

REPUBLIC OF KENYA



GOVERNMENT OF MAKUENI COUNTY



Department of Agriculture, Irrigation, Livestock and Fisheries Development
P.O. Box 78 – 90300
MAKUENI

Agribusiness Development Officer
P .o. Box 78
Makueni
19th June 2023

The Director
Agriculture and Irrigation
P.o. Box 78
Makueni

GROSS MARGIN RANK OF MAJOR GRAINS CROPS IN MAKUENI COUNTY

Following gross margin analysis of the major cereals and pulses grown in the the County the table indicated how their ranked

CROP	GROSS MARGIN /ACRE in(Kshs)	RANK
Beans	36,561	1
Pigeon peas	30,165	2
Green grams	27,550	3
Sorghum gadam	18,250	4
Cow peas(K80)	17,970	5

A handwritten signature in blue ink, appearing to read 'Jackson M Katua'.

Jackson M Katua
Agribusiness Development Officer
Makueni County

**GROSS MARGIN ANALYSIS OF
CROPS GREEN GRAM, COWPEAS,
SORGHUM & BEANS ENTERPRISES
MAKUENI COUNTY**

2022

**DEPARTMENT OF AGRICULTURE, LIVESTOCK, FISHERIES AND
COOPERATIVE DEVELOPMENT**

Gross margin analysis for crops and livestock enterprises

Introduction

Gross margin is net sales less the cost of produce sold. In other words, it's the amount of money a farmer retains after incurring the direct costs associated with producing the crop produce sold. Sometimes it is expressed as a ratio. Gross margin ratio indicates the percentage of each shilling of revenue that the farmer retains as gross profit.

Gross Margin Ratio = (Revenue – COPS) / Revenue

In the county both annual and perennial crops are grown. An annual crop is a plant that completes its life cycle, from germination to the production of seeds, within one growing season then die off. Perennial crops are those crops which take more than one year for them to start harvesting and they continue providing a stream of returns (cash flows) for a number of years over their economical life span.

Annual crops grown the County are tomatoes, french beans, water melon, Asian vegetables, kale's, sorghum, maize, beans, green grams, cowpea and millet while major perennial crops are mangoes, citrus, pawpaw, avocado coffee and macadamia,

1.0 GROSS MARGIN ANALYSIS FOR ANNUAL CROP ENTERPRISES

An annual crop is a plant that completes its life cycle in, from germination to the production of seeds, within one growing season. Generally all herbs, vegetables and plant belonging to grass family exhibit this type of life cycle maize, sorghum, millet's, green grams, cow peas and beans are a few example of annual crops grown in the county. Some of economic vegetables grown in the county include watermelon, french beans, tomatoes, onions, baby corn, Asian vegetables, kale's, leafy vegetables among others.

Field crops

1. GROSS MARGINS ANALYSIS FOR 1 ACRE GREENGRAMS

ITEM	UNIT	QTY	UNIT PRICE	TOTAL
EXPECTED OUTPUT				
Green grams	Bag	6	7200	43,200.00
Thrust waste	Bag	3	100	300.00
GROSS OUTPUT				43,500.00
VARIABLE COSTS				
Land preparation				
Plough planting/ripping	Acre	1	2000	2,000.00
Inputs				-
Seed	kg	4	300	1,200.00
Manure	Oxcarts	4	1500	6,000.00
Planting fertilizer	bags	1	6000	6,000.00
Insecticides- Bestox	Litre	1	2500	2,500.00
Foliar feeds	Ltrs	1	450	450.00
Storage cost	Kg	0.5	800	400.00
Bags		6	150	900.00
Labour costs				-
Planting	Md	3	350	1,050.00
1st weeding	Md	2	350	700.00
Spraying	Md	2	350	700.00
Harvesting	Md	6	350	2,100.00
Threshing/winnowing	Md	3	350	1,050.00
Dusting/bagging	Md	2	350	700.00
Transport				-
Manure	Oxcarts	4	100	400.00
Produce	bags	6	50	300.00
TOTAL VC				26,450.00
GROSS MARGIN				17,050.00

GROSS MARGINS ANALYSIS FOR 1 ACRE COWPEAS

Category	Items	UNIT	QTY	UNIT PRICE (Kshs)	TOTAL (Kshs)
EXPECTED INCOME	Yields				
	Cow peas grains	Kgs	600	60	36,000.00
TOTAL GROSS INCOME					30,000.00
EXPECTED VARIABLE COST					
Input costs	Cow peas seed	Kgs	10	200	2,000
	Planting fertilizer	Bags	1.5	6600	9,900
	Foliar feeds	Mls	200	1.8	360
	Pesticides	Mls	100	2.0	200
	Fungicides	gms	200	2.20	440
	Herbicide	Mls	300	2.40	720
Labour costs	Land preparation	Man days	4	300	1,600
	Ripping	Acres	1	2000	2000
	Planting	Man days	4	300	1200
	Weeding	Man days	4	300	1200
	Harvesting – vegetables	Man days	1		
	Harvesting Grains	Man days	8	300	1,600
	Threshing/dusting	Man days	2	300	600
Post harvest costs	Gunny bags	Pcs	7	30	210
TOTAL VARIABLE COSTS					22,030
GROSS MARGIN PER ACRE					13,970.00

1.2.4 GROSS MARGIN -GADAM SORGHUM AREA: 1 ACRE

	Item	Unit	Quantity	Unit cost (Ksh)	Value (Ksh)
Expected income					
	Out puts	Kgs	900	28	25,200.00
Direct In puts	Seeds	Kgs	4	150	600
	Manure	Tons	7000	1000	7000
	Planting fertilizer	Bags	1	6600	6600
	Top dressing fertilizer	Bags	1	5950	5950
	Herbicides	Mls	300	2.40	720
	Pesticides		0	0	0
	Total inputs costs				1500
Operations	Land preparations				
	Ripping (tractor)	Acres	1	2000	2000
	Planting	Man days	4	300	1200
	Weeding	Man days	4	300	1200
	Spraying (herbicides)	Man days	2	300	1200
	Bird scaring	Man days	10	300	3000
	Harvesting	Man days	5	300	1500
	Threshing/winnowing	Man days	3	300	900
	Total labour costs				6750
	Total variable costs				8250
	Gross margins /ACRE				14,250

1.2.5 GROSS MARGINS ANALYSIS FOR 1 ACRE BEANS

ITEM	UNIT	QTY	UNIT PRICE	TOTAL
YIELD				
Beans	Bag	7	9000	63,000.00
Thrust waste	Bag	5	100	500.00
GROSS OUTPUT				63,500.00
VARIABLE COSTS				
Land preparation				
Plough planting	Acre	1	2000	2,000.00
Inputs				-
Seed	kg	18	250	4,500.00
Manure	Oxcarts	4	1000	4,000.00
Fertilizer DAP	bags	1	6000	6,000.00
Insecticides- Bestox	Litre	1	1800	1,800.00
Foliar feeds	Kgs	1	450	450.00
Storage cost	Kg	0.4	550	220.00
Bags	No	6	120	720.00
Labour costs				-
Planting	Md	3	350	1,050.00
1st weeding	Md	4	350	1,400.00
Spraying	Md	1	350	350.00
Harvesting	Md	3	350	1,050.00
Threshing/winnowing	Md	4	350	1,400.00
Dusting/bagging	Md	3	350	1,050.00
Transport				-
Manure	Oxcarts	4	100	400.00
Fertilizer DAP	Bags	1	50	50.00
Produce	bags	10	50	500.00
TOTAL VC				26,940.00
GROSS MARGIN				36,560.00

GROSS MARGINS ANALYSIS FOR 1 ACRE PIGEON PEAS.

ENTERPRISE:	PIGEON PEAS	SPACING:		
SIZE:	1	PLANT POPULATION:		
VARIETY:				
ITEM	UNIT	QTY	UNIT PRICE	TOTAL
YIELD				
Pigeon peas	Bag	8	6300	50,400.00
Fire wood	Oxcarts	6	500	3,000.00
Thrust waste	Bag	5	100	500
				0.00
GROSS OUTPUT				53,900.00
VARIABLE COSTS				
Land preparation				
Plough planting	Acre	1	2000	2,000.00
Inputs				0.00
Seed	kg	8	250	2,000.00
Manure	Oxcarts	4	1000	4,000.00
Fertilizer DAP	bags	0.5	6000	3,000.00
Insecticides-Bestox	Litre	1	1800	1,800.00
Fungicides	Kgs	1	2600	2,600.00
-Storage	Kg	0.5	550	275.00
Bags	No	8	120	960.00
Labour				0.00
Planting	Md	3	350	1,050.00
1st weeding	Md	2	350	700.00
Spraying	Md	2	350	700.00
Harvesting	Md	6	350	2,100.00
Threshing/winnowing	Md	3	350	1,050.00
Dusting/bagging	Md	2	350	700.00
Transport				0.00
Manure	Oxcarts	4	100	400.00
Produce	bags	8	50	400.00
TOTAL VC				23,735.00

GROSS MARGIN				30,165.00
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