



Dairy Intensification, Household Incomes and Child Nutritional Status: Testing the link



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INTRODUCTION

THE PROBLEM:



THE CAUSE: Limited diversity – mainly plant based

THE SOLUTION: Food based approaches (diversity)

MILK : A POTENTIAL FOOD??

Rich in nutrients thus high potential but Malawi's production is very low (4.5-10l/cow/day) which limits per capita consumption to 5l/person against FAOs 200l/person

PROJECT SCOPE



STUDY METHODOLOGY

Using household interviews, repeated (3) measures were taken from a sample of 48 dairy farmers over 6 months (before, during and after feed trials). 24 were regarded as treatment subjects (benefited from trials) & the other were a control group.

RECOMMENDATIONS : STRENGTHENING THE LINK

Positive (significant) impacts with agricultural based interventions will be achieved only when a number of factors are put into consideration and these include;

1. Targeting of high risk (malnourished) individuals at project inception (baseline assessments crucial where the goal is to solve an existing problem).
2. Adoption of a holistic approach with clear additional strategies for the attainment of goals outlined e.g. incorporation of a nutrition education and ICT components to promote positive behaviour & addressing issues of gender and power in decision making on expenditure which is often left to Men who consider child care a "woman's issue".
3. Sustainability and ability to be replicated (Consideration of cost, alternative interventions): *Could group farming enhance uptake or are there other cheaper yet nutritious alternatives for exploration (goat/soya)?*

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 Participating Milk Bulking Groups (MBGs) & Study participants

RESEARCH QUESTION

Does a project aimed at increasing dairy productivity achieve the desired outputs of increased milk consumption and sales and ultimately improved income and nutritional status as hypothesized or there is more to the link ?

RESULTS

1. MILK PRODUCTION, CONSUMPTION & SALES

Variable	Visit number	Treatment	Comparison
Milk Production	1	417.9	472.4
	2	458.1	436.4
	3	482.6	398.2
	Overall mean ± SD	453.5 ± 205.8	436.7 ± 223.3
Milk Consumption	1	41.6	42.5
	2	49.4	46.4
	3	73.0	43.0
	Overall mean ± SD	54.8 ± 79.1	43.9 ± 26.3
Milk sales	1	364.1	414.2
	2	383.8	363.4
	3	404.3	356.6
	Overall mean ± SD	384.4 ± 186.8	379.2 ± 205.0

2. INCOME AND EXPENDITURE PATTERNS

GROUP	VISIT	INCOME FROM MILK SALES		EXPENDITURE ON FOOD	
		Median (MK)	Median (USD)	Median	Median (USD)
CONTROL	1	25290	180.64	4500	32.14
	2	19500	139.28	3350	23.92
	3	20400	145.71	3550	25.36
TREATMENT	1	22440	160.28	3550	25.36
	2	24810	177.21	3450	24.64
	3	31620	225.86	4400	31.43
	Comparison	(19.34)		(21.11)	
	***% Change (v1- v3)				
	Treatment	40.91		23.94	

Milk production, consumption and sales increased among the treatment subjects following the intervention although differences were insignificant across groups (p=0.641) or visits (p=0.988).

Note that insignificant differences may also be attributed to the short observation period in the study (6 months) which was part of an academic research.

Though insignificant, **Income and expenditure on food rose for treatment subjects by 41% and 24% respectively.** No increases were registered among comparison subjects. Taken together, treatment subjects earned more (6%) during the intervention period as compared to the comparison group.

Average monthly total income for both groups was about **\$307** translating to **\$3571/year**, higher than the Malawi annual average income of **\$357** reported in the 2004/2005 IHS report. Dairy households also spend more in a year (about **\$1885**) compared to the national annual average household expenditure of **\$711** This provides evidence for improved well-being with dairy farming.

3. NUTRITIONAL STATUS AND DIETARY INTAKE

There were no significant differences in anthropometric indices which is not surprising considering the study duration **BUT** Good nutritional indices at baseline suggests that dairy households are relatively well off providing proof on benefits of dairy promotion.

Nutrient Intake Improved for subjects belonging to the treatment group

Calcium, Phosphorus, Retinol, Vitamins B1 and B2 as well as vitamin C were higher in the diet of the treatment subjects.

CONCLUSIONS

- >There is evidence of improved milk production, consumption and sales with dairy intensification.
- >Ownership of a dairy cow, alone, sets households apart from an average rural household in a community as evidenced in the findings



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