

**ONE-COW INITIATIVE EXCELS IN PROVIDING SUSTAINABLE LIVELIHOODS AND NUTRITION FOR
VULNERABLE HOUSEHOLDS IN KAKAMEGA COUNTY**

County:	Kakamega		
Sector/s:	Agriculture	Sub-sector/Theme:	Kakamega County Dairy Development Corporation
Keywords:	Kakamega County Dairy Development Corporation, KDDC, One-cow initiative, Kakamega County		
Target Audience:	Dairy Farmers, Dairy Cooperatives, Learning institutions, Research institutions, County Departments in charge of Livestock		
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Introduction (*Context and Challenge*):

High poverty levels, food insecurity, high unemployment levels, and lack of raw materials for agro-processing industries were the prevailing conditions in Kakamega

County in 2013. For example, 51% of the County population of 1.7 million people was poor¹.

Though Kakamega County is endowed with good climatic conditions for farming, a large part of the population is involved in subsistence farming, including largely rearing indigenous cattle for milk production. Milk produced from these indigenous cattle could hardly cater for household incomes and nutritional needs.

Unemployment rates were high among these poor households, many of whom could not afford school fees for their children, leave alone decent shelter for the family members.

The Participatory Analysis of Poverty and Livelihood Dynamics (**PAPOLD**) identified the following categories of population status:

- i) Destitute – no land, no animals, they beg for food
- ii) Very poor – little land, can work but have no animals (*Avamanani*)
- iii) Poor – have land, can produce food crops but have no animals
- iv) Fairly rich – have land, have some animals and a little extra income (*Kaikai*)
- v) Rich – have land, have animals and paid employment to maintain good living standards (*Avahinda*)

The County had all categories except for the destitute category. It thus needed to address the livelihood gaps and challenges facing categories (ii) very poor and (iii) poor as categories iv (fairly rich) and v (rich) were living above the poverty line.

The then Governor, H.E. FCPA Wycliffe Ambetsa Oparanya, saw a huge potential for the dairy value chain due to favourable climatic conditions and an alternative source of income to sugarcane and this led to the creation of a special-purpose programme dubbed the One-cow Initiative.

A proposal to initiate a *One Cow per poor Household program* in the financial year 2013/2014 was done. This would involve the purchase and distribution of in-calf heifers

¹ Kakamega County Projects Implementation Report 2013-2017 page 3, item 1.4 – Poverty reduction efforts (March 2017).



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to targeted and carefully selected beneficiaries across all the 60 wards in the County. This initiative would trigger increased milk production, create on-farm employment and improve household incomes and nutrition. The beneficiaries would then pass on the first heifers from the donated cows to other selected beneficiaries within their localities.

Implementation of the practice (*Solution Path*):

- In the financial year 2014/2015, the One Cow Initiative was implemented/operationalized under the Livestock Production Directorate. The main objective of the programme is to improve the socio-economic status of the farmers of Kakamega through improved and increased milk production, improved household incomes, nutrition and creation of employment.
- The One-Cow Initiative proposal included other initiatives (see Section 2.4.2, pages 18–21) such as:
 - Smart Dairies Ventures (Farm-in-a-Box) for increased milk production by acquisition of high-quality dairy cows;
 - a milk processing plant for value addition;
 - Research/training components in the dairy sector for capacity building;
 - Smart Milk Cooperatives for marketing.
- The operationalization of these initiatives led to the formation of the Kakamega County Dairy Development Corporation (KDDC) through a County Assembly Bill of 2017 as part of its core mandate. KDDC was established by an Act of the County Assembly of Kakamega in the year 2018 to provide a legal framework for the development of the dairy value chain in Kakamega County.
- The One-Cow Initiative programme has been and is still one of the flagship programmes in the Department of Agriculture, Livestock, Cooperatives and Fisheries. To sustain it, the package included a subsidized Artificial Insemination.
- Vetting committees established at ward and sub-county levels carefully selected vulnerable farmers.
- The identified beneficiaries were then trained on dairy enterprise management practices, including dairy fodder establishment and construction of units/infrastructure to shelter the cows. They were then provided with in-calf



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heifers and were regularly followed up by technical staff focusing on improved feeding and welfare of the cows.

- A beneficiary whose animal calved down to a heifer would pass on this heifer at one-year of age to the next selected farmer/beneficiary in the locality.
- All beneficiary farmers receive continuous extension services from department staff, especially in areas of fodder development, calf rearing, clean milk production, feeding, disease and proper record keeping.

The main activities carried out

- Departmental budget preparation (program-based budgeting), specifically for the One Cow per poor household initiative.
- Presentation of the above budget to the Executive (Cabinet for approval).
- Presentation of the entire County budget to the County Assembly for budgetary appropriation.
- Formation of operationalization committees from the County level up to village levels.
- Selection and vetting of beneficiaries.
- Sensitization and training of beneficiaries.
- Scouting of high-quality in-calf heifers.
- Purchase of the identified high-quality in-calf heifers.
- Preparation of the launch and distribution of the animals with the help and participation of the executive (Governor).
- Extension officer follow-up with trainings, monitoring and evaluation and reporting back.

When and where the activities were carried out

- County government budgetary cycle — mainly in-house and office work
- Selection and sensitization activities are fieldwork with the general public
- Scouting and purchases are mainly where high-quality animals are available, for instance, ADCs (Agricultural Development Corporation)
- Launches, distribution, extension services, monitoring and evaluation are fieldwork activities and are continuous.



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Establishment of the One-cow initiative

- The County rolled out the initiative in the Financial Year 2015/16 by procuring 610 in-calf heifers and distributing 10 to each ward. In 2016/17, 700 in-calf heifers were procured and distributed equally among the wards. Shinyalu and Ikolomani Sub-counties were given double the number to cure the low dairy farming problem there. In 2017/18, 480 in-calf heifers were distributed with each ward getting 8.
- Beneficiaries were expected to pass on the first heifer calf to the next beneficiary and the cycle continues. So far, 1,790 in-calf heifers have been distributed to farmers across the County, 180 are in the process of being procured and 916 heifers have been passed on to other beneficiaries. Additionally, 100 heifers are ready to be passed on. Bull calves are not passed over; the farmers can sell them.
- Farmer groups maintain themselves, i.e. they monitor one another. The community has a vetting committee that carefully selects the beneficiaries based on their knowledge of the socio-economic status of those who apply.
- All farmers interested in receiving a heifer must apply through the Livestock Officer. The database of applicants is availed to the vetting committee which vets each applicant against a checklist to ensure cows are given to the most deserving beneficiaries. The vetting committee comprises church leaders, women, youth, and persons with disabilities (PWD) representatives, one representative of the Community, Area Council member for Agriculture; ward and sub-county administrators and officers from key departments such as Livestock and Cooperative departments. Committee members ask questions to establish the suitability of a farmer to take care of the cow. Checklist questions include:
 - Size of land
 - Availability of water
 - Whether the applicant has kept dairy before
 - Subsistence crops grown within the homestead for food. Milk proceeds should cater for capital expenses such as school fees, housing, etc.
 - Farmer must be a member of a cooperative.
 - Farmer must commit to give the first heifer calf to the next beneficiary once it's weaned off milk.



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- Phase I of the initiative ran into difficulties as some very poor farmers couldn't take care of the cows when they became sick. They would call the Livestock Office which would send vets to check on the cows and settle the bills.
- Phase II focused on women and Phase III was open to both genders and PWDs provided they applied.
- Vetting takes place at the ward level and the beneficiary list is sent to the County headquarters. The Livestock/Veterinary officers visit the beneficiary farmers at the ward level for M&E.

Key implementers and collaborators and their roles

	Implementers/Collaborators	Their roles
1	County Government of Kakamega	Main source of funding and political goodwill
2	County Assembly of Kakamega	Appropriation of the budget and oversight of the implementation of County projects.
3	Directorates of Livestock Production, veterinary services and cooperative development	Logistics and operationalization of the entire programme
4	KDDC (Kakamega County Dairy Development Corporation)	Research, breeding, value addition strategies and specialized training on management of grade/pedigree breeds (Farm-in-the-box Smart Dairy Farms)
5	Farmers/Beneficiaries	Actual owners of distributed animals. They provided land as a resource and established fodder, constructed zero grazing units, provided clean water and feeds, and availed farm labour. They do the actual animal-rearing activities.
6	Agroindustry ventures	Provide animal feeds, drugs, equipment and tools.



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7	National Government	Policy formulation, capacity building and technical assistance.
8	Council of Governors (CoG)	Mobilization of funds from national government to be released on time and capacity building at the county level.
9	Cooperative societies	Markets enhancements, income mobilization and farm inputs acquisition
10	Development partners, e.g. ASDSP, KCSAP, GIZ, FAO	Harmonizing activities working on residence issue supplementary and complementarity enhancement.

Resource implications

Financial year	Number of heifers procured	Total Cost
2015/2016	610	55,450,000
2016/2017	700	50,400,000
2018/2019	480	35,520,000

Sustainability of the initiative

The County Government intends to sustain the One-Cow Initiative through:

- heifer pass-ons to the next beneficiaries making the programme perpetual (from one cow, one farmer has had 6 calves — 3 heifers and 3 bulls).
- strengthening Cooperative societies movement to improve marketing channels.
- increasing milk production in the County by transitioning from subsistence to commercial dairy farming.
- commercialization strategy by building a milk processing plant.
- creation of the Lake Region Economic Bloc by CoG where Kakamega County is a signatory and a member has increased the size of market for the region's agricultural products.
- full implementation of the multi-sectorial County Agricultural Sector Steering Committee (CASSCOM) to harmonize and harness resources from other development partners.



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- continuous public participation and sensitization to capture the ownership of the initiative by the farmer-beneficiaries.
- enhancing the number of Smart Dairy Farms by establishing at least one smart dairy farm in each sub-county to serve as centres of excellence for dairy farmers.
- retaining one cow per poor household initiative as a flagship project in the CIDP with an annual budget allocation regardless of changes in political regimes.
- training and follow-up of beneficiary farmers.
- establishing an artificial insemination (AI) scheme where heifers of the same age will be synchronized and served at the same time (i.e. injected with hormones to put them on heat at the same time) for faster multiplication.
- encouraging able farmers to purchase high-grade animals on their own. The county government will offer technical advice and capacity building.
- forming synergies with other counties to explore their comparative advantages and exchange of technologies and resources, and improve on disease control.

Results of the practice (outputs and outcomes)

- Dairy population and milk production in the County is as follows:
 - In 2015, the dairy population was 147,820, producing 131.7 million litres of milk annually;
 - In 2016, the dairy population was 148,430, producing 145.8 million litres of milk annually;
 - In 2018, the dairy population was 161,030, producing 165.0 million litres of milk annually;
 - In 2019, the dairy population was 165,780, producing 171.8 million litres of milk annually.
 - In 2022, the dairy herd increased to 170,000, resulting in a 30% increase in milk production.
- Construction of a milk processing plant in Malava has not been completed due to budgetary constraints; it is currently at 70% completion. In this FY 2022/2023, a budgetary allocation has been provided to complete its construction.
- There was a noted increase in household incomes of beneficiaries that has enabled them to pay for their children's education.

- Crop yields have increased among beneficiaries due to the use of manure generated from animal units.

Impact/successes

- The initiative has reached 1,790 first-level beneficiary households and 1,016 second-level beneficiary households, and this is a continuous process as heifers of age are passed on to other beneficiaries. The County has also made a saving since it didn't purchase the 1,016 heifers.
- Farmers' nutrition and livelihoods have improved since their diet includes sufficient milk and they sell the surplus milk to neighbours. For example:
 - a (blind) farmer was given a cow, and after putting their 3-year child who had never walked on milk, the nutrition condition was corrected and the child started walking.
 - Farmers are using the proceeds of milk sales to educate their children and improve their shelters from one type to another.
 - There is an improvement in yields because of manure use; the cows are zero-grazed.

Results through the eyes of a beneficiary of the One-Cow Initiative, Mr Vincent Shikombe from Sheywe Location

Vincent Shikombe who lives with his wife and 5 children, benefited from the One-Cow Initiative after he was interviewed by the Ward vetting committee and identified as one of the deserving beneficiaries. His name was forwarded to the County which gave him a cow sometime in 2015.

His cow named Susan after the Livestock Officer who handed it over, produces 24 cups of milk (equivalent to 12 litres) per day, 2 litres of which he consumes with his family and the remaining 10 litres, he sells to the neighbours.

So far, he has got 2 calves — male and female; he passed on the heifer calf to another beneficiary as required under the One-cow initiative. The cow has enabled him to boost his family's nutrition, build a house and educate his firstborn son who is currently in college. Shikombe is grateful to the County Government for these benefits.



Shikombe speaking to CoG & Kakamega County staff during a visit to his farm



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Shikombe grows maize, beans, peanuts, sweet potatoes, arrowroots and bananas, among other food crops. He has also started beekeeping and selling gravel broken from the rocks in the homestead.

Shikombe experiences challenges, including:

- Disease control — once the cow is infected, it has to be treated immediately.
- Drought affects the availability of feed but the beneficiary has planted grass which comes in handy during the dry season.
- The milk is only enough to sell to neighbours and not to the dairy.



Shikombe showing off the cow he got from the One-Cow Initiative as a first-level beneficiary

Key activities undertaken which led to positive results

- Early farmer preparation before receiving the cow ensured that the farmer plants enough fodder and constructs the unit for the cow before receiving it.
- Proper beneficiary selection ensured the most vulnerable benefitted in each Ward.
- Constant interaction with farmers and follow-up ensures keeping track of the cows and their offspring.

Lessons learnt:

- Political goodwill facilitated the equal distribution of in-calf heifers across the County with all Wards benefitting.
- Mode of selection of the beneficiaries minimized conflicts — the selection is done at the community level with implementation guidelines.
- Constant farmer trainings by the officers facilitated the high number of heifers passed on to other beneficiaries as part of sustainability measures.
- Good collaboration with other stakeholders enabled follow-up to monitor the cows.
- There were increased incidences of mortality rate in Phase I due to high incidences of East Coast Fever (ECF) because the disease is very expensive to diagnose and treat for poor farmers. The County government had to intervene by:
 - procuring some doses of ECF drugs for use by the resource-poor dairy farmers in the programme.



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- purchasing 60 foot pumps (one per Ward) to enable comprehensive spraying of animals to eliminate ticks. However, this is very expensive for the low-productive zebu cattle that would spread the effect of ECF to the program animals. Hence, there was the need for rehabilitation/construction of cattle dips and spray races in the County (ongoing).
- training veterinary staff on ECF vaccination.
- carrying out free ECF vaccinations in the County for all programme cattle. This offers lifetime immunity against ECF.

What to do differently

- Enhance tick control initiatives and vaccinations against ECF.
- Veterinary extension services are to be initiated and enhanced by the County government.
- Initiate synchronized Artificial Insemination services using advanced technologies of sexed semen and embryo transfers.

Conclusion and recommendations

- Good targeting of vulnerable beneficiaries can transform household incomes and nutrition.
- The beneficiaries should be well-trained on the dairy value chain before they are given animals.
- The requirement to pass on one-year old heifers brings ownership to beneficiaries since passing on is looked upon by farmer peers as clearance of a “debt”.
- There is a need for proper coordination among all stakeholders at all levels of project implementation, taking cognizance of the political environment.
- There is a need to have effective, efficient and accountable vetting committees at the Ward levels with proper reporting mechanisms.
- There is a need to develop value-addition strategies and marketing channels/linkages as milk production increases.
- Farmer field exchange learning visits help farmers share knowledge and skills in adapting to changing circumstances in the rearing of the cows.
- Farmer feedback mechanisms through extension services.

What to avoid

- Uncoordinated implementation of the programmes.
- Political influences by having committees work independently under proper regulations.

Further reading:

1. **One Cow Initiative Program Proposal – County Government of Kakamega**
2. **Initial County Government of Kakamega CIDP document**



Heifer pass-on exercise in Likuyani Sub-County



Heifer pass-on exercise in Ikolomani Sub-County