



<b>Project Title:</b>	Formulation and evaluation of feed rations for sustainable improvement of dairy productivity by smallholders in Kenya		
<b>Annual Report</b>	<b>Period Covered:</b> October 2020 to September 2021		
<b>KCSAP livestock Applied</b>	<b>Value chain:</b> Dairy	<b>Duration: 18 Months</b>	<b>Start Date: Oct 2020</b>
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<b>Background</b>  In Kenya, the low milk production is attributable mainly to the high costs of feeds and poor feeding of dairy cattle. This project will therefore be involved in the formulation and testing of least-cost and nutrient-balanced dairy ration. The testing of the formulated dairy rations will be done both on-station and at farm level in Bomet County. The proven feed rations are expected to sustainably increase milk production and thus contribute to food security, improved nutrition and income generation among the resource-poor smallholder households. Besides, enhancing the efficiency of feeding dairy cattle will lead to reduced feed wastage and emission of enteric methane to the environment.			
<b>Objectives:</b> 1. To test and recommend rations for feeding dairy cattle during the dry season			
<b>Expected Outputs</b> 1. Dry season rations tested and recommended to dairy farmers			

## **I ACHIEVEMENTS**

**Objective 1:** To test and recommend rations for feeding dairy cattle during dry season

**Activity 1.1:** Sensitization of stakeholders about the project by December 2020

### **Achievement 1.1**

- Eight extension officers and fourteen dairy farmers were sensitized about the project in Bomet County from 10<sup>th</sup> to 14<sup>th</sup> August 2020
- Joint planning meeting with extension workers was held in Bomet county on 14<sup>th</sup> August 2020
- A back to office and a field technical report were compiled on 02/01/2021

**Activity 1.2:** Development of on-station research protocols and other reports by January 2022

### **Achievement 1.2**

- One on-station research protocol was developed on 09/10/2020
- A technical report for the first disbursement of funds was submitted on 04/02/2021.

**Activity 1.3:** Renovation/ repair of experimental structures by October 2021

### **Achievement 1.3**

- Experimental structure renovations/ repairs were not complete by September 2021

**Activity 1.4:** Purchase of experimental feeds and other inputs by January 2022

### **Achievement 1.4**

- Purchase of experimental feeds and other inputs from first disbursement of funds was done by July 2021.

**Activity 1.5:** Revision of research proposal

Based on comments from a M&E Monitoring and evaluation exercise on 17/05/2021, a revised research proposal WP&B were submitted on 14/07/2021

### **Summary of achievements under objective 1**

- Development of on-station research protocol
- Revision of research proposal
- Revision of work plan and budget
- Purchase of experimental feeds and other inputs

**II Other achievements** (e.g. patents, publications such as journal papers, technical reports, presentation in workshops and conferences). List them with proper citations.

- Back to office reports
- One technical report
- One Bomet county dairy production technical report

**III Constraints and how they were overcome**

There were procurement challenges at KALRO Naivasha Centre and hence major delays in the purchase of animal feeds and the repairs of the feed intake structures, livestock weighing bridge, forage chaff cutter, feed mixer, and hammer mill. This was because project funds were requested through KALRO Naivasha Centre but the project implementation was being done at KALRO Ol Joro Orok. To circumvent the problem it was agreed that funds for the other quarters be requested through KALRO Ol Joro Orok Centre where most of the project activities are being implemented.

**IV Summary of funds received, accounted for and balance**

<b>Project Amount (KES)</b>	<b>Amount Received (KES)</b>	<b>Amount accounted for (KES)</b>	<b>Balance (KES)</b>
5,191,000	992,300	978,598	4,212,402

**IV Way Forward**

- Conduct two on-station feeding trials at KALRO - Ol Joro Orok (January – April 2022)
- Data analysis and reporting (May-June 2022).