

USAID KENYA Accelerated Value Chain Development Program

Potato Value Chain

FY 2020 YEAR 2 QUARTER 2 REPORT

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International Potato Center

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ACRONYMS

AGM	Annual general meeting
AVCD	Accelerated Value Chain Development program
BW	Bacterial wilt
CHV	Community health volunteer
CIP	International Potato Center
DLS	Diffused light store
FGs	Farmer groups
FPOs	Farmer producer organizations
GAP	Good agricultural practices
HH	Household(s)
J2SR	Journey to Self-Reliance
KBPFCS	Bungoma Potato Farmers' Cooperative Society Ltd
KEPHIS	Kenya Plant Health Inspection Service
KWESTO	Kabuchai, Kimilili, Elgon, Webuye, Sirisia, Tongaren
LFs	Learning farms
M&E	Monitoring and evaluation
NARIGP	National Agricultural and Rural Inclusive Project
NPCK	National Potato Council of Kenya
ToC	Theory of change
ToT	Training of trainers
WAO	Ward agricultural officer

EXECUTIVE SUMMARY

Phase 2 of the potato component of the Accelerated Value Chain Development (AVCD) program, funded by the United States Agency for International Development, is replicating phase I interventions in the two new counties of Bungoma and Taita Taveta. These are minor potato-producing counties in Kenya, hence the number of potato farmers, general knowledge of good agricultural practices (GAP) for potato, and accessing commercial seed were limited prior to interventions.

The theory of change (ToC) partly relies on recruiting more households (HH) into potato farming so that the economic benefits of the crop and its contribution to national food security can be realized, thereby increasing the importance of potato in these counties. The interventions addressed low productivity through an extensive farmer-training program, accompanied by seed distribution to apply the training and raise awareness of the benefits of certified seed, and nutrition messaging.

To support the ToC, the potato value chain is promoting potato production and marketing in 17 nontraditional wards where potato is grown at a very low level or not at all due to the agro-ecology, and in 10 traditional potato-producing wards where potato is commonly grown due to conducive highland conditions and high rainfall agro-ecologies. Learning farms (LFs) managed by a progressive farmer or farmer group served as project activity focal points for GAP training and agri-nutrition messaging.

Activities along the three objectives and M&E progressed, albeit at a reduced pace due to COVID-19 pandemic. County governments lead critical activities including seed and input distribution, establishment of learning farms, monitoring field crop management, and training learning farm (LF) host farmers and farmer group representatives at the LFs. Taita Papa is producing apical cuttings for seed production in Taita Taveta to prepare for the September/October sales and development of farmer producer organisations (FPOs) advanced.

To facilitate implementing critical activities so as to not lose the third of three project cropping seasons, AVCD invested \$2,260 US to support safety measures to enable continuation of activities and \$3,250 US in fungicides to manage late blight and top dressing fertiliser as a result of limited access to inputs. As a result of the protective measures, 82 LFs were established, 246 potato GAP training sessions were held training 1,476 farmers, and 1,232 in-field technical support visits by WAOs to provide advisory services to the host farmer of 308 farmer groups who received certified seed to apply the GAP training and multiply further for next season use.

Taita Papa nursery was accredited and licensed by the Horticulture Development Crops Authority. In early June, the nursery started their second cycle of production to produce apical cuttings targeting the September/October planting season. KEPHIS will inspect the production cycle for certification. ***The accelerated pace of developing Taita Papa to produce apical cuttings, a new technology, certified by KEPHIS, in a nursery licensed by HCDA in less than one year from the initial beginning in October 2019 without any previous nursery experience is a significant achievement of the AVCD potato component.***

The capacity-development efforts and experience from previous years' activities were key to being able to (1) continue implementing activities under COVID-19 restrictions and (2) remotely support the counties to lead implementing activities. Establishing implementation and operational systems early in the project was key to being able to deliver in the challenging and continually changing environment created by COVID-19.

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 (HH) with improved technologies to improve farm productivity and engage in market systems in Elgeyo-Marakwet, Meru, Nandi, and Uasin Gishu counties. The seed system initiated by transforming 150 progressive farmers into seed multiplier businesses, and three institutions are producing certified seed. To respond to demand for better coordinated marketing of potato, the project supported the formation and capacity building of five potato-marketing cooperatives to provide marketing, input, and production-support services to farmer members, in turn championing farming as a business culture among farmers.

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 is promoting potato production and marketing in 17 nontraditional wards where potato is grown at a very low level or not at all due to the agro-ecology, and in 10 traditional potato-producing wards where potato is commonly grown due to conducive highland conditions and high rainfall agro-ecology (Table I, Fig. 1).

TABLE I. POTATO WARDS UNDER AVCD POTATO VALUE CHAIN

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	Mukuyuni
Chwele/Kabuchai			Nontraditional
Mt. Elgon		Cheptais	Traditional
		Chepyuk	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
Bungoma		Chesikaki	Traditional
		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

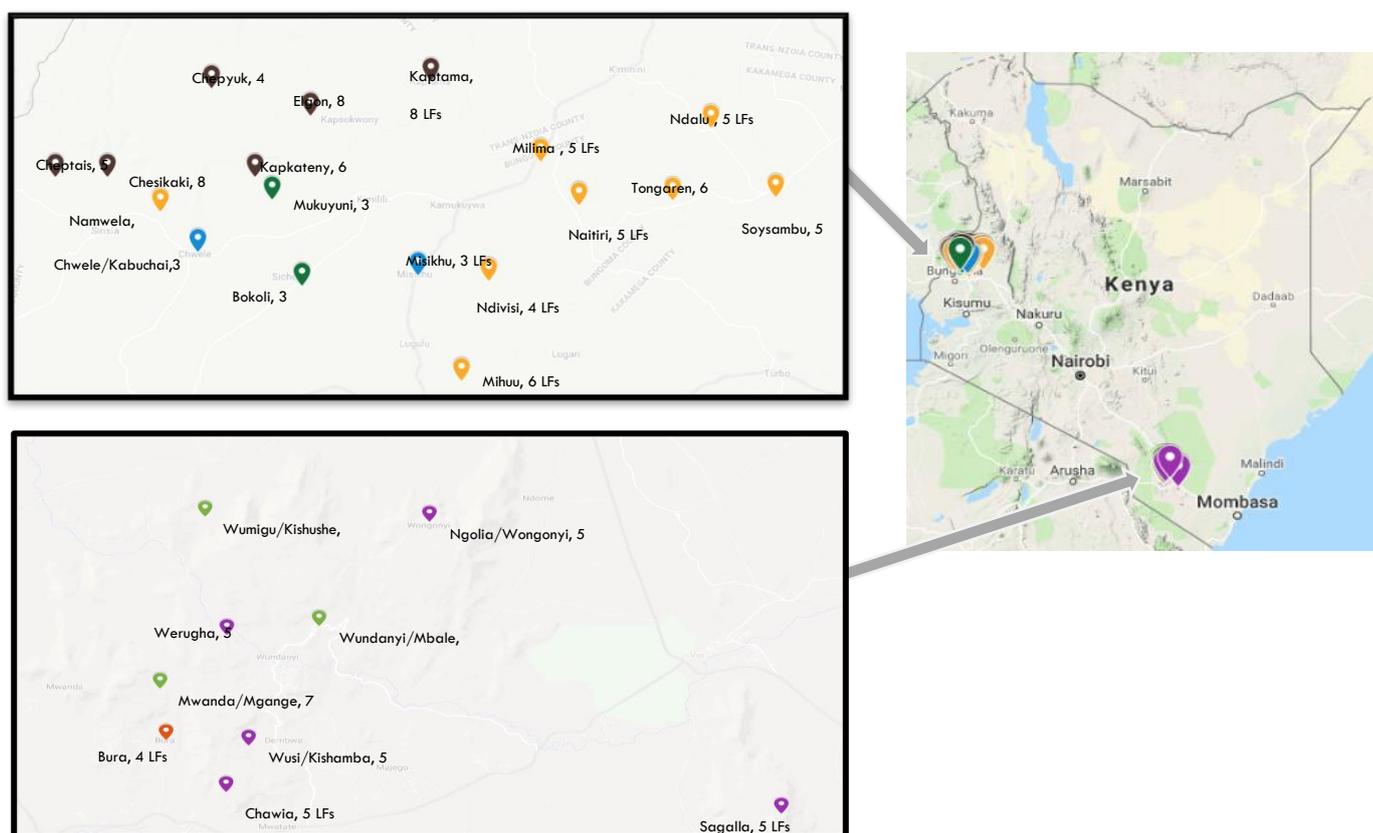


Figure 1. Map of AVCD potato learning farms by ward in Bungoma and Taita Taveta counties in Y2Q1.

2. KEY ACHIEVEMENTS (QUALITATIVE IMPACT)

2.1 POTATO VALUE CHAIN UNDER COVID

Partnerships and capacity development of county government partners to lead interventions enabled activities to continue during COVID-19 restrictions. Having worked with the counties over the past 1.5 years has imparted the capacities to plan, implement and monitor agriculture and nutrition field activities, which turned out to be essential for activities to continue with minimal CIP supervision during this third season of activities. This further demonstrates the commitments of counties to support potato value chain development due to the benefits brought to farmers and the county.

During this period, activities along the three objectives and M&E progressed, albeit at a reduced pace due to COVID-19 pandemic. County governments lead critical activities including seed and input distribution, establishment of learning farms, monitoring field crop management, and training learning farm (LF) host farmers and farmer group representatives at the LFs. Taita Papa is producing apical cuttings for seed production in Taita Taveta to prepare for the September/October sales and development of farmer producer organisations (FPOs) advanced.

To facilitate implementing critical activities so as to not lose the third of three project cropping seasons, AVCD supported ward agricultural officers (WAOs) with funds to purchase hand sanitizers, soap and water for hand washing and masks for use while out in the field. WAOs used the one-pager FAO-FFS information sheet on COVID-19 guidelines including pictorial messages on social distancing and hygiene while conducting farmer training sessions. WAOs were also provided with airtime to enable them to remotely support farmers. Plus the AVCD Potato WhatsApp group allowed to follow activities, and provide remote and immediate guidance.

"Farmers were so excited to have sanitizers and masks, they had only heard about the two items but had never seen or used them. AVCD was the first project to provide these items for us" said Rhoda Khamuka WAO, Tongaren ward, Bungoma.

Between March and June, **AVCD invested \$2,260 US to support preventive measures** to ensure the safety of the 33 WAOs implementing field activities in the 27 wards across Bungoma and Taita Taveta counties. The investment ensured continuation of activities related to objective 1: good agricultural practices (GAP) for potato:

- distribution of 27 tonnes of certified seed to 308 farmers groups to apply GAP training and 58 individual farmers who purchased certified seed,
- establishment of 82 LFs
- 246 potato GAP training sessions were held training 1,476 farmers, including the LF host farmers and at least 5 farmers on average who attended each training sessions as farmer group representatives. Some WAOs had greater than 10 farmers per session due to demand from farmers for training.
- 1,232 in-field technical support visits by WAOs to provide advisory services to the host farmer of 308 farmer groups who received certified seed. WAOs visited host farmer of each of the 308 farmer groups were visited 3-6 times to provide advisory services to the groups.

Feedback from the counties revealed that farmers faced difficulties accessing inputs due to movement restrictions, inputs not available or insufficient income to buy inputs. With late blight being a high disease risk this past season due to high rainfall, farmers risked losing their crops without access to fungicides. Thus, **AVCD further provided fungicides to manage late blight and**

top dressing fertiliser valued at \$3,250 US to ensure a vibrant crop, with WAOs distributing the inputs.

Implementing safety measures not only allowed activities to progress, but bigger outcomes are supporting counties on the journey to self-reliance (J2SR) and teaching rural farmers about COVID-19 and how to protect themselves and their families from the virus.

2.2 PROGRESS BY OBJECTIVES

2.2.1 Objective I

Objective I focuses on agricultural and nutritional capacity development of rural farming HH. Through season-long training on LFs led by the county governments, yields are targeted to increase by 50% for 12,000 smallholder farmers reached over year 2 as a result of applying productivity-enhancing technologies. To respond to COVID-19, activities were geared towards safeguarding attained gains and ensure continuation of season 3 activities.

Most field activities support this first objective and is responsible for reaching the individual household's with project interventions. As detailed above, WAOs were provided with masks, hand sanitizers, soap and water for hand washing for use while out in the field.

As reported in Q1, WAOs had identified the 308 farmer groups of 4,872 farmer beneficiaries to participate in season 3 GAP training before COVID-19 restrictions set in (Table 2), an activity that wouldn't have been possible with COVID restrictions. As the farmer groups and LF host farmers were already identified, the WAOs with safety measures were able to organise establishing the 82 LFs and train LF host farmers and farmer group representatives as described above. Training all season 3 farmers will commence in July after approvals from county governments and CIP safety.

TABLE 2. SUMMARY OF POTATO LEARNING FARMS, FARMER GROUPS AND BENEFICIARY FARMERS TRAINED IN GAP

Sub-county	No. of LFs	No. of FGs Season 3	No. of Beneficiaries Season 3	No. of WAOs	No. of FGs 3 seasons total	No. of Beneficiaries 3 seasons total
Bungoma	54	254	4,228	24	709	12,940
Taita Taveta	28	54	644	9	140	3,101
Total	82	308	4,872	33	849	16,041

Over three seasons of interventions, AVCD invested \$162,800 US in direct activity costs averaging \$10.85 US per smallholder farmer to have their capacities developed by county governments in GAP for potato, including the GAP 4 module production guide, agri-nutrition and farmer producer organization (FPO) development (Tables 3 and 4). Project operation costs are not considered in this cost evaluation, only the direct activity cost, and will increase slightly as there still remains FPO development activities in Q3 and Q4.

TABLE 3. SUMMARY OF AVCD INVESTMENTS OVER 3 SEASONS

Sub-county	No. of county staff trained	Cost per county staff (USD)	No. of smallholder farmer beneficiaries	Cost per beneficiary (USD)*
Bungoma	175	77.40	12,940	8.5
Taita Taveta	59	126.7	3,101	10.4
Total/Average	234	89.8	16,041	8.8

*exclusive of county government capacity development to enable them to develop capacity in GAP, agri-nutrition and FPO development.

TABLE 4. SUMMARY OF AVCD INVESTMENTS IN CAPACITY DEVELOPMENT OVER 3 SEASONS

Sub-county	Capacity building for county staff (USD)	GAP training (USD)	Agri-nutrition training (USD)	FPO development (USD)	Total (USD)
Bungoma	13,539	74,774	29,275	5,541	123,129
Taita Taveta	7,474	22,801	8,201	1,190	39,666
Total	21,013	97,575	37,477	6,731	162,796

Across the three seasons of GAP training, each LF measured 220 and 45 m² in Bungoma and Taita Taveta counties at average establishment and training material costs of \$400 and \$290 US, respectively. Identifying plots greater than 45 m² in Taita Taveta was not possible due to extreme limitations on land holdings. Certified seed distributed to each of the 849 farmer groups to apply GAP training and multiply for seed averaged \$28 US.

During the year 2 work planning meeting, county governments were assigned to support nutrition messaging from county budgets; however, with COVID-19 this did not materialize. The 7,302 adults who received in nutrition messaging provided by community health volunteers during year 1 (5,348 (72%) were also trained on GAP) have the background to understand healthy diets and this further reinforces the nutrition messages of the Ministry of Health allowing these farmers to apply the messaging.

2.2.2 Objective 2

Objective 2 focuses on seed system development by supporting private sector seed businesses to produce 400 t of seed annually. To increase access to good quality seed, especially by women and youth, farmer producer organizations (FPOs) will coordinate the collective purchase of inputs to support use of certified seed, creating markets for the seed companies and resulting in increased yields of 25%.

Taita Papa nursery was accredited and licensed by the Horticulture Development Crops Authority (HCDA) as a registered nursery. In early June, the nursery started their second cycle of production, having received 400 tissue culture plantlets sourced from Stokman Rozen Kenya in Naivasha as starter material to produce apical cuttings targeting the September/October planting season (Figure 2). Tissue culture plantlets were transplanted without any losses – a steep learning curve from the first cycle where many tissue culture plantlets did not survive transplanting. Once production is underway the end of July, KEPHIS will inspect the production cycle for certification.



Figure 2. Left: Some of the 400 tissue culture plantlets at Taita Papa satellite nursery, (Right): transplanted invitro plantlets. The elite starter materials were sourced from Stokman Rozen Kenya limited in Naivasha

The accelerated pace of developing Taita Papa to produce apical cuttings, a new technology, certified by KEPHIS, in a nursery licensed by HCDA in less than one year from the initial beginning in October 2019 without any previous nursery experience is a significant achievement of the AVCD potato component.

During the first production cycle (January-May 2020) which is more like to the learning by doing-homework cycle, the nursery produced 2,454 cuttings. Seven individual farmers and five farmer groups bought 970 cuttings – impressive as this was the first season of production and an entirely new technology for farmers, AVCD purchased 1,350 for farmer distribution and Taita Papa planted 134.

First generation seed from cuttings harvested in January was planted in April/May for a second season of multiplication. This harvest of these six varieties will be distributed to farmers for them to assess: Chulu and Konjo (late blight resistant), Wanjiku (robust, big yielder), Nyota and Unica (heat tolerant) and Lenana. WAOs monitor providing in-field training and technical backstopping throughout the cropping season to Taita Papa and Mbirwa farmer group in Wundanyi/Mbale ward who received tubers from Taita Papa for further multiplication.

2.2.3 Objective 3

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

Profiles of each FPO in Bungoma and Taita Taveta indicating progress to date. There is a combined total of 21 management and supervisory committee members (eight women) between the two county FPOs.

Bungoma: KWESTO: Kabuchail/Kimilili, Elgon, Webuye, Sirisia, Tongaren, Potato Farmers' Cooperative Society Ltd. Formation of the FCS was in response to farmers request for an organized marketing structure as indicated in the county potato strategy. The formation of the cooperative started in April/May 2019 after WAO organized for one public barazas in each of the 18 project intervention wards. This was followed by two sensitization/mobilization meetings (one with Members of County Assembly (MCAs) and another with WAOs and sub- county cooperative officers. The cooperative was officially registered by the Commissioner of Cooperative with the Certificate, No CS/24790 dated 24th January 2020 (Figure 3).

The objectives of the FCS are seed sourcing, increased productivity and collective marketing.

KWESTO FCS held its first annual general meeting (AGM) on 24 Feb 2020.

In May 2020, County Government has officially allocated an office space for FCS at Mt Elgon sub-county Agricultural office located in Kapsokwony town.

The project will provide basic furniture and stationeries to the FCS once travel and field activities resumes. A 2-days training on good governance and leadership skills for the 11 interim committee members will be 15-16 July at Mabanga ATC. Cooperative development officers from the county department of cooperative will lead the training.

All the interim members and the 709 farmer groups they represents have already been trained on GAP and agri-nutrition at group level.

Taita Taveta Potato FPO: Formation of the FPO was in response to farmers request for an organized marketing structure so as to maximize their profitability given their proximity to Mombasa market. The formation of FPO started in April/May 2019 after WAOs organized for group meetings in each of the 9 project intervention wards. During the meetings, 11 interim committee members were elected by farmer groups (Figure 3).

The objectives of the FPO are: seed sourcing, increased productivity and collective marketing.

In June 2020, County Government has officially allocated an office space for FPO at Wundanyi sub-county Agricultural office located in Wundanyi town.

The project will provide basic furniture and stationeries to the FPO once travel and field activities resumes. A 2-days training on good governance and leadership skills for the 11 interim committee members will be held this week, on 15-16 July 2020. Official registration of the FPO will be done during the training by the Social Development Officer who is the main facilitator at the training.

All the interim members and the 148 farmer groups they represents have already been trained on GAP and agri-nutrition at group level.

The National Potato Council of Kenya hosts the Viazi Soko (potato marketing) platform where 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. Farmers have also been receiving advisory messages through the platform such as soil testing, fertilizer recommendations, among others. Currently the platform has 82,052 registered potato farmers. Following the success of the platform, other areas have been identified to upgrade based on the need of potato farmers and stakeholders:

- a) The platform to be modified to run on USSD for ease of registration and querying of seed and market information by farmers,
- b) Include option for placing orders for inputs such as seeds, fertilizers and agro-chemicals,
- c) Integrating M-pesa option or any other agreed payment platform for making payments,
- d) Generation of reports and graphs for analysis,
- e) Incorporation of Geographical Information System (GIS) into the platform for ease of locating farms and categorization of potato farmers,
- f) Capture real time details from the field including map coordinates and weather information,
- g) Provide capacity to associate each farmer in the platform with a farmer group/cooperative,
- h) The ability to match farmers supply with market demand for potatoes,
- i) Include the interactive voice over and links for sharing videos and printable brochures.

The initial stages have been completed during Q2, namely contacting the service provider to support the upgrades. The above upgrades will be carried out in Q3.

Farmer Association	KWESTO BUNGOMA POTATO FARMERS COOPERATIVE SOCIETY 11 Committee Members					
Committee Members per Sub County	Kabuchai 1	Sirisia 0	Tongaren 2	Mt. Elgon 3	Webuye East	Kimilili 1
# of WAOs (Extension) Trained	2	2	6	9	3	2
# of intervention Wards	2	1	5	6	2	2
# of Farmer Groups Trained in GAPs	45	43	177	327	72	45
# of beneficiaries reached in 3 seasons LR2019/SR2019/ LR2020	937	901	3,754	6,907	1,502	925
Potential FPO members Assuming 25% of the beneficiaries	235	226	939	1,727	376	232

Figure 3. Organigram for Kabuchai/Kimilili, Elgon, Webuye, Sirisia, Tongaren, Potato Farmers' Cooperative Society Ltd of Bungoma County

Farmer Association	Taita Taveta Potato Farmer Producer Association 11 Committee Members		
Committee Members per Sub County	Mwatate 3	Taita 8	Voi 0
# of WAOs (Extension) Trained	3	4	2
# of intervention Wards	3	4	2
# of Farmer Groups Trained in GAPs	43	79	26
# of beneficiaries reached in 3 seasons LR2019/SR2019/ LR2020	1,121	2,048	696
Potential FPO members Assuming 25% of the beneficiaries	280	512	174

Figure 4. Organigram for Taita Taveta Potato Farmer Producer Organization

2.2 LESSONS LEARNED

Strong partnerships with county governments were key in continuation of activities, even if at a slower pace due to COVID-19. Counties were committed to keeping activities going to not lose the investments in the learning farms and ensure farmers had access to training. Actually, farmers were also demanding the county for GAP training despite COVID-19. By supporting safety first by providing PPE gave the county governments and farmers the confidence to continue with activities respecting national guidelines. Capacity development, establishing implementation and operational systems early in the project were also key for the counties to progress with remote support and with to being able to deliver in the changing and challenging environment created by COVID-19.

A host farmer in Taita Taveta used the hormone-based product TIVAG 40SL to break seed tuber dormancy with good sprouting and uniform field establishment (Figure 5). At the end of the season, the benefits of using TIVAG 40SL will be assessed by comparing yield from treated and untreated plots, and the information disseminated to farmers. ***If adopted widely by either seed merchants or farmers, then it can be a game changer for overcoming the consistent challenge of seed not being sprouted and ready for planting to time farmers plant the seed.*** Dormant seed can really discourage farmers to buy commercial/certified seed as they perceive delayed emergence as a quality factor, when it is physiological and often difficult to time breaking dormancy right to coincide with planting season.



Figure 5 Left: Christopher Mghandi, host farmer for a learning farm in Werugha ward, Taita Taveta with well sprouted var. Unica after using sprout-promoter IVAG 40SL. Right: poor and uneven sprouting of Unica in the neighboring learning farm without sprout-promoter from the same seed source.

3. ACTIVITY PROGRESS (QUANTITATIVE IMPACT)

There was been little change in indicators since reporting YI achievements, as beneficiaries who participated in Y2Q1 activities were already reported in Y1 (Table 5). After data cleaning, an additional 4,996 beneficiaries were entered into the monitoring and evaluation (M&E) system. The remaining project targets for year 2 are expected to be reached in this last season of intense project interventions, the third of three project seasons. The LFs for activities are ready as described in previous section, thus once the situation starts to normalize and GAP trainings can resume, the registered farmers for season 3 will become project beneficiaries.

TABLE 5. SUMMARY OF TARGETS VS. ACHIEVEMENTS FOR AVCD INDICATORS THE POTATO VALUE CHAIN IS REPORTING AGAINST

Indicator	Y2Q2 Targets	Y2Q2 Achieved	Year 2 Targets	Year 2 Achieved	Project Life Target	Project Life Achieved	% Project Life Achieved	Reasons for Deviation
EG.3-2: Number of individuals participating in USG food security programs [IM-level]	4,000	4,996	12,000	6,005	20,000	18,643	93	<ul style="list-style-type: none"> • These two indicators are on track overall, as have reached just greater than 90% of project beneficiaries after three seasons of interventions
EG.3.2-24 Number of individuals in the agriculture system who have applied improved management practices or technologies with USG assistance [IM-level]	4000	4,996	12,000	N/A	20,000	11,169	56%	<ul style="list-style-type: none"> • Annually monitored indicator and its official results will be reported after survey. • The reported values are from seed distribution activities for the last 3 seasons.
EG.3.2-26 Value of annual sales of farms and firms receiving USG assistance [IM-level]	N/A ^b	N/A	4,000,000	N/A	4,000,000	N/A	N/A	<ul style="list-style-type: none"> • Annually monitored indicator are reported after survey, this indicator is not continuously monitored • This indicator is not continuously monitored
EG.3-10 -11,-12 Yield of targeted agricultural commodities among program participants with USG assistance [IM-level]	N/A	N/A	18	-	18	21	117	<ul style="list-style-type: none"> • The project reported figures are from continuous monitoring in season 2 with the data coming from learning farms and farmer groups saving seed on farm • This indicator is annually monitored, and the official figures reported after endline survey.
EG.3.2-25 Number of hectares under improved management practices or technologies with USG assistance [IM-level]	N/A	N/A	1,200	N/A	3,000	N/A	N/A	<ul style="list-style-type: none"> • This indicator is not continuously monitored, and the official data will be reported after annual survey which projects results is extrapolated to total beneficiaries

EG.3.3-10 Percentage of female participants of USG nutrition-sensitive agriculture activities consuming a diet of minimum diversity [IM-level]	N/A	N/A	80%	N/A	80%	N/A	N/A	<ul style="list-style-type: none"> This indicator is not continuously monitored, and the official data will be reported after endline survey in quarter 3.
HL.9-2 Number of children under age 2 (0–23 months) reached with community-level nutrition interventions through USG-supported programs [IM-level]	0	41	1,200	632	2,000	1,518	76%	<ul style="list-style-type: none"> This target was under achieved because majority of beneficiaries (62%) are above reproductive age 49 years) hence the lower number of children under 23 months. Some caregivers did not attend more than one training sessions required to consider children as reached
GNDR-2 Percentage of female participants in USG-assisted programs designed to increase access to productive economic resources [IM-level]	40%	71%	40%	71%	40%	71%	177%	<ul style="list-style-type: none"> This target was exceeded as more women were available and more organized to participate in activities taking place at the learning farms.
YOUTH-3 Percentage of participants in USG-assisted programs designed to increase access to productive economic resources who are youth (15-29) [IM-level]	15%	10%	15%	10%	15%	11%	73%	<ul style="list-style-type: none"> The target is 15%; and have thus far have 11% of youth or reached the target at 73%
CBLD-9 Percent of USG-assisted organizations with improved performance [IM-level]	60%	-	60%	N/A	60%	N/A	N/A	<ul style="list-style-type: none"> While the organizations have been formed, their capacity will be developed, and targets will be reported in Q3 and Q4

4. PERFORMANCE MONITORING

During the reporting period, data for 4,996 beneficiaries from seed distribution to groups was entered and cleaned by youth monitoring agent based in the field. At the same time, the list of LFs for season 3 (Long rains 2020) within the 2 project counties was collected and entered. This data aided in tracing the beneficiaries of a certain field activity to a specific LF for monitoring purposes.

As part of participatory monitoring of activities, WAOs visited 308 farmer groups and 82 leaning farms 3-6 times i.e. during planting, hilling, top dressing and at harvesting within the season. These monitoring visits were documented with data being collected in these routine monitoring visit specifically on the dates of visit, list of farmers participating, their age and gender. Once the data from activities and monitoring visits has been cleaned and ascertained that it is of the right standard and quality, it will be uploaded to the MEASURE platform to validate the activities conducted during COVID-19 restrictions.

Preparation of tools to assess the effects of COVID-19 on the potato value chain at the national level covering AVCD phase 1 and 2 counties: Elgeyo-Marakwet, Meru, Nandi, Uasin Gishu, Bungoma and Taita Taveta, then other important potato counties of Kiambu, Nakuru and Nyandarua. To assess the impacts, senior county agriculture officials, farmers, WAOs, input dealers, traders and FPOs will be surveyed. National Potato Council of Kenya will conduct the surveys for senior county agriculture officials, input dealers, traders and FPOs.

5. CONSTRAINTS AND OPPORTUNITIES

The constraints as a result of the coronavirus pandemic are obvious. But this is also an opportunity to demonstrate how during restrictions that interventions can continue to be delivered and thus contribute to project results. Remote technical and operational support through different communication platforms, along with having developed county government capacity and experience in the interventions, enabled activities to continue and contribute to the J2SR.

Because the activities contributing to the majority of indicators require people to gather, were delayed as a result of covid-19. As described above, however, the county governments were committed to keeping minimal activities operating during the restrictions. This will enable activities to resume immediately once the situation normalizes as a result of observing the positive results of AVCD interventions and buying into the value of investing in potato.

6. PROGRESS ON GENDER STRATEGY: YOUTH AND PRIVATE SECTOR

As stated above, activities in Y2Q1 continued from those in season 2, and preparations were made for season 3; thus no activities with new beneficiaries occurred during the reporting period. Significant results related to gender were reported in the Y1 report.

7. PROGRESS ON ENVIRONMENTAL MITIGATION AND MONITORING

Rainfall has been extremely limited in Taita Taveta this past quarter. To mitigate dependence on rainfall, farmer groups have irrigated their potato crop. This season of low rainfall will enable to further assess further the water stress tolerance of Unica var by comparing yields of irrigated and non-irrigated crops of the variety.

8. PROGRESS ON LINKS WITH GOVERNMENT OF KENYA AGENCIES

CIP was appointed to the technical advisory committee of Agriculture Sector Network (ASNET) for root crops potato and sweetpotato. ASNET has been formed through a very strong partnership of the Kenya Private Sector Alliance (KEPSA), Kenya National Chamber of Commerce and Industry (KNCCI) and the SDG Partnership Platform at the United Nations, with support from the Business Advocacy Fund (BAF), Elgon Kenya Limited, and other partners.

CIP is further engaging with KEPSA Foundation in their Youth in Enterprise Forum, a platform bringing together all stakeholders under the Youth Enterprise Development and Employment Creation program to promote a youth-driven and economy-led transformation that is sector-based and anchored on a vibrant MSME sector. The KEPSA Foundation has a potato value chain initiative as part of the sector-specific interventions to engage youth. CIP is currently developing specific objectives to support youth business development in the potato value chain to then seek support for these interventions.

9. J2SR, SUSTAINABILITY, AND EXIT STRATEGY

The potato value chain operates under a model of private sector institutions leading activities along the value chain, while public institutions provide the enabling environment and support services. Close engagement with county governments supports positioning potato-growing among the objectives of these ministries at county level. Co-investment by county governments under their agricultural support work plans and budgets will be encouraged and monitored by the project as an indicator to future investments after the project ends and sustainability.

Engaging the private sector and farmer institutions to operate along the value chain is the other key sustainability factor. A private sector seed business has been identified to undertake the challenge of producing seed in Taita Taveta county—something that initially was not expected to happen. This is quite an accomplishment toward sustainable seed supply in the county. Development of FPOs to support marketing will help farmers to equitably engage in the value chain.

The detailed matrix detailing the J2SR was submitted in the YI annual report. No changes have been made in this reporting period.

10. WORK PLAN FOR Q4

Activities planned in Q3:

1. Capacity development of the Bungoma potato cooperative, KWETSO and the farmer marketing groups of Taita Taveta in good governance, leadership and business skills, with a business plan and building farmer membership being the main outputs.
2. Assessment of the effects of COVID-19 on the potato value chain from production to marketing. The assessment will obtain experiences and observations from senior county officials, input dealers, WAOs, farmers, traders and markets.
3. Endline survey to assess annually monitored indicators as stated in Table 5.
4. Seed System Workshop for stakeholders and implementors of seed system interventions.
5. Expand Viazi Soko (Potato Marketing) Platform of NPCK to include agronomic, weather information, and support marketing services for producers and markets, and collect and report user and platform use data.
6. Support Taita Papa nursery to produce apical cuttings for seed production, targeting sales to start late-August/early-September. Support KEPHIS to certify the current production of cuttings as the nursery is licensed to operate by HCDA.

Farmer GAP training was the main activity of Q2 that was impacted by COVID-19, which also caused delays in progressing in FPO development. However, towards the end of Q2 advancements were beginning to accelerate FPO development and production of cuttings seed production proceeded as planned with all planned activities completed (Table 6).

TABLE 6. STATUS OF ACTIVITIES FOR Y2Q2 (APRIL-JUNE 2020)

Planned Actions from Previous Quarter	Actual Status (Q2)	Explanations for Deviations
Continuous monitoring/spot check	In process	An ongoing process that continues throughout all activities
Develop communication materials	In process	One deliverable (Annex 2). Brief on Potato Value Chain AVCD Outcomes. An ongoing process throughout all activities
County Government: partner meetings to develop and implement potato strategies	Suspended	Completed in Bungoma Delayed for Taita Taveta due to COVID-19
County Government: establish 82 LFs (season 3)	Completed	
County Government: Train good agricultural practices on potato learning farms	In process	Conducted on a small-scale in Q2 as a result of COVID-19
Cost-share starter material—cuttings + transport	Completed	
HCDA nursery licensing of Taita Papa to produce apical cuttings	Completed	
Sample fields intended for use for seed potato production for key soil/seed-borne pathogens	Completed	
Cost-share investments for seed storage (DLS)	Completed	
County Government: Support FPOs to form/rally members	In process	Activities delayed slightly due to intensity of other activities. Progress made in all these activities in Q2 and they are on-going in Q3 and Q4
County Government: good governance/leadership training	In process	
Business plan development cooperative/farmer institutional	In process	

Planned Actions from Previous Quarter	Actual Status (Q2)	Explanations for Deviations
Establish office for each FPO	Completed	
NPCK: Expand Viasi Soko (Potato Marketing) Platform	In process	Activities delayed slightly due to intensity of other activities. Progress made in all these activities to be completed by Q3
Support youth groups to engage in potato value chain	In process	Ongoing process throughout all activities

ANNEX I. RESULTS MONITORING FRAMEWORK: ROOT CROP VALUE CHAIN- POTATO

Indicator	Annual Target (2019)		Achieved 2019 (Q1–Q4)		Overall Achieved	Notes	Reasons for Deviation
	Bungoma	Taita Taveta	Bungoma	Taita Taveta			
Objective 1. Build capacity for smallholder farmers to increase potato productivity by 50% and improve consumption of nutritious foods							
No. of county potato development strategies developed	1	1	1	0	50%	O/P cont. monitoring	Taita Taveta potato strategy is being developed and will be reported in Y2.
No. of potato GAP and variety LFs established	56	14	94	48	202%	O/P cont. monitoring	More LFs were developed to ensure that farmers do not travel longer for training to ensure building the critical mass for a potato value chain.
Percent increase in potato yield per acre	25%	25%	233%	350%	1,100%	O/C Survey	Annually monitored indicators are reported after survey; the reported data are from FGs applying GAP on distributed seed.
No. of potato farmers saving quality seed on-farm	3,200	800	3,810	1,771	139%	O/P cont. monitoring	FGs produced seed on-farm from 38–50 kg of certified seed each group received to apply the GAP training.
No. of potato farmers reached with nutrition messages	6,400	1,600	4,322	1,240	69%	O/P cont. monitoring	Low attendance in season I because agri-nutrition trainings are done separately. Figures expected to increase in Y2.
No. of women engaged in potato value chain	2,560	640	6,347	1,828	255%	O/P cont. monitoring	This target was overachieved as more women were available and more organized to participate in project activities.
Objective 2. Support access to seed system development in Bungoma county to produce at least 400 t of seed annually							
No. of seed companies in Bungoma engaged in potato seed production	1	0	0	1	100%	O/P cont. monitoring	In Bungoma the seed company supported to produce seed near Bungoma abandoned seed potato and did not identify a further qualified seed business. Efforts continue with an interested professional seed company near Bungoma. In Taita a private sector philanthropist company invested in seed potato business to support the county farmers.
No. of FPOs buying seed on behalf of member farmers	1	1	0	0	0%	O/P cont. monitoring	Will be done in Y2 after FPOs have been operationalized. Y1 focused on forming the FPOs.
No. of farmers using certified potato seed	6,400	1,600	8,712	2,457	139%	O/P cont. monitoring	Higher than expected due to the seed distributed to the FGs to apply GAP training.
Objective 3. Empower potato farmer producer organizations to engage in marketing and value addition, and provide other necessary services							
No. of FPOs with potato business plans	2	6	0	0	0%	O/P cont. monitoring	In Y1 the focus was on formation and membership recruitment for producer and marketing groups members; hence there were no targets for Y1. Y2 will involve business development and operationalization of FPOs.
No. of FPOs engaged in aggregation of produce	1	3	0	0	0%		
No. of FPOs linked to diversified markets	1	3	0	0	0%		
No. of FPOs operating as a business	2	6	0	0	0%		
No. of youth engaged in potato value chain	960	240	1,167	294	121%		

Note this table was submitted for the Y1 annual report; only a few changes occurred in Y2Q1. The framework will be updated in the Q2 report.

ANNEX 2. LIST OF DELIVERABLE PRODUCTS

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