to provide SRI extension services to paddy outgrowers.
- Grant agreements with nine agro-dealers were signed during the reporting year, as discussed in *Section 3.2: NAFKA Enterprise Development Co-Investment and Association Strengthening Grants*.
- In NAFKA's new region of Mbeya, three processors, one agro-inputs supplier, and one micro-finance institution also signed collaborative grant agreements with NAFKA, discussed in *Section 5: Activities Implemented in Expansion Regions Iringa and Mbeya*.

- TANSEED International and Tropical Seeds East Africa signed grant agreements to increase the production and distribution of certified seed by training certified seed producers.

Through Market Linkages:

- Seed companies that collaborated with NAFKA during the reporting year include: Aminata Seed Ltd., Bytrade, East-West Seed Company, Kibo Seed Company, Meru Agro-Tours and Consultancy, Monsanto, Pannar Seed Company, Seedco, Starn Seed Company, Suba-Agro Engineering Ltd. (SATEC), TANSEED International, Tropical Seeds East Africa, and Zambia Seed Company.
- Fertilizer companies that collaborated with NAFKA include: China Pesticides, Export Trading Group (ETG), Mea Fertilizer, Minjingu Mines and Fertilizer Ltd., Positive International, Tanzania Fertilizer Company Ltd. (TFC), TATA Africa, and YARA Tanzania Ltd.
- Agro-chemical companies that collaborated with NAFKA during the quarter include: Arysta Life Science, Glycel Crop Care, Meru Agro-Tours and Consultancy, Monsanto, Positive International, Suba-Agro Engineering Ltd. (SATEC), Syngenta, Tanzania Crop Care, and TATA Africa.

10. CROSS-CUTTING ISSUES

Gender and Youth Integration

To ensure that men, women, and youth have equal opportunities to participate in and benefit from rice and maize value chains, gender and youth considerations are streamlined into all NAFKA activities. Among the farmers supported by NAFKA this reporting year, 48% were women, and 27% were youth.

For key NAFKA activities, disaggregation between male and female beneficiaries is noted directly within the report narrative. For disaggregation of youth (ages 18-35) and non-youth (ages 36 and above) beneficiaries amongst key NAFKA groups, see the below chart as an illustration of age representation within NAFKA.

Table 17: Age Representation within NAFKA Activities – PY 2015

Activity	Female Youth	Female Non-Youth	Male Youth	Male Non-Youth
VBAAs	8%	14%	25%	53%
VBAA Farmers	25%	21%	25%	29%
Association Members	21%	26%	21%	32%
SILC Members	34%	32%	16%	17%
Agro-Dealer Grantee Customers	19%	23%	19%	39%
Processor Grantee Outgrowers	13%	19%	22%	46%

Human Rights Training: Throughout the reporting year, the gender team conducted its “Human Rights” training curriculum, which combines Tanzanian and international best practices. The training equips individuals with knowledge and awareness of gender and human rights issues within their communities by discussing topics such as the definitions of human rights and gender, their origins, their cultural significance, and their impact on communities. NAFKA engaged a training specialist to conduct a ToT on the curriculum, comprised of three modules:

- *Basic Human Rights and Good Governance for Increased Agricultural Production*
- *Human Rights, Gender, and Women’s Empowerment*
- *Relevant Laws and Policies for Enhancing Support for Women’s Empowerment, Leadership, and Gender: Land Laws, Laws on Marriage, and Inheritance*

Throughout the reporting year, the ToT was delivered to a total of 285 (52% M / 48% F) peer educators from Ifakara North, Iringa, Kilombero, Kiteto, Kongwa, KVTC, Mbeya, Mlimba, and Mvomero districts. The peer educators included PSPs, FAs, association leaders, government officials, and women’s and youth group leaders. Local leaders (Village Chairpersons and Ward Land Tribunals) were also invited to attend, since they are custodians of these issues within their communities. The peer educators will deliver the training program directly to their community members. To date, close to 5,015 community members have been trained.

Focus groups with peer educators and participants of the first round of training were carried out in the villages of Alabama, Igota, Kikwawila, Kanolo, and Sagamaganga in Kilombero district to capture successes and lessons learned. A one-day refresher workshop for the 38 top performing peer educators from the four current project

districts was conducted in Morogoro to share experiences and challenges, as well as to recommend suggestions for improving the training program.

Initial feedback from the focus groups and peer educator workshop shows that women do understand their rights and are able to access land and other resources. With a stronger understanding of these rights, women are also taking on leadership positions in farmer groups and government committees. It appears that this training intervention has the potential to contribute to a decline in gender-based violence and child marriage and an increase in more collaborative household decisions. It has also created a sustainable network of human rights advocates who will continue to inform community members going forward.

International Women's Day: This year, International Women's Day festivities were held in Morogoro Municipality at the Jamhuri Stadium from March 3-8 with the theme "*Empowering Women: Empowering Humanity. Make it Happen.*" NAFKA participated by hosting a pavilion and inviting successful farmers to share the benefits of using the improved farming techniques promoted by the project. More information on this event can be found under *Section 9: Special Issues*.

Gender Integration Workshop to Grantees in Mbeya and Iringa: In the third quarter, a two-day gender integration training workshop for local implementing partners in Iringa and Mbeya was implemented to develop a common understanding of USAID requirements and gender issues in NAFKA activities. The workshop raised awareness of gender-related human rights issues and enhanced the capacity of grantees to monitor and to report on gender issues and dynamics.

As a result of this two-day workshop, grantee gender guidelines were developed, which provide grantees suggestions for useful strategies in handling common gender issues and raising awareness about the importance of gender integration into agricultural activities. Some of the common issues discussed were that women provide the majority of on-farm labor but are often restricted from attending trainings, as they either have too many responsibilities within the household or are not permitted to attend by their husbands; men are mostly responsible for the sale of produce and all marketing decisions; and there is limited shared decision-making regarding production and expenditures.

Grantees are encouraged to promote gender sensitization through non-agricultural activities, such as drama or sports competitions, that include both men and women and are a good vehicle for relaying messages; through incorporating household-related trainings, such as cooking with labor-efficient stoves, into the larger GAP trainings that would naturally attract women; through consideration of demonstration plot placement relative to households; and through general promotion of female involvement and leadership.

Pre-Constitutional Training to Youth Groups: In the third quarter, a total of 126 member representatives (56% M / 44% F) from 12 youth groups in Mang'ula and Ifakara were given pre-constitutional training to develop their own constitutions as a condition for receiving formal registration status with the district council.

Gender and Youth Strategy: In June, the gender team facilitated mini-workshops with each technical lead that will serve as the basis of a NAFKA Gender and Youth Strategy that will guide NAFKA's gender and youth activities and intended results for the remaining life of the project. The results of the baseline assessment recently conducted in new project regions Mbeya and Iringa will also be considered in the development and finalization of the strategy.

International Youth Day: International Youth Day, August 12, is an opportunity to celebrate the creative force and innovative motivations that young people bring to society – and to draw attention to the cultural and legal issues surrounding youth. This year's theme was "*Youth Civic Engagement.*" NAFKA narrowed the theme to "*Modern Farming is an Employment; Liberate Yourself Economically.*"

NAFAKA celebrated the day by organizing an event in Michenga village, Kilombero and inviting six youth groups from paddy-growing areas in Kilombero district to participate. A total number of 300 (60% M, 40% F) farmers participated in the event. Members of the private sector were also invited to explore various opportunities they might have with youth groups. Hub agro-dealers and representatives from Arista Fertilizer, CRDB, YETU Microfinance, and Opportunity International Limited attended the event. Entertainment included traditional dances that incorporated GAP messages, skirts made by youth group members, and testimonies from youth groups on GAP achievements and SILC methodologies.

Behavior Change Communication

Behavior Change Communication (BCC) activities are integrated directly into NAFKA components and have been discussed in relevant sections throughout the report. Key BCC activities during the reporting year – and their location within the narrative – are provided below.

GAP Input Promotion Campaign: In the first quarter of this reporting year, the Phase II Input Campaign was designed, pre-tested, and rolled out. The campaign built on last year’s seasonal campaign that promoted quality certified inputs and aims to both reinforce those messages and incorporate new messages to promote good farming practices, such as proper land preparation and line spacing. More information on this campaign can be found in *Section 1.1.6: GAP Behavior Change Communication (BCC) and Material Development*.

Association Membership Campaign: The BCC Team designed, pre-tested, and rolled out an association membership campaign to promote the benefits of farmer group membership. Together with the ‘Know Your Market’ campaign in Mbeya and Iringa, these two campaigns encouraged the sustainability of existing associations by recruitment of new members and encouraging associations to link to new markets for their produce. More information on this campaign can be found in *Section 1.1.6: GAP Behavior Change Communication (BCC) and Material Development*.

GAP Training Manuals: Training manuals for GAP Modules 1, 2, and 3 for both paddy and maize production were finalized this reporting year. The manuals include GAP technical information and visual aids that allow various trainers to deliver consistent messages to the farmers with whom they work.

GAP Calendars: Building on previous BCC campaigns, the BCC team designed calendars with creative prompts to encourage farmers to ask questions to VBAs and association leaders about best farming practices. More information on GAP calendars can be found in *Section 1.1.6: GAP Behavior Change Communication (BCC) and Material Development*.

Training Video: A GAP training video, using time-lapse filming, was created to demonstrate and promote GAP techniques. A plot was divided into two sections – one using traditional farming techniques and one using GAP techniques – and a camera captured the growth stages over time. More information on this training video can be found in *Section 1.1.6: GAP Behavior Change Communication (BCC) and Material Development*.

Roadshow: The time-lapse training video, along with three other videos produced last year by the BCC team, was shown to over 5,000 beneficiaries in the last quarter of this reporting year using the RUDI rural movie van. More information on the roadshow can be found in *Section 1.1.6: GAP Behavior Change Communication (BCC) and Material Development*.

‘Know Your Market’ Campaign: The BCC team designed the “Know Your Market” campaign to target maize and rice farmers in new project regions Mbeya and Iringa, encouraging farmers to actively seek market information

for best sales prices and best market locations before selling their crops. More information on this campaign can be found in *Section 5: Activities Implemented in Expansion Regions Iringa and Mbeya*.

Environmental Compliance and Natural Resource Management

NAFAKA's activities are guided by our Safe Use Action Plan (SUAP), which was approved by USAID as part of our Pesticide Evaluation Review and Safe Use Action Plan (PERSUAP) submission. All inputs and agro-chemicals promoted by NAFKA, whether they are contributed by input supply companies or purchased for demonstration with project funds, have been approved in our PERSUAP. NAFKA also ensures that these inputs are promoted in a manner compliant with the SUAP and our Environmental Mitigation Monitoring Plan (EMMP), also approved by USAID.

NAFAKA enforces the use of standard operating procedures and integrates environmental compliance aspects into all of its activities, including GAP trainings, BCC campaigns, and field monitoring systems. Throughout the reporting year, the Environmental Compliance Specialist ensured that NAFKA activities conformed to environmental laws and regulations as stipulated in PERSUAP guidelines. Compliance activities focus on environment and natural resource concerns associated with the use of pesticides and safety protection; solid waste management; and wastewater management.

Natural Resource Management: Agricultural conservation activities included GAP trainings on soil fertility management and farm water management. Ripping technology was a major focus of activities in the first quarter, which is discussed in more detail in *Section 1.2.5: Ripping Technology*. Low-cost solutions such as ridge tilling by maize farmers for water retention were also promoted.

Integrated Pest Management (IPM) Manual and Training of Trainers: In the third quarter, NAFKA introduced an IPM training module that provides farmers with best practices for effective and environmentally sensitive approaches to controlling pests in rice and maize farming in a safe manner. The NAFKA Environmental Compliance Specialist – in collaboration with the Agro-Input Specialist and Seed Specialist – conducted TOTs for youth groups and hub agro-dealers on Integrated Pest Management (IPM) and Pesticide Product Knowledge in Ifakara and Morogoro so that they can more knowledgeably teach other farmers to use pesticides safely.

The training was especially valuable for youth groups, since NAFKA is working with youth groups to promote and develop their ability to provide agricultural support services, such as field preparation, manual weeding, pesticide spraying, and harvest and post-harvest activities as income-generating activities. In December, during the Input Stakeholders Workshop, participants noted that youth groups engaged in farming and provision of agricultural support services in their communities were a good model to cascade technology and increase farm input sales since many youth groups provide spraying and other services to farmers. Excel Crop Care, Syngenta, Tanzania Crop Care, and other crop protection companies showed interest in developing a youth group program, and this training was the first step towards building a partnership between input suppliers and various youth groups. Forty youth from seven youth groups in Ifakara attended the training.

IPM trainings continued in July at KVTC in Ulanga for 49 Lead Farmers representing local farming associations affiliated with NAFKA. A NAFKA agronomist led the training sessions, which were organized into two-day workshops held at the KVTC Conference Center. In addition to covering the safe use of pesticides, other agro-chemical products, protective clothing, and equipment, the trainings provided practical information in water management, fertilizer dosage, physical control of pests, and recipes for the use of organic or botanical pesticides, such as neem extract, wood ash, papaya leaves, and amaranthus products available locally at modest cost.

Monitoring, Evaluation, and Learning

The NAFKA M&E Team is responsible for the collection, verification, and aggregation of all project data. For NAFKA PMP indicators, data is collected through Data Collection Forms (DCFs) completed during an activity, from technical staff individual records, or via a beneficiary sample survey, such as the Annual Outcome Survey. In addition to oversight of data used for official reporting and annual entry into the Feed the Future Monitoring System (FTFMS), the M&E Team also assists project staff in collecting data specific to a project area or activity that technical staff can use to gauge impact and inform future planning.

Changes to Indicators for PY 2015: In October, NAFKA M&E representatives participated in a webinar on FTFMS Guidance Review with the aim of providing guidance to clarify and further improve reporting, including timelines for finalizing reports and FTFMS indicator data. The webinar provided information on indicators that were revised, dropped, and newly added. The changes that impacted NAFKA are as follows:

- *4.5.2(2) Number of hectares under improved technologies or management practices as a result of USG assistance* (Dropped: New/Continuing Disaggregate, Addition: “Cultural Practices” disaggregate category)
- *4.5.2(5) Number of farmers and others who have applied improved technologies or management practices as a result of USG assistance* (Dropped: New/Continuing Disaggregate, Addition: Producers/Others Disaggregate, Addition: Technology Type disaggregates)
- *CBLD(5) Score, in percent, of combined key areas of organization capacity among USG direct and indirect local IPs* (Dropped by FTFMS as an indicator.) *However, at some point in PY 2015, USAID Tanzania requested that NAFKA continue to track it as a USAID cross-cutting indicator and at the activity level. Therefore, at the beginning of PY 2015, NAFKA had 20 indicators. With the reinstatement of CBLD(5) Score, NAFKA ends PY 2015 with 21 indicators.

Counting Indirect Beneficiaries: The USAID Leveraging Economic Opportunities (LEO) team in Washington is working to standardize its definition of and counting methodologies for indirect beneficiaries. They requested consultation with USAID Tanzania and NAFKA to explore ways that counting indirect beneficiaries can best be standardized across projects. In December, the M&E team participated in a conference call with staff from the USAID Leveraging Economic Opportunities (LEO) to discuss different challenges and approaches to capturing indirect numbers. NAFKA expressed willingness to help in whatever way possible, and USAID Tanzania indicated it would ascertain whether they would be able to support this exercise.

NAFKA Database Migration: ACIDI/VOCA IT expert Jeremy Barnes conducted the migration of the NAFKA Database from MS Access to SharePoint in January, followed by on-site training of all M&E staff. The SharePoint platform allows for more efficient and timely entry and retrieval of project data.

Annual Market Survey: As a follow-up to the PY 2014 Annual Outcome Survey, the Annual Market Survey was conducted in late March. The Market Survey re-collects sales data on volumes and prices in order to update key indicators originally reported at the end of the previous fiscal year, such as gross margin and value of incremental sales. Findings from the Market Survey are presented in the full Annual Outcome Survey report.

RIG Audit: NAFKA was recently selected to take part in a Tanzania Feed the Future RIG Audit. The entire M&E team attended a meeting organized by USAID Tanzania at the NAFKA Morogoro office in March to respond to questions about NAFKA M&E protocols and systems.

SUCCESS STORY: USAID NAFKA USES MOBILE: SAVES TIME, ERRORS



Photo: Hamisi Mwango

M/s Anna Mumghamba, one of NAFKA's enumerators, interviewing a farmer using a Samsung Tab4 at Digoma village, Mvomero District.

***“This has revolutionized data collection for NAFKA and has increased the number of beneficiaries interviewed per day from 4 using paper questionnaires to 8 using the electronic questionnaire. This saves time, and makes the exercise easy and quick”,
Said Sarah Bwahama, NAFKA M&E Officer, Kongwa***



For the past four years USAID NAFKA Staples Value Chain Activity has been conducting necessary but expensive and time consuming annual production outcome and commodity market surveys using a large portion of its own staff with an aggressive use of pencil and paper, the traditional - and now former - method of M&E data collection. Although successful, there were challenges with human error, staff time diversion, pro-longed data cleaning, long backlogs on data entry, and overall cost.

These challenges prompted NAFKA to seek an alternative and more cost-effective method for data collection in 2015, and opted for the mobile phone/tablet data collection option using fifteen Samsung Galaxy Tab4's and the on-line Magpi survey platform with a three month license. Set up was easy starting with a three-day training for two key M&E staff on how to customize and use the Magpi system. Then an electronic questionnaire was developed, tested and loaded onto the 15 devices for data collection. The two M&E staff trained 20 NAFKA staff enumerators on how to use the Tab4's and the survey program.

Mr. Albin Massawe, the M&E Operations and Database Manager who had been involved in previous 'paperwork' surveys, collaborated that the new mobile-based data collection process greatly reduced the data entry burden. As data was entered by the interviewer in the field these records were uploaded directly to the NAFKA M&E cloud server using the built-in internet connectivity of the device.

Albin further explains, “The use of the Magpi mobile data collection tool improved data quality by allowing data validations rules and consistency checks that were integrated into the Magpie questionnaire”. An added bonus attributed to the increased speed of the process was a reduction in interview fatigue on the part of beneficiary – reducing form filling-time from 60 minutes to 30 minutes. Real-time access to information and automatic uploads to the cloud also reduced the risk of transcription errors.

Sara Bwahama, who was involved in the previous paperwork survey, used the mobile devices for data collection for the first time. She admits that “this has revolutionized data collection for NAFKA and has increased the number of beneficiaries interviewed per day from 4 using paper questionnaires to 8 using electronic questionnaire. This saves time, and makes the exercise easy and quick”.

With mobile data collection technology, the data analysis team had the opportunity to review data consistently to ensure it was ready for analysis just one day after the completion of data collection for all 1,200 sampled households.

Money and time saved is another big benefit survey time was reduced from 400 man-days to 300 man-days; the team itself was reduced to just 20 enumerators; and the data processing (cleaning and uploading) was reduced from 350 man-days to just 10 man-days. The tablets cost \$500 each and the Magpi Survey license and upload credits was only \$1800. “This investment was a no-brainer” says Tom Carr the NAFKA Chief of Party; “The use of the Magpi Mobile data collection system is now a permanent tool in the NAFKA M&E survey toolkit and is here to stay”.

Mbeya and Iringa Baseline Survey: NAFKA conducted a baseline survey in new regions Mbeya and Iringa in May to collect comprehensive, reliable, and comparable household-level data that will be used as a basis of comparison for future changes. The specific objectives of the survey were to:

- Collect socio-economic and demographic data for each district in new intervention areas;
- Conduct mapping for the sampled villages, and establish baseline values for key outcome agricultural indicators against which project performance will be measured (average yield, gross margin, hectares cultivated, number of farmers using improved technologies, quantities of produce sold, and value of sales);
- Measure availability of business development and financial services and ease of access to these services by smallholder producers;
- Set realistic performance targets based on current status of the indicators;
- Identify available opportunities and challenges for promoting maize and rice production and marketing in the two regions; and
- Identify constraints that might pose risks to achievements of desired results.

NAFKA staff conducted the survey in Mbeya Rural, Mbarali, Mbozi, and Rungwe districts in Mbeya region and Iringa Rural and Kilolo districts in Iringa region. The final baseline report is expected to be finalized in the first quarter of PY 2016. The baseline data cleaning and analysis was temporarily delayed to allow M&E to prepare for the Mid-Term Evaluation that was conducted in June.

Mapping Project Activities: To improve project activity mapping, ArcGIS mapping software packages were ordered in the third quarter to provide geographic data visualization, mapping, management, and analysis capabilities. These will allow M&E to update existing maps – last revised by TMG and M&E regional office – and to create new maps for expanded project areas. ArcGIS will enable NAFKA to record and store large quantities of information on agriculture, land environment, and people; analyze locational distributions and spatial patterns through maps; and present information that is complex to express verbally.

Feed the Future Mid-Term Evaluation: The mid-term performance evaluation for three Feed the Future projects – NAFKA, Mwanzo Bora, and Tuboreshe Chakula – was conducted during the month of June. This was a formative evaluation that was intended to provide an independent examination of the overall progress and achievement of three of the FtF activities in Tanzania. For NAFKA, the evaluation team interviewed project beneficiaries in Mvomero, Kongwa, and Kiteto districts. M&E prepared comprehensive learning pieces for each component outlining key results of our work over four years. These learning pieces were shared to the evaluators for their review. The evaluation team provided their preliminary observations on July 3.

Annual Outcome Survey (AOS) 2015: NAFKA conducted its Annual Outcome Survey (AOS) in August, a household survey of direct beneficiaries that is undertaken annually by project staff to measure changes in productivity, income, and food security during the previous year. The AOS provides primarily quantitative data on the relative success or failure of various project activities, as well as insight into performance areas not easily tracked on a regular basis. The AOS is also used to collect data for outcome-level indicators, which are reported on an annual basis.

For the first time, NAFKA used mobile technology to collect data for the AOS. Fifteen hand-held tablets (Samsung Galaxy Tab 4) were used for data collection, complemented by Magpi software to aggregate the data. Not only does mobile technology reduce the chances for human error when entering data, it also reduces the time it takes to conduct an individual survey. This year, the survey team of 20 enumerators took 14 days to collect data from 1,220 respondents, compared to last year's

survey team of 20 enumerators taking 23 days to interview 896 respondents, plus 14 additional days for data entry. The full AOS report is forthcoming, but summary findings for the five outcome indicators can be found under *Section 6: Key Achievements and Results*.

Quarterly Performance Review Meetings: M&E conducted performance review meetings each quarter of the reporting year. These meetings provide technical staff the opportunity to report on key accomplishments and challenges during the quarter, as well as to preview the work plan for the coming quarter.

Feed the Future

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