

USAID KENYA Accelerated Value Chain Development Program

Potato Value Chain

FY 2021 THIRD QUARTER REPORT

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International Potato Center

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ACRONYMS

AVCD	Accelerated Value Chain Development program
CBA	Cost benefit analyses
EGS	Early generation seed
FCS	Farmer cooperative society
FPO	Farmer producer organizations
GAP	Good agricultural practices
J2SR	Journey to self-reliance
KCSAP	Kenya climate smart agriculture project
KWETSO	Bungoma potato farmers' cooperative society Ltd
KEPHIS	Kenya Plant Health Inspection Service
LF	Learning farm
NPCK	National potato council of Kenya
RAC	Rooted apical cuttings
TTFPO	Taita Taveta potato farmer organization
WAO	Ward agricultural officer

EXECUTIVE SUMMARY

The 9 month cost extension from January to September 2021 supported sustainability of interventions that started January 2019 in Bungoma and Taita Taveta, focusing on further developing the farmer producer organizations (FPOs) to operate autonomously; supporting KWESTO FCS and three farmer groups in Taita Taveta to produce certified seed potato and supporting Taita Papa to produce quality rooted apical cuttings (RACs) as well as developing capacity of 7,169 farmers to farm as a business through numeracy training at numeracy learning farms. The county governments lead implementation of all field activities with guidance from AVCD to support the Journey to Self-Reliance (J2SR).

During this last quarter of the extension period as well as the project duration, the season-long numeracy training program on numeracy learning farms (LFs) led by the county governments was concluded. A total of 402 among the 849 farmer groups from phase 2 were trained to calculate cost of production and net income by unit of production (kg, ha, acre) from potato farming. Thirty-one WAOs trained the 7,169 farmers above the target of 6,000 farmers in three modules covering basic numeracy/business skills at 95 numeracy LFs. The FPOs revenue streams and coordination/management expanded to include seed sales, shares and service charge for aggregated ware potatoes.

KWESTO FCS successfully produced certified potato after going through the mandatory KEPHIS certification procedure becoming the first organization to produce certified seed in Bungoma county. KWESTO harvested a total of 14 tonnes of certified seed and approx. 50% will be multiplied further and the remaining sold to members who have booked and paid the full cost. KWESTO harvested another 3.5 tonnes of early generation seed from field established with RACs. KWESTO completed construction of the 50-tonne seed capacity diffuse light store (DLS) for seed storage.

The cumulative number of paid-up members for Taita Taveta FPO (TT FPO) reached 1,111 members surpassing the target of 1,000 members being a key justification for receiving the Kes 1 million inclusion grants from KCSAP. The FPO will now be eligible for the enterprise funds from KCSAP.

TT FPO continued with aggregation of ware potatoes at Mnuka aggregation center in Werugha ward for onward sale to direct market – hotel and supermarket in Wundanyi, and is actively pursuing further direct markets. The FPO aggregated 1.6 MT of ware potatoes during the months of August/September 2021.

Two additional media run on the outcomes of the potato value chain AVCD interventions in were produced in July, featuring the benefits potato is bringing to farmers in Taita Taveta county.

Rapid end line survey was completed both in Taita Taveta and Bungoma county. A total of 99 respondents across the targeted 12 wards (8 in Bungoma and 4 in Taita Taveta) were interviewed. County staff comprising of Subcounty crop officers and WAOs administered the survey questionnaires after being trained as enumerators by the project staff.

In addition to the above, this reporting period witnessed other milestones including:

- ✓ Mbangamboi farmer group received irrigation equipment worth 3,000 USD to enable the group irrigate their seed crop to maximise seed production.
- ✓ As a result of the AVCD investments expanding potato in each county, Taita Taveta invested **27,000 USD during the quarter directly and in-kind to support potato value chain development**, supporting the J2SR, including:

- Taita Taveta KCSAP program supported 17 farmer groups to order 33 tonnes of certified seed valued at approximately 23,000 USD and comprising of farmer's preferred varieties including the robust CIP variety Unica and Sherekea.
- Taita Taveta spent over 1,600 USD to digitize potato value chain actors. The digitization was done by youths creating some employment for youth.
- Taita Taveta train TT FPO management on business skills and financial management.
- ✓ Bungoma allocated 48,000USD to support production and access to certified seed in the 2021/22 county financial year budget.
- ✓ Tuber yield data obtained by 32 individual farmers who purchased own certified seed in April /May 2021 showed a 2-3-fold increase in tuber yields compared with what farmers used to harvest before they received the GAP trainings. **Given that these individual farmers did not receive regular technical backstopping from WAOs, the increase in yield is a good indicator that trained farmers have adopted use of quality seed and GAPs.**
- ✓ Over 80% of the 402 FGs completed and submitted their farm records (activity related cost, production and sales) that they recorded with guidance from WAOs during training session at the LFs. This is a great improvement compared to less than 10% of FGs which kept good activity and production records during the GAPs training conducted in the previous seasons (LR 2021).

I. BACKGROUND

Potato farming in Kenya supports approximately 800,000 largely smallholder farmers and another 2m people along the value chain as market agents, transporters, distributors, processors, vendors, retailers, and exporters.¹ Despite low yields, the average gross margin of potato farming is \$720/ha, equivalent to an income of \$180/month compared with gross margin of \$550/ha, which is an income of \$92/month for maize.² Doubling productivity would result in increasing gross margins to \$1,300–\$1,400/ha, which translates to monthly incomes of \$325–\$350/ha. With such an income, potato farmers can be food secure and out of poverty and graduate from subsistence to farming as business.

During the 3 years of phase I of the Accelerated Value Chain Development (AVCD) program, the potato value chain component, led by the International Potato Center (CIP), supported about 46,000 farming households with improved technologies to improve farm productivity and engage in market systems in Elgeyo-Marakwet, Meru, Nandi, and Uasin Gishu counties.

Phase 2 of the AVCD potato component is replicating phase I interventions in the two new counties of Bungoma and Taita Taveta. These are not major potato-producing counties in Kenya, hence general knowledge of good agricultural practices (GAP) for potato and the access to commercial seed are weak. The theory of change (ToC) partly relies on increasing the number of potato farmers so that the benefits of this crop and its contribution to national production can be realized at a greater scale, thereby increasing the importance of potato in these counties.

To support the ToC, the potato value chain promoted potato production and marketing in 10 traditional potato-producing wards where potato is commonly grown due to conducive highland conditions and high rainfall agro-ecology and 17 nontraditional wards where potato was grown at a very low level or not at all yet these wards are suitable for potato production (Table 1, Fig. 1). Over the 3-year project duration, farmers in these nontraditional wards have realized the benefits of potato farming and already other county programs, have started supporting potato farmers in these wards as spillover from AVCD activities.

TABLE 1. WARDS IN BUNGOMA AND TAITA TAVETA UNDER AVCD POTATO VALUE CHAIN IMPLEMENTED BETWEEN JAN 2019- SEPT 2021

County	Sub-county	Ward	Traditional or Nontraditional Potato Agro-ecology
Taita Taveta	Mwatate	Chawia	Traditional
		Wusi/Kishamba	Nontraditional
		Bura	Nontraditional
	Voi	Ngolia/Wogonyi	Nontraditional
		Sagalla	Nontraditional
	Taita	Mwanda/Mgange	Nontraditional
		Werugha	Traditional
		Wumigu/Kishushe	Traditional
		Wundanyi/Mbale	Traditional
	Bungoma	Kabuchai	Nontraditional
		Chwele/Kabuchai	
		Mt. Elgon	Traditional
		Chepyuk	Traditional
		Chesikaki	Traditional

¹ Ministry of Agriculture, Livestock and Fisheries. 2016. The National Potato Strategy, 2016–2020.

² ACIDI-VOCA. 2012. Kenya Maize Development Programme II: Performance Evaluation.

County	Sub-county	Ward	Traditional or Nontraditional Potato Agro-ecology
		Elgon	Traditional
		Kapkateny	Traditional
		Kaptama	Traditional
	Sirisia	Namwela	Nontraditional
	Tongaren	Tongaren	Nontraditional
		Milima	Nontraditional
		Naitiri/Kabuyefwe	Nontraditional
		Ndalu	Nontraditional
		Soysambu/Mitua	Nontraditional
	Webuye East	Mihuu	Nontraditional
		Ndivisi	Nontraditional
	Webuye West	Misikhu	Nontraditional
		Bokoli	Nontraditional

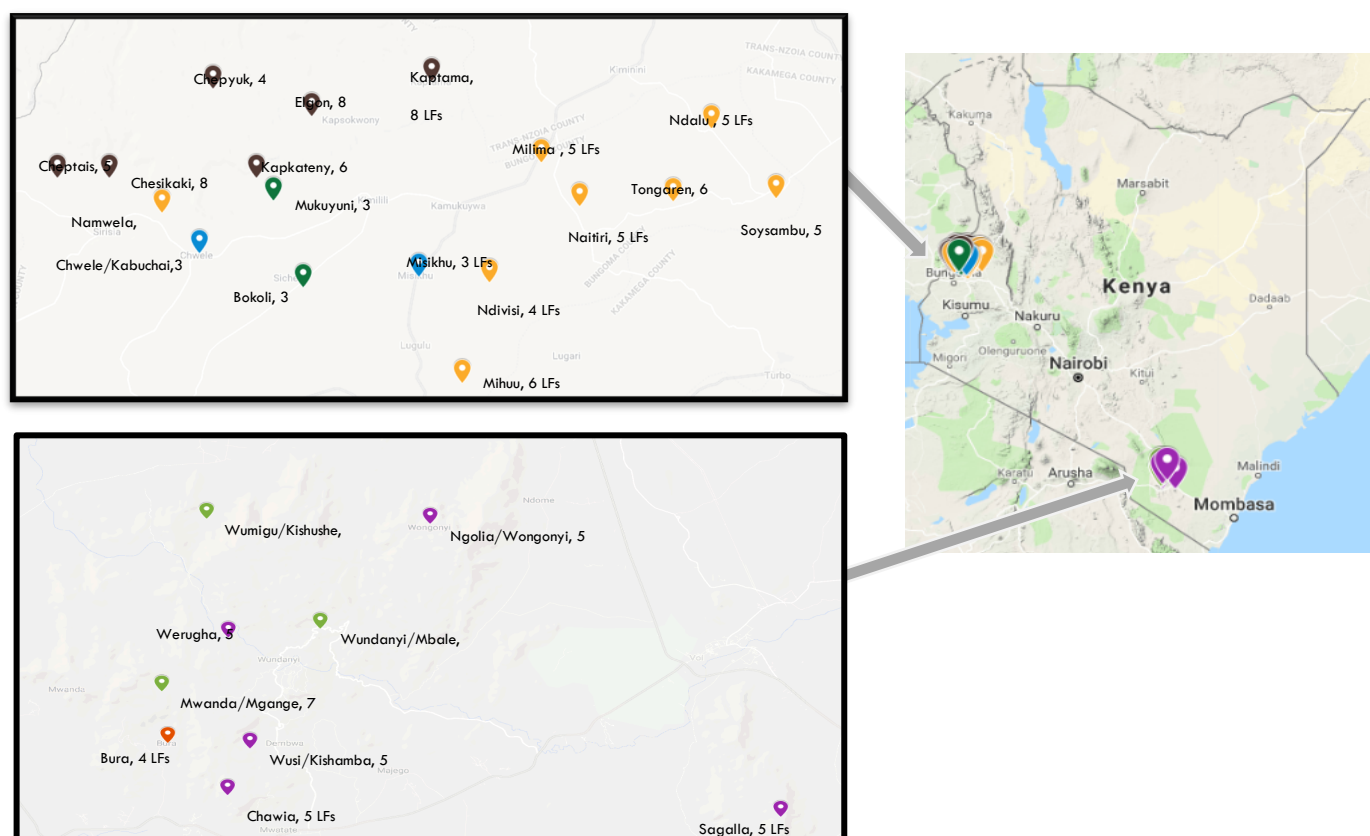


FIGURE 1. Map of AVCD potato learning farms by ward in Bungoma and Taita Taveta counties

2. KEY ACHIEVEMENTS (QUALITATIVE IMPACT)

2.1 PROGRESS BY OBJECTIVES

The 9 month cost extension from January to September 2021 supported sustainability of interventions that started 2 years ago in Bungoma and Taita Taveta, focusing on further developing the farmer producer organizations (FPOs) to operate autonomously; supporting KWESTO FCS and three farmer groups in Taita Taveta to produce certified seed potato and supporting Taita Papa satellite nursery to produce quality rooted apical cuttings (RACs) as well as developing capacity of 7,169 farmers to farm as a business through numeracy training at numeracy learning farms. The county governments led implementation of all filed activities with guidance from AVCD while FPOs and private sector drive the value chain to support the Journey to Self-Reliance (J2SR). Potato in Bungoma and Taita Taveta counties was relatively low profile until AVCD demonstrated that potato crop contributes to food and economic security, resulting in these counties prioritizing the crop in county development plans and starting to invest through county government budgets and other programs such as Kenya Climate Smart Agriculture Project (KCSAP) in Taita Taveta.

2.1.1 Project Objective 1

Project Objective 1 focused on bringing farming as a business to the forefront of the potato farming system aligning with IR 1 Strengthened inclusive agriculture systems that are productive and profitable. Development of county-level potato strategy in the two project counties are providing the enabling environment impacting *the number of individuals in the agriculture system who have applied improved management practices or technologies*. Further aligning with IR 4: Increased sustainable productivity, particularly through climate smart approaches, Project Objective 1 aimed at *increasing production of the important national food security crop by increasing productivity of potato farming systems with climate smart technologies*.

Project Objective 1 focused on adding depth to the good agricultural practices (GAP) training of phase 2 after a post-training assessment revealed limited numeracy/basic business skills among farmers. Through a season-long numeracy training program on numeracy LFs led by the county governments, WAOs trained 402 among the 849 farmer groups from phase 2 to be able to calculate cost of production and net income by unit of production (kg, ha, acre) from potato farming enabling farming as a business.

The GAP training exposed farmers to productivity-enhancing technologies that significantly improve yield, such as certified seed, proper and timely hilling – and climate resilient technologies such as disease resistant, and water and heat stress tolerant potato varieties. While the GAP training embedded numeracy into each of the four modules, this was insufficient to develop numeracy skills as most effort was placed on GAP. Having numeracy as a standalone training has enhanced farmers numeracy skills in addition to technical aspects of production which were taught and reviewed in the previous trainings.

Farmers training on basic numeracy/business skills. The training covered three modules over the potato growing season: Module 1: Farming as a Business at planting, Module 2: Record Keeping at flowering stage and Module 3: Cost Benefit Analysis, Unit Production Costs at harvest. Modules 2 and 3 were completed by the 31 WAOs during the reporting period. A total of 7,169 farmers (68% women and 15% youth), among the 402 farmer groups, above the target of 6,000 farmers were trained in basic numeracy/business skills. Thirty-one WAOs conducted the trainings at the 95 numeracy LFs established in their respective wards (Table 2). The basic numeracy/ business skills training targets farmers who participated in a previous season of GAP training. Farmers and county

government requested to extend outreach for the numeracy training beyond the target. Resources and good planning with the county governments enabled to expand the numeracy training to accommodate this demand.

TABLE 2. FARMER GROUPS TRAINED BY WAOS AT NUMERACY LEARNING FARMS FOR LONG RAINS 2021. THE LEARNING FARMS WERE ESTABLISHED IN MAY AND CROP HARVESTED IN AUGUST /SEPTEMBER 2021

	Sub County	No. Wards	No. FG ^a	# Women	# Men	Grand Total	% Women	% Youth	Potato agro-ecology
Bungoma	Chwele/Kabuchai	2	12	198	47	245	81	7	Non-Traditional
	Sirisia	1	6	76	54	130	59	18	Non-Traditional
	Tongaren	5	70	837	392	1,229	68	9	Non-Traditional
	Webuye East	2	24	280	113	393	71	3	Non-Traditional
	Webuye West	3	25	267	128	395	68	3	Non-Traditional
	Mt Elgon	6	184	2,263	1,180	3,443	66	23	Traditional
	Subtotal	19	321	3,921	1,914	5,835	67	16	
Taita Taveta	Mwatate	3	26	279	124	403	69	14	Non-Traditional
	Voi	2	12	154	69	223	69	9	Non-Traditional
	Taita	4	44	509	199	708	72	8	Traditional
	Subtotal	9	82	942	392	1,334	71	10	
Total		28	403	4,863	2,306	7,169	68	15	

^a Farmer groups

Main activities carried out by WAOs during the reporting period included: training on crop protection, demonstration of dehaulming, final harvesting, sorting, grading and yield assessment at the 95 NLFs, Fig. 2 and 3. WAO submitted yield data both for the NLFs and individual farmers who purchased own certified seed at the onset of the long rains in April.



FIGURE 2. Potato Value chain. Left, Group members of Mbirwa farmer group in Wundanyi IMbale ward and left, members of Dawida D cu farmer group in Mwanda/Mgange ward sorting and grading harvested potatoes at their learning farm. Both groups are in Taita Taveta County. Harvesting was done in August 2021



FIGURE 3. Potato Value chain. Left, Group members of Bonya Spongy Group, Mwanda/Mghange Ward and Right: members of Chakiloli Group, Bura ward, being trained by their respective WAOs on Cost benefit Analysis (Module 3). Module 3 (Cost benefit Analysis) was conducted after harvesting and farmers have recorded all the farm activities and related cost for each activity and the value of harvested potatoes using prevailing market price.

Crop performance at the learning farm. Averaged yields from non-traditional agro-ecologies in Bungoma and Taita Taveta is 11.5 and 8.9 t/ha while in traditional agro-ecologies, yields averaged 14 and 10.2 t/ha respectively, Table 3. The yields obtained in both counties are considered good given the dry weather conditions experienced during the cropping season and when compared with what farmers used to harvest before they received the GAPs trainings: baseline yields of 7.8 and 7.5 t/ha, respectively.

For example, in Taita Taveta county, rainfall data presented during the SEK monthly meeting held on 19th August shows that the onset of MAM long rains 2021 started two weeks (4th week of March instead on 2nd week) and interval of dry spells were common. The data also indicates early cessation of the rains i.e., on 1st week of May instead of 2nd or 3rd week of May. Further, the data shows that amount of rainfall received in potato growing area was 26-75% normal.

TABLE 3. TUBER YIELD (T/HA) OBTAINED AT 85 (45 BUNGOMA AND 40 TAITA TAVETA) LEARNING FARMS. THE CROP WAS PLANTED IN APRIL/MAY 2021 AND HARVESTING STARTED IN AUG.2021¹.

Aug. 2021

County	Subcounty	Ward	Variety				Category
			Nyota	Shangi	Sherekea	Average	
Bungoma	Mt Elgon	Cheptais		13.1		13.1	Traditional
		Chepyuk	16.8	14.9	14.0	14.9	
		Chesikaki	14.0	10.3	19.2	12.4	
		Elgon	15.3	11.9	26.4	14.5	
		Kapkateny	11.5	9.8	14.1	11.0	
		Kaptama	30.0	14.2		19.5	
	Average -Traditional Areas		17.2	11.9	17.5	14.0	-
	Kabuchai	Mkuyuni			11.9	11.9	Non-Traditional
	Sirisia	Namwela	7.0			7.0	
	Tongaren	Milima		15.1		15.1	
		Naitiri/Kabuyefwe		13.9		13.9	
		Ndalu/Taabani	9.9	11.0		10.7	
		Soysambu/Mitua		17.0		17.0	
	Tongaren		11.1		11.1		
	Webuye East	Mihuu		11.9	17.9	14.9	
	Webuye	Bokoli			7.4	7.4	
	West	Misikhu	6.0			6.0	
	Average Non-Traditional Areas		7.6	12.4	12.4	11.5	Non-Traditional
Average-Bungoma		14.9	12.1	14.6	13.1		
Taita Taveta	Taita	Mwanda/Mgange			16.5	16.5	Traditional
		Werugha			9.8	9.8	
		Wumingu/Kishushe	9.8	7.1	10.0	9.4	
		Wundanyi/Mbale	8.2			8.2	
	Average -Traditional Areas		8.5	7.1	11.5	10.2	
	Voi	Ngolia/Wungonyi	6.4		9.0	7.3	Non-Traditional
		Sagala	7.1			7.1	
		Bura	9.3			9.3	
	Mwatate	Chawia		6.1		6.1	Non-Traditional
		Wusi/Kishamba		8.8	12.1	11.6	
	Average Non-Traditional areas		7.9	6.8	11.6	8.9	
	Average -Taita Taveta		8.1	6.9	11.5	9.6	
Average both Counties		10.3	11.2	12.7	11.4		

¹Project baseline survey done in 2019 indicated a county average of 7.8 and 7.5 t/ha, respectively for Bungoma and Taita Taveta.

Crop performance at individual farms. Tuber yield data obtained by 32 individual farmers who purchased own certified seed in April /May 2021 both in Bungoma and Taita Taveta county shows a 2-3-fold increase in tuber yields compared with what farmers used to harvest before they received the GAP trainings, Table 4. Project baseline survey done in 2019 indicated a county average of 7.8 t./ha compared to an average of 13.3 t/ha obtained by the 32 individual farmers. **Given that these individual farmers did not receive regular technical backstopping from WAOs, the**

increase in yield is a good indicator that trained farmers have adopted use of quality seed and GAPs.

Irrigation technology appliers. In Taita Taveta county, crop performance was affected by inadequate rainfall due to unexpected cessation of rains except for a few farmers who were able to carry out supplementary irrigations. Eight out of the 14 individual farmers in Taita Taveta county practiced supplementary irrigation in their farms and they recorded higher yield compared to the ones we relied on rainfed condition, Table 4.

TABLE 4. TUBER YIELD (T/HA) OBTAINED BY TRAINED INDIVIDUAL POTATO FARMERS. THE CROP WAS PLANTED IN APRIL/MAY 2021 AND HARVESTING IN AUGUST/SEPTEMBER 2021¹

County	Names of Individual farmers	Tonnes of seed planted	Tonnes of seed Harvested	Yield t/ha	Category
Bungoma	Maurison Misiko	0.1	0.6	13.0	Non-Traditional
	Charles Sichei	0.1	0.5	18.0	Traditional
	David Kipsang	0.1	0.5	10.0	
	Emily Chelimo	0.1	0.3	10.0	
	Emily Chepturre	0.3	1.8	14.6	
	Hellen Masai	0.1	0.7	13.8	
	Kevin Kitoo	0.1	0.6	12.4	
	Kiterie Neumo	0.2	1.2	16.0	
	Laba Kibet	0.1	0.3	10.0	
	Lawrence Ambundo	0.1	0.5	10.8	
	Maurice Kinyanja	0.2	1.0	13.3	
	Peter Ngachi	0.2	2.0	19.8	
	Sammy Cheminingwa	0.1	0.2	8.9	
	Teresa Chebet	0.3	1.8	14.0	
	Average Traditional	1.6	11.3	13.2	
County		1.7	11.9	13.2	
Taita Taveta	ACK Mwawache	0.1	0.5	8.9	Non-Traditional
	Janet Mafuko	0.0	0.3	11.9	
	Nashon Mwadime ²	0.1	0.7	14.4	
	Harry Japhet	0.1	0.6	12.4	
	Rogasia Wakisha ²	0.0	0.2	17.3	
	Benard Mwamburi	0.1	0.5	10.3	
	Margret Nyangala	0.1	0.2	8.2	
	Margret Ringoma	0.1	0.2	8.9	
	Patrick Mwabili	0.1	0.8	15.2	
	Renson Mwadime ²	0.1	0.6	15.1	
	Michael Mwamburi	0.1	0.5	9.4	
	Non-Traditional	0.9	5.1	11.7	Traditional
	Edgar Msangi ²	0.0	0.4	22.0	
	Martha Mwakina ²	0.1	0.5	20.9	
	Benedict Mvoi	0.1	0.4	12.5	
	Lukas Ngeti	0.0	0.1	11.2	
	Angelica Mwachofi ²	0.1	1.2	24.5	
	Renson Kifumbu ²	0.3	1.5	10.0	
	Average Traditional	0.6	4.1	16.8	
County Average		1.4	9.2	13.4	
Both Counties		3.1	21.1	13.3	

¹Project baseline survey done in 2019 indicated a county average of 7.8 and 7.5 t/ha, respectively for Bungoma and Taita Taveta. ²Carried out supplementary irrigation.

Cost benefit analysis. Over 80% of the 402 FGs completed and submitted their farm record sheets showing all activity related cost, production and value sales that they recorded with guidance

from WAOs during training session at the LFs. This is a great improvement compared to less than 10% of FGs which kept activity and production records and submitted analyzable data during the GAPs training conducted in the previous seasons (LR 2021). Cost benefit analysis (CBA) done on data for 78 LFs (41 in Bungoma, 37 in Taita Taveta) shows an average unit cost of production of 0.15 and 0.21 USD/kg of ware potatoes respectively in Bungoma and Taita Taveta compared to 0.25 USD/kg of certified seed potato obtained by KWESTO FCS. With an average farm gate price of 0.25 and 0.40 USD/kg in Bungoma and Taita Taveta, farmers can earn a net profit of up to 1,450 and 2,100 USD/ha respectively. The average yield obtained in Bungoma was 13.3t/ha and 10 t/ha in Taita Taveta. Some of the analysis of data submitted by WAOs are presented in Fig 4.

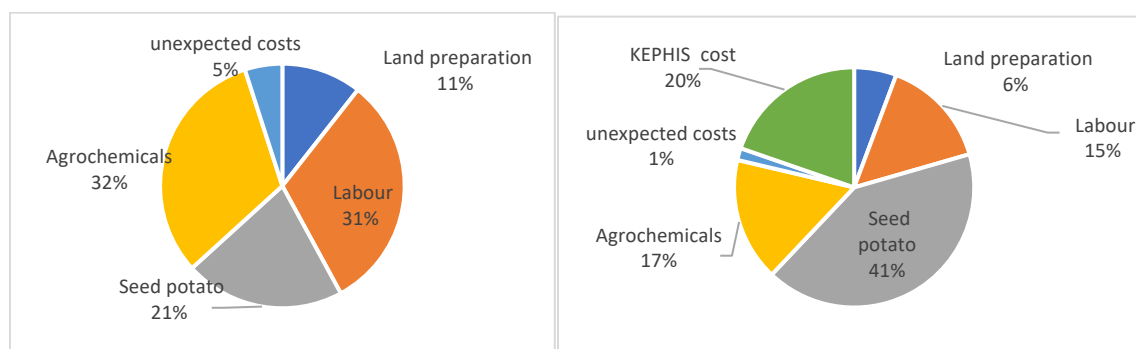


FIGURE 4. Potato Value Chain. Left: Proportion (%) of inputs for potato production per acre based on the records from 78 (41 Bungoma and 37 in Taita Taveta) learning farms established during the LR2021, (planted in April/May and harvested in August/Sept); Right based on records from KWESTO seed farm established during the same time.

2.1.2 Project Objective 2

Project Objective 2 focused on seed system development by supporting FPOs and farmer groups to produce certified seed and enable farmers to save quality seed on farm using specific technologies. To increase access to seed, especially by women and youth, FPOs coordinated the collective purchase of inputs to support use of certified seed, creating markets for the seed businesses and resulting in increased yields of 25%.

Through developing seed roadmaps with county governments and supporting certified seed production by private seed businesses: KWESTO FCS in Bungoma and three farmer groups in Taita Taveta. Project Objective 2 aligns with IR 2 Strengthened and expanded access to markets and trade resulting in farmers buying certified seed which is critical for trade.

Certified seed production by farmer groups in Taita Taveta. The three farmer groups (Mreshinyi, Mchunghunyi Mbangamboi FG) harvested a total of 11 tonnes of quality seed potato. KEPHIS seed inspectors conducted the two mandatory field inspections and tuber sampling for laboratory analysis at the 3 groups seed farm. **It is worthwhile to note that all the three groups obtained over 80% of their total harvested being within seed sizes (30 - 60 mm tuber diameter).** This is a good indication that members scouted on tuber size and did proper and timely dahaulming.

Certified seed production by KWETSO in Bungoma county. KWESTO FCS successfully underwent through KEPHIS certification process becoming the first organization to produce certified seed (C1 seed) in Bungoma county. KEPHIS seed inspectors conducted the two mandatory field inspections and tuber sampling for laboratory analysis at the KWESTO FCS seed farm. The inspectors gave an impressive report on field performance and the laboratory analysis/results were negative for Bacterial wilt (BW).

KWESTO FCS harvested a total of 14 tonnes of seed potatoes at the end of September 2021 with a value of 2,670 USD based on a unit price of 0.55 USD/kg. The cost of production of is 1,150USD. Once they receive labels from KEPHIS, the FCS will sell some of the certified seed to farmer members and do second field multiplication for the remaining quantities. Second field multiplication will be officially registered for certification by KEPHIS as C2 certified seed.

It is worthwhile to note that KWESTO obtained **over 80% of their total harvested tubers within seed sizes (30 - 60 mm tuber diameter)**, a good indicator that the members of FCS production sub-committee applied good seed agronomic practices including proper and timely dahaulming.

Commercial production of apical rooted cuttings in Taita Taveta county Following careful backstopping to produce to right product of the right quality has resulted in improved performance of the nursery and they produce a top quality rooted apical cutting (RACs) – better quality than many other nurseries. Supply of apical cuttings is important for Taita Taveta to have a local source of early generation seed (EGS) for the farmer groups/seed businesses to multiply into certified seed, rather than obtaining basic seed from KALRO or ADC Molo, 400 to 550 km away.

During the reporting period quarter, Taita Papa produced an additional 2,695 RACs bringing the total number of RACs produced over the LR2021 season to 8,325, having sold and/or distributed 6,549 RACs with a value of 650USD to 26 farmer groups. Varieties produced include Unica, Chulu and Wanjiku.

Promoting use of apical cuttings by farmers to produce seed on-farm Responding to demand from farmers for training in RACs, WAOs in Taita Taveta trained and provided technical backstopping to additional 12 farmer groups bringing the total number of farmer groups trained to 60 (34 in Bungoma, 26 in Taita Taveta) with a combined membership of 1,096 (708 in Bungoma, 387 in Taita Taveta) who collectively received 12,976 RACs (between 150-200 per group).

Performance of rooted apical cuttings planted by farmers to produce on-farm seed in Taita Taveta and Bungoma. A total of 1.7 tonnes of EGS from RACs were harvested by 24 (21 in Bungoma and 4 in Taita Taveta) farmer groups. This brings the total quantities of EGS harvested in the two counties to 5.2 tonnes including the 3.5 tonnes of EGS produced by KWESTO FCS. The cumulative amount of EGS harvested is enough for about 2 hectares of land and if well managed during the second field multiplication, it will produce over 40 tons of quality seed.

Seed storage technology appliers in Bungoma county. KWESTO FCS completed and started using the 50-tonne seed capacity diffuse light store (Fig 5) to store the 14 tonnes of seed potatoes they harvested as they wait for the labels from KEPHIS.



FIGURE 5. Potato Value chain. Left: Early stages of construction of diffused light store (DLS) for KWESTO FCS. Right: Completed outer structure of the DLS. The 50- tonne seed storage capacity DLS was constructed through cost sharing with AVCD- Potato component procuring the construction materials and Aphid proof insect net while KWESTO FCS provided labor for construction and a committee member provided land where the DLS has been constructed.

Preparation for second field generation of certified seed. KWESTO FCS production sub-committee completed land preparation at the 3-acre piece of land that the FCS has set aside for further multiplication of certified seed during the upcoming short rains seasons. This is part of the 10-acre land that the county gave to KWESTO for production of certified seed potatoes.

2.1.3 Project Objective 3

Project Objective 3 focused on empowering potato FPOs to engage in marketing and value addition through organizational and business capacity development. The idea was to provide necessary services among member farmers to support farming as a business.

Project Objective 3 aimed at better coordinated marketing systems for potato farmers through improving business performance of FPOs to increase *value of annual sales of smallholder farmers* contributing to IR 2 Strengthened and expanded access to markets and trade. In the reporting period, FPOs improved business performance advancing on FPO coordination and business plans, developing revenue streams and increasing membership.

FPO revenue streams Bungoma KWESTO FCS. During the month of September, KWESTO harvested a total of 14 tonnes of seed potatoes that has been certified by KEPHIS. Once they receive labels from KEPHIS, KWESTO FCS will sell some of the certified seed to farmer members

FPO revenue streams Taita Taveta TT FPO. During this last quarter, TT FPO aggregated 1.6 tonnes of ware potatoes at the Mnuka aggregation center in Werugha ward. Buying price is dictated by prevailing market prices. For example, if the FPO buys potatoes at Kes 30/kg, the farmer is then given Kes 27/kg through Mpesa, Kes 1/kg for service charge and Kes 2/kg as share for the farmer.

TTFPO continues to supply Heritage Hotel and a supermarket in Wundanyi for 500 kg of potato per week. With fluctuating market prices, there is no signed agreement, TTFPO sells at current market prices.

FPO/County monthly meetings. AVCD potato component supported the FPOs to host monthly meetings to support coordination within the FPO and the county governments. Both KWESTO and TT FPO each held two executive and full committee meetings during the 4th quarter with FPO Secretary Manager recording the minutes for each meeting:

- Executive Monthly Progress/Planning Meetings: In attendance are FPO Chairman and Secretary Manager, county potato focal point and AVCD field officer.
- Full Committee/county Monthly Progress/Planning Meetings: TT FPO and KWESTO hold their full committee monthly meetings to review progress and agree on upcoming activities. Meetings are attended by FPO committee members and secretary manager, county staff from Department of Agriculture and Social Development/Cooperative and AVCD field officers.

The one-year (Sept 2020- August 2021) employment contract for the two FPO/FCS secretary managers ended on 31st August 2021. Both the County executives and the FPO committee members are grateful to AVCD-program for supporting the organization during its nascent stage and promised to support the FPOs.

Business to Business Forum in Bungoma county. A one-day marketing forum for potato producers and buyers was held on 11th August. The forum facilitated National Potato Council of Kenya (NPCK) aimed at creating direct market linkages between farmers and market outlets. The forum was attended by a total of 34 participants comprising of 11 committee members from the KWESTO FCS representing the farmers and county executive from Ministry of Agriculture and Cooperative representing the enablers while buyers were represented by Norda Industries and Twiga foods from Nairobi, and five traders from Bungoma county.

Action points agreed during the marketing forum:

1. Formation of organized farmer groups/ cooperative to for ease of aggregation of inputs and service delivery.
2. NPCK to oversee linkages between farmer groups/cooperative and input/service providers as well as buyers and off-takers
3. Recruit more farmers into Viazio soko digital platform to help them access suitable inputs, services, extension and advisory messages and markets
4. Introduce and recruit farmers into contractual farming agreement with identified buyers

Exchange/Exposure visit by TT FPO committee members. With support AVCD-PVC component, a group of 15 participants comprising of TT FPO committee members and extension officers visited AVCD Phase I counties of Nandi, Elgeyo Marakwet and Uasin Gishu where they held separate consultative meetings with management committee of three potato FCS respectively: Nandi grower's cooperative society Elgeyo Marakwet marketing cooperative society (EMPM FCS) , and Ainabkoi farmers' cooperative society. The group also visited Molo ADC Seed potato Complex in Nakuru county where they were able to see mechanized seed potato producing including mechanised sorting, grading and packaging. The exposure tour took place between 6 -10 September 2021, Fig. 6. The exchange visit created some strong linkages between the AVCD supported potato producer organization.

Summary of the lessons learned from the field exposure tour:

- The FPO should upgrade to a society as it is legally recognized and well-structured under the Cooperative Act.
- The FPO must prepare annual budgets on time.
- The FPO must observe timely implementation of activities with proper records keeping.
- All FPO members should be encouraged to pay their shares within one year of joining the FPO.
- Farmers should be encouraged to stagger planting so that the society have access to continuous production.
- The FPO must establish good network with stakeholders and secure direct markets access.
- The FPO must expand their revenue streams for it to grow and stand on its own.
- The FPO should prioritize own aggregation center and cold store to enable storage of tubers as they wait for better prices.
- The FPO should make arrangement to obtain branded bags for packaging seed and ware potatoes.
- Every subcommittee to perform its duties as clearly defined in cooperative by-laws and regulations.



FIGURE 6 – Potato Value Chain. Left. Some of the County extension staff and management committee of TT FPO who participated during the exposure tour at Tissue Culture Laboratory at ADC Molo seed potato complex and: Right: admiring ware potato stored in wooden crates at the ambient cold storage facility owned by Ainabkoi FCS in Uasin Gishu county. The exposure tour took place between 6th and 10th September 2021 and the participants visited ADC Molo Complex and Ainabkoi FCS on 7th Sept 2021

Membership Recruitment Cumulatively, there were 229 and 1,111 paid members of KWESTO and TTPFO, respectively, as of end September, up from 205 and 736 end of June. Each member is required to pay a registration fee of Kes 500 and Kes 200 respectively for KWESTO and TT PFO. **This is a milestone for the TT FPO having surpassed the target of 1,000 members being a key requirement for receiving the Kes 1 million inclusion grants from KCSAP. The FPO will now be eligible for the enterprise funds from KCSAP.**

The new members include 16 members from Ndile village in Ronge ward, Voi sub county. This is a new ward for potato where TTPFO committee members visited upon request from farmers and the committee members were impressed by the good turn out and the interest shown by the farmers on potato business.

Training on Viazi Soko digital platform in Bungoma county. A one-day training on use of Vazi Soko digital platform and attended by 45 participants was held on 12th August 2021. The training was facilitated NPCK aimed at creating awareness and promoting use of the digital platform among farmers and FCS members.

The facilitators placed emphasis on the following services available in the platform:

1. Query and receive feedback on seed potato information.
2. Book and order of seeds for the season
3. Access of potato recommended fertilizers and approved agrochemicals
4. Access to soil testing, mechanization, and spray services.
5. Access to extension and advisory services on GAPS
6. Access to pest and disease advisory services
7. Access to weather information and forecast.

Enhancing the Digital Platform Viazi Soko to Support Seed and Potato Marketing NPCK hosts the Viazi Soko (potato marketing) platform <https://npckviazisoko.com/>, farmers are able to query and access seed availability information such as; variety, quantity, price per kg, location and contacts of seed producer and market prices of ware potato in major towns. Seed orders remained as was reported in the previous quarter with farmers order seeds worth Ksh, 4,215,749 (~42,000 USD) through the platform. Total of 2,671 bags of certified seed were ordered by farmers from the following counties; Nakuru (1,809), Meru (415), Nyandarua (222), Narok (92), Nairobi (85), Laikipia (40), Uasin Gishu (4), Elgeyo Marakwet (4). The seeds were delivered to their respective pick-up points by the logistic company working with NPCK. Seed orders is expected to start in October in preparation for the SR2021

Further Viazi Soko statistics:

- Currently there are 49 pick-up points in various counties
- Currently there are 98,426 farmers registered on the platform
- 1,211 farmers are actively using the platform to access inputs, services and advisory information.
- 21 companies are registered on the platform and offering various products and services to farmer through the platform marketing the following products and services; seeds tubers, apical cuttings, minitubers, agrochemicals, fertilizers, mechanization, soil testing and spraying services.

NPCK and CIP trained 35 FPOs representatives in Bungoma on the platform use. FPOs are expected to train other members of the groups on the platform use. The trained FPO members representatives register and enjoyed the services offered through the platform.

2.1.4 Project Objective 4

Project Objective 4 developed the capacities of institutions, partners and stakeholders for the sustainability of the interventions and the J2SR. Transforming value chains is a process requiring enabling environment, capacity development at many levels, multi-stakeholder coordination, access to resources, behavior change and a monitoring system to guide support. Objective 4 builds upon gains made in Bungoma and Taita Taveta counties by developing the capacity of key potato value chain institutions to carry forth AVCD interventions.

Through capacity development of county government and FPOs, Project Objective 4 aligns to CCIR6 Improved Human, organizational and system performance *impacting county government investments in the potato value chain guided by county strategies/programs thereby contributing to enhancing uptake of productivity-enhancing technologies and streamlining value chains thereby supporting the J2SR through enabling more effective governance, policy, and institutions.*

Development of Taita Taveta county potato strategy. A one-day stakeholder validation workshop for the county potato strategy was held on 3rd September 2021. The validation workshop facilitated NPCK brought together 20 participants representing key potato stakeholders including: Kenya Agriculture and Livestock Research Organization (KALRO), Kenya Plant Inspectorate Services (KEPHIS), Agricultural Food Authority (AFA) and Financial Institutions. At county level, senior staff from department of Agriculture and Cooperative participated while farmers were represented by members of Taita Taveta potato farmer producer organization, Fig 7.



FIGURE 7. Potato Value chain. Left: Davies Mwangoma (Standing Infront), CECM), Ministry of Agriculture, Livestock, Irrigation d Fisheries giving opening remarks during the County Potato Validation workshop held 3rd September 2021 and facilitated by staff from National Potato Concil of Kenya Right: Group photo of the workshop participants at Panlis Hotel, Mwatate , Taita Taveta County

Launch of Bungoma potato strategy. The five-year (2021-2025) Bungoma County Potato Strategy was officially launched on 9th September 2021. The launch was organized by County Government in partnership with AVCD-Potato component, NPCK and GIZ- NuSSEP program. Among the participants were four members of the Bungoma County Assembly (BCA). Also in

attendance were potato traders and other stakeholders and media coverage was done by the county Press, Fig. 8.

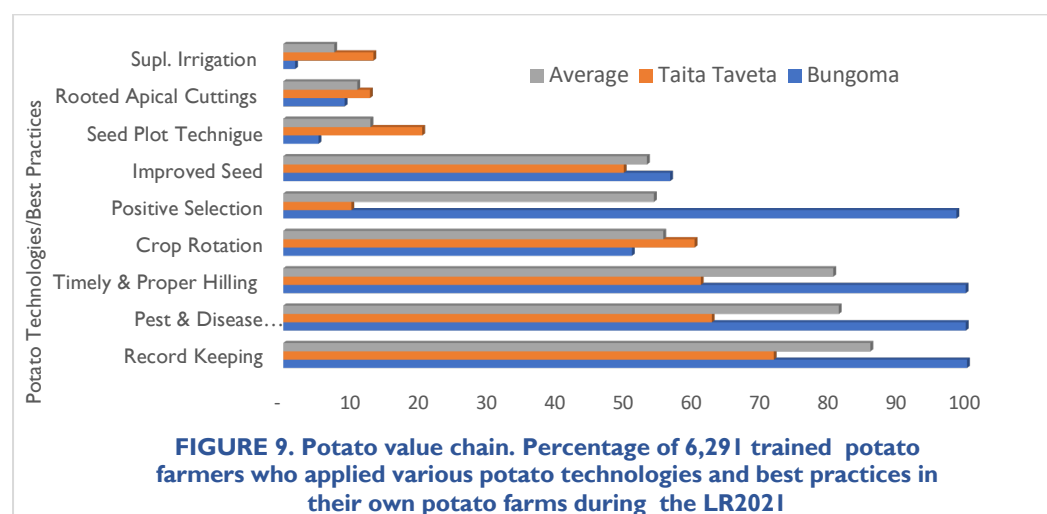


FIGURE 8. Potato Value chain. Left: Participants during the official launch of the Bungoma County Potato strategy that was held on 9th September 2021 at Sawan Hotel, Bungoma, Right: Standing far left: Onesmus Makhanu (CDA), Mathews Chirasha (CECM) Hon. Joan Lutukai (Agriculture committee Chair), Hon. Sosipater Nyongesa (Agriculture committee Member) holding the copy of the 2021-2025 Bungoma county potato strategy

Agrinutrition messaging by trained CHVs. During the reporting period, 40 (31 in Bungoma and 9 in Taita Taveta) trained CHVs completed agrinutrition messaging. A total of 1,137 children under 23 months reached with Agrinutrition training in two sessions: Session 1 covering card 3 on pregnant mothers and nutrition and card 4 on breastfeeding mothers and nutrition while session 2 covered card 5 on feeding infants 0-6 months and card 6 on appropriate complementary feeding for children 6-23 months. The emphasis during session 1 is good nutrition for pregnant and breastfeeding mothers and exclusive breastfeeding for infants 0-6 months and the need to give a variety of food from at least 4 out of the 10 food groups to children above 6 months formed the key highlight of session 2.

M & E ACTIVITIES

Continuous Monitoring Data on Appliers of Technologies by County Staff. Ward Agricultural officers completed monitoring farmers participating in trainings by collecting appliers of technology indicator data during Module 3. A majority adopted the various potato technologies in their own farms during the cropping season, Fig. 9. Three out of the nine potato technologies, numeracy skills (record keeping), timely and proper hilling and pest and disease management were applied by the all the trained farmers. Use of improved seed, crop rotation and positive selection were applied by over 50 percent of the trained farmers. The least applied technologies are seed plot techniques, rooted apical cuttings and supplementary irrigation.



Rapid end line survey was completed both in Taita Taveta and Bungoma county. A total of 99 respondents across the targeted 12 wards (8 wards, 65 respondents in Bungoma and 4 wards, 34 respondents in Taita Taveta) were interviewed. A detailed report has been submitted.

Media coverage on benefit of potatoes; Two additional media run on the outcomes of the potato value chain AVCD interventions in were produced in July, featuring the benefits potato is bringing to farmers in Taita Taveta county (Annex 1).

2.2 LESSONS LEARNED

Numeracy training is critical to enable farmers to know the cost of production to engage in smart contract farming. Farmers tend not to know their production costs, and even less so to calculate production costs to a unit: per kg, ha or acre to enable sound decisions when selling their produce. *The unit price is the main bottleneck in negotiating contract farming.* Many farmers consider the standard price of 0.22 to 0.30 US per kg as low as make estimations based on peak selling prices and they do not know their cost of production per kg. At a selling price of 0.20 USD per kg, using 100% certified seed with yields of 20 t/ha and 85% of production marketable, a farmer can earn 0.14 US per kg profit, or 1,400 USD/ha gross margin, or 2,800 USD annually/ha under two seasons, equivalent to 7.67 USD/day, much greater than poverty thresholds.

3. ACTIVITY PROGRESS (QUANTITATIVE IMPACT)

Activities contributing to all indicators with exception of CBLD-9 began in April with the rains and cropping season. Indicators of yield, area under technology and value of sales based on the endline survey are indicated in Table 5, Annex 2. County and farmer demand resulted in many more farmers participating in numeracy training, beyond the target of 6,000 to 7,169 (EG.3-2). Resources and good planning with the county governments enabled to expand the numeracy training beyond the target to accommodate this demand.

Similarly for nutrition messaging, demand was so great among the counties and households for training, that the indicator exceeded the target (HL.9-2).

TABLE 5. TARGETS OF FTF INTERMEDIATE RESULTS INDICATORS FOR THE POTATO VALUE CHAIN COMPONENT OF AVCD, JANUARY TO SEPTEMBER, 2021

Indicator	Target	Q2 Achieved	Q3 Achieved	Q4 Achieved	Total Achieved	Comment
EG.3-2: Number of individuals participating in USG food security programs [IM-level]	6,000	51	7,250	0	7,301	This was overachieved due to high demand from counties and farmers for numeracy training, and the resources to respond to this demand, 7,169 farmers, 132 county government staff
EG.3.2-24 Number of individuals in the agriculture system who have applied improved management practices or technologies with USG assistance [IM-level]	6,000		0	6,291	6,291	Reached through continuous monitoring

Indicator	Target	Q2 Achieved	Q3 Achieved	Q4 Achieved	Total Achieved	Comment
EG.3.2-26 Value of annual sales of farms and firms receiving USG assistance [IM-level]	1,100,000		0	1,409,107	1,409,107	Reached through Rapid endline survey
EG.3-10 -11,-12 Yield of targeted agricultural commodities among program participants with USG assistance [IM-level]	14 t/ha		0	8.3 t/ha	8.3 t/ha	Based on rapid endline survey.
EG.3.2-25 Number of hectares under improved management practices or technologies with USG assistance [IM-level]	800		0	977.6	977.6	Reached through Rapid endline survey
GNDR-2 Percentage of female participants in USG-assisted programs designed to increase access to productive economic resources [IM-level]	40%		0%	70%	70%	Reached through Rapid end line survey
YOUTH-3 Percentage of participants in USG-assisted programs designed to increase access to productive economic resources who are youth (15-29) [IM-level]	10%		0%	18%	18%	Reached through Rapid end line survey
CBLD-9 Percent of USG-assisted organizations with improved performance [IM-level]	100%		100%	100%	100%	Data from continuous monitoring
HL.9-2 Number of children under age 2 (0–23 months) reached with community-level nutrition interventions through USG-supported programs [IM-level]	400		823	314	1,137	Total 1,137 children reached through nutrition messaging by trained 40 CHVs

4. PERFORMANCE MONITORING

For the extension phase, county governments lead monitoring of field activities for FtF and potato component specific indicators. CIP under the potato component is developing the capacity of the county governments to monitor continuously and annually monitored indicators. This is in response to demand from the counties during the co-creation process for this extension phase to strengthen skills in monitoring and evaluation.

WAOs and CHVs are continuously monitoring overall participants in USG supported programs using the numeracy training and nutrition messaging templates. WAOs are monitoring appliers of technology indicator through continuous monitoring. The numeracy training template was adjusted to accommodate feedback from farmers on applying several technologies. All farmers who can apply technologies participate in numeracy trainings were questioned at time of training registration for module 3 on use of diverse technologies. This allowed for actual data on applying technologies rather than extrapolating from a sample of the population in endline survey (Table 5- EG.3.2-24, Fig 9).

After harvest and sales in mid-August, the counties led the endline survey for the annually monitored indicators yield, area under technology and value of sales. Each WAO surveyed 8 households (on average). This was agreed in the county ToT for M&E held in May 2021. The AVCD Data Manager and Field Officers in each county trained WAOs as enumerators in August 2021 and guided the county team through the process. To broaden capacity development, the ToT trained across the county team, in addition to the WAOs who actually conducted the surveys.

5. CONSTRAINTS AND OPPORTUNITIES

The capacity development of counties during the past 2 years of implementation resulted in them being the most suitable to take the next step into leading monitoring activities. WAOs know the technical subject better than enumerators, and can ensure to get more accurate answers for technical questions. This improved the accuracy of the data. This provided an opportunity to respond from demand from the county governments to develop their capacities in monitoring and evaluation.

6. PROGRESS ON GENDER STRATEGY: YOUTH AND PRIVATE SECTOR

After supporting youth businesses based on youth groups and individuals owning businesses, observations reveal that businesses owned by individual businesses are more sustainable due to group dynamics – especially of younger population without much experience in cooperative-style of business.

7. PROGRESS ON ENVIRONMENTAL MITIGATION AND MONITORING

After farmers observed the performance of robust varieties, of the 33 tonnes of seed farmers in Taita Taveta have procured through KCSAP for the SR2021, 60% are of the robust variety Sherekea, resistant to late blight and remaining 40% are Unica, tolerant to late blight, heat and water stress, varieties.

8. PROGRESS ON LINKS WITH GOVERNMENT OF KENYA AGENCIES

CIP-AVCD continues to collaborate closely with county governments, they are the only partners in the project. County programs continue to invest in potato value chain to grow from the AVCD interventions.

9. J2SR, SUSTAINABILITY, AND EXIT STRATEGY

The extensive capacity building of staff within the county departments and those from private institutions operating within the two counties is central to all interventions as it ensures the continuity of activities beyond the project cycle. While developing capacity of large numbers of farmers to improve productivity is a core goal of the project, developing capacity of implementors who drive the project will contribute to continued support to the system and scaling out interventions.

As part of implementation of the priority interventions listed in the respective County Potato Strategy, both Bungoma and Taita Taveta County have allocated funds to support PVC. These include:

- Through KCSAP program, 17 farmer groups which successfully applied for the competitive grants has paid for 33 tonnes of certified seed of various varieties including robust CIP variety of Unica and Sherekea. The seeds valued at approximately 23,000 USD were ordered from ADC Molo.
- Bungoma allocated 48,000 USD to support production and access to certified seed in the 2021/22 county financial year budget. The AVCD county coordinator has already placed orders for 13 tonnes of basic seed for KWESTO FCS and 6 tonnes for learning farms using some of these funds.

Largely as a result of the AVCD investments expanding potato in each county, **the counties collectively invested 89,146 USD up from 53,900 USD at the end of June directly and in-kind to support potato value chain development**, Table 6.

TABLE 6. COUNTY INVESTMENT IN POTATO VALUE CHAIN JULY- SEPTEMBER 2021

County	Activity	Type of Investment			Total
		County direct exp.	County (In-kind)	Programs KSCAP	
Bungoma	FPO Exposure Tour in May	800,000			800,000
	Field visit to support seed production	60,000			60,000
	KWESTO office premise, April- Sept		24,000		24,000
	County focal point staff time (in-kind),		720,000		720,000
	Support KWESTO FCS with 253 bags of basic seed for SR 2021	759,000			759,000
	Purchased 115 bags of certified seed for LF, SR 2021	345,000			345,000
	Total (Kes)	1,964,000	744,000	-	2,708,000
	Total (USD)	19,640	7,440	-	27,080
Taita Taveta	Seed, 849 bags, 17 FGs, LR 2021			2,122,500	2,122,500
	Seed transport cost			127,000	127,000
	Seed, 668 bags, 17 FGs, SR 2021			2,338,000	2,338,000
	TTFPO recruitment			1,000,000	1,000,000
	Service providers to support			106,000	106,000
	Digitalizing potato farmers in Survey CTO			19,100	19,100
	TTFPO Office Premise (In kind)		24,000		24,000
	County focal point staff time (in-kind)		270,000		270,000
	Training expenses for the TTFPO			200,000	200,000
	Total (Kes)	-	294,000	5,912,600	6,206,600
	Total (USD)	-	2,940	59,126	62,066
Both Counties		19,640	10,380	59,126	89,146

I 0. WORK PLAN FOR Y3Q3

All the planned activities (Table 7), planned for July to September 2021 have been completed.

TABLE 7. STATUS OF ACTIVITIES FOR Y3Q3 (JULY TO SEPTEMBER, 2021)

Planned Actions for Y3Q3	Actual Status (Q3)	Explanations for Deviations
Conduct module 3 of numeracy training by WAOs	Completed	
Monitor harvest and storage of certified seed	Completed	
Enter monitoring data for Module 2 and 3 numeracy training,	Completed	
Enter data for nutrition messaging from CHVs	Completed	
Conduct Business to Business forum in Bungoma county	Completed	
Conduct endline survey to be done by county governments under CIP supervision to collect yield, area under technology and value of sales indicator data	Completed	
Continuous monitoring for appliers of technology indicator,	Completed	
Support certification process for KESTO and construction of diffused light store and	Completed	
County government: Support FPO monthly meetings	Completed	
County government: Support FPO in membership drives	Completed	
NPCK: Integrate an E-Extension component into Viazzi Soko platform in Bungoma county	Completed	
Print and launch Bungoma county Potato strategy	Completed	
County government: Develop County Potato strategy with Taita Taveta County Government and stakeholders	Completed	

I I. FINANCIAL SUMMARY Y3Q3

	TOTAL BUDGET	TOTAL EXPENSES	BALANCE	BURN RATE
Personnel	\$451,482	\$347,444	\$104,038	77%
Collaborators	\$20,500	\$14,425	\$6,075	70%
Supplies & Services	\$588,110	\$563,079	\$25,031	96%
Equipment	\$0	\$0	\$0	0%
Operational Travel	\$13,183	\$10,413	\$2,769	79%
Institutional Overheads	\$166,480	\$143,266	\$23,214	86%
CG Fee	\$24,795	\$20,536	\$4,259	83%
ILRI Passthrough	\$63,226	\$52,017	\$11,209	82%
Grand Total	\$1,327,775	\$1,151,179	\$176,597	87%

ANNEX I. LIST OF DELIVERABLE PRODUCTS

Technical guides. Two extensions guide to train farmers and a farmers numeracy guide were completed and public links generated by CIP.

1. Basic Numeracy Skills Activities and Tasks for Farmers: <https://hdl.handle.net/10568/115279>
2. Basic Agribusiness Skills Training Modules for Extension to Train Potato Farmers: <https://hdl.handle.net/10568/115280>

Media coverage. There were two additional media features of the successes of AVCD with much focus on potato in Taita Taveta county:

3. Sacco grows roots of success from nut seeds; <https://www.businessdailyafrica.com/bd/corporate/enterprise/sacco-grows-roots-success-from-nut-seeds-3461974>
4. From farm to Bank: using potatoes to fight poverty. <https://epaper.peopledaily.co.ke/html5/reader/production/default.aspx?pubname=&edid=f862755f-4009-495a-80f5-2730a202c1e1>

ANNEX 2. PERFORMANCE TABLES

Indicator Title: Number of individuals participating in USG food security programs [IM-level].																									
UNIT						Indicator Number: EG.3-2																			
						DISAGGREGATE BY: Location, event, date and gender																			
	Geographic Location					Activity Title														Date (2021)		W	M	Subtotal	
	Bungoma, Taita Taveta					Individuals participating in USG food security programs																4,934	2,367	7,301	
																Totals:				0					
Results:																									
Additional Criteria If other criteria are important, add lines for setting targets and tracking	Baseline		Reporting Period Jan-March 2021				Reporting Period April-June 2021				Reporting Period July-Sept 2021								FY 2021		FY 2021		End of Activity Target		
			Target		Achieved		Target		Achieved		Target		Achieved		Target		Achieved		Target		Achieved		Target		
	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	
Sex*: Women (W), Men (M)																									
Isiolo																									
Garissa																									
Marsabit																									
Turkana																									
Wajir																									
Siaya																									
Vihiga																									
Homa Bay																									
Busia																									
Makueni																									
Kisumu																									
Migori																									

[illegible][illegible]

Makueni																							
Kisumu																							
Migori																							
Kitui																							
Taita Taveta			0	0	0	0	0	0	0	0			507	213						507	213		
Bungoma			0	0	0	0	0	0	0	0			3,726	1,845						3,726	1,845		

Indicator Title: Number of hectares under improved management practices or technologies with USG assistance [IM-level]																								
Indicator Number: EG.3-10 -11,-12																								
UNIT						DISAGGREGATE BY: Location, event, date and gender																		
	Geographic Location					Activity Title												Date (2020)	W	M	Subtotal			
	Bungoma, Taita Taveta					Hectares under improved technologies													319.8	657.8	977.6			
																				Totals:				
Results:																								
Additional Criteria If other criteria are important, add lines for setting targets and tracking	Baseline		Reporting Period Jan-March 2021				Reporting Period April-June 2021				Reporting Period July-Sept 2021				Reporting Period Oct-Dec 2021				FY 2021		FY 2021		End of Activity Target	
			Target		Achieved		Target		Achieved		Target		Achieved		Target		Achieved		Target		Achieved		Target	
	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M
	Sex*: Women (W), Men (M)																							
Isiolo																								
Garissa																								
Marsabit																								
Turkana																								
Wajir																								
Siaya																								

Vihiga																								
Homa Bay																								
Busia																								
Makueni																								
Kisumu																								
Migori																								
Kitui																								
Taita Taveta			0	0	0	0	0	0	0	0			39.5	296.2						39.5	296.2			
Bungoma			0	0	0	0	0	0	0	0			177.1	464.1						177.1	464.1			

Indicator Title: Value of annual sales of farms and firms receiving USG assistance [IM-level]																										
Indicator Number: : EG.3.2-26																										
UNIT							DISAGGREGATE BY: Location, event, date and gender																			
	Geographic Location						Activity Title												Date (2020)		W	M	Subtotal			
	Bungoma, Taita Taveta						Value of annual sales														955,850	453,257	1,409,1070			
							Totals:																			
Results:																										
Additional Criteria If other criteria are important, add lines for setting targets and tracking	Baseline		Reporting Period Jan-March 2021				Reporting Period April-June 2021				Reporting Period July-Sept 2021				Reporting Period Oct-Dec 2021				FY 2020		FY 2020		End of Activity Target			
			Target		Achieved		Target		Achieved		Target		Achieved		Target		Achieved		Target							
	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M				
	Sex*: Women (W), Men (M)																									

Isiolo																						
Garissa																						
Marsabit																						
Turkana																						
Wajir																						
Siaya																						
Vihiga																						
Homa Bay																						
Busia																						
Makueni																						
Kisumu																						
Migori																						
Kitui																						
Taita Taveta			0	0	0	0	0	0	0	0		45,949	428,859						45,949	428,859		
Bungoma			0	0	0	0	0	0	0	0		260,378	673,921						260,378	673,921		

Indicator Title: Yield of targeted agricultural commodities among program participants with USG assistance [IM-level]																									
Indicator Number: EG.3.2-25																									
UNIT							DISAGGREGATE BY: Location, event, date and gender																		
	Geographic Location						Activity Title												Date (2020)		W	M	Subtotal		
	Bungoma, Taita Taveta						Potato yield (t/ha)														7.20	8.57	8.30		
																			Totals:						
Results:																									
Additional Criteria If other criteria are important, add lines for setting targets and tracking	Baseline		Reporting Period Jan-March 2021				Reporting Period April-June 2021				Reporting Period July-Sept 2021				Reporting Period Oct-Dec 2021				FY 2020		FY 2020		End of Activity Target		
			Target		Achieved		Target		Achieved		Target		Achieved		Target		Achieved		Target		Achieved		Target		
	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	

[illegible]

Indicator Title: Percentage of female participants in USG-assisted programs designed to increase access to productive economic resources						
Indicator Number: GNDR-2						
UNIT	DISAGGREGATE BY: Location, event, date and Percentage					
	Geographic Location	Activity Title	Date (2020)			Subtotal
	Bungom, Taita Taveta				70%	70%
	Totals:					
Results:						

Additional Criteria If other criteria are important, add lines for setting targets and tracking	Baseline	Reporting Period Jan-March 2021	Reporting Period April-June 2021		Reporting Period July-Sept 2021		Reporting Period Oct-Dec 2021		FY 2020	FY 2020	End of Activity Target
		Achieved	Target	Achieved	Target	Achieved	Target	Achieved	Target	Achieved	Target
	%	%	%	%	%	%	%	%	%	%	%
Sex*: Women (W), Men (M)											
Isiolo											
Garissa											
Marsabit											
Turkana											
Wajir											
Siaya											
Vihiga											
Homa Bay											
Busia											
Makueni											
Kisumu											
Migori											
Kitui											
Taita Taveta		0%	0%	0%		70%				70%	
Bungoma		0%	0%	0%		70%				70%	

Indicator Title: Percentage of participants in USG-assisted programs designed to increase access to productive economic resources who are youth (15-29)						
Indicator Number: YOUTH-3						
UNIT	DISAGGREGATE BY: Location, event, date and gender					
	Geographic Location	Activity Title	Date (2020)	W	M	Subtotal
						0
Results:						

Additional Criteria If other criteria are important, add lines for setting targets and tracking	Baseline	Reporting Period Jan-March 2021	Reporting Period April-June 2021		Reporting Period July-Sept 2021		Reporting Period Oct-Dec 2021		FY 2020	FY 2020	End of Activity Target
		Achieved	Target	Achieved	Target	Achieved	Target	Achieved	Target	Achieved	Target
	%	%	%	%	%	%	%	%	%	%	%
Sex*: Women (W), Men (M)											
Isiolo											
Garissa											
Marsabit											
Turkana											
Wajir											
Siaya											
Vihiga											
Homa Bay											
Busia											
Makueni											
Kisumu											
Migori											
Kitui											
Taita Taveta		0%	0%	0%		18%				18%	
Bungoma		0%	0%	0%		18%				18%	

Indicator Title: Number of children under age 2 (0–23 months) reached with community-level nutrition interventions through USG-supported programs [IM-level]							
Indicator Number: HL.9-2							
UNIT	DISAGGREGATE BY: Location, event, date and gender						
	Geographic Location	Activity Title		Date (2021)	W	M	Subtotal
	Bungoma, Taita Taveta	Number of children under 23 months reached through their primary givers at the various wards/community units	April-June		586	551	1,137
				Totals:			

Results:																								
Additional Criteria If other criteria are important, add lines for setting targets and tracking	Baseline		Reporting Period Jan-March 2021				Reporting Period April-June 2021				Reporting Period July-Sept 2021				Reporting Period Oct-Dec 2021				FY 2020		FY 2020		End of Activity Target	
			Target		Achieved		Target		Achieved		Target		Achieved		Target		Achieved		Target		Achieved		Target	
	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M
Sex*: Women (W), Men (M)																								
Isiolo																								
Garissa																								
Marsabit																								
Turkana																								
Wajir																								
Siaya																								
Vihiga																								
Homa Bay																								
Busia																								
Makueni																								
Kisumu																								
Migori																								
Kitui																								
Taita Taveta					0	0				0	0			151	148						151	148		
Bungoma					0	0				0	0			435	403						435	403		

Indicator Title: Percent of USG-assisted organizations with improved performance [IM-level]

Indicator Number: CBLD-9

UNIT	DISAGGREGATE BY: Location, event, date and percentage											
	Geographic Location		Activity Title				Date (2021)		W	M	Subtotal	
	Bungoma and Taita Taveta		Percent of organizations with improved performance				April-June				100%	
	Totals:											
Results:												
Additional Criteria If other criteria are important, add lines for setting targets and tracking	Baseline	Reporting Period Jan-March 2021	Reporting Period April-June 2021		Reporting Period July-Sept 2021		Reporting Period Oct-Dec 2021		FY 2021	FY 2021	End of Activity Target	
		Achieved	Target	Achieved	Target	Achieved	Target	Achieved	Target	Achieved	Target	
	%	%	%	%	%	%	%	%	%	%	%	
Sex*: Women (W), Men (M)												
Isiolo												
Garissa												
Marsabit												
Turkana												
Wajir												
Siaya												
Vihiga												
Homa Bay												
Busia												
Makueni												
Kisumu												
Migori												
Kitui												
Taita Taveta		100%		100%						100%		
Bungoma		100%		100%						100%		

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