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KISAN PROJECT

ANNUAL REPORT
JULY 1, 2014 – SEPTEMBER 30, 2015
CONTRACT NUMBER AID-367-C-13-00004



Submitted October 30, 2015

This publication was produced for review by the United States Agency for International Development. It was prepared by Winrock International.

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DISCLAIMER

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

TABLE OF CONTENTS

TABLE OF CONTENTS.....	1
LIST OF TABLES	1
ACRONYMS.....	3
I. ANNUAL HIGHLIGHTS	3
II. DATA ANALYSIS	5
A. COMPARISON OF RESULTS AND TARGETS.....	5
III. PROJECT MANAGEMENT	21
A. COORDINATION AND LEVERAGE.....	21
B. PROJECT IMPROVEMENTS	22
.....	26
C. ENVIRONMENTAL COMPLIANCE.....	26
D. MANAGEMENT CHALLENGES AND RESPONSES.....	26
E. ANTICIPATED RISKS AND MITIGATION MEASURES	27
F. PROSPECTS FOR FY2016 (YEAR 4) PERFORMANCE	28
IV. ANNEXES	28
ANNEX 1: SUCCESS STORIES.....	28
ANNEX 3: FTFMS DISAGGREGATED DATA TABLES	32
ANNEX 4: FY2015 SURVEY DESIGN AND DATA QUALITY MEASURES.....	63
ANNEX 5: KISAN INDICATORS.....	66

LIST OF TABLES

Table 1. 4.5.2(13) Number of rural households benefiting	7
Table 2. 4.5.2(14) Number of vulnerable households benefiting	7
Table 3. 4.5.2(7) Number of individuals trained.....	8
Table 4. 4.5.2(11) No. of food security enterprises, organizations, and associations assisted	9
Table 5. 4.5.2(27) No. of members of producer organizations and CBOs assisted.....	9
Table 6. 4.5.2(37) Number of MSMEs/farmers receiving BDS.....	10
Table 7. FY2014 to FY2015 consolidation of categories related to improved technologies and management practices	12
Table 8. 4.5.2(5) Number of farmers who applied improved technologies or management practices*	13
.....	13
Table 9. 4.5.2(2) Number of hectares under improved technologies or management practices*.....	14
Table 10. Nepal Custom: Yield/Ha (metric tons)	15
Table 11. 4.5.2(23) Incremental sales*.....	15
Table 12. 4.5.2(16) Gross margin/Ha*	16
Table 13. Quantity of Nutrient-Rich Vegetables Set Aside for Home Consumption (MT)	16
Table 14. Nepal 2.2-1: Number of MSMSs established and/or expanded	17
Table 15. 4.5.2(38) Value of Private Sector Investment (USD)*	18
Table 16. 4.5.2(42) Number of Enterprises, Producers Organizations, and CBOs that applied Improved Technologies or Management Practices*	19

Table 17. (Nepal I.3.2-1) Percent of leadership positions filled by a woman or member of a vulnerable group	19
Table 18. 4.5.2(29) Value of Agriculture and Rural Loans (formal).....	20
Table 19. 4.5.2(30) No. of MSMEs/farmers assisted to access loans (formal and informal).....	21
Table 20. Management Challenges, Implementation Impacts, and Responses	27
Table 21. Anticipated Challenges, Potential Impacts, and Mitigation Measures	27
Table 23. KISAN Indicators FY2015-2017.....	66

COVER PHOTO: KISAN beneficiaries attend a training conducted by grantee Dev Bhar Milling Company to improve fine rice production.

ACRONYMS

BDS	Business Development Services
CEAPRED	Center for Environmental and Agricultural Policy Research, Extension and Development
DADO	District Agriculture Development Offices
DAG	Disadvantaged Group
DO	Development Objective
FTF	Feed the Future
FTFMS	Feed the Future Monitoring System
FTE	Full Time Equivalent
GESI	Gender Equality and Social Inclusion
GON	Government of Nepal
ICT	Information and Communication Technology
KPI	Key Performance Indicator
LSP	Local Service Provider
MIT	Micro-Irrigation Technology
MFI	Micro Finance Institution
MPC	Marketing and Planning Committee
MSME	Micro, Small, and Medium Enterprise
PIRS	Performance Indicator Reference Sheet
SACCO	Savings and Credit Cooperative
VDC	Village Development Committee
WIKISAN	Winrock International's KISAN project database

INTRODUCTION

The United States Agency for International Development in Nepal (USAID/Nepal) awarded Winrock International a contract on February 14, 2013 for the Knowledge-based Integrated Sustainable Agriculture and Nutrition (KISAN) Project. KISAN is funded with a budget of \$20.4 million over five years (2013-2017) by President Obama's Feed the Future (FTF) Initiative. Its goals are to sustainably reduce poverty and hunger in Nepal. KISAN's budget expended to date on improving smallholder agriculture is equivalent to \$113 per farmer.

KISAN contributes to all three USAID/Nepal Development Objectives (DOs):

- DO1 More Inclusive and Effective Government: KISAN forms community based organizations and strengthens members' skills and knowledge.

- DO2 Inclusive and Sustainable Economic Growth to Reduce Extreme Poverty: KISAN helps raise incomes for smallholder farmers by supporting high-value vegetable production, strengthening market linkages, and building private sector capacities.

- DO3 Increased Human Capital: KISAN improves household food consumption and nutritional status, especially of women and children, by helping farmers achieve higher yields and grow nutrient-rich vegetables.

KISAN works in twenty districts – ten districts in the Bheri and Rapti Zones of the Mid-Western Development Region; six districts in the Mahakali and Seti Zones in the Far-Western Development Region; and four districts in the Lumbini Zone in the Western Development Region. KISAN helps subsistence farmers graduate to commercial agriculture by improving on-farm production and facilitating market development. KISAN focuses on target commodities that are important for food security (rice, maize, and lentils), are high-value (off-season vegetables), and are nutrient-rich. Market opportunities vary across KISAN's target area. In areas with access to markets, such as the Terai and low-lying hills, KISAN focuses on building the capacities of private sector and community-based service providers to improve the supply of quality inputs, credit, and other services such as land preparation and equipment rental. In parallel, the project facilitates market linkages to improve farmers' access to service providers and buyers. Opportunities to attract buyers and to engage private sector service providers are fewer in more remote regions. Here, KISAN project staff work directly with farmers to achieve higher yields, promoted market development, and increase household consumption of vegetables. Coordination and collaboration with the Government of Nepal (GON) ensures unified messages on recommended agricultural inputs and techniques, and helps coordinate investments in irrigation and collection center infrastructure. KISAN works through change agents including commercial agribusinesses, market planning committees, GON extension staff, local service providers, lead farmers, and staff to deliver trainings, capacity building, and guidance.

Winrock implements the project in collaboration with two Nepali organizations: the Center for Environmental and Agricultural Policy, Research, Extension and Development (CEAPRED) and the Development Project Service Center (DEPROSC).

As per the contract (Section C.4.8.8 and F.4), Winrock must submit an annual progress report up to 30 days following each project year. The annual report describes the accomplishments compared to performance targets. While the Year Three (Y3) Annual Report covers the period from July 1, 2014 to September 30, 2015, annual results data aligns with the standard USAID fiscal year and that presented in the KISAN Project PMP: October 1, 2014 to September 30, 2015.¹

I. ANNUAL HIGHLIGHTS

In FY2015, KISAN's Year 3, the project accomplished the following results (refer to Figure 1):

- **83,286 farmers trained** and implementing improved agricultural practices and technologies.
- **Increased yields** for rice, maize, lentil and vegetables from 29 to 91 percent.
- **60,713 ha** under improved management practices and technologies.²
- **\$71.8 million** in farm-level incremental sales for target commodities.
- **Improved gross margins** for cereals by 38 to 139 percent. Greatest improvements in vegetable gross margins are for tomato, cucumber, and cabbage (122 to 161 percent).

KISAN also made technical and management improvements in a number of areas:

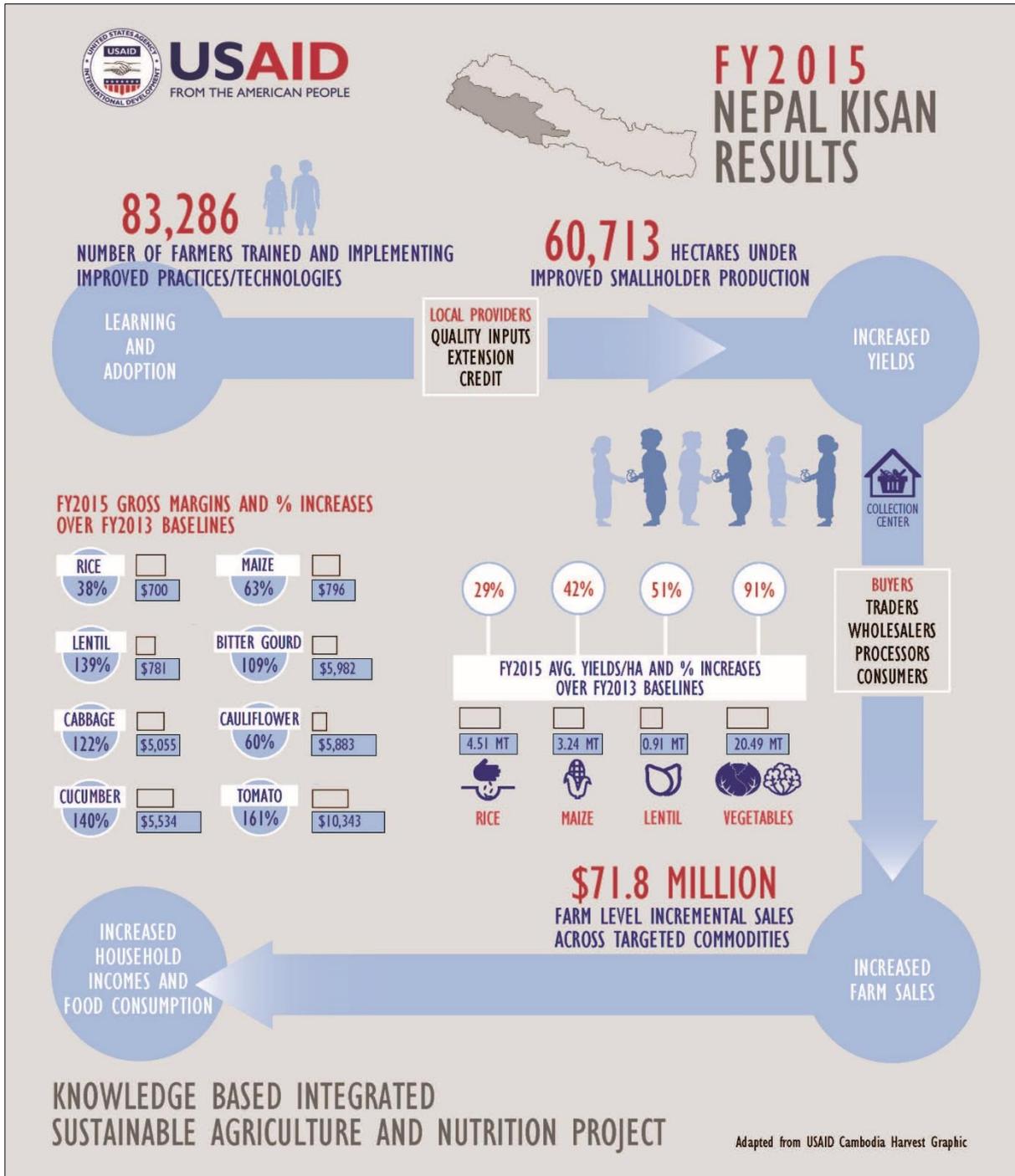
- **Aligned M&E Plan** with USAID/Nepal and Feed the Future (FTF) results frameworks and reporting schedules, and designed and implemented surveys to collect results data. FY2015 data presented in this Annual Report provides the first clear picture of project results, evidence for KISAN's theory of change, and scale of potential life-of-project (LOP) results.
- **Streamlined staff structure** to improve communications, reporting, and overall management.
- Identified and started to implement a **robust learning agenda**.
- **Revised overall technical approach** to focus on building private sector capacity to provide trainings, demonstrations, and technical information directly to farmers.
- **Significantly increased grant awards**, awarding \$254,740 in KISAN funds and negotiating final details for an additional \$550,000 in awards.

On April 26, 2015 Nepal suffered a 7.8 earthquake followed by weeks of strong aftershocks. KISAN's project areas were not significantly affected by the earthquake. Project activities went on largely unhindered; though some staff lost homes in earthquake-affected areas and took leave.

¹ Results for the quarter starting July 1 FY2014 and ending September 30 2014 were included in KISAN's FY2014 data in FTFMS.

² The number reported in FTFMS is higher (76,629 Ha) because FTF methodology allows the same hectare to be counted multiple times, based on the number of crop cycles a particular parcel of land is farmed. KISAN farmers report a total of 60,713 ha of cultivable land, which represents the upper limit of the actual number of hectares under improved management.

Figure 1: Selected KISAN FY2015 Results



II. DATA ANALYSIS

A. COMPARISON OF RESULTS AND TARGETS

OVERVIEW

The following narrative focuses on aggregate results for KISAN's 18 indicators and selected disaggregates. Indicators are grouped under the following themes:

- Project reach: number and type of beneficiaries;
- Farm-level outcomes;
- Private sector and organizational capacity building outcomes; and
- Access to finance outcomes.

This structure is more conducive to telling the story of KISAN's beneficiaries and project achievements than following the five outcomes in KISAN's contract, as the project design has evolved since the outcomes were identified.³ Gender and social inclusion (GESI) results are discussed throughout the narrative, including but not limited to those indicators that explicitly focus on women and disadvantaged groups.

KISAN's seven Key Performance Indicators (KPIs) were drawn from the Feed the Future (FTF) results framework and are marked with an asterisk*. Of these, KISAN's most impressive achievements occurred with farmers, far exceeding the project team's expectations:

- ***Application of improved technologies and management practices exceed targets for both the number of farmers and number of hectares.*** Farmers applied an average of 9.7 technologies and management practices each.⁴
- ***Yields exceed baseline by more than 25 percent*** for five of KISAN's eight most important commodities.
- ***Incremental sales of \$71.8 million*** exceed targets by a factor of more than seven and average ***\$862 per farmer.***
- ***Over 96 percent of KISAN farmers sold*** at least one KISAN-promoted commodity.⁵
- ***Gross margins exceed targets by 35 percent or more*** for seven of KISAN's eight most important commodities.
- ***KISAN's budget expenditure to date (FY2013-FY2015) is \$113 per farmer, compared to \$862 per farmer in total incremental sales.***

I. Additional information

Additional information is available in the following annexes:

Annex 5: table of indicator titles and corresponding FTF and USAID indicator numbers

Annex 3: complete data tables for all indicators and disaggregates

Annexes B and E in KISAN's M&E Plan: detailed guidance on who and what counts for each indicator

³ References to USAID/Nepal Intermediate Results (IRs) and Sub-IRs are also omitted from the narrative to allow for a more readable document. Refer to the indicator table in Annex 5 for USAID/Nepal indicator numbers, which reflect the IRs and Sub-IRs.

⁴ Compared to 6.5 in FY2014 and 4 in baseline.

⁵ Compared to 77 percent in FY2014 and 66 percent in baseline.

KISAN conducted extensive due diligence to ensure data quality. The key drivers of success are discussed in the Farm-Level Outcomes section.

PROJECT REACH: BENEFICIARIES

Who benefits? KISAN beneficiaries include smallholder households, producer organizations, trade associations, agribusinesses, financial institutions, and government. Noteworthy characteristics include:

- ***KISAN has formed over 4,000 farmers groups, trained over 83,000 farmers, and supported 465 additional private sector enterprises and organizations;***
- ***The majority of KISAN farmers trained are women (73 percent);***
- ***The vast majority of KISAN-supported farm microenterprises are managed by women (72 percent).***
- ***68 percent of beneficiary households are vulnerable to extreme poverty and social exclusion; and***
- ***24 percent of KISAN farmers are youth (15-30 years).***

KISAN met its household beneficiary target. Household beneficiaries equal the number of farmers trained: 83,286 (refer to Table 1, next page). Of these, 59 percent (49,384) are new beneficiaries in FY2015 and 41 percent (33,902) are continuing from FY2014. KISAN's contract specifies a target of 30 percent for the number of beneficiaries from female-headed households. KISAN achieved 28.6 percent, just under the target.⁶



Figure 3. Women provide essential agricultural labor and leadership due to significant out-migration. KISAN works with women to improve their cultivation techniques and access to credit and labor-saving technologies.

⁶ Although not explicitly stated, the rationale for KISAN's female-headed household target is that many are headed by widows who are more vulnerable to extreme poverty. This is not always the case in rural Nepal,

Table 1. 4.5.2(13) Number of rural households benefiting

HH Gender Disaggregates	FY15 Target	FY15 Actual	Percentage of Target
Female-Headed (female decision-maker) ⁷	30%	28.6%	95%
Male and Female Adults (M&F)	80,005	80,779	101%
Adult Female No Male (FNM)	1,374	1,424	104%
Male Adult No Female Adult (MNF)	621	625	101%
Disaggregates Not Available	0	458	n/a
Total	82,000	83,286	102%

KISAN met its vulnerable household target. In March 2015 USAID defined vulnerable households in its Mission Performance Management Plan (PMP) based on the criteria listed below, which omits female-headed households. Although it does not require disaggregates, they are presented to help characterize KISAN’s vulnerable beneficiary population. Disadvantaged groups (DAGs) include disadvantaged caste groups and ethnic and religious minorities (e.g. Dalits, Janjatis, and Muslims). Some households meet multiple criteria. The total reflects the number of households that meet one or more of the criteria to avoid double-counting.

Table 2. 4.5.2(14) Number of vulnerable households benefiting

Vulnerability Criteria	FY15 Target	FY15 Actual	Percentage of Target
Less than \$1.25/day/person ⁸	n/a	37,444	n/a
Disadvantaged group	n/a	55,104	n/a
Victim of natural disaster	n/a	4,040	n/a
Number vulnerable households	55,597	56,634	102%

KISAN met all indicator-level (aggregate) targets related to the number of enterprises, organizations, and members assisted. The following tables present data for several overlapping beneficiary groups.⁹ These output indicators and their disaggregates are most relevant for

where many female-headed households have men working overseas and receive remittances. Since the female-headed target remains in KISAN’s contract but is not a vulnerability criterion, it is reported under rural households.

⁷ The 28.6% is based on 23,860 of 83,286 KISAN farmers are from a female-headed household. USAID/Nepal’s definition for “female-headed household” differs from the FTF “Adult Female No Adult Male” (FNM) disaggregate. “Female-headed” signifies that a woman has decision-making authority, which may or may not be related to the absence of her husband. The FNM disaggregate reflects the composition of the members currently residing in the household. It does not reflect who makes the decisions. For example, it is common for a rural household to have a male elder who is no longer involved in making decisions about the use of farmland. Such households may be classified M&F but still be female-headed. This information is collected on the Intake Form at the time each KISAN farmer starts training.

⁸ KISAN uses the individual income reported by each farmer on the project Intake Form as a proxy for income/day/person, as household income is difficult to measure.

⁹ For example, number of producers trained [4.5.2(7)] equals the number of “KISAN farmers”, the number of members of producer organizations assisted [4.5.2(27)], and the number of rural households benefiting [4.5.2(13)].

characterizing KISAN’s beneficiaries than providing evidence of actual capacity development. For this reason, they are presented in the beneficiary section.¹⁰

Farmer training and subsequent needs based support: KISAN’s farmer mobilization and training activities were concentrated in the first year of fieldwork (FY2014) and helped create the foundation for the project’s ongoing market development work. KISAN’s Agricultural Technicians led each farmers group through a six-course training curriculum on market opportunities and improved on-farm practices. Upon group formation, course delivery was sequenced and timed to coincide with the local crop calendar and related fieldwork, so that farmers could immediately put what they learned to use in their fields. In parallel, KISAN facilitated linkages with agrovets to ensure that farmers had access to quality inputs when needed. As a result of this methodology, 100 percent of KISAN farmers adopted improved seeds in FY 2015 (to be described more fully later in this report). Although KISAN emphasized vegetable production, technical staff also advised on cereal production at strategic points during the agricultural calendar. Now that all KISAN farmers groups have graduated from formal training, KISAN Agricultural Marketing Technicians provide ongoing needs-based assistance that reinforces training messages. In parallel, they continue to strengthen marketing linkages while building private sector capacities to provide support services to farmer.

Refer to Table 3 for the number of beneficiaries trained, Table 7 for a list of improved technologies and practices promoted in KISAN training, and the narrative for Table 4 for a description of KISAN training for private sector firms.

Table 3. 4.5.2(7) Number of individuals trained

Disaggregates	FY15 Target	FY15 Actual	Percentage of Target
Type of individual			
Producers/Farmers	82,000	83,286	102%
Government	40	26	65%
Private Sector Firms	470	466	99%
Gender			
Male	22,376	23,070	103%
Female	60,134	60,708	101%
Age (Farmers Only)			% of Farmers
15-30 years (youth)	n/a	20,088	24%
31-60 years	n/a	57,281	69%
61+years	n/a	5,917	7%
Total	82,510	83,778	102%

¹⁰ The number of MSMEs assisted to access loans [4.5.2(30)] is discussed under Access to Finance. Although FTF identifies it as an output indicator, this is an outcome indicator in the context of KISAN’s project design. The MSME must actually receive a loan to be counted and KISAN does not disburse loans.

KISAN Assistance to Micro, Small and Medium Enterprises (MSMEs) and Organizations:

Beyond training farmers on improved production practices, most other KISAN assistance comprised business development services (BDS) for targeted agribusinesses; for example, KISAN:

- Helped farmers access improved inputs by linking them to agrovets;
- Helped farmers increase sales by strengthening over 100 collection centers and linking farmers to buyers, including traders;
- Helped over 170 agrovets improve inventory planning and book-keeping;
- Helped seed companies broker production contracts with over 1,300 KISAN farmers and cooperatives to improve supply chain management, increase the supply of quality seed on the market, and increase sales for farmers; and
- Worked with over 75 savings and credit cooperatives (SACCOs) and microfinance institutions (MFIs) to expand their membership/client base and loan products by linking them to KISAN’s farmers groups – most of which also function as savings groups (88 percent) as a result of KISAN support.

The following three tables capture overlapping data related to training, BDS, and other assistance. Disaggregates vary across indicators. KISAN’s unique beneficiary groups are listed for each FTF-specified “type of organization or SMSE” disaggregate to clarify who contributes.

Table 4. 4.5.2(11) No. of food security enterprises, organizations, and associations assisted

Selected Disaggregates	FY15 Target	FY15 Actual	Percentage of Target
Type of organization			
Private enterprises (for profit): banks and agrovets	341	192	56%
Producers organizations: farmers groups	4,000	4,004	100%
Trade and business associations: seed groups, traders, cooperatives, MPCs, SACCOs	110	272	247%
Disaggregates not available	0	1	n/a
Water users associations, women’s groups, and CBOs	0	0	n/a
Total	4,451	4,469	100%

Table 5. 4.5.2(27) No. of members of producer organizations and CBOs assisted

Selected Disaggregates	FY15 Target	FY15 Actual	Percentage of Target
Type of organization			
Producer organization	82,000	83,286	101.6%
Non-producer CBO ¹¹	60	unknown	unknown
Total	82,060	83,286	101.5%

¹¹ KISAN anticipated that some non-producer members of KISAN-supported MPCs would benefit. However, KISAN was unable to collect data on these beneficiaries.

Table 6. 4.5.2(37) Number of MSMEs/farmers receiving BDS

Selected Disaggregates	FY15 Target	FY15 Actual	Percentage of Target
Size of MSME			
Micro (1-10 FTE workers)	82,607	83,752	101%
Small (11-50 FTE)	4	0	0%
Medium (51-100 FTE)	0	0	n/a
MSME Type			
Agricultural producer: farmer	82,000	83,286	102%
Input supplier: agrovets, seed companies, agricultural business	120	180	150%
Trader: cooperatives, collection centers, MPCs	120	115	96%
Output processors: millers	13	3	23%
Non-agriculture: financial institutions	88	76	86%
Other	270	92	34%
Total	82,611	83,752	101%

In addition to the indicators listed above, the FTF Annual Portfolio Review looks at the number of rice, maize, lentil, and vegetable farmers. This information is reported in Table 10 under Direct Beneficiaries.

Across all indicators, results reflect direct beneficiaries only. These include beneficiaries supported by KISAN staff (primary contacts), and those trained by private sector service providers supported by KISAN (secondary contacts) under an intentional cascade approach. Spontaneous spillover of improved practices to neighbors is not counted (these are indirect beneficiaries). Starting in FY2016, KISAN will count secondary contacts associated with KISAN's private sector grantees. Although KISAN signed grant agreements in FY2015, grantees had not yet implemented sufficient activities by the end of FY2015 to measure results.

FARM-LEVEL OUTCOMES

This section looks at **yields, sales, and gross margins** and the **technology adoption** that drives yields. In addition, it looks at **increased consumption of nutrient-rich vegetables** as a complement to sales.

KISAN far exceeded its farm-level targets for FY2015, suggesting that targets were overly conservative. Extensive data quality assessment was conducted to rule out the possibility of data issues. The analysis shows that data across all contributing factors are within expected ranges. When KISAN set targets in August 2015, it anticipated modest increases across factors.¹² In contrast, all contributing factors increased simultaneously, creating a synergistic and compounding affect.

Two factors outside of KISAN's control explain part of the results:

¹² Refer to the Monitoring Systems and Performance Targets section for additional information on target-setting.

- **Weather:** Farmers benefitted from unusually favorable weather conditions in FY2015 that helped optimize yields; and
- **Market prices:** Prices increased for most KISAN commodities, accounting for \$15 million (21 percent) of the **\$71.8 million in incremental sales**.

Three factors attributable to KISAN interventions are significant:

- **Increased yields:** Beyond favorable weather, yields were driven by increased adoption of improved technologies and practices, for example, 100 percent of KISAN farmers invested in improved seeds. In addition, farmers had significantly more experience with improved practices, having completed KISAN's full six-part training course and multiple crop cycles.
- **Increased land area dedicated to vegetables:** As farmers shifted to vegetable production, the average number of hectares planted in cereals per farmer decreased (maize and lentils) or increased modestly (rice 4 percent) compared to baseline. Conversely, the average number of hectares per farmer dedicated to vegetable production increased by 100%, doubling from 0.08 ha to 0.16 ha.
- **More sellers selling larger volumes of vegetables:** Beyond price effects, the balance of incremental sales is attributable to the increase in the number of sellers¹³ and sales volumes, and a shift to high-value vegetables. Low-value cereals account for \$15.9 million (22 percent) of incremental sales, compared to \$40.9 million (57 percent) for vegetables.

2. Improved seeds, improved income

Access to quality certified seed in Nepal is constrained by limited production. Unique Seed Company Pvt. Ltd. plans to address this constraint with help from a KISAN grant. The company will contract farmers to grow certified seed and will hire three new technical staff to train 570 farmers on rice, maize, lentil, and vegetable seed production. The company will also offer credit to 500 farmers to buy inputs like high-quality foundation seed and tools. The company expects to increase its sales of certified seed by 10% within the first year. Farmers will benefit from improved seed cultivation skills and yields and an assured buyer; a larger number of farmers will benefit from having access to quality seed in local markets that could improve their yields.

KISAN's theory of change assumed that farmers would pilot test KISAN's recommendations on a very small area of their plot, and then incrementally increase the number of hectares planted in vegetables using improved technologies and practices as they gained confidence. In parallel, money earned from sales would allow them to invest in better technologies. KISAN anticipated that cereal production would decrease as farmers allocate land previously planted in cereals to higher-value vegetables. FY2015 data supports our theory. The welcome surprise is that KISAN farmers progressed more rapidly than expected with respect to improved production and marketing practices. The potential pace and scale of change was not evident when KISAN set targets based on FY2014 results, because KISAN farmers had only 6.6 months on average to contribute to FY2014 –

¹³ In addition, a higher percentage of KISAN producers sold compared to FY2014. This is significant for the calculation methodology, because the sales baseline is adjusted for annual increases in the number of producers, not sellers.

too short a timeframe to accurately predict the shape of the technology adoption/behavior change curve.

Tables 7-12 follow the production and marketing cycle outcomes, from application of improved on-farm technologies to yields, sales, and gross margins. Table 7 presents a list of improved technologies and management practices promoted by KISAN, grouped by FTF disaggregate. This identifies potential behavior changes attributable to KISAN farmer training. The two far-right columns list the number of potential technologies per FTF disaggregate in FY2014 and FY2015. KISAN condensed the list in FY2015 to collapse closely-related practices into a single practice (e.g., line sowing and raised bed cultivation, which would not occur separately).

Table 7. FY2014 to FY2015 consolidation of categories related to improved technologies and management practices

FTF Disaggregates	No. in FY2014	No. in FY2015
Crop genetics: improved seed	2	1
Cultural practices: 1) improved nursery practice, 2) soil solarization, 3) direct seeding of cereals by machine, 4) staking 5) mulching, 6) raised bed farming, and 7) polypot/polybag and/or tray nursery	17	7
Pest management: 1) Integrated Pest Management (IPM) – lure and traps, judicious use of Class III and IV pesticides, <i>jholmol</i> (liquid manure); and 2) proper handling of sprayer.	5	2
Disease management: judicious use of fungicide	1	1
Soil conservation: 1) terrace improvement, and 2) use of nutrients and lime, use of bio-fertilizer.	7	2
Irrigation: 1) shallow tube well, 2) lift irrigation, 3) canal, 4) drip irrigation (micro-irrigation technology), 5) sprinklers	6	5
Water management: 1) plastic pond and 2) cement or stone masonry tank.	5	2
Climate mitigation: 1) drought or flood tolerant seed varieties and 2) plastic house or tunnel for vegetable production	2	2
Marketing: input costs recorded in logbook	3	1
Post-harvest handling: 1) super bags for grains, 2) metal seed bins, and 3) plastic crates for vegetable transportation.	8	3
Other: off-season cultivation of vegetables for sell to other eco-regions	1	1
Total Number of Potential Technologies	57	27

Application of improved technologies and management practices exceeds targets for both the number of farmers and hectares with at least one improvement by 11 to 25 percent. As noted for FY2014 results, given the large number of improved technologies and management practices in agriculture and the long history of donor interventions in the Zone of Influence, application of at least one improvement is a very low bar that obscures the actual level of behavior change among project beneficiaries. The change in the average number of improvements provides a clearer picture.

KISAN-assisted farmers applied an average of 9.7 improved technologies or management practices in FY2015 – more than double the baseline of 4. These numbers underestimate adoption, as KISAN collapsed its baseline list of 58 improved technologies and practices into 28 for the FY2015 survey. A corresponding adjustment to the baseline number (reduction) will be required to fully capture project gains.



Figure 4. Through demonstrations of agro-technology, like the push row seeder pictured here, KISAN promotes adoption of labor-saving technologies that increase yields and incomes of smallholder farmers.

Over 76 percent of improved technologies and management practices were applied jointly by women and men. In addition, farmers applied improvements to both cereals and vegetables.

Table 8. 4.5.2(5) Number of farmers who applied improved technologies or management practices*

Selected Disaggregates	Baseline	FY15 Target	FY15 Actual	% of Target
Commodity				
Rice farmers	26,871	66,318	65,826	99%
Lentil farmers	6,880	20,434	31,839	156%
Maize farmers	19,273	43,232	52,553	122%
Vegetable farmers	21,698	68,906	75,286	109%
Gender				
Male farmers	18,733	33,411	9,420	n/a
Female farmers	13,864	41,435	10,514	n/a
Joint farmers ¹⁴	n/a	n/a	63,352	n/a
Technology				
Crop genetics	20,334	70,146	83,286	119%
Cultural practices	29,629	74,483	76,539	103%
Pest management	20,334	59,229	57,850	98%
Disease management	5,206	34,895	52,723	151%
Soil conservation	3,247	72,124	39,314	55%
Irrigation	27,853	55,171	59,291	107%
Water management	18,701	5,107	1,154	23%
Climate mitigation	1,424	8,749	46,867	536%
Marketing	1,432	34,168	29,253	86%

¹⁴ FTFMS does not have a gender disaggregate for “joint” application. KISAN therefore divides the result for “joint” equally between the “male” and “female” disaggregates in FTFMS. In this table, we present the three disaggregates, in accordance with the FTF Annual Portfolio Review Table (Annex K of KISAN’s M&E Plan).

Table 8. 4.5.2(5) Number of farmers who applied improved technologies or management practices*

Selected Disaggregates	Baseline	FY15 Target	FY15 Actual	% of Target
Post-harvest handling	1,018	69,326	27,893	40%
Other	0	0	9,748	n/a
Total with 1 or more	32,597	74,846¹⁵	83,286	111.3%

KISAN farmers applied improved technologies and management practices to 76,629 hectares.

This number is based on FTF measurement methodology, which requires double-counting. It exceeds the number of cultivatable hectares reported by KISAN farmers in the FY2015 survey: **60,713 hectares**. This latter figure is reported in Figure 1 as a better proxy for the number of hectares under improved management when communicating KISAN results to outside audiences.

Table 9. 4.5.2(2) Number of hectares under improved technologies or management practices*

Disaggregates	Baseline	FY15 Target	FY15 Actual	% of Target
Commodity				
Rice	16,157	40,455	42,416	105%
Lentil	1,994	7,278	8,138	112%
Maize	4,233	9,317	10,376	111%
Vegetables	1,189	4,224	11,669	276%
Technology¹⁶				
Crop genetics	10,585	45,616	74,223	163%
Cultural practices	16,775	59,139	8,859	15%
Pest management	2,201	26,171	7,212	28%
Disease management	623	14,436	23,449	162%
Soil conservation	16,528	57,342	8,701	15%
Irrigation	10,336	31,956	47,212	148%
Water management	199	1,932	203	10%
Climate mitigation	410	5,177	7,818	151%
Other	14,710	54,994	0	0%
Total with 1 or more¹⁷	23,563	61,274	76,629	125%

¹⁵ FTFMS target is 75,006 which includes 160 other than farmers

¹⁶ For each technology disaggregate, hectares are counted more than once if multiple technologies are applied to the same hectare. The number of crop cycles is not considered.

¹⁷ For the “Total with 1 or more” figure, hectares are counted more than once for multiple crop cycles. The number of technologies applied is not considered.

Yields exceed targets by more than 25 percent for five of KISAN's eight most important commodities.

Table 10. Nepal Custom: Yield/Ha (metric tons)

KISAN Commodities	Baseline	FY15 Target	FY15 Actual	% of Target	No. of Direct Beneficiaries
Rice	3.49	3.56	4.51	113%	70,031
Maize	2.28	2.88	3.24	144%	58,137
Lentil (Pulses)	0.60	0.63	0.91	127%	37,983
Bitter Gourd	8.62	13.94	18.68	134%	31,198
Cabbage	15.65	21.09	26.44	125%	57,231
Cauliflower	13.07	16.93	18.49	109%	62,161
Cucumber	13.87	18.82	23.06	123%	30,854
Tomatoes	14.43	19.33	30.22	156%	44,185

Incremental sales of \$71.8 million exceed targets by a factor of more than seven and average **\$862 per farmer**.

Table 11. 4.5.2(23) Incremental sales*

Selected Disaggregates	Baseline	FY15 Target	FY15 Actual	% of Target	No. of Direct Beneficiaries
Total: All Commodities					
Total volume of sales (MT)	n/a	129,052	339,081	263%	n/a
Total no. of direct beneficiaries ¹⁸	86,176	208,942	242,600	116%	242,600
By Commodity					
Rice	n/a	\$191,201	\$14,175,512	7,414%	70,031
Lentil	n/a	\$246,325	\$2,240,263	909%	37,983
Maize	n/a	\$1,055,141	\$2,451,591	232%	58,137
Vegetables (16 total) ¹⁹	n/a	\$7,860,115	\$52,966,108	674%	76,449
Total		\$9,352,782	\$71,833,475	768%	242,600

Gross margins exceed targets by 35 percent or more for seven of KISAN's eight most important commodities. Much more important than gross margin increases for individual commodities -- **KISAN has helped farmers significantly increase high-value vegetable production, which have gross margins that are 7-8 times greater than cereals.** This is evident in the doubling of land dedicated to vegetables (per farmer average) and substantial increase in volume and value of vegetables sales. Tomato gross margins can be up to 14 times greater than cereals and account for 21 percent of vegetable production and 16 percent of incremental sales.

¹⁸ Beneficiaries in this table are counted for each commodity grown.

¹⁹ KISAN's 16 target vegetables include: bitter gourd, cabbage, cauliflower, cucumber, tomatoes, eggplant, chili, long bean, bottle gourd, okra, spinach, pumpkin, carrot, onion, sponge gourd, and french bean.

Table 12. 4.5.2(16) Gross margin/Ha*

Selected Disaggregates	Baseline	FY15 Target	FY15 Actual	% of Target
Rice	\$506	\$660	\$700	106%
Maize	\$488	\$579	\$796	138%
Lentil (pulses)	\$327	\$391	\$781	200%
Bitter gourd	\$2,822	\$4,366	\$5,892	135%
Cabbage	\$2,276	\$3,014	\$5,055	168%
Cauliflower	3,682	\$4,069	\$5,883	145%
Cucumber	3,961	\$3,893	\$5,534	142%
Tomatoes	3,969	\$4,636	\$10,343	223%

Total consumption of nutrient-rich vegetables exceeds the target by almost double. Note, however, that KISAN's target was set based on baseline results for only four vegetables, compared to seven vegetables in FY2015. Regardless, it is clear that production of nutrient-rich vegetables is increasing in the Zone of Influence (with the exception of carrots) and that these vegetables are either consumed by the producer, shared with neighbors, or sold in the market for consumption by other households.²⁰

Table 13. Quantity of Nutrient-Rich Vegetables Set Aside for Home Consumption (MT)

Commodities	Baseline	FY15 Target	FY15 Actual	% of Target
Consumption				
Bitter gourd	504	1,410	1,713	121%
Cabbage	1,233	2,143	5,236	244%
Cauliflower	1,471	2,977	5,534	186%
Okra	456	1,151	1,343	117%
Carrots	23	--	20	n/a
Spinach	36	--	37	n/a
Pumpkin	229	--	772	n/a
Total		7,681	14,656	191%
Beneficiaries				% Increase
Bitter gourd	11,212	--	31,045	177%
Cabbage	16,036	--	57,231	257%
Cauliflower	18,023	--	62,008	244%
Okra	10,212	--	15,438	51%
Carrots	1,207	--	306	-75%
Spinach	3,065	--	653	-79%
Pumpkin	8,893	--	9,839	11%

²⁰ Post-production losses may also occur, an issue that KISAN will assess in supplementary analysis of survey results as part of project learning.

PRIVATE SECTOR AND ORGANIZATIONAL CAPACITY BUILDING

KISAN's capacity building outcome indicators measure enterprise expansion (increased revenues), value of private sector investment, application of improved technologies and management practices, and gender and social inclusion. These outcomes are driven by training and other assistance provided to farmers, firms, and organizations reported earlier in the Beneficiary section. This section focuses on evidence of actual increased capacities.

KISAN exceeded its target for the number of new or expanded MSMEs.

This is a new indicator for KISAN in FY2015 from the USAID/Nepal PMP. New MSMEs established as a result of KISAN assistance include farmers and agrovets who sold products for the first time in FY2015. Expanded MSMEs include farmers and other MSMEs that increased the value of sales by 10 percent or more since FY2014. The low target (611 MSMEs) mistakenly omits farmers from the micro-enterprise disaggregate. For FY2015 reporting, KISAN assumes that the 75,020 farmers who sold high-value vegetables is a conservative estimate of the number of farmers who increased sales by at least 10 percent.²¹ This is 90 percent of KISAN farmers. An additional 464 microenterprises also increased sales by at least 10 percent.

3. Meeting urban demands

Urban demand for poultry and livestock is increasing, creating unmet demand for quality feed. With a KISAN grant, Pyuthan Feeds Firm plans to double its operational capacity and increase locally sourced maize from 40 MT to 670 MT and increase soya capacity as well. To achieve these increases, Pyuthan will contract 450 farmers and establish an extension team of two agricultural technicians, five traders, and 20 lead farmers who will advise 600 farmers on maize and soya cultivation using DADO-approved, high-yield seed varieties.

Table 14. Nepal 2.2-1: Number of MSMEs established and/or expanded

Selected Disaggregates	FY15 Target	FY15 Actual	% of Target
Size of MSME			
Micro (1-10 FTE workers)	--	75,484	--
Small (11-50 FTE)	--	0	--
Medium (51-100 FTE)	--	0	--
Gender of Owner			
Male	--	20,766	--
Female	--	54,718	--
Joint	--	0	--
Age of Owner			
15-30 years (youth)	--	12,493	--
31-60 years	--	53,234	--
61+years	--	9,757	--
Disadvantaged Group			

²¹ The FY2015 survey did not collect information on FY2014 sales, as incremental sales are measured against the baseline for FTF, not against the prior reporting period. The data shows that *average total sales per farmer* increased 362 percent since FY2014 (from \$248 to \$1,143) and *average vegetable sales per vegetable farmer* increased 657 percent since FY2014 (from \$91 to \$693). Although it is likely that almost all 83,286 KISAN farmers achieved higher sales, KISAN focuses on vegetable sellers (75,020) to report a conservative, lower-limit estimate.

Table 14. Nepal 2.2-1: Number of MSMSs established and/or expanded

Selected Disaggregates	FY15 Target	FY15 Actual	% of Target
Dalit	--	8,676	--
Janajati	--	32,714	--
Muslim/Madhesi	--	8,000	--
Other	--	2	--
Total	611	75,484	n/a

KISAN exceeded its target for the value of private sector investment by more than double, for a total of over \$1.6 million in capital investment. This target is relatively low because most KISAN-supported MSMEs make working capital investments, such as agricultural inputs, rather than capital investments. The capital investments reported below reflect investment in land/building, Vehicle, Furniture, Machinery, Computers, Tools and Equipment.

Table 15. 4.5.2(38) Value of Private Sector Investment (USD)*

Selected Disaggregates	Baseline	FY15 Target	FY15 Actual	% of Target
Total	n/a	\$777,514	\$1,616,024	208%

KISAN exceeded its target for the number of enterprises and organizations that applied an improved technology or management practice by 10 percent. This number is largely driven by farmers groups who have started to save as a group. Other examples for KISAN beneficiaries include:

- **Cooperatives:** prepared business plans, improved accounting practices, improved credit flow, and proper seed storage.
- **Collection Centers and Marketing Planning Committees:** held market-led production planning meetings, provided marketing extension services to members, wrote a business plan, posted a Market Information Board (wholesale and retail prices, planting times, etc.), and established links to three or more traders or wholesale markets.
- **Agrovets:** Practiced safe distribution, use, and disposal of pesticides and fungicides; installed a first aid box; took health and hygiene precautions (soap and water for hand-washing); stocked sand for pesticide spills; conducted demonstrations or training for farmers; and properly stored agro-chemicals.

4. Climate smart technology improves resiliency

Vegetable production can significantly increase smallholder incomes; however, it requires reliable access to water. Unpredictable weather and the high cost of irrigation often preclude smallholders from this technology. Sital Thopa Sichai Prabidhi Udhog plans to change that through a KISAN grant. As a micro-irrigation technology manufacturer and dealer, STU plans on adding 13 new dealers linked to Community Based Agents who will work on a commission basis. They will be trained on logistics, assembling, maintenance, and basic finance and in turn will train 10,000 farmers on MIT and vegetable cultivation. STU expects to sell an additional 10,000 MIT systems and will make credit available for at least 5,000 farmers to purchase MITs.

- **Financial Institutions:** Expanded access to wholesale credit; increased share capital, deposit, and financial resources; improved audit system, and improved transparency.
- **Cross-cutting:** improved information technology, improved record-keeping, improved budgeting and financial management, and new or improved business plan.

Table 16. 4.5.2(42) Number of Enterprises, Producers Organizations, and CBOs that applied Improved Technologies or Management Practices*

Selected Disaggregates	Baseline	FY15 Target	FY15 Actual	% of Target
Type of Organization				
Private enterprises	n/a	273	172	63%
Producers organizations	n/a	3,200	3,527	110%
Trade and business associations	n/a	88	186	211%
WUAs, womens groups, and CBOs	n/a	0	0	0
Total		3,561	3,885	109%

Fifty-seven percent of leadership positions in KISAN-supported community groups are filled by women or members of disadvantaged groups. In August 2015, USAID/Nepal requested that KISAN adopt a new cross-cutting governance indicator related to gender and social inclusion (GESI) in leadership positions in “community management entities”. These are broadly defined to include community groups engaged in private sector activities. KISAN set targets starting in FY2016. Although not required, FY2015 results are reported below, broken down by organization type. Of KISAN’s 4,004 farmers groups, 54 percent have a female chairperson.²²

Table 17. (Nepal 1.3.2-1) Percent of leadership positions filled by a woman or member of a vulnerable group

Organization Type	Total Leaders ²³	GESI Leaders	GESI Percentage
Number of Women that are Chair of Farmer Groups			
No. of Farmer Group chairperson	4,004		
Women as the Chair of the FG		2,181	54%
Number of Women and DAG members in Executive Committee or Board of Organizations			
No. of Executive Committee/Board Members	2,655		
Women and/or DAG ²⁴		1,634	62%
Totals/Percentage	6,659	3,815	57%

²² No data is available on the percentage of chairpersons who are members of disadvantaged groups, since KISAN collected data on group members at the time groups were formed, before this indicator was assigned, and no new groups are being formed at this point in the project cycle.

²³ Although not requested in the USAID/Nepal Performance Indicator Reference Sheet (PIRS) for this indicator, KISAN has provided data for the total number of leadership positions and number leadership positions filled by women or members of disadvantaged groups to ensure that the Mission can roll-up project-level results across its program portfolio. Percentage figures alone cannot be aggregated.

²⁴ This figure avoids double-counting individuals who are both female and a member of a DAG.

ACCESS TO FINANCE

KISAN exceeded targets for both loan indicators by roughly 3 to 4 times. KISAN's access to finance indicators focus on loans and exclude other financial services such as savings. The two indicators measure different types of loans:

- “Value of loans” measures the value of cash loans from formal financial institutions to KISAN beneficiaries that are invested in agriculture²⁵.
- “Assisted to access loans” measures the number of cash and in-kind loans, to KISAN beneficiaries, from a formal or informal financial institution, for any purpose.

Table 18. 4.5.2(29) Value of Agriculture and Rural Loans (formal)

Disaggregates	Baseline	FY15 Target	FY15 Actual	% of Target
<i>Type of loan recipient</i>				
Producers	\$486,605	\$1,710,123	\$6,658,270	389%
Local traders/assemblers: cooperatives, agrovets, traders	\$91,379	\$203,609	\$593,376	291%
Wholesalers/processor: seed companies, cereal and feed mills	\$18,684	\$60,000	\$316,105	527%
Others	\$70,947	\$1,973,732	0	0%
<i>Gender of recipient</i>				
Male	\$230,802	\$296,060	\$4,831,066	1,632%
Female	\$59,593	\$394,747	\$2,736,685	693%
Joint	\$377,220	\$1,282,925	\$0	0%
Total	\$667,615	\$1,973,732	\$7,567,751	383%

Over half of KISAN farmers received a loan. KISAN's efforts to increase access to *informal* credit has focused on helping farmers groups function as savings groups. This is a critical first step in helping farmers become credit-worthy so that they can eventually access formal sources of credit. In addition, KISAN has worked with agrovets to provide credit for agricultural inputs. KISAN's efforts to increase access to *formal* sources of credit have focused on helping SACCOs and MFIs expand their membership/client base by linking them to KISAN's farmers groups and wholesale credit.

KISAN's FY2014 farmer survey asked participants an open-ended question about their top three constraints to increased yields and sales. Only 3 percent of respondents identified lack of access to credit. KISAN suspected that this response may reflect a cultural stigma related to borrowing. The data in this section suggests that farmers have access to credit, do in fact borrow, and that the

²⁵ Although the formal definition refers to loans attributable to KISAN for only KISAN commodities, it is not possible to disaggregate loans by just KISAN commodities as neither farming households nor organizations are able to isolate what commodities loan proceeds were used for. Attribution also is difficult to determine. As loan growth is directly related to sales growth and sales growth is attributable to KISAN, all agricultural loans were included.

number of KISAN farmers who have received loans has increased almost 10-fold since baseline (while the number of KISAN farmers has increased less than 3-fold).

Table 19. 4.5.2(30) No. of MSMEs/farmers assisted to access loans (formal and informal)

Disaggregates	Baseline	FY15 Target	FY15 Actual	% of Target
<i>Size of MSME</i>				
Micro	4,931	17,818	48,440	272%
Small	0	4	0	0%
Medium	0	0	0	n/a
<i>Gender of owner</i>				
Male	1,705	2,673	15,441	578%
Female	440	3,567	32,652	915%
Joint	2,786	11,582	347	3%
Total	4,931	17,822	48,440	272%

III. PROJECT MANAGEMENT

A. COORDINATION AND LEVERAGE

KISAN links beneficiaries to other funding opportunities to help communities leverage KISAN trainings by adopting improved techniques and technologies that enhance agriculture production. This approach has established an environment for multi-stakeholder coordination, and minimized duplication of donor-funded activities in common working areas. Collaborative activities are carried out jointly, with KISAN providing technical assistance and partners contributing resources in kind or cash. In Year 3, KISAN worked with government and non-government organizations in activities ranging from seed and crop production support to investment in machinery, leveraging a total of \$1,721,174.

Coordination with the government has been at local, regional, and central levels – from Directorates, District Agriculture Development Offices (DADO), and Village Development Committees (VDC) to projects, leveraging a total of \$924,746. Non-government collaborators have included community-based groups; private sector actors such as agrovets, seed companies etc.; the central and district chapters of the Federation of Nepalese Chamber of Commerce and Industries (FNCCI); and other development projects. Non-government coordination has leveraged \$ 796,429. In Year 3, KISAN has also leveraged funds from a range of agriculture-related business such as mills and input suppliers. This private sector leverage is mostly cost-share in investments through KISAN’s grants program (see Grants section below).

5. National Seed Summit

The Government of Nepal’s Ministry of Agricultural Development, in close coordination with development partners and other relevant stakeholders including KISAN, held the National Seed Summit in September 2015. The Summit brought together more than 150 public, private, and donor stakeholders to identify how policy makers, the regulatory environment, and private sector actors can come together to accelerate seed sector development in Nepal. For instance, one commitment is to establish a Seed Industry Innovation Lab for technical assistance to relevant public and private sector actors.

B. PROJECT IMPROVEMENTS

Year 3 of the KISAN Project marked a year of improvements in several areas including M&E systems, staff structure, grants, and overall technical approach.

REVISED APPROACH

Mid-way through Year 3, KISAN strengthened its approach, supplementing direct farmer trainings with more needs based assistance and more proactively promoting linkage of beneficiary farmers with key value chain actors such as agrovets, seed companies and buyers. In addition, KISAN became more deliberate and strategic in building capacity within the private sector to deliver quality agriculture inputs and services, particularly in areas with sufficient access to markets such as the Terai and low-lying hills. Through the grants program, KISAN is identifying private sector actors such as agrovets, agro-machinery dealers, processors, and seed companies and providing grants that embed technical services in their farmer-oriented business activities; these services may include demonstrations of equipment and inputs, guidance on use, trainings, etc. This improves the sustainability of smallholder access to technical services and inputs. The model is based on the premise that it is in agribusinesses' interest to provide these services to farmers if doing so increases their profit.

In more remote regions, KISAN project staff continue to work directly with farmers to achieve higher yields and income. KISAN is also continuing to facilitate market linkages to improve farmers' access to service providers and buyers, and coordinating with the GON and other stakeholders.

GRANTS

As mentioned above, KISAN's grants program is focusing on agribusinesses that have an interest in embedding technical services in their business and marketing plans. KISAN issued an Annual Program Statement to expedite the process and to solicit a wide range of concepts, and also expanded the Grants Team bringing on a Grants and

6. Market opportunity for increased farmer incomes

Pathak Khadya Udyog Mill in Kanchanpur is working to expand into fine rice processing, which is in high demand in urban markets, with help from a KISAN grant. Typically, smallholders grow coarse rice, which has lower value. The mill will train 25 traders, 3 technical staff, and 2 LSPs to support farmers in growing fine rice and lentil, and will also contract 1,000 farmers and train a total of 2,050 farmers in fine rice cultivation. Farmers will benefit from increased incomes from selling a higher-value product, and the mill can increase sales and profits by investing in their supply chain.



Figure 5. Dev Bhar Milling Company has developed a plan, through a KISAN grant, to engage 700 smallholders via contract farming, provide training, extension services, and credit for seeds, and increase its processing capacity. Both the mill and farmers benefit: the mill can reduce its dependence on rice imports from India and increase its production and profits while farmers learn how to increase their yields and have an assured buyer, reducing their risk and increasing their income.

Procurement Manager to improve grant processes and financial management and a Business Opportunities Director to better integrate private sector oriented grants into KISAN. In Year 3, the project awarded \$338,046 (\$254,740 in KISAN funds, \$83,306 in grantee contributions) in grants to private sector actors; no grants prior to Y3 had been executed. As of September 30, 2015, KISAN eight additional grants totaling \$523,664 were pending USAID approval or waiting for the SAMs registration. An additional 12 companies are working with KISAN to refine their applications. Grants have been made to agribusinesses to conduct demonstrations and trainings on agro-machinery, seed production and technology, and agricultural practices for rice, lentil and maize.

MONITORING SYSTEMS AND PERFORMANCE TARGETS

In Year 3, KISAN completed a substantial overhaul of M&E systems. KISAN rewrote the Monitoring and Evaluation Plan to align with USAID/Nepal and Feed the Future (FTF) results frameworks and annual reporting schedules. In parallel, KISAN designed and implemented surveys to collect outcome data in accordance with FTF indicator measurement guidance. In April KISAN conducted a joint baseline-FY2014 results survey and used this data to set performance targets for FY2015-FY2017. In the survey debrief, KISAN noted that FY2014 data provided an incomplete picture of potential impact, because it measured a truncated year in which KISAN farmers had only 6.5 months on average to contribute to results. The truncation was a consequence of the project roll-out schedule across KISAN's three development regions, the agricultural calendar, and FTF measurement methodology that counts all farm-level outcomes (technology adoption, yields, gross margins, and sales) in the year in which sales occur. KISAN concluded that a clear picture would not emerge until FY2015 data was collected. Nonetheless, KISAN undertook a thoughtful target-setting exercise involving M&E staff, key technical staff, project leadership, and USAID/Nepal staff. KISAN experts estimated expected ranges for a series of key drivers related to prices, number of hectares, yields, number of sellers, and sales volumes -- and anticipated modest increases across all factors. KISAN subsequently conducted our FY2015 results survey starting in late September.

FY2015 data presented in this Annual Report provides the first clear picture of project results, evidence for KISAN's theory of change, and scale of potential life-of-project (LOP) results.

KISAN is pleased to report strong project performance across all indicators that far exceeded targets. In November 2015, KISAN will set new, more ambitious out-year targets, especially for farm-level outcomes.

For both surveys, Winrock subcontracted one to two firms to help conduct interviews, data entry, and data analysis. Project staff continue to collect output data on an ongoing basis. All data is submitted to USAID through the Feed the Future Monitoring System (FTFMS). Refer to Annex 3 for the FTFMS data tables and Annex 4 for a brief description of the survey design and data quality measures.

PROJECT LEARNING AGENDA

In alignment with USAID/Nepal and Bureau of Food Security's vision for project learning, KISAN has developed a learning agenda and started to collect data to help project staff better understand the project implementation context related to market development opportunities and constraints and the factors that influence household and business decisions. Mechanisms for data collection include

supplementary survey questions, special studies, and ongoing consultations with farmers groups on priority needs.

Results surveys: KISAN started incorporating learning questions at a modest scale in our FY2014 farmer survey, by asking farmers an open-ended question about their top three constraints to achieving increased yields and sales. For our FY2015 survey, we significantly expanded the number of learning questions to include:

- Land status: owned or leased;
- Access to irrigation: hectares irrigated, months available, and technology type;
- Pre and post-harvest losses: volumes and causes;
- Scale of sharing food with neighbors who are worse off, an indicator of resilience capacity;
- Sales transactions: number and type of buyers and locations;
- Access to inputs: sources for quality seeds, fertilizer, pesticides, and other inputs;
- Scale of household remittances and other income sources;
- Value of household savings;
- Household uses of loan funds; and
- Farmer's perceptions about constraints: household labor, access to loans, access to water and irrigation, decision-making authority, skills and knowledge (on-farm practices, marketing, prices, literacy/numeracy, and knowledge of appropriate technologies), access to quality inputs and trusted advisors, access to markets (transportation and buyers), access to electricity, access to tools and mechanization, and vulnerability to natural disasters and extreme weather.

In parallel, KISAN incorporated questions in the FY2015 firm and organization questionnaire to assess constraints and help measure private sector capacity development outcomes beyond the limited FTF indicators. For example:

- Indicators of firm and organization expansion and capacity development: 1) change in sales value or volume; and/or 2) change in the number of members or customers/buyers, districts covered, agricultural products and services offered, or employees.
- Questions about constraints and opportunities: 1) access to finance, including overdraft facilities, 2) products or services requested by customers that firms and organizations are unable to provide and why, and 3) unmet loan demand of members/customers.
- Project feedback: 1) what KISAN assistance has been most helpful, and 2) what difference has KISAN support made?

KISAN will conduct further data analysis and submit a Project Learning addendum to the Annual Report in mid-December.

Special studies: KISAN is developing several scopes of work for market assessments and focus group research on the following topics:

- Market channels study for vegetables: Including MPCs, wholesale markets, and cold storage, as well as examining opportunities to expand linkages to traders.
- Agrovet needs and opportunities assessment.
- Economic potential of rice and maize, taking into consideration gross margins and competition with Indian imports.
- Beneficiary perceptions about credit and investment.
- Gender assessment.
- What drives beneficiaries' decisions?
- Feasibility of private sector oriented local level grain storage options for farmers.
- Feasibility of agriculture insurance.
- Pilot use of soil testing and analysis to tailor fertilizer recommendations and increase yields.

Ongoing farmer needs assessments: To support KISAN's needs based approach to technical assistance, KISAN has developed tools to solicit feedback from project participants. These include:

- A priority constraints questionnaire to solicit input on group level needs as well as for project design decisions and work plan development.
- A preparedness checklist that will be used routinely by KISAN field staff during visits to gauge whether farmers are prepared for next steps in the local agricultural calendar with respect to obtaining inputs and planning field work. This will be used to prioritize the Agricultural Marketing Technicians follow-up support to farmers groups.

Adopting a resilience lens: KISAN notes that the ongoing fuel shortage crisis in Nepal, which started in October 2015 during the rice harvest period, is likely having a negative impact on the agriculture sector. In follow-up to recommendations from the USAID Resilience Measurement Workshop for Implementing Partners on September 17th, KISAN field staff will interview farmers and other market actors to assess market and project impacts and identify and prioritize mitigation measures. In addition, KISAN has included a question about farmers' exposure to shocks and stressors in the Priority Constraints focus group questions to facilitate ongoing monitoring of threats and farmers' responses. Examples that are common in Nepal include floods, drought, landslides, earthquakes, over-grazing, hail/freezing, political instability or violence, fuel shortages, market price fluctuations, and border issues.

INTERNSHIP REPORT

In follow-up to RIDA's Data Quality Assessment (DQA) recommendations in March 2015, KISAN eliminated the internship program in September 2015. The DQA found that using M&E interns for only 3 to 6 months was not conducive to data entry staff understanding project activities and output

data. In addition, the internship program created a significant administrative burden on staff related to ongoing recruitment and training. Data entry is now conducted by District level M&E Associates cum Accountants who are long-term project staff.

STAFFING STRUCTURE

KISAN reconfigured the staffing structure in order to improve certain processes and ensure streamlined reporting. In order to simplify and streamline reporting, KISAN transferred all field positions from the District Coordinator level and below to CEAPRED; all positions from above the District Coordinators as well as the majority of HQ staff are now Winrock. KISAN created a Business Opportunities Unit lead by a newly hired and experienced private sector-oriented technical expert. In addition KISAN created and filled several management positions to improve administrative and other processes including a Grants and Procurement Manager, an HR and Administration Manager, and an Agriculture Director. KISAN is in the process of filling the final open position, that of the M&E Director. The number of junior field staff (at the APO and BDSO level) as also be reduced at the beginning of Year 4 to reflect the decrease in direct staff trainings (due to the focus on private sector-led trainings and demonstrations).

7. Increasing access to credit and agro-machinery for women

Significant out-migration of men from rural to urban areas in Nepal has created a labor shortage requiring women picking up those duties. With KISAN grant funding, United Youth Community (UNYC) and Bio-Dynamic Agro Green Company (BDAG) are partnering to increase access to credit and labor-saving technologies for women. BDAG sales agents will target MFI's semi-literate women farmers in Banke and Bardiya to increase sales of women-friendly, labor-saving agricultural tools and will train people on repair and maintenance. BDAG will also use demonstrations to increase knowledge, awareness, and sales. UNYC will develop an agricultural mechanization loan product so women can purchase these tools; UNYC expects to provide NRs 3.6M in rural loans to 10,000 farmers.

C. ENVIRONMENTAL COMPLIANCE

KISAN staff continues to reinforce the importance of safe environment practices and using safe pesticides in all project events and trainings in accordance with the approved PERSUAP and EMMP.

D. MANAGEMENT CHALLENGES AND RESPONSES

See Table 20 for information on management issues and administrative problems and KISAN's response.



Figure 6. KISAN promotes climate resilient, flood- and drought-tolerant, high-yielding rice varieties to improve farmer production and resilience.

Table 20. Management Challenges, Implementation Impacts, and Responses

Challenge	Project Impact	Response
<p>Political unrest in the Terai late in FY2015 affected project implementation in many districts.</p> <p>In the hills areas and the Kathmandu Valley shortages of fuel and other essential commodities as a result of the trade embargo by India has impeded scheduled activities.</p>	<p>The curfews, and bans on public gatherings in the Terai districts stalled some scheduled activities for 2 months.</p>	<p>Some field-based activities in the Terai were postponed districts for security reasons.</p> <p>Increased use of locally based Ag Marketing Technicians.</p> <p>KISAN offices continued to work behind closed doors during curfew hours whenever possible.</p>
<p>Unseasonal winter rains affected the winter 2015 lentil crop.</p>	<p>Lentil production in the Terai was below potential.</p>	<p>Since lentil is a once-a-year crop, KISAN brought farmers and millers together to plan for the next lentil season (winter 2015).</p>

E. ANTICIPATED RISKS AND MITIGATION MEASURES

See Table 21 for information regarding anticipated future problems, delays, conditions, and security issues that may adversely impact implementation, integrity, and/or safety of the projects, its staff, and partners.

Table 21. Anticipated Challenges, Potential Impacts, and Mitigation Measures

Anticipated Challenges	Potential Project Impacts	Mitigation Measures
<p>Earthquake or other natural disaster</p>	<p>Disruption of crop cycles and services in rural areas, delay of trainings and other project activities, staff endangerment.</p>	<p>Updated emergency preparedness plan with identified security focal person; stockpiled food, tents, lanterns, and other supplies in the office for staff; updated staff lists and phone tree.</p>
<p>Weather-related challenges such as delayed or reduced winter rain and monsoons</p>	<p>Disruption of crop cycles and ability to plant; training schedules; and household gross margin.</p>	<p>Continue focus on climate smart seed varieties and practices; irrigation facilities.</p>
<p>Political transition</p>	<p>Disruption to transportation and other key services; protests; change in priorities and possible loss of support and collaboration.</p>	<p>Carefully monitor situation at central and local levels for logistics management. Maintain communication with district staff to plan and implement activities.</p>
<p>National or regional unrest disturbances</p>	<p>Possible threat to staff as they travel to/from the field or within districts.</p>	<p>Carefully monitor and inform staff.</p>
<p>USAID staff transition</p>	<p>Possible shift in vision and/or priorities for KISAN activities and approach.</p>	<p>Maintain frequent and open communication with multiple POCs in the Mission and</p>

		maintain quality records of communications.
Private sector engagement unsatisfactory/some grant recipient performance declines	Performance targets are not met; quality services and inputs not provided to farmers	Hired a full-time Grants and Procurement Manager and Business Opportunities Director to monitor grantee performance
Market price fluctuations	May cause decline in farmers' earnings and/or ability to sell produce/crops	Continue to monitor market prices and provide beneficiaries with this information; continue promotion of post-harvest storage

F. PROSPECTS FOR FY2016 (YEAR 4) PERFORMANCE

In FY2016, KISAN will further orient project activities toward a facilitative, private sector-led approach and will build on recent survey data, conduct focus groups, partner and beneficiary needs assessments, and business cases looking into what is working and why to further refine and tailor the approach. KISAN will work through private sector actors to increase farmer access to inputs including seed, irrigation, agro-machinery, and other technologies; provide technical services to farmers by embedding them in business models and community-based buyer-seller relationships; improve market access through formal agreements with agribusinesses and linkages with other market outlets; and improve technology adoption through advisory visits, demonstrations, and trainings along with field days and exposure visits. KISAN will also work towards providing more needs-based assistance to existing beneficiaries and will emphasize strengthening linkages between input providers and buyers.

KISAN will continue to move forward with the Grants Program to buy down risk as lead firms, intermediaries, and service providers test new business models that strengthen value chain relationships and provide reliable market outlets for smallholder farmers by issuing approximately \$700,000 in grants by March 30, 2016. KISAN will work closely with grantees to develop business plans and monitor activities.

IV. ANNEXES

ANNEX I: SUCCESS STORIES

Access to Irrigation Enables Farmers to Increase Vegetable Production

Pitamber Gharti is a shopkeeper living in Arghankachi district in Nepal's mid-west region. Pitamber is from a disadvantaged ethnic group; he doesn't earn enough from the small shop he runs from his house and his opportunities for economic advancement are few. He grows vegetables for his wife and four children to eat but the limited availability of water and the lack of irrigation infrastructure limited the land Pitamber could cultivate and the vegetables he had available to sell.



Newly installed lift irrigation has encouraged farmers to expand cultivation for increased income generation

The USAID KISAN Project supported Pitamber and his group, the Baneshwor Farmer Group, to install irrigation infrastructure in their fields. Twenty-two households benefitted from the irrigation system and were able to expand their cultivable land from 0.35 ha to 0.85 ha. KISAN provided NRs 20,000 and Pitamber and the Baneshwor Farmer Group Contributed NRs 100,000 for the lift irrigation equipment and installation. KISAN provided training to farmers on how to use the irrigation equipment and improved vegetable growing techniques. Many farmers have taken the opportunity to increase their own vegetable production and several have leased land, including Pitamber, who has now leased an additional 0.2 ha.

As more land has become usable, farmers have expanded cultivation and are growing larger quantities of crops including maize, tomato, cabbage, cauliflower, bitter melon, bottle gourd, pumpkin, cucumber, cowpea, bean, and other green leafy vegetables. KISAN has helped link Pitamber and the farmers in the area to larger markets to sell their crops, as well as to suppliers and repair providers for the irrigation equipment to ensure sustainability. The Baneshwor Farmer Group multiplied its vegetable sales six-fold in the first harvest since installation, selling approximately 7,900 kg of vegetables for NRs 315,500 compared to before installation when farmers sold approximately 1,680 kg of vegetables for NRs 50,300.

Pitamber has already earned NRs 60,000 from vegetable sales from his first harvest, and pays about NRs 10,000 for the land he leases. The additional income has helped Pitamber and his wife send their children to school, eat more nutritious food at home, and generally improve their overall quality of life.

Collection Center Expands Services to Provide Holistic Support to Farmers

In the district of Palpa, in southwestern Nepal, farmers belonging to the Shree Mainadi Agriculture Cooperative had finally begun to make the transition from small-scale subsistence farming to commercial farming. Participation in the KISAN Project helped farmers establish the cooperative and register it with the Palpa's DADO in 2013 and, through associated trainings and activities, improve and increase their agricultural yields.

However, farmers in the area lacked access to enough markets to sell their higher yields, and as a result suffered losses on those crops they couldn't sell. The Shree Mainadi Agriculture Cooperative, supported by the DADO with NRs 100,000 for agriculture inputs, approached KISAN to help support the establishment of a collection center in the community that could better serve farmers and function as a transit point where farmers could sell their produce to several buyers, and thus reach larger markets.



The Mainadi Krishi Upaj Collection Center, on a market day.

The Mainadi Krishi Upaj Collection Center was established in August 2014, and Shree Mainadi member's crops are now selling in markets in Palpa's city-center Tansen as well as in other parts of the district, and additional crops are reaching markets further south in Butwal. Farmers have been able to nearly quadruple their sales through the collection center to nearly 99,767 kg worth of vegetables that sold for NRs 2,682,628.

Shree Mainadi early success allowed it to expand its services to members, resulting in an increase in cooperative membership. Shree Mainadi began providing vendor-based financing to members for the purchase of agricultural inputs such as seeds and fertilizers, in addition to their normal offerings of savings and credit services. Members commit to save NRs 100/month, which the cooperative then lends out to other members needing loans. Twenty-nine farmers took out loans since the collection center's inception, totaling NRs 1,225,108, and ranging in amounts of NRs 5,000 to NRs 50,000 to expand vegetable cultivation, purchase tools, etc. The interest rate charged is approximately 12% per year. Farmers generally repay loans within four months and are given the option to repay after selling at the collection center. Shree Mainadi Agricultural Cooperative plans to increase its services in the area including providing price information to farmers in the area.

The Chair of this MPC said *“Different programs introduced by KISAN project in our VDC have improved awareness of the farmers of improved agriculture technologies for increased production to generate revenue. The collection center establishment has helped farmers to market their agriculture produce and has encouraged the farmers to expand their areas of production.”*

An agrovet helps smallholder farmers transition to commercial farming

Hira Lal Kathariya ran a small agrovet shop, the R.H. Agrovet Center, in Joshipur, Kailali in southwestern Nepal. Though it was established in 2013, Hira had a hard time earning enough income to sustain his business as the business was not registered, he had limited supplies, and he lacked the connections to suppliers and farmers he needed to better stock his store and increase sales.

Because Agrovet shops play a key role in helping subsistence farmers transition to commercial farming by providing access to quality inputs, such as seeds, pesticides, and tools, technical agricultural guidance, and market/marketing information to farmers, KISAN has made capacity building of agrovet shops an important component to improve farmer livelihoods.

Hira participated in several KISAN activities that helped him strengthen and improve his agrovet business. Through a joint KISAN and DADO training, Hira got his pesticide and general retailer licenses, officially registering his business as a legal input retailer. Hira also participated in farmer field days, intra-district exposure visits, and district-based input/output workshops where he learned about his client base and their needs and also connected with suppliers and traders (buyers).

As a result of his interaction with clients, Hira created a store-based credit facility that now provides 800 farmers with financing for inputs. Hira lends out NRs 100 to 10,000 per farmer, providing a total of NRs 360,000 worth of store credit at any one time. His customers purchase agricultural inputs they might otherwise not be able to afford, and this in turn has helped attract new customers and further increase sales. Hira's early success encouraged him to do even more. He increased his inventory and now also offers technical services to his customers, imparting best practices, demonstrating new technologies, and inspecting his client's fields to identify potential problems

Hira has established himself as a trusted and knowledgeable agrovet in the community. He now has more and better products and services; he is even beginning to wholesale his products. As a result of his success, Hira has more than tripled the number of regular store customers from approximately 600 to almost 2,000 and his income has increased ten-fold since he began receiving training from KISAN and upgrading his products and services and improving his sales strategy.



KISAN helped Hira to build linkages with farmers, traders, and input suppliers which helped him increase his store earnings from NRs 5,000/month to NRs 50,000/month.

ANNEX 3: FTFMS DISAGGREGATED DATA TABLES

Data Entry Status Report as of 01-Nov-2015 11:10:09 PM, Washington DC Time

Current Selection

Prime Partner : Winrock International Institute For Agricultural Development
 Implementing Mechanism : Knowledge-based Integrated Sustainable Agriculture and Nutrition Project (KISAN)
 Data Status : All
 Indicator Type : All

Indicator / Disaggregation	Deviation Narrative	Comment	Baseline Year	Baseline Value	2015		2016	2017	2018
					Target	Actual	Target	Target	Target
Knowledge-based Integrated Sustainable Agriculture and Nutrition Project (KISAN)									
4.5(16,17,18): (4.5-4) Gross margin per hectare, animal or cage of selected product	1								
Bitter Gourd				2,821.61	4,366.23	5,892.54	4,409.89	4,453.99	
Male				1,937.59		4,696.38			
Female				4,891.08		5,825.32			
Joint				3,421.46		6,062.47			
Association-applied									
Hectares planted (for crops); Number of animals (for milk, eggs); or Area (ha) of ponds or Number of crates (for fish)				79.44		707.00			
Male			2013	36.88		71.00			
Female			2013	5.19		134.00			

Indicator / Disaggregation	Deviation Narrative	Comment	Baseline Year	Baseline Value	2015		2016	2017	2018
					Target	Actual	Target	Target	Target
Joint			2013	37.37		502.00			
Association-applied									
Disaggregates Not Available									
Total Production (mt)				777.69		13,240.00			
Male			2013	288.06		1,351.00			
Female			2013	75.69		2,793.00			
Joint			2013	413.94		9,096.00			
Association-applied									
Disaggregates Not Available									
Value of Sales (USD)				169,590.11		3,708,784.00			
Male			2013	54,299.82		285,698.00			
Female			2013	14,873.60		682,399.00			
Joint			2013	100,416.69		2,740,687.00			
Association-applied									
Disaggregates Not Available									
Quantity of Sales (mt)				563.63		10,985.00			
Male			2013	208.86		1,075.00			
Female			2013	42.19		2,267.00			
Joint			2013	312.58		7,643.00			

Indicator / Disaggregation	Deviation Narrative	Comment	Baseline Year	Baseline Value	2015		2016	2017	2018
					Target	Actual	Target	Target	Target
Association-applied									
Disaggregates Not Available									
Purchased input costs (USD)				9,849.60		304,099.00			
Male			2013	3,432.05		25,606.00			
Female			2013	1,298.93		60,140.00			
Joint			2013	5,118.62		218,353.00			
Association-applied									
Disaggregates Not Available									
Cabbage				2,276.21	3,014.38	5,056.18	3,044.53	3,074.97	
Male				2,160.28		5,227.72			
Female				2,043.54		4,641.95			
Joint				2,355.01		5,128.09			
Association-applied						3,341.33			
Hectares planted (for crops); Number of animals (for milk, eggs); or Area (ha) of ponds or Number of crates (for fish)				215.54		1,808.00			
Male			2013	56.31		402.00			
Female			2013	14.77		193.00			
Joint			2013	144.46		1,170.00			

Indicator / Disaggregation	Deviation Narrative	Comment	Baseline Year	Baseline Value	2015		2016	2017	2018
					Target	Actual	Target	Target	Target
Association-applied						43.00			
Disaggregates Not Available									
Total Production (mt)				3,963.05		47,872.00			
Male			2013	891.23		10,941.00			
Female			2013	165.62		4,877.00			
Joint			2013	2,906.20		31,421.00			
Association-applied						633.00			
Disaggregates Not Available									
Value of Sales (USD)				456,921.39		8,279,474.00			
Male			2013	103,188.74		1,912,030.00			
Female			2013	24,360.86		787,056.00			
Joint			2013	329,371.79		5,450,424.00			
Association-applied						129,964.00			
Disaggregates Not Available									
Quantity of Sales (mt)				3,205.32		40,871.00			
Male			2013	682.83		9,365.00			
Female			2013	123.56		4,051.00			
Joint			2013	2,398.93		26,925.00			
Association-applied						530.00			

Indicator / Disaggregation	Deviation Narrative	Comment	Baseline Year	Baseline Value	2015		2016	2017	2018
					Target	Actual	Target	Target	Target
Disaggregates Not Available									
Purchased input costs (USD)				74,322.43		556,129.00			
Male			2013	13,036.76		132,256.00			
Female			2013	2,470.30		51,640.00			
Joint			2013	58,815.37		360,689.00			
Association-applied						11,544.00			
Disaggregates Not Available									
Cauliflower				3,682.11	4,069.28	5,883.47	4,109.97	4,151.07	
Male				4,192.09		6,023.89			
Female				2,514.61		5,668.42			
Joint				3,433.90		5,920.07			
Association-applied						3,741.91			
Hectares planted (for crops); Number of animals (for milk, eggs); or Area (ha) of ponds or Number of crates (for fish)				320.79		2,413.00			
Male			2013	118.64		551.00			
Female			2013	12.83		261.00			
Joint			2013	189.32		1,558.00			
Association-applied						43.00			

Indicator / Disaggregation	Deviation Narrative	Comment	Baseline Year	Baseline Value	2015		2016	2017	2018
					Target	Actual	Target	Target	Target
Disaggregates Not Available									
Total Production (mt)				4,711.42		44,662.00			
Male			2013	1,723.56		10,876.00			
Female			2013	139.84		5,230.00			
Joint			2013	2,848.02		28,090.00			
Association-applied						466.00			
Disaggregates Not Available									
Value of Sales (USD)				1,053,852.49		12,492,347.00			
Male			2013	434,766.62		2,849,852.00			
Female			2013	24,737.31		1,257,139.00			
Joint			2013	594,348.56		8,254,142.00			
Association-applied						131,214.00			
Disaggregates Not Available									
Quantity of Sales (mt)				3,818.41		37,308.00			
Male			2013	1,419.97		8,892.00			
Female			2013	97.77		4,212.00			
Joint			2013	2,300.67		23,850.00			
Association-applied						354.00			
Disaggregates Not Available									

Indicator / Disaggregation	Deviation Narrative	Comment	Baseline Year	Baseline Value	2015		2016	2017	2018
					Target	Actual	Target	Target	Target
Purchased input costs (USD)				119,132.33		757,975.00			
Male			2013	30,370.34		166,551.00			
Female			2013	3,119.21		81,521.00			
Joint			2013	85,642.78		498,077.00			
Association-applied						11,826.00			
Disaggregates Not Available									
Cucumber				3,960.62	3,893.21	5,536.22	3,932.14	3,971.46	
Male				2,195.31		5,039.97			
Female				2,184.94		5,338.68			
Joint				5,681.64		6,055.02			
Association-applied									
Hectares planted (for crops); Number of animals (for milk, eggs); or Area (ha) of ponds or Number of crates (for fish)				124.25		770.00			
Male			2013	38.45		252.00			
Female			2013	20.44		186.00			
Joint			2013	65.36		332.00			
Association-applied									
Disaggregates Not Available									

Indicator / Disaggregation	Deviation Narrative	Comment	Baseline Year	Baseline Value	2015		2016	2017	2018
					Target	Actual	Target	Target	Target
Total Production (mt)				1,931.64		18,052.00			
Male			2013	479.63		6,004.00			
Female			2013	67.53		4,166.00			
Joint			2013	1,384.48		7,882.00			
Association-applied									
Disaggregates Not Available									
Value of Sales (USD)				394,150.43		3,891,526.00			
Male			2013	65,258.28		1,256,349.00			
Female			2013	21,486.32		844,459.00			
Joint			2013	307,405.83		1,790,718.00			
Association-applied									
Disaggregates Not Available									
Quantity of Sales (mt)				1,402.71		15,502.00			
Male			2013	347.05		5,474.00			
Female			2013	32.20		3,393.00			
Joint			2013	1,023.46		6,635.00			
Association-applied									
Disaggregates Not Available									
Purchased input costs (USD)				50,668.95		268,774.00			

Indicator / Disaggregation	Deviation Narrative	Comment	Baseline Year	Baseline Value	2015		2016	2017	2018
					Target	Actual	Target	Target	Target
Male			2013	5,778.61		107,918.00			
Female			2013	400.96		43,851.00			
Joint			2013	44,489.38		117,005.00			
Association-applied									
Disaggregates Not Available									
Maize				488.00	578.76	795.86	584.55	590.39	
Male				595.32		626.23			
Female				366.53		695.15			
Joint				472.29		896.39			
Association-applied						885.12			
Hectares planted (for crops); Number of animals (for milk, eggs); or Area (ha) of ponds or Number of crates (for fish)				1,985.00		8,586.00			
Male			2013	595.00		2,073.00			
Female			2013	277.00		1,309.00			
Joint			2013	1,113.00		5,188.00			
Association-applied						16.00			
Disaggregates Not Available									
Total Production (mt)				5,613.00		29,164.00			

Indicator / Disaggregation	Deviation Narrative	Comment	Baseline Year	Baseline Value	2015		2016	2017	2018
					Target	Actual	Target	Target	Target
Male			2013	2,115.00		6,655.00			
Female			2013	586.00		4,120.00			
Joint			2013	2,912.00		18,340.00			
Association-applied						49.00			
Disaggregates Not Available									
Value of Sales (USD)				679,044.00		4,358,264.00			
Male			2013	313,724.00		957,006.00			
Female			2013	58,696.00		647,183.00			
Joint			2013	306,624.00		2,748,812.00			
Association-applied						5,263.00			
Disaggregates Not Available									
Quantity of Sales (mt)				3,272.00		16,202.00			
Male			2013	1,592.00		4,093.00			
Female			2013	265.00		2,405.00			
Joint			2013	1,415.00		9,688.00			
Association-applied						16.00			
Disaggregates Not Available									
Purchased input costs (USD)				196,200.00		1,011,734.00			
Male			2013	62,571.00		257,857.00			

Indicator / Disaggregation	Deviation Narrative	Comment	Baseline Year	Baseline Value	2015		2016	2017	2018
					Target	Actual	Target	Target	Target
Female			2013	28,266.00		198,730.00			
Joint			2013	105,363.00		553,191.00			
Association-applied						1,956.00			
Disaggregates Not Available									
Pulses				327.01	390.72	781.00	394.63	398.57	
Male				300.93		657.59			
Female				345.59		1,059.40			
Joint				362.23		817.24			
Association-applied									
Hectares planted (for crops); Number of animals (for milk, eggs); or Area (ha) of ponds or Number of crates (for fish)				2,573.59		7,504.00			
Male			2013	1,383.55		2,448.00			
Female			2013	330.72		525.00			
Joint			2013	859.32		4,531.00			
Association-applied									
Disaggregates Not Available									
Total Production (mt)				1,612.55		7,967.00			
Male			2013	807.98		2,105.00			

Indicator / Disaggregation	Deviation Narrative	Comment	Baseline Year	Baseline Value	2015		2016	2017	2018
					Target	Actual	Target	Target	Target
Female			2013	217.90		648.00			
Joint			2013	586.67		5,214.00			
Association-applied									
Disaggregates Not Available									
Value of Sales (USD)				593,009.67		4,141,208.00			
Male			2013	299,897.60		1,071,767.00			
Female			2013	68,916.71		365,240.00			
Joint			2013	224,195.36		2,704,201.00			
Association-applied									
Disaggregates Not Available									
Quantity of Sales (mt)				986.15		5,224.00			
Male			2013	506.33		1,326.00			
Female			2013	113.00		400.00			
Joint			2013	366.82		3,498.00			
Association-applied									
Disaggregates Not Available									
Purchased input costs (USD)				128,101.22		455,004.00			
Male			2013	62,205.53		91,640.00			
Female			2013	18,600.15		35,505.00			

Indicator / Disaggregation	Deviation Narrative	Comment	Baseline Year	Baseline Value	2015		2016	2017	2018
					Target	Actual	Target	Target	Target
Joint			2013	47,295.54		327,859.00			
Association-applied									
Disaggregates Not Available									
Rice				505.64	659.58	700.23	666.18	672.84	
Male				500.80		676.23			
Female				627.92		601.56			
Joint				481.50		716.23			
Association-applied						1,154.22			
Hectares planted (for crops); Number of animals (for milk, eggs); or Area (ha) of ponds or Number of crates (for fish)				13,035.48		39,819.00			
Male			2013	7,264.66		8,523.00			
Female			2013	1,183.29		2,876.00			
Joint			2013	4,587.53		28,397.00			
Association-applied						23.00			
Disaggregates Not Available									
Total Production (mt)				47,379.19		182,576.00			
Male			2013	26,370.93		39,889.00			
Female			2013	4,816.75		13,698.00			

Indicator / Disaggregation	Deviation Narrative	Comment	Baseline Year	Baseline Value	2015		2016	2017	2018
					Target	Actual	Target	Target	Target
Joint			2013	16,191.51		128,886.00			
Association-applied						103.00			
Disaggregates Not Available									
Value of Sales (USD)				3,981,632.85		24,052,516.00			
Male			2013	2,342,718.18		4,644,904.00			
Female			2013	328,082.80		1,611,216.00			
Joint			2013	1,310,831.87		17,780,401.00			
Association-applied						15,995.00			
Disaggregates Not Available									
Quantity of Sales (mt)				20,285.82		117,786.00			
Male			2013	11,802.16		23,310.00			
Female			2013	1,649.84		7,920.00			
Joint			2013	6,833.82		86,507.00			
Association-applied						49.00			
Disaggregates Not Available									
Purchased input costs (USD)				2,708,215.72		9,400,627.00			
Male			2013	1,596,500.29		2,185,044.00			
Female			2013	214,839.47		1,056,572.00			
Joint			2013	896,875.96		6,151,936.00			

Indicator / Disaggregation	Deviation Narrative	Comment	Baseline Year	Baseline Value	2015		2016	2017	2018
					Target	Actual	Target	Target	Target
Association-applied						7,075.00			
Disaggregates Not Available									
Tomatoes				3,969.16	4,636.03	10,343.96	4,682.39	4,729.22	
Male				3,613.29		10,584.55			
Female				5,277.05		10,357.54			
Joint				4,171.40		10,298.94			
Association-applied						8,085.63			
Hectares planted (for crops); Number of animals (for milk, eggs); or Area (ha) of ponds or Number of crates (for fish)				175.42		1,412.00			
Male			2013	71.40		263.00			
Female			2013	9.97		241.00			
Joint			2013	94.05		896.00			
Association-applied						12.00			
Disaggregates Not Available									
Total Production (mt)				2,911.96		42,646.00			
Male			2013	1,207.44		7,966.00			
Female			2013	151.43		7,096.00			
Joint			2013	1,553.09		27,331.00			

Indicator / Disaggregation	Deviation Narrative	Comment	Baseline Year	Baseline Value	2015		2016	2017	2018
					Target	Actual	Target	Target	Target
Association-applied						253.00			
Disaggregates Not Available									
Value of Sales (USD)				544,021.15		13,203,548.00			
Male			2013	225,636.58		2,632,012.00			
Female			2013	41,423.44		2,182,627.00			
Joint			2013	276,961.13		8,304,496.00			
Association-applied						84,413.00			
Disaggregates Not Available									
Quantity of Sales (mt)				2,037.78		37,301.00			
Male			2013	953.11		7,290.00			
Female			2013	112.84		6,019.00			
Joint			2013	971.83		23,781.00			
Association-applied						211.00			
Disaggregates Not Available									
Purchased input costs (USD)				81,128.41		489,867.00			
Male			2013	27,856.98		92,342.00			
Female			2013	2,977.62		77,004.00			
Joint			2013	50,293.81		316,333.00			
Association-applied						4,188.00			

Indicator / Disaggregation	Deviation Narrative	Comment	Baseline Year	Baseline Value	2015		2016	2017	2018
					Target	Actual	Target	Target	Target
Disaggregates Not Available									
4.5.2(11): Number of food security private enterprises (for profit), producers organizations, water users associations, women's groups, trade and business associations, and CBOs receiving USG assistance					4,451	4,469	4,714	4,517	
Type of organization					4,451	4,469	4,714	4,517	
Private enterprises (for profit)					341	192	354	367	
Producers organizations					4,000	4,004	4,250	4,040	
Water users associations									
Women's groups									
Trade and business associations					110	272	110	110	
Community-based organizations (CBOs)									
Disaggregates Not Available						1			
New/Continuing					4,451	4,469	4,714	4,517	
New					2,538	2,556	263	13	
Continuing					1,913	1,913	4,451	4,504	
Disaggregates Not Available									

Indicator / Disaggregation	Deviation Narrative	Comment	Baseline Year	Baseline Value	2015		2016	2017	2018
					Target	Actual	Target	Target	Target
4.5.2(13): Number of rural households benefiting directly from USG interventions					82,000	83,286	92,000	81,800	
New/Continuing					82,000	83,286	92,000	81,800	
New					48,098	49,384	10,000	8,000	
Continuing					33,902	33,902	82,000	73,800	
Disaggregates Not Available									
Gendered Household Type					82,000	83,286	92,000	81,800	
Male and Female Adults (M&F)					80,005	80,779	89,761	79,809	
Adult Female no Adult Male (FNM)					1,374	1,424	1,541	1,370	
Adult Male no Adult Female (MNF)					621	625	698	621	
Child No Adults (CNA)									
Disaggregates Not Available						458			
4.5.2(14): Number of vulnerable households benefiting directly from USG assistance					55,597	56,445	62,396	55,624	
New/Continuing					55,597	56,445	62,396	55,624	
New					32,707	30,458	6,800	5,440	
Continuing					22,890	25,987	55,596	50,184	
Disaggregates Not Available									

Indicator / Disaggregation	Deviation Narrative	Comment	Baseline Year	Baseline Value	2015		2016	2017	2018
					Target	Actual	Target	Target	Target
Gendered Household Type					55,597	56,445	62,396	55,624	
Male and Female Adults (M&F)					54,338	54,900	60,984	54,365	
Adult Female no Adult Male (FNM)					857	877	962	858	
Adult Male no Adult Female (MNF)					402	406	450	401	
Child No Adults (CNA)									
Disaggregates Not Available						262			
4.5.2(2): Number of hectares under improved technologies or management practices as a result of USG assistance	2			23,563	61,274	76,629	66,954	57,038	
Technology type				23,563	61,274	76,629	66,954	57,038	
crop genetics			2013	10,585	45,616	74,223	49,844	42,462	
cultural practices			2013	16,775	59,139	8,859	64,622	55,051	
pest management			2013	2,201	26,171	7,212	28,597	24,362	
disease management			2013	623	14,436	23,449	15,774	13,438	
soil-related fertility and conservation			2013	16,528	57,342	8,701	62,757	53,462	
irrigation			2013	10,336	31,956	47,212	34,919	29,747	
water management (non-irrigation)			2013	199	1,932	203	2,111	1,798	
climate mitigation or adaptation			2013	410	5,177	7,818	5,657	4,819	

Indicator / Disaggregation	Deviation Narrative	Comment	Baseline Year	Baseline Value	2015		2016	2017	2018
					Target	Actual	Target	Target	Target
other			2013	14,710	54,994		60,092	51,193	
total w/one or more improved technology			2013	23,563	61,274	76,629	66,954	57,038	
Disaggregates Not Available									
Sex				23,563	61,274	76,629	66,954	57,038	
Male			2013	10,132	8,787	8,889	9,602	8,180	
Female			2013	2,905	11,281	6,113	12,327	10,501	
Joint			2013	10,526	41,206	61,627	45,025	38,357	
Association-applied									
Disaggregates Not Available									
4.5.2(23): Value of incremental sales (collected at farm-level) attributed to FTF implementation	3				9,352,782.46	71,833,475.25	12,089,209.73	12,227,837.95	
Total Adjusted Baseline Sales					21,190,431.54	23,389,324.75	22,491,755.27	20,008,921.05	
Total Baseline sales				8,476,910.00	8,476,910.00	8,476,910.00	8,476,910.00	8,476,910.00	
Total Reporting year sales					30,543,214.00	95,222,800.00	34,580,965.00	32,236,759.00	
Total Volume of sales (mt)					129,052.00	339,081.00	146,328.00	136,675.00	
Total Number of direct beneficiaries				86,176.00	208,942.00	242,600.00	219,588.00	167,623.00	
Maize					1,055,141.43	2,451,591.22	1,220,421.70	135,695.57	
Adjusted Baseline Sales					1,461,463.57	1,906,671.78	1,510,264.30	151,026.43	

Indicator / Disaggregation	Deviation Narrative	Comment	Baseline Year	Baseline Value	2015		2016	2017	2018
					Target	Actual	Target	Target	Target
Baseline sales			2013	679,045.00	679,045.00	679,045.00	679,045.00	679,045.00	
Reporting year sales					2,516,605.00	4,358,263.00	2,730,686.00	286,722.00	
Volume of sales (mt)					11,137.00	16,201.00	12,084.00	1,269.00	
Number of direct beneficiaries			2013	20,705.00	44,562.00	58,137.00	46,050.00	4,605.00	
Pulses					246,325.31	2,240,262.87	488,646.95	559,112.15	
Adjusted Baseline Sales					1,362,536.69	1,900,945.13	1,378,802.05	1,240,921.85	
Baseline sales			2013	593,010.00	593,010.00	593,010.00	593,010.00	593,010.00	
Reporting year sales					1,608,862.00	4,141,208.00	1,867,449.00	1,800,034.00	
Volume of sales (mt)					2,623.00	5,224.00	2,926.00	2,765.00	
Number of direct beneficiaries			2013	11,849.00	27,225.00	37,983.00	27,550.00	24,795.00	
Rice					191,200.71	14,175,512.56	760,547.86	1,334,172.86	
Adjusted Baseline Sales					9,561,504.29	9,877,005.44	10,711,948.14	10,711,948.14	
Baseline sales			2013	3,981,633.00	3,981,633.00	3,981,633.00	3,981,633.00	3,981,633.00	
Reporting year sales					9,752,705.00	24,052,518.00	11,472,496.00	12,046,121.00	
Volume of sales (mt)					49,690.00	117,786.00	58,452.00	61,375.00	
Number of direct beneficiaries			2013	28,231.00	67,794.00	70,031.00	75,951.00	75,951.00	
Vegetables					7,860,115.01	52,966,108.60	9,619,593.22	10,198,857.37	
Adjusted Baseline Sales					8,804,926.99	9,704,702.40	8,890,740.78	7,905,024.63	

Indicator / Disaggregation	Deviation Narrative	Comment	Baseline Year	Baseline Value	2015		2016	2017	2018
					Target	Actual	Target	Target	Target
Baseline sales			2013	3,223,222.00	3,223,222.00	3,223,222.00	3,223,222.00	3,223,222.00	
Reporting year sales					16,665,042.00	62,670,811.00	18,510,334.00	18,103,882.00	
Volume of sales (mt)					65,602.00	199,870.00	72,866.00	71,266.00	
Number of direct beneficiaries			2013	25,391.00	69,361.00	76,449.00	70,037.00	62,272.00	
4.5.2(27): Number of members of producer organizations and CBOs receiving USG assistance					82,060	83,286	92,075	81,890	
Type of organization					82,060	83,286	92,075	81,890	
Producer organization					82,000	83,286	92,000	81,800	
Non-producer-organization CBO					60		75	90	
Disaggregates Not Available									
Sex					82,060	83,286	92,075	81,890	
Male					36,516	22,980	40,972	36,440	
Female					45,544	60,306	51,103	45,450	
Disaggregates Not Available									
4.5.2(29): Value of Agricultural and Rural Loans	4			667,615.00	1,973,732.00	7,567,751.00	2,265,025.00	2,124,324.00	
Type of loan recipient				667,615.00	1,973,732.00	7,567,751.00	2,265,025.00	2,124,324.00	
Producers			2013	486,605.00	1,710,123.00	6,658,270.00	1,976,235.00	1,809,845.00	
Local traders/assemblers			2013	91,379.00	203,609.00	593,376.00	213,790.00	224,479.00	

Indicator / Disaggregation	Deviation Narrative	Comment	Baseline Year	Baseline Value	2015		2016	2017	2018
					Target	Actual	Target	Target	Target
Wholesalers/processors			2013	18,684.00	60,000.00	316,105.00	75,000.00	90,000.00	
Others			2013	70,947.00					
Disaggregates Not Available									
Sex of recipient				667,615.00	1,973,732.00	7,567,751.00	2,265,025.00	2,124,324.00	
Male			2013	230,802.00	296,060.00	4,831,066.00	339,754.00	318,649.00	
Female			2013	59,593.00	394,747.00	2,736,685.00	453,005.00	424,865.00	
Joint			2013	377,220.00	1,282,925.00		1,472,266.00	1,380,810.00	
n/a									
Disaggregates Not Available									
4.5.2(30): Number of MSMEs, including farmers, receiving USG assistance to access loans	5			4,931	17,822	48,440	21,995	21,513	
Size of MSME				4,931	17,822	48,440	21,995	21,513	
Micro			2013	4,931	17,818	48,440	21,990	21,507	
Small					4		5	6	
Medium									
Disaggregates Not Available									
Sex of owner				4,931	17,822	48,440	21,995	21,513	
Male			2013	1,705	2,673	15,441	3,300	3,226	
Female			2013	440	3,567	32,652	4,400	4,307	

Indicator / Disaggregation	Deviation Narrative	Comment	Baseline Year	Baseline Value	2015		2016	2017	2018
					Target	Actual	Target	Target	Target
Joint			2013	2,786	11,582	347	14,295	13,980	
n/a									
Disaggregates Not Available									
4.5.2(37): Number of MSMEs, including farmers, receiving business development services from USG assisted sources					82,611	83,752	92,624	82,437	
Size of MSME					82,611	83,752	92,624	82,437	
Micro					82,607	83,752	92,619	82,431	
Small					4		5	6	
Medium									
Disaggregates Not Available									
MSME Type					82,611	83,752	92,624	82,437	
Agricultural producer					82,000	83,286	92,000	81,800	
Input supplier					120	180	120	125	
Trader					120	115	125	125	
Output processors					13	3	19	25	
Non agriculture					88	76	90	92	
Other					270	92	270	270	
Disaggregates Not Available									

Indicator / Disaggregation	Deviation Narrative	Comment	Baseline Year	Baseline Value	2015		2016	2017	2018
					Target	Actual	Target	Target	Target
Sex of owner					82,611	83,752	92,624	82,437	
Male					12,392	23,049	13,894	12,366	
Female					16,522	60,703	18,524	16,487	
Joint					53,697		60,206	53,584	
n/a									
Disaggregates Not Available									
4.5.2(38): Value of new private sector investment in the agriculture sector or food chain leveraged by FTF implementation	6				777,514.32	1,616,024.00	855,265.75	940,792.00	
4.5.2(42): (4.5.2-28) Number of private enterprises (for profit), producers organizations, water users associations, women's groups, trade and business associations, and CBOs that applied improved technologies or management practices as a result of USG assistance					3,561	3,885	3,771	3,614	
Type of organization					3,561	3,885	3,771	3,614	
Private enterprises (for profit)					273	172	283	294	
Producers organizations					3,200	3,527	3,400	3,232	
Water users associations									
Women's groups									

Indicator / Disaggregation	Deviation Narrative	Comment	Baseline Year	Baseline Value	2015		2016	2017	2018
					Target	Actual	Target	Target	Target
Trade and business associations					88	186	88	88	
Community-based organizations (CBOs)									
Disaggregates Not Available									
New/Continuing					3,561	3,885	3,771	3,614	
New					1,844	2,168	210	10	
Continuing					1,717	1,717	3,561	3,604	
Disaggregates Not Available									
4.5.2(5): Number of farmers and others who have applied improved technologies or management practices as a result of USG assistance	7			32,597	75,006	83,286	84,138	74,833	
Producers				32,597	74,846	83,286	83,973	74,663	
Sex				32,597	74,846	83,286	83,973	74,663	
Male			2013	18,733	33,411	41,096	37,485	33,329	
Female			2013	13,864	41,435	42,190	46,488	41,334	
Disaggregates Not Available									
Technology type				32,597	74,846	83,286	83,973	74,663	
crop genetics			2013	20,334	70,146	83,286	78,700	69,975	
cultural practices			2013	29,629	74,483	76,539	83,567	74,302	

Indicator / Disaggregation	Deviation Narrative	Comment	Baseline Year	Baseline Value	2015		2016	2017	2018
					Target	Actual	Target	Target	Target
livestock management									
wild fishing technique/gear									
aquaculture management									
pest management			2013	5,206	59,229	57,850	66,452	59,085	
disease management			2013	3,247	34,895	52,723	39,151	34,810	
soil-related fertility and conservation			2013	27,853	72,124	39,314	80,920	71,948	
irrigation			2013	18,701	55,171	59,291	61,899	55,036	
water management (non-irrigation)			2013	1,424	5,107	1,154	5,730	5,095	
climate mitigation or adaptation			2013	1,432	8,749	46,867	9,816	8,728	
marketing and distribution			2013	1,018	34,168	29,253	38,335	34,085	
post-harvest - handling and storage			2013	22,876	69,326	27,893	77,780	69,156	
value-added processing									
other						9,748			
total w/one or more improved technology			2013	32,597	74,846	83,286	83,973	74,663	
Disaggregates Not Available									
Others					160		165	170	
Sex					160		165	170	

Indicator / Disaggregation	Deviation Narrative	Comment	Baseline Year	Baseline Value	2015		2016	2017	2018
					Target	Actual	Target	Target	Target
Male					104		107	110	
Female					56		58	60	
Disaggregates Not Available									
Technology type					160		165	170	
crop genetics					150		155	159	
cultural practices					159		164	169	
livestock management									
wild fishing technique/gear									
aquaculture management									
pest management					127		131	135	
disease management					75		77	79	
soil-related fertility and conservation					154		159	164	
irrigation					118		122	125	
water management (non-irrigation)					11		11	12	
climate mitigation or adaptation					19		19	20	
marketing and distribution					73		75	78	
storage					148		153	157	
value-added processing									

Indicator / Disaggregation	Deviation Narrative	Comment	Baseline Year	Baseline Value	2015		2016	2017	2018
					Target	Actual	Target	Target	Target
other									
total w/one or more improved technology					160		165	170	
Disaggregates Not Available									
4.5.2(7): Number of individuals who have received USG supported short-term agricultural sector productivity or food security training					82,510	83,778	92,500	82,305	
Type of individual					82,510	83,778	92,500	82,305	
Producers					82,000	83,286	92,000	81,800	
People in government					40	26	20	20	
People in private sector firms					470	466	480	485	
People in civil society									
Disaggregates Not Available									
Sex					82,510	83,778	92,500	82,305	
Male					22,376	23,070	25,086	22,321	
Female					60,134	60,708	67,414	59,984	
Disaggregates Not Available									

Indicator / Disaggregation	Deviation Narrative	Comment	Baseline Year	Baseline Value	2015		2016	2017	2018
					Target	Actual	Target	Target	Target
4.5.2.8(TBD3): Total quantity of targeted nutrient-rich value chain commodities produced by direct beneficiaries that is set aside for home consumption									
Bitter Gourd									
Total Consumption Quantity (mt)			2013	504.00	1,410.00	1,713.00	1,582.00	1,407.00	
Number of Direct Beneficiaries			2013	11,212.00		31,045.00			
Cabbage									
Total Consumption Quantity (mt)			2013	1,233.00	2,143.00	5,236.00	2,404.00	2,138.00	
Number of Direct Beneficiaries			2013	16,036.00		57,231.00			
Cauliflower									
Total Consumption Quantity (mt)			2013	1,471.00	2,977.00	5,534.00	3,341.00	2,970.00	
Number of Direct Beneficiaries			2013	18,023.00		62,008.00			
Okra									
Total Consumption Quantity (mt)			2013	456.00	1,151.00	1,343.00	1,292.00	1,149.00	
Number of Direct Beneficiaries			2013	10,212.00		15,438.00			

Index	Comments and Deviation Narratives
1	<p>Between baseline and FY2015 prices of the 8 commodities measured for gross margins increased on average by 22%. This price increase was not factored into targets. Between baseline and FY2015, yields increased from 29% (rice) to 115% (bittergourd). Yields were significantly higher than expected due to the very high adoption rates of improved technologies and practices. (For example, improved seed was used by 100% of beneficiaries.) High technology adoption rates were driven by the implementation of KISAN's systematic and comprehensive training program for project beneficiaries and the rapid replication of early adopter success, however, KISAN experts did not anticipate the speed and extent to which beneficiaries would adopt key yield affecting technologies. An additional contributor to the increase in yields was the exceptionally favorable weather during FY2015. Even adjusting for the increase in commodity prices, targets set by KISAN were too conservative.</p>
2	<p>The number of hectares dedicated to KISAN commodities for multiple growing seasons exceeded expectations and the adoption of improved technologies was higher than anticipated (for example improved seed was used by 100% of beneficiaries).</p>
3	<p>Between baseline and FY2015, increases in the prices of commodities comprised 21% of the increase in incremental sales. This was not factored into the incremental sales target. Also contributing to high incremental sales were very high yields, which increased by 29% (rice) to 91% (on average for vegetables). Yields were significantly higher than expected due to the very high adoption rates of improved technologies and practices. (For example, improved seed was used by 100% of beneficiaries.) High technology adoption rates were driven by the implementation of KISAN's systematic and comprehensive training program for project beneficiaries and the rapid replication of early adopter success, however, KISAN experts did not anticipate the speed and extent to which beneficiaries would adopt key yield-affecting technologies. An additional contributor to the increase in yields was the exceptionally favorable weather during FY2015. Rice sales contributed \$14 million to incremental sales, much higher than expected as virtually all of the additional rice produced due to increased yields was sold rather than consumed. By far the biggest contributor to the very large increase in sales was the land area dedicated to vegetables, which increased by 5,990 hectares – more than doubling. This additional 5,990 Ha, together with the increases in yield and price, resulted in \$52.9 million in incremental vegetable sales. KISAN significantly underestimated the land area beneficiary farmers would dedicate to vegetable and the time span within which farmers would dedicate the resources and take on the risk of farming vegetables on a commercial basis.</p>
4	<p>12,574 farmers out of 83,286 took a formal loan in 2015. The average loan size for beneficiaries who took out loans increased from \$99 per farmer in the baseline year to \$530 per farmer in FY2015. The percentage of farmers taking loans remained approximately the same but the loan size increased dramatically. Total sales per beneficiary increased from \$250 in the baseline year to \$1,143 in FY 2015. The percentage increase in loan size is on par with the average percentage increase in sales per beneficiary. KISAN underestimated the increase in average loan size per beneficiary. With respect to organizations, twice as many agrovets as expected took loans (122 vs. 52) and the average loan size was approximately \$4,800 in FY2015 vs. a target of \$3,900.</p>
5	<p>KISAN has had significant success in forming and strengthening beneficiary group level savings and credit schemes. In FY 2015, 58% of beneficiary farmers accessed loans from their own groups. KISAN underestimated the number of beneficiaries who would take loans from their own group's saving and credit schemes.</p>
6	<p>With the increase in commercial farming revenue in KISAN focus zones, private sector investment related to agriculture increased as well – more than expected.</p>
7	<p>KISAN reached slightly more farmers than expected. Adoption rates across the board were higher than expected. For example, 100% of KISAN farmers are using improved seed either for rice, lentil, maize or vegetable. KISAN estimated that approximately 92% of beneficiaries would apply improved technologies and practices and the result was 100%.</p>

ANNEX 4: FY2015 SURVEY DESIGN AND DATA QUALITY MEASURES

SURVEY DESIGN

KISAN's FY2015 survey design was similar to the FY2014 survey, with the following exceptions:

- KISAN reduced the number of strata to the two ecological zones (hills and Terai). The FY2014 survey stratified by both eco-region and development region (West, Mid-West, and Far-West) to account for varying farmer mobilization dates. Development regions are less likely to influence project outcomes in FY2015, as participating farmers will have experienced multiple crop cycles since they started KISAN training.
- KISAN increased the participation of third parties in conducting interviews. KISAN staff members observed some farmer interviews, but did not collect data. Organization survey was done by KISAN staff. This approach seeks to address potential concerns about bias (such as leading questions).

To ensure a representative sample, KISAN used a two-stage cluster sampling approach.

Approximately 240 potential interviewees were required per strata to achieve a sample size that produces statistically significant data. This reflects a margin of error of 10 percent, a confidence level of 95 percent, an estimated 20 percent nonresponse rate, and accounts for the design effect of using clusters based on villages (2). KISAN randomly selected 12 VDCs²⁶ (rural villages) per strata and 20 interviewees per VDC. The two-stage cluster sampling was conducted as follows:

1. Systematic sampling: The total number of VDCs in the strata were divided by 12 to identify the interval (for example, $58/12 = 5$). All VDCs in the strata were listed, a random starting point is chosen between 1 and 5, and each 5th VDC was selected.
2. Simple random sample: A simple random sample of 20 beneficiaries in each selected VDC was identified.

As was done for FY2014, the farmer survey and firm/organization were conducted simultaneously. Copies of survey forms are available upon request.

DATA QUALITY MEASURES: BEFORE INTERVIEWS

The data presented in this report has been cleaned and is considered final. The methodology and data have undergone the following reviews:

- The survey design was vetted with BFS/SPPM M&E Advisor in March, during KISAN's FY2014 Survey.
- The indicator measurement methodologies are documented in detail in KISAN's M&E Plan (Annex E).

The Survey Team implemented the following measures to ensure data quality:

²⁶ The Government of Nepal uses the term "VDC" to refer to both "Village Development Committee" and its corresponding rural village. VDCs are distinguished from "municipalities" in Government of Nepal strategies. "VDC" is used in this report to refer to target villages.

- KISAN staff helped facilitate survey logistics, since the team is familiar with the target districts and VDCs.
- Interviews were conducted in teams of two to allow one person to ask questions and another to record answers. Each team included at least one KISAN staff member for the reasons stated above.
- Both the farmer and firm questionnaires were tested in two rounds and revised based on feedback to ensure clarity and completeness. These were provided in both English and Nepali.
- Detailed Field Guides were prepared to provide written instructions for completing the questionnaires on a question-by-question basis. They also include a chart for converting local units of measure to standard units, and a list of phone numbers to call as needed to obtain answers to questions that might come up during the survey.
- KISAN's M&E Team and senior field managers conducted two rounds of 3-day training sessions in Nepalgunj to familiarize interviewers with the questionnaires and survey procedures. Most of the training was conducted in Nepali, to facilitate learning and clear communication. The training approach was highly participatory and included calculating gross margins, reviewing a wide range of potential scenarios, and conducting interviews in nearby villages. Data quality expectations, issues, and measures were discussed at length. Completed questionnaires were immediately reviewed and detailed feedback was provided to participants about gaps and errors. The Field Guides were subsequently revised as needed to address common mistakes and misunderstandings.
- KISAN's M&E Team and senior field managers conducted 4 two-day-training events in 4 clusters to fill out the organization questionnaires.
- Information from interviews was recorded manually on data collection forms (hard copies) using blue or black ink to ensure that no information was lost from smudging or erasing.

DATA QUALITY ANALYSIS – AFTER INTERVIEWS

Upon submission to the Review Team in Nepalgunj, each questionnaire was assigned a unique identification number and recorded in a log. The Review Team subsequently implemented the following review process:

1. **KISAN District Review:** Both interviewers (the BDSO and either an APO or Full Bright Enumerator) reviewed the form to ensure it was complete and accurate. One photocopy of the form was taken before dispatching it to Nepalgunj for data entry. Photocopies were kept in the local KISAN District Office in the event the original was lost or the M&E Team had a question for the interviewers.
2. **KISAN Cluster Review:** The Cluster Manager conducted spot checks on Interview Teams to ensure they understood the Interview Form and process.
3. **KISAN Regional Review:** The M&E Regional Manager and Operational Officer in Nepalgunj reviewed each form. An expected range table for key data was prepared for this purpose (refer to Annex J). If any data appeared outside of the expected range or was otherwise suspect, and no explanation had been provided in the comment section, it was flagged for follow-up. The

reviewers could correct some recording errors based on available information. Other errors required follow up with the Interview Team to discuss and resolve. If necessary, the Interview team also followed up with the interviewee. Refer to Annex K for a description of common errors and corrective measures.

4. **Full Bright Review:** The Full Bright Survey Supervisor in Nepalgunj, an Agricultural Expert, reviewed each form.
5. **Full Bright Data Entry:** The Full Bright Data Entry Specialists entered the data into the survey database.
6. **KISAN Data Quality Assessment (DQA):** The Full Bright Database Designer and KISAN GIS and DQA Specialist ran queries to detect data entry errors and outliers, based on the indicator measurement guide in Annex E and the expected values table in Annex J.²⁷ They produced a series of Error Lists for the Regional Review Team that listed all questionnaires requiring correction. This was done on an iterative basis over the course of several weeks, until DQA queries no longer detected errors. This process took longer than originally anticipated in the Work Plan, as it was conducted in post-earthquake conditions and the data required extensive data scrubbing. Following are selected examples of DQA queries:
 - Farmers having land >5 ha (omitted 6 respondents);
 - Harvest occurred outside baseline or FY2014 assessment period;
 - Yields higher than expected;
 - Input costs higher than expected;
 - Crop planting and harvest dates outside expected range;
 - Crop reported for technology adoption but not reported as planted or harvested; and
 - Loan date outside baseline or FY2014 assessment period.

The Survey Team is confident that any potential errors in the data used for calculations has been minimized.

²⁷ DQA queries focused on the variables that drive KISAN's indicator results. Not all data was scrubbed. For example, data scrubbing related to yields and sales focused on the crops for which gross margins were calculated. Data scrubbing for consumption focused on nutrient-rich crops.

ANNEX 5: KISAN INDICATORS

Following is a list of KISAN's 18 indicators, showing full indicator titles and cross-referencing indicator numbers from the Feed the Future (FTF) results framework and USAID/Nepal Performance Management Plan (PMP). Indicators are grouped following the outline of the Annual Report. KISAN's seven Key Performance Indicators (KPIs) are marked with an asterisk*.

Table 22. KISAN Indicators FY2015-2017

FTF No.	Nepal PMP	Titles
<i>Project Reach: Beneficiary Outputs</i>		
4.5.2(13)	2.1.1-4	Number of rural households benefiting directly from USG interventions (S)
4.5.2(14)	2.1.1-5	Number of vulnerable households benefiting directly from USG assistance (S)
4.5.2(7)	2.1.1-3	Number of individuals who have received USG supported short-term agricultural sector productivity or food security training (RiA)
4.5.2(11)	2.1.2-1	Number of food security private enterprises (for profit), producers organizations, water users associations, women's groups, trade and business associations, and community-based organizations (CBOs) receiving USG assistance (RiA)
4.5.2(27)		Number of members of producer organizations and community based organizations receiving USG assistance (S)
4.5.2(37)		Number of MSMEs, including farmers, receiving business development services from USG assisted sources (S)
<i>On-Farm Outcomes</i>		
4.5.2(5)*	2.1.1-2	Number of farmers and others who have applied improved technologies or management practices as a result of USG assistance (RiA)
4.5.2(2)*	2.1.1-1	Number of hectares of land under improved technologies or management practices as a result of USG assistance (RiA)
	Custom	Yield per hectare of selected product (metric tons)
4.5.2(23)*	2.1.2-2	Value of incremental sales (collected at farm-level) attributed to FTF implementation (RiA)
4.5(16)*	2.1-2	Gross margin per hectare of selected product (RiA)
4.5.2.8(x)		Total quantity of targeted nutrient-rich value chain commodities set aside for home consumption by direct beneficiary producer households (RiA)
<i>Private Sector and Organizational Capacity Building Outcomes</i>		
	2.2-1	Number of medium, small, and micro-enterprises established and/or expanded as a result of USG assistance.
4.5.2(38)*		Value of new private sector investment in the agriculture sector or food chain leveraged by FTF implementation (RiA)
4.5.2(42)*	2.1.2-3	Number of private enterprises, producers 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)
	1.3.2-1	Percent of leadership positions in USG-supported community management entities that are filled by a woman or member of a vulnerable group (cross-cutting)
<i>Access to Finance Outcomes</i>		
4.5.2(29)*		Value of agricultural and rural loans (RiA)
4.5.2(30)		Number of MSMEs, including farmers, receiving USG assistance to access loans (S)

FTF Classification

(RiA) Required if Applicable

(S) Standard Indicator (best practice, not required)