Policy Prioritisation through Value Chain Analysis (PPVC)

Deep Dive Analysis on the Coffee Value Chain in Kenya

Executive Summary
February 2022

BACKGROUND ON PPVC METHODOLOGY

The PPVC is a market-led approach that aims to:

- Assist governments with evidence-based analysis to adequately prioritise their policies and investments (e.g. the Agriculture Sector Transformation and Growth Strategy (ASTGS)[1] and the accompanying National Agricultural Investment Plan (NAIP) for Kenya, Kenya Vision 2030[2], and the Big Four Presidential Agenda[3])
- Determine which policies and public investments are most (cost) effective at driving market-led inclusive agricultural transformation, and
- Involve public- and private sector stakeholders right from the start.

First, the current state or "as-is" baseline is established. This entails establishing the current state and historical trends of coffee supply and demand, identifying stakeholders throughout the value chain with linked market shares, operational costs, capacity and constraints and summarising challenges faced by the various value chain actors. Secondly, the value chain "ideal state" in which key bottlenecks and constraints are addressed using specific levers of change (e.g. value chain investments and policy levers) is defined. In order to reach the ideal state, a combination of investments and policies are formulated at specific nodes of the value chain aimed at unlocking more value out of the market system. Furthermore, these changes are translated to gross margin changes at the various nodes of the value chain. The impact of interventions on the coffee sector is modelled over a medium-term horizon (10 years, using the BFAP's partial equilibrium model) and the resulting impact on agri-food system GDP, poverty reduction and off-farm agri-food system jobs is modelled (RIAPA – CGE modelling).

INTRODUCTION

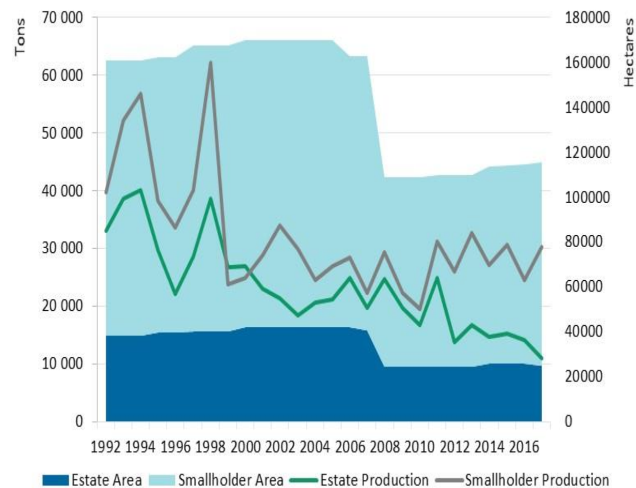
Kenya's policy landscape is largely shaped by the Kenya Vision 2030, Agricultural Sector Transformation and Growth Strategy (ASTGS), National Agriculture Investment Plan (NAIP) and the Big Four Presidential Agenda. These policies establish the framework and enabling environment requirements for growth and inclusive agricultural transformation. However, appropriate and effective public investments require that these policies be translated into more concise and targeted strategies that take the budgetary constraints facing policymakers into consideration. In this regard, the Ministry sought support from the Alliance for a Green Revolution for Africa (AGRA) in analysing and identifying policy levers using market-based approaches and modelling techniques that could provide insight into how to achieve set targets for implementation of the ASTGS and the Big Four Initiatives.

In response to this request, AGRA partnered with the Bureau for Food and Agricultural Policy (BFAP), Tegemeo Institute of Agricultural Policy and Development, Egerton University and the International Food Policy Research Institute (IFPRI) on a project called Policy Prioritisation through Value Chain Analysis (PPVC). The scope covered 12 commodity value chains that are common in both the ASTGS and the Big Four Initiatives. During the first phase of the project, the 12 value chains were ranked based on a list of indicators measuring each value chain's contribution to market-led, inclusive agricultural transformation.

At a meeting held on 25th Nov 2019, the ranking results were presented to the Principal Secretary of the Ministry of Agriculture, Livestock & Fisheries, Prof Hamadi Boga. From the 12 value chains, Prof Boga selected three value chains for a deep-dive analysis, namely coffee, beef and fish. This policy brief presents an overview of the coffee deep-dive value chain analysis.

BACKGROUND

The coffee industry has been one of the key pillars of Kenya's economic development for decades, contributing an annual average of US$230 million in foreign exchange earnings as Kenya's fourth most important export, after horticulture, tourism and tea. Its key role is recognised in the Government's efforts to fight poverty and is central to the agricultural sector's contribution towards the realisation of Kenya's Vision 2030, which is the country's economic blueprint, the Agriculture Sector Transformation and Growth Strategy (ASTGS), and in the Big 4 Government Agenda. (ICO, 2019)Coffee used to be the primary livelihood source for the majority of Kenya's small-scale producers. However, following the collapse of the International Coffee Agreement in 1989, production of coffee went into a steady decline (production area) and coupled with other key challenges such as delayed coffee payments, mismanagement and inefficiencies in cooperative societies, and high cost of production the sector has declined to 40 000 tonnes in 2019 from 130 000 tonnes in 1988. As a result, there has been a series of reforms aimed at reviving the coffee sub-sector.



Currently there are two Coffee Bills (Coffee Bill 2020 (Senate Bill) & Coffee Bill 2021 (National Assembly Bill)) under review. There is an uregent need for coordinated action between the two levels of Government and the Industry to ensure that these legislations properly respond to the challenges facing the sector.

There are various processes reviewing the two bills in order to identify both areas of conflict and areas of synergy. The purpose of the deep dive was not to analysis the impact of all the interventions proposed in the various Coffee Bills but rather to highlight the positive impact of intervenetions that would stimulate sustainable growth within the coffee sector. Some of the aspects being presented in the Coffee Bill are summarised below:

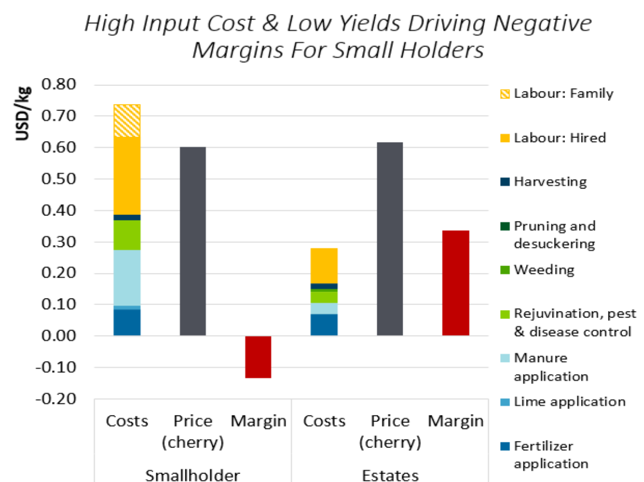
- The coffee factories are to be transformed to autonomous entities (instead of falling under / belonging to a cooperative).
- Coffee factories are to appoint millers themselves (previously decided by the cooperative).
- A revision of the Nairobi Coffee Exchange operations to a commodity-based system.
- Millers and factories are to be prohibited to lend to farmers, farmers are to borrow from the Cherry Advance Fund.

- Additional levies on the sale of coffee are to be introduced (nowhere does the bill state which existing levies are to be replaced, stakeholders will continue to pay other licences as required):
    - 2% ad valorem levy for the Coffee Research Institute
    - 4% import duty on imported coffee to the Coffee Board of Kenya
    - 2% auction levy (paid by buyers) - 1% to Coffee Board of Kenya and 1% to County Governments.

The bill proposes the introduction of various forms of additional government controls on the coffee value chain, the transformational effect of which can be speculated and debated – research and evidence shows that markets need to be well regulated but with fair competitive rather than control practices. While a number of the proposed changes might take time to implement, the additional levies are straight forward to implement and this analysis considered this change as part of the near-future reality. While the Coffee Research Institute and Coffee Board of Kenya are not directly involved in handling coffee volumes, the auction is a significant stakeholder in the coffee value chain from a market perspective. Therefore, the 2% additional auction levy is introduced to the current state of the coffee value chain as the first "intervention" and part of the near-future state; before the PPVC market-led intervention, recommendations are systematically introduced and the impacted modelled.

Additional levies essentially impose additional taxes on a declining industry, rendering the value realised at farm-level lower and resulting in a worse-off position. However, if these funds can be put to use to support farm-level productivity and address downstream inefficiencies, significant additional value can be unlocked, particularly at farm-level, supporting the overall sustainability and profitability of the coffee value chain.

From the deep-dive analysis of the current state of the coffee value chain, it was found that the majority of smallholder farmers incur significantly higher input costs per kg of coffee produced than the estate farmers. This includes inflated fertiliser and manure applications and costs as well as higher labour costs. Smallholders were found to produce coffee at lower yields and higher cost than commercial or estate producers . Negative average gross margins for smallholder coffee production were observed, explaining why smallholders are existing coffee and looking to other perineal crops for income. In order to curb the decline in the coffee area (stop smallholders from exiting coffee farming) significant reforms supporting farm-level productivity are needed.



1. **Optimised inputs (Costs & Application)**: excessive manure and fertiliser application to be reduced which in addition to reducing direct cost of inputs could lead to reduced vegetative growth and therefore also reduced disease management, weeding and labour costs. This has a direct implication on the current fertiliser subsidy program for coffee farmers. The Government could

consider restructuring the subsidy program to focus on an extension module to ensure that farmer optimally use fertiliser as well as the fair and affordable cost of fertiliser.

2. **Improved agricultural practices and yields**: re-establishing improved management practices (through improved extension services) to introduce the suitable activity at the right time. Access to new cultivars can also facilitate higher yields in the longer term. The levies to the CRI and county governments can be used to develop an extension outreach program for coffee farmers to equip smallholder farmers with the right knowledge and skills to produce and manage coffee. See Box 1 at the end of the executive summary document for a suggested framework for an improved extension and support delivery framework.

Another key take-home message from the deep dive analysis speaks to inefficiencies in the downstream coffee value chain (especially at the traditional cooperative level). Kenyan coffee receives a premium in the international market. However, this higher value is not realised at the farm-level (particularly for smallholders). Coffee producers own their coffee until it is sold at auction, which when not managed optimally leads to significant payment delays and high interests payments on production loans. Other inefficiencies found at the cooperative level include:

1. **High operating cost**: declining coffee volumes lead to sub-optimal capacity utilisation and, therefore, higher per-unit cost. Old, poorly maintained machinery is operated, resulting in low-quality parchment.

2. **Governance related inefficiencies**: cooperative societies are offering high-interest loans, high processing losses and some evidence of embezzlement/corruption was found.

3. **Input supply systems**: cooperative societies procure inputs in bulk, which enables cooperatives to offer inputs at lower than market prices. However, the bulk purchase of inputs is mainly on loan, and the resulting interest is often charged to all members instead of those accessing inputs through the cooperative.

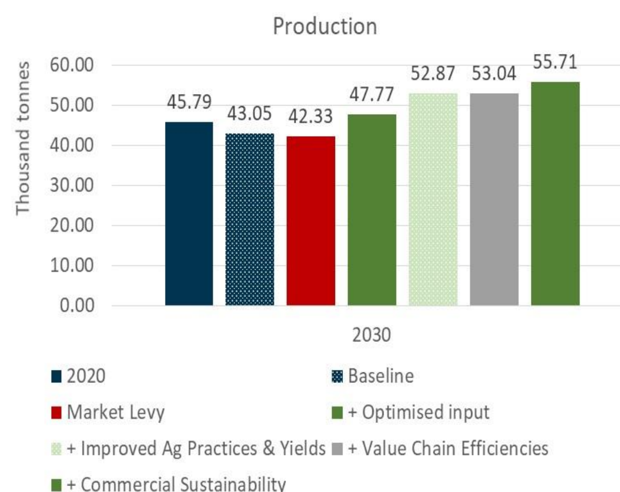
The third market-led intervention speaks to improving the value chain efficiencies by supporting competitive market dynamics with increased capacity utilisation and cost efficiencies as well as increased market opportunities.

The deep dive analysis show that introducing reforms that don't support increased productivity at farm level will not bring about transformational growth within the industry. Medium to long term productivity reforms take time and require funding – therefore if funds from additional market levies are successfully channelled to support farm-level productivity and address downstream inefficiencies, significant additional value can be unlocked, particularly at farm-level, supporting the overall sustainability and profitability of the coffee value chain.

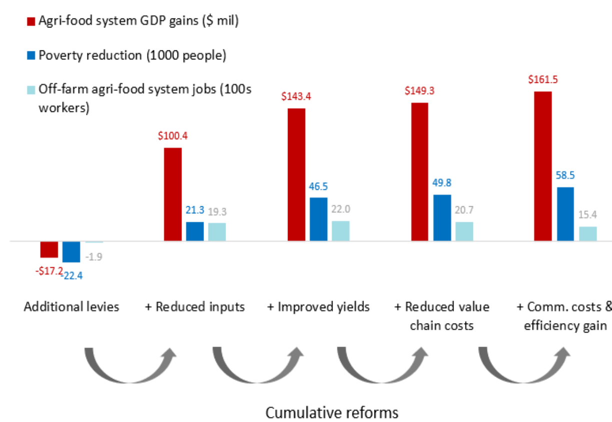
Table 1: Recommended Market-Led Interventions

1. Optimised inputs (costs & application)	2. Improved Ag Practices & Yields	3. Value Chain Efficiencies	4. Towards Commercial Sustainability
Balanced input application, transparent and fair cost of inputs, access to affordable finance.	Improved management practices, access to new cultivars	Competitive market dynamic with increased capacity utilisation and quality processing. Increased market opportunity	Interventions 1 – 3 are seen to yield incremental improvements over time. Continuously achieving incremental improvements over time, will reduce the gap between smallholder and estate coffee profitability.

Applying these interventions to the coffee value chain leads to a combination of input cost savings, producer price increases, and overall increased competitiveness in coffee production. The resulting incremental impact on production by 2030 is illustrated.



Furthermore, the impact of the ideal-state coffee value chain on the economy at large is modelled and quantified in agri-food system GDP gains, poverty reduction and off-farm agri-food system jobs.



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Box 1 - Delivery Framework for improved extension and farmer support (Interventions 1 and 2)

The deep dive analysis highlighted that Kenyan smallholder coffee farmers face profitability challenges driven by low productivity (yields), low input response-rates leading to high per-unit cost of production and low returns for their coffee after various deductions have been made from the gross price that they are quoted to have received from their cooperative for the sale of their coffee. Effective delivery of extension services, the dissemination of research and best practices as well as business advice is key to support smallholder farmer development towards effectively managing costs and improving productivity, as set out in the first two suggested interventions out of the Deep Dive analysis.

Extension service provision from the public sector is the responsibility of County Governments. Other institutions, such as private sector institutions among them cooperative societies, and civil society organisations complement the public sector extension delivery system. However, on-the-ground delivery of these key services is lacking from the public sector, and the ones undertaken by other providers only cover a small proportion of farmers. Furthermore, while the Coffee Research Institute (CRI) undertakes quality research, it is facing budgetary constraints. Previously, it received direct funding from the coffee industry through a levy mechanism, but this was scrapped in 2014. The industry has proposed several changes that essentially walk back the reforms undertaken in 2014. First, the proposal reinstates the Coffee Board of Kenya (CBK) (currently the Coffee Directorate under Agriculture and Food Authority(AFA)) as the regulator, and CRI as an independent research organisation for the industry (currently an Institute under Kenya Agricultural and Livestock Research Organisation (KALRO)). Second, the proposal reinstates various levies[1] aiming to avail more funding to the CRI, the CBK, and the coffee-growing County Governments for coffee development. The Deep Dive analysis highlights the importance of attributing additional funding streams to activities that will enable the delivery of extension services and effective communication channels towards assisting farmers to enhance cost-effective productivity and ultimately increasing the value the farmers receives for their coffee.

Through workshop discussions on 14th and 15th February 2022, stakeholders identified some successful delivery models (case studies) that were being implemented in Makueni. These delivery frameworks were investigated and mapped out in detail and the following proposal for a generic delivery framework to be introduced in coffee-producing counties was put forward.

[1] 1% levy dedicated to the CRI, 0.5% to the Coffee Board for regulatory and coffee promotion functions and 0.5% to the coffee growing county governments for coffee development.

Figure 1 illustrates the current governance structures and roles, as listed in Table 2. Table 2 also identifies current gaps and shortcomings of the current governance structures. A few of the key contributions (that were noted during the workshop) contributing to the sub-optimal extension service delivery in Kenya's crops and coffee sector are the following:

- Top-heavy government structures with little resources and funds for implementation and service delivery
- Lack of trust in government and public extension services
- Lack of coordination of extension services

In an attempt to address these constraints the following activities, roles, and working groups are proposed to be rolled out to drive "coffee development under county governments" and for the proposed 0.5% levy introduction to be ring-fenced for these activities (new/proposed institutions are illustrated in green on Figure 1 and described in Table 3).

In terms of structures, it is proposed that village councils be established or re-formalised where they exist but are not delivering required services to the village and farmers. The village council should consist of an elected village elder (to be compensated) and 3-5 elected council members. The primary purpose of these councils includes the coordionation of extension services at grass roots level, village advisory, knowledge demonstration and information dissemination. Furthermore, farmers are to be organised into farmer groups such that regular meetings can be held relatively easily and a promotor farmer is to be selected. The promotor farmer's role is to demonstrate best practices and disseminate knowledge to other farmers with the farmer groups.

The Green Stars[2] in Figure 1 indicate existing extension personnel or capacity, and it is proposed that these people are to be mobilized regularly to provide training at factory level. The promotor farmers needs to be mobilised to attend training sessions at factory levels. These training sessions are to be supported by technical experts from private sector i.e. input providers, finance institutions, millers and marketers. The CRI is also to pro-actively disseminate knowledge through its demonstration farms national and at county level through the county extension officer(s). It is important here, that the village and ward councils perform accountability functions and are key channels by which grievances or inadequate service delivery can be reported.

From a coordinating perspective, the establishment of County Sector Working Groups is proposed, in order to provide a platform where extension coordination and extension capacity sharing can be discussed. This institution is not to add to the beaurocracy, but to provide a platform for various stakeholders to communicate and coordinate. Members of such a County Agriculture Working Group can include:

- County Agriculture / Coffee Directorate
- County Co-operative Directorate
- Sub-county Directorate
- Co-operative / Society Extension
- Private sector players i.e. input suppliers, service providers, millers, marketers, banks, finance

[2] Public extension personnel at ward and co-operative society level, promotor farmers as attendees of the training and private extension services at mill or other private service provider levels to assist in hosting or present training.

The County Agriculture Working Group is to facilitate private public partnership in ensuring service delivery to the farmers in the respective wards and villages. The Kenya Coffee Platform is in the process of establishing county-level units and these platform can form part of the County Agriculture Working Groups or report to them in the coffee-growing counties.

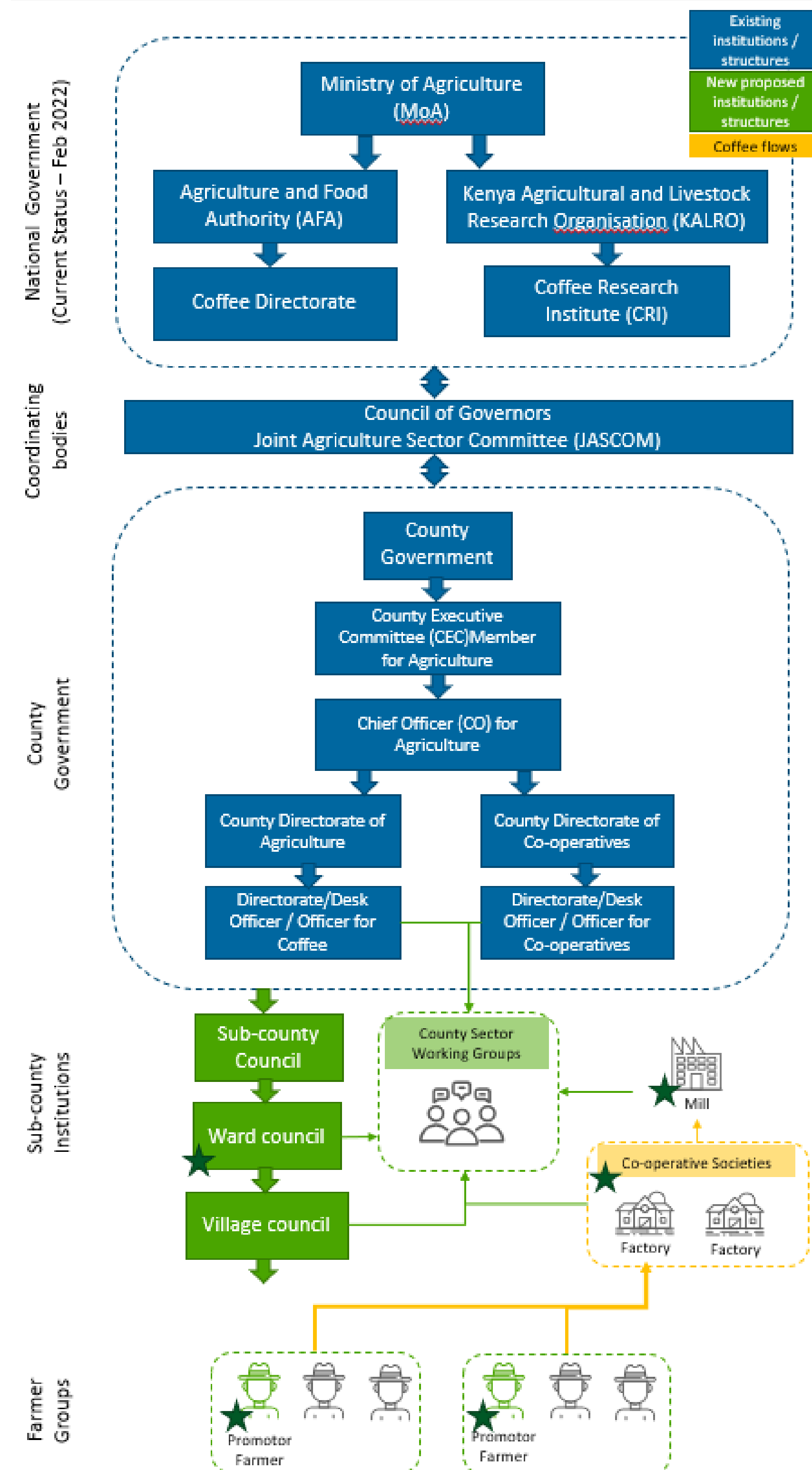

Figure 1 - Government Frameworks (focused on agricultural and coffee-sub sector structures not all governance positions and structures)

Table 2: Existing Institutions

	Roles and Responsibilities	Current Gaps

National level institutions	• Policy development and formulation
	• Regulatory framework
	• Institutional framework
		– Poorly implemented and enforced regulations by CD-AFA
		– Fragmented regulatory bodies and institutions:
		  • AFA in charge of lincensing
		  • CMA in charge or auction
		  • SASRA/State Department for cooperatives – in charge of regulating cooperatives
		– No cohesion between national istitutions and grassroots institutions.

Coffee Research Institute (CRI)	• Communication and Information dissemination between National and County Governments	– Weak coordination between the two levels of government and with the private sector institutions
Council of Governors & Joint Agriculture Sector Committee (JASCOM)	• Extension Delivery • Application of Research • Regulation	– No provision of key services such as extension services – Lack of coordination of extension services. – Lack of clear accountability mandates
County Government – Agricultural directorate	• Enforcement of regulations and guidelines of the Co-operatives Act • Extension / Business Development • Knowledge dissemination	– Poor oversight and accountability for coffee cooperatives – Collaboration with extension functions is unclear.
County Government – Co-operative directorate	• Technical experts • In charge of Ward activities • Coordination of extension activities •	– Reporting and accountability functions / mechanisms unclear.

Table 3: Additional proposed groups and activities

	Roles and Responsibilities
Sub-county Councils	• Technical experts • In charge of Ward activities • Coordination of extension activities
Ward Councils	• Planning • Target setting • Implementation of performance management • Data collection
Establish Village Councils	• Coordination of extension services • Village advisors • Knowledge demontsration • Information dissemination
Establish Farmer Groups and Identify "Promoter Farmer"	• Organise farmers in a way that regular meetings are possible and knowledge sharing is easy.
Promoter Farmer	• Demonstrate best practices • Disseminate knowledge and training to the farmer group.
Establish County Sector Working Groups	• Provide a platform for public-private-partnetship can be established • Mandated to hold service delivery to farmers accountable.

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