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Results Based Monitoring and Evaluation Outcome Process on Agricultural-based Projects on Household Food Security Murang'a County, Kenya.

ABSTRACT

Worldwide, Governments continue to face severe challenges on food insecurity, both urban and rural Kenya have been affected. The execution and durability of projects have proven to be difficult, despite attempts by the Governments and Donor agencies efforts to finance food-related agricultural-based programmes for food security. The purpose of this study was to establish the Influence of Monitoring and Evaluation of Agricultural-Based Projects on Household Food Security in Murang'a County, Kenya. The study objective/s was to determine whether Monitoring of agricultural-based project processes had any influence on household food security in Murang'a County. Result-Based Monitoring and Evaluation strategy was utilised as widely used by development agencies since the 1990s. Value addition methods were also applied to help provide longevity, curb, and reduce spoilage of food whose lifespan is short. Researcher used pragmatic paradigm, with both qualitative and quantitative research methods. The research design used descriptive and correlational surveys. Sample size from the population, was chosen using stratified, simple random, and purposive selection techniques. The target population was 134,654 individuals based on the 2019 census data and the sample size of 383 was determined using Krejcie and Morgan Table of sampling method, which comprised of 372 household heads, 7 local leaders, and 4 agricultural extension officers as key informants. An interview guide and structured questionnaires were main methods used to collect data. A pilot test was carried out with a sample of 38 household heads from Muchatha, Kiambu County, to confirm the validity and reliability of the research instruments, the test yielded a reliability coefficient of = 0.818 (Cronbach's alpha) for the pre-tested instruments used in the pilot. The Statistical Package for Social Sciences (SPSS) version 25 computer program which generates frequencies, percentages, means, standard deviations, correlations, and regressions were used to ascertain the relationship between independent and dependent variables. Descriptive and inferential statistics are used to analyze quantitative data. A paired sample t-test was used to evaluate the study's hypothesis after thematic analysis of the qualitative data. Shapiro-Wilk test statistics were used to test for normality which made sure the study sample was representative of a group with a normally distributed population and the variation inflation factor (VIF) was used to test for multicollinearity. By ensuring that the data used in hypothesis testing were roughly normal and appropriately transformed, as determined by Levene's statistics for equality of variances, heteroscedasticity was reduced. Tests were run to evaluate the statistical hypotheses and guarantee the accuracy of the study before beginning the data analysis. The Pearson Correlation Coefficient and simple and multiple linear regression models were used to determine the relationship between independent and dependent variables. The findings obtained from seven hypotheses were investigated with a significance level of 0.05: The null hypothesis (H0), which claimed that the M&E Input process and Household food security have no meaningful association, was disproved (P=0.0000.05). The null hypothesis about the relationship between household food security and M&E activities process was disproved (P=0.0000.05). The M&E Output process and Household Food Security null hypothesis was likewise rejected (P=0.0000.05). The M&E Outcome process null hypothesis regarding household food security was disproved (P=0.0000.05). The M&E Impact process and Household Food Security null hypothesis was likewise disproved (P=0.0000.05). Additionally, the combined Results-Based M&E of Agricultural-based Projects and Household Food Security null hypothesis was rejected (P=0.0000.05). The association of M&E of Agricultural-Base products and Value addition on household food security was the last null hypothesis to be rejected (P=0.0000.05). The null hypothesis that Value addition did not significantly affect the link between Results-based agricultural programs and family food security was also rejected (P=0.0000.05). Study conclusion, that value addition acts as a moderator and results-based agricultural projects have a major impact on household food security. The results of this study should help household heads, local leaders, agricultural extension offices, and Government and Donor agencies to generalize and adopt results-based M&E agriculture practices and value addition to improve household food security through the insightful information from the study. The findings realized that Results-based agriculture projects and value-adding techniques were essential in making well-informed decisions about household food security. In conclusion, training and encouraging households to shift their attitudes towards education and crucial knowledge of monitoring and evaluating practices would ultimately guaranteeing enhanced produce output and food security for households. The study recommended generalization to the already proven research and future research should seek fully incorporate monitoring and evaluation procedures. Future study should also look at how monitoring and evaluation procedures affected Kenyan households in adopting new agricultural methods and value addition to achieve long lasting and sustainable initiatives of Food security in Murang'a County and generalized in the whole of Kenya.

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Introduction

STATEMENTS		SA	A	N	D	SD	Mean	Std. dev
1.	Conducting a readiness assessment help the outcome process	99 (30.9%)	94 (29.4%)	56 (17.5%)	43 (13.4%)	28 (8.8%)	3.60	1.29
2.	Conducting a readiness assessment evaluates outcome process	90 (28.1%)	108 (33.8%)	57 (17.8%)	31 (9.7%)	34 (10.6%)	3.59	1.28
3.	Ensuring advocacy promotes outcome process	83 (25.9%)	106 (33.2%)	59 (18.4%)	43 (13.4%)	29 (9.1%)	3.53	1.26
4.	Ensuring accountability promotes outcome process	105 (32.8%)	102 (31.8%)	54 (16.9%)	29 (9.1%)	30 (9.4%)	3.70	1.27
5.	Selecting key indicators helps to monitor outcome process	110 (34.4%)	91 (28.4%)	53 (16.6%)	36 (11.2%)	30 (9.4%)	3.67	1.30
6.	Selecting key indicators helps to evaluate outcome process	112 (35%)	97 (30.3%)	51 (15.9%)	28 (8.8%)	32 (10%)	3.72	1.30
7.	Type of produce storage facilities measures the outcome process	111 (34.7%)	96 (30%)	44 (13.7%)	39 (12.2%)	30 (9.4%)	3.68	1.31
8.	Type of farm produce storage facilities provides longevity in the outcome process	137 (42.7%)	78 (24.4%)	40 (12.5%)	29 (9.1%)	36 (11.3%)	3.78	1.37
9.	The extent of food produced helps determine the outcome process	144 (45%)	69 (21.5%)	47 (14.7%)	36 (11.3%)	24 (7.5%)	3.85	1.31
10.	The extent of farm produce helps in food security measures in the outcome process	144(45%)	66(20.5%)	45(14.1 %)	36(11.3 %)	29(9.1%)	3.81	1.35
Composite mean and Composite standard deviation							**3.74**	**1.32**

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Statement (2) that '*conducting a readiness assessment evaluates outcome process'* had a mean of 3.59 and a e

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ood preservation which are described as the procedure of treating and handling food to prevent or significantly delay spoilage and prevent food borne illness while retaining nutritional value, texture, and flavor. Food preservation and techniques include those that inhibit the microbial growth such as yeasts and slow the breakdown of fats that trigger inflammation, Food preservation encompasses a variety of techniques that prevent food from spoiling following harvesting, processing, and storage.

Statement (8) on '*types of farm produce facilities provide longevity in the outcome process'* had a mean of 3.78

practices dating all the way back to prehistoric times. The three types of food storage are as follows: dry storage, which is defined as items that do not require climate control; packaged food, which is defined as foods that require storage at a low temperature but not below freezing; and frozen food storage, which is

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agricultural project modelers should exercise caution in analyses of agricultural projects output and food availability for household food security as the empirical evidence based on including food access indicators and

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food security comprises availability, access, utilization and stability dimensions, best practice would involve more effort to incorporate food access and stability indicators into agricultural projects models. The empirical evidence based on including food access indicators and their determinants in agricultural projects requires

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of households' food security was also under-represented in previous work and requires strategy of dynamic

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agricultural project systems which include households' food security indicators robustness and adaptability of household levels. Agricultural project often shortens analysis of households' food security as independent variable which has the potential to improve households' food security such as food yield with an assessment of food security itself.

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§ *'Readiness assessment is normally carried out through data collection, community networks, focus group*

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'Valuation of the project scope, monitoring of the outcome of investment from farm produce directly attributed to project farming has enhanced agricultural project outcome process'-interviewee-019.

4.9.1 Correlation Analysis of Results Based M&E Agricultural Projects Outcome Process and Household Food Security

Table 4.: Results Based M&E Agricultural Projects Outcome Process and Household Food Security

Results Based M&E Outcome Process		Household Food Security
1. Conducting a readiness assessment helps the outcome process	Pearson correlation sig. (2-tailed) n	0.145* 0.010 320
2. Conducting a readiness assessment evaluates outcome process	Pearson correlation sig. (2-tailed) n	0.163* 0.030 320
3. Evaluating advocacy promotes outcome process	Pearson correlation sig. (2-tailed) n	0.114* 0.041 320
4. Ensuring accountability promotes outcome process	Pearson correlation sig. (2-tailed) n	0.200* 0.000 320
5. Selecting key indicators help monitor outcome process	Pearson correlation sig. (2-tailed) n	0.178* 0.001 320
6. Selecting key indicators help evaluate outcome process	Pearson correlation sig. (2-tailed) n	0.132* 0.030 320
7. Types of produce storage facilities measures the outcome process	Pearson correlation sig. (2-tailed) n	0.184* 0.002 320
8. Types of produce storage facilities measures the outcome process	Pearson correlation sig. (2-tailed) n	0.136* 0.043 320
9. The extent of food produced helps determine the outcome process	Pearson correlation sig. (2-tailed) n	0.188* 0.000 320
10. The extent of food produced helps in measuring outcome process	Pearson correlation sig. (2-tailed) n	0 .142* 0.023 320
Results Based M&E Outcome Process (overall correlation)	**Pearson correlation** **Sig.(2-tailed)** **n**	**0 .201*** **0.000** **320**

4.9.2 Regression Analysis of Results Based M&E Agricultural Projects Outcome Process and Household Food Security

4.9.2.1 Model Summary of Results Based M&E Agricultural Projects Outcome Process and Household food Security

Model Summary				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	0.201[a]	0.040	0.037	0.353

a. Predictors: (Constant), Results Based M&E outcome Process

ge the world's national environment sustainably. FAO vision is for a "world free of hunger" which interlocks

4.9.2.2 ANOVA of Results Based M&E Agricultural Projects Outcome Process and Household Food Security

Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	Regression	1.665	1	1.665	13.324	0.000[b]
	Residual	39.731	318	0.125		
	Total	41.396	319			

a. Dependent Variable Household Food Security
b. Predictors: (Constant), Results Based M&E Outcome Process

4.9.2.3 Coefficients for Regression of Results Based M&E Agricultural Projects Outcome Process and Household Food Security

Coefficients					
Model	**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
	B	**Std.**	**Beta**		

			Error			
1	(Constant)	3.685	0.194		18.960	0.000
	Results Based M&E outcome Process	0.163	0.045	0.201	3.650	0.000

a. Dependent Variable: Household food Security

results-based M&E outcome process on household food security. The coefficient of the constant term (β_0 = 3.6

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