Appendices

Appendix 1: Questionnaire for Poultry Farmers

Introductory Remarks

This is an instrument for data collection on microcredit and poultry production in the Dormaa Municipality as part of a survey being conducted to fulfil an academic requirement for a Master's degree. The researcher is **Sylvester Amoako Agyemang** a student of Czech University of Life Sciences pursuing his Masters in International Development and Agricultural Economics under the Faculty of Tropical AgriScience. The main goal of the study is to determine the impact of microcredit on productivity efficiency, output and income and as such its role in poverty reduction and national self-sufficiency in poultry production. Information provided will be distinctly confidential and participation is voluntary. The interview will last for approximately 30 minutes and the respondents are kindly requested to provide honest and authentic answers.

Section 1

Questionnaire Number		
Community		
Enumerator Name		
Respondent's Name		
Date	Time	

Section 2: Demographic Characteristics of Farmer

Description	Answers
Sex	1 – Male 2 – Female
Age	
Marital Status	1 – Married 2 – Divorced 3 – Separated 4 –
	Widow/er 5 – Single
Household size	
Literacy	1 – Literate 2 – Illiterate
Number of years spent in school	
Main Income source	1- poultry farming 2- Crop/Vegetable gardening 3- Livestock rearing 4- Fishing 5- Pension 6- Remittance 7- Formal employment 8-Casual employment 9-Business 10- Other (Specify)
Other source(s) of income	1)

4)

Section 3: Poultry Production

Farm Inputs (write in						
figures)						
Total Land size						
Total land used for farmi	ng					
Land used for poultry			Hired (Rent):			
production	No		Owned:			
77-1 £ 1 1 1 £						
Value of land used for						
poultry production			Hired labour:			
Total number of			Hired labour:			
employees	NO					
			Family labour:			
Total working capital			GHC			
Total working capital			G11C		• • • • • • • • • • • • • • • • • • • •	
Total number of machine	rv		Hired:			
Total number of machine	.1 y		Owned:			
			1)			
			2			
Please provide a list of al	1 the ma	achineries	2)			
i lease provide a list of al	i the ma	termeries	1			
			4) 5)			
Farm Equipment &			Hired:	No		
Buildings Equipment &			GHC			
Dunungs			GHC			
			Owned:			
			o whou.	Modernity	Size	
Please provide a list al	1 the	1) Buildings			[]	
equipment & buildings		2) Feeders				
indicates whether	its	3) Drinkers				
modernity as well as its s	ize	4) Wheelbarrow				
•	codes	5) Shovel				
provided below)		6) Water Reserv		[]		
provided out in				[]		
		,,		[]		
Number of day-old chick	s (poult	ry) used per annum:		L J	L J	
How long (years) have ye		•				
		, <u> </u>	Chicks			
Total number of	birds		Broilers			
(currently)			Layers			

Total number of birds produced	No				
How many birds have you sold for the past one	Broilers				
year?	Layers				
How much is the price of a bird?	Broilers GHC				
r	Layers GHC				
Total number of eggs produced per month/year	No				
Creates of eggs sold for the past one year	No				
How much is the price of a 'create'?					
Total sales from birds per annum					
Total sales from eggs per annum					
Estimated income per annum					
Why do you farm poultry?					
Rank in order of importance; 1=Most important					
Reasons, Rank					
1- Source of income [] 3- Food se	curity [] 5- Others (specify)				
2- Social status [] 4- Jobs cr	eation []				
Modernity Codes	Size Codes				
1- New/Modern	1- Small				
2- Old	2- Medium				
	3- Big				
Challenges of poultry production?					
Rank in order of importance; I=Most Challenging					
1- Lack/low level of technology in production	[]				
2- High competition faced from cheap imports	[]				
3- Inadequate capital/credit	[]				
4- High energy prices	[]				
5- High cost of inputs such as feed	[]				
6- Poor quality of day-old birds/chicks	[]				
7- Absence of good government policies and le	egislative instruments [
8- Absence of available local market	[]				
9- Lack of processing and storage facilities	[]				

Please try to estimate your expenditure of production for the farming season/year using the following guide

Inputs	Source of input (Use Codes)	Quantity	Unit (GHC)	Cost	Total Cost (GHC)

Day old chicks/birds	
Poultry feed	
Labour	
Services (Specify)	
Veterinary	
Repairs	
Maintenance	
Drugs (Specify)	
De-wormer	
Vitamins	
Cocxi	
Newcastle	
Disinfectant	
Glucose	
Energy	
Fuel	
Electricity	
Other Cost	
Total	

Where	/to whon	n do y	ou sell	your b	oirds a	and egg	s?	•••••		• • • • • • • • • • • • • • • • • • • •	
How n	nuch do	you pa	ay for I	Hired la	abour	? GHC		• • • • • • • • •		p	er hour/head
	much		•			rent	for	hired	land	(if	applicable)?

Section 4: Microcredit/MF and Poultry Production

Do you take microcredit?	1- Yes 2- No
For Microcredit Clients	
	1- Formal
	a) Rural/Community Banks
	b) Savings & Loans
	c) Lending Firms
If yes, from what source?	d) Co-Operative Credit Unions
	e) MASLOC
	2- Informal
	a) Money lenders
	b) Susu Collectors
For how long?	years

Please indicate the amount taken	GHCmonthly/quarterly/semi-
in credit	annually/annually/others (specify)
in cicuit	1)
Please name MFI(s)/credit	2)
institution you acquire credit from	3)
institution you acquire credit from	4)
Why do you borrow from them?	1- Low interest rate 2- Good services 3- Good
winy do you borrow from them:	terms of repayment due to their application
	requirements 4 - No security needed 5- The
	closest MFI 6- Trust them
For what main purpose do you	1- Farm expansion 2- Working capital 3- Input
borrow?	acquisition
Please indicate the estimated rate	Farm purpose: percent
of loan used for farm and off-farm	7 W. P.
purpose(s).	Off-farm: percent
Please how much do you pay in	
interest (rate) on the credit per	percent
month	1
How long is the period of	(months)
repayment?	
What mode of borrowing do you	
often use?	1- Group borrowing 2- Individual borrowing
Do you need security before	
borrowing?	1- Yes 2- No
What do you often use as	
security?	
How long does it take to access a	
credit?	
How do you assess the services of	1- Poor 2- Fair 3- Good 4- Very Good 5-
MFIs based on your experience?	Excellent
	1- Personal savings 2- Microcredit 3-
Main source of finance	Borrowings from friends & family 4- Loans
	from Money lenders 5- Loans from
	Traditional banks 6- others
East Mars all audin	(specify)
For Non-clients Why don't you take microgradit?	1 High interest note 2 Difficulty in appointing
Why don't you take microcredit?	1- High interest rate 2- Difficulty in providing
	security 3- Lost of trust for MFIs 4- Difficulty in access 5- Distance from farm to the closest
	MFI 6-
What is your main source of	1- Personal savings 2- Loans from friends &
finance?	family 3- Loans from money lenders 4- Loans
imanec:	from Traditional Banks 5- Others
	(specify)
How much do you pay as interest	(open),
on your source of finance?	percent/annum
Have you ever accessed the	, p
services of MFIs in the past	1- Yes 2- No
before?	
001010.	

If 'yes', for how long?	
How do you compare their	
services (MFIs) to your current	
source of finance?	
For Clients and Non-clients	
Other services from MFIs apart	1- Micro-savings 2- Micro-insurance 3- Micro-
from credit	transfer 4- Others
	(specify)
Please indicate if you have ever	1- Yes
lost your savings due to the	2- No
collapse of MFIs before.	
How many times and how much?	No. of times
	Amount lost GHC

Section 5: Demand Constraint of Microcredit

Please rank the following challenges to your demand for microcredit						
Rank in order of Hierarchy $(1 = Most\ Challenging)$						
1- Lack of credit security	[]				
2- High interest on credit	[]				
3- Time Wasting (Bureaucratic process of application)	[]				
4- Lack of information on microcredit policy	[]				
5- Poor mode of repayment	[]				
6- Lack of trust and reliability of MFIs	[]				
7- Short period of credit refund	[]				

Appendix 2: Interview Guide for MFIs

Basic Information about the MFI

- I. Name of MFI
- II. Years of operation
- III. Number of clients
- 1) What are the financial services provided to your clients?
- 2) Is your organization a credit institution?
- 3) What are the forms of credit provided by your institution to its clients?
- 4) Do you have specific credit facilities for farmers?

- 5) What are the forms of borrowing?
- 6) How do farmers assess loans from you?
- 7) Do you have any limit the amount farmers can borrow from you?
- 8) Do clients need collateral before credits are given to them?
- 9) How long does it take clients to assess credit?
- 10) How long does it take to repay back?
- 11) Are farmers given some grace period before repayment?
- 12) How is interest rate charged by your institution?
- 13) What is your rate of interest per month and a year?
- 14) Are there limitations to the credit offered to the poultry farmers? (lower and upper limits)
- 15) A brief account on the relations between your institution and poultry farmers?
- 16) What are your default and repayment rates?
- 17) Closing remarks

Note: Answers were not restricted to these questions

Appendix 3: Excel Output of the Data Envelopment Analysis using GAMS

dmu	CRS	VRS	SCALE	u0	CRS_TI	VRS_TI
1	0.999986	1	1	0.000	1.35635E-05	0
2	1	1	1	0.000	0	0
3	0.999528	0.999916	0.999817	0.000	0.000472377	8.39E-05
4	0.999788	1	0.999788	-0.532	0.000212425	0
5	0.56187	0.62071	0.905206	0.212	0.438129589	0.37929
6	0.771636	0.780401	0.988769	0.041	0.22836381	0.219599
7	0.052382	0.223542	0.234328	-0.224	0.947617862	0.776458
8	0.737233	0.780097	0.945053	-0.157	0.262767118	0.219903
9	0.78898	0.797641	0.989141	0.013	0.211020405	0.202359
10	0.239166	0.590289	0.405168	-0.489	0.760833988	0.409711
11	0.500947	0.516502	0.969883	0.010	0.499053466	0.483498
12	0.957747	1	0.957747	0.028	0.042252981	0
13	0.434474	1	0.434474	-1.000	0.565525627	0
14	0.648411	0.659544	0.98312	0.012	0.351588983	0.340456
15	1	1	1	4.037	0	0
16	0.86803	0.872169	0.995255	0.009	0.131970355	0.127831
17	0.845989	0.881681	0.959519	-0.073	0.154010608	0.118319
18	0.540686	0.550362	0.982419	0.035	0.459314265	0.449638
19	0.805666	0.854727	0.942599	-0.155	0.194334491	0.145273

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	66	0.999816	0.999932	0.999891	0.000	0.000183827	6.8E-05

67	0.999725	0.999786	0.99994	0.000	0.000274553	0.000214
68	0.99978	0.999944	0.99992	0.000	0.0002201	5.65E-05
69	0.999539	0.999689	0.99985	0.000	0.000461397	0.000311
70	0.999911	1	0.999911	-0.416	8.85402E-05	0
71	0.999623	1	0.999918	0.000	0.000377488	0
72	0.999959	0.999976	0.999984	-0.587	4.05895E-05	2.43E-05
73	0.99989	0.999901	0.999989	0.000	0.000110008	9.95E-05
74	1	1	1	0.686	0	0
75	0.999781	0.99997	0.999948	0.000	0.00021865	2.99E-05
76	0.99956	0.999932	0.999974	0.000	0.000440359	6.8E-05
77	0.99985	0.999967	0.999891	0.000	0.0001496	3.29E-05
78	0.999141	1	0.999141	0.000	0.000858821	0
79	0.845989	0.881681	0.959519	-0.073	0.154010608	0.118319
80	0.805666	0.854727	0.942599	-0.155	0.194334491	0.145273
81	0.516779	0.583095	0.886269	-0.210	0.483220752	0.416905
82	0.156491	0.288307	0.542792	-0.288	0.843509109	0.711693
83	0.452003	0.4701	0.961504	-0.099	0.547996884	0.5299
84	0.766369	0.76646	0.999881	-0.036	0.233631389	0.23354
85	0.722245	0.752591	0.959678	0.042	0.277755205	0.247409
86	0.71811	0.875273	0.820442	-0.264	0.281889909	0.124727
87	0.076776	0.428413	0.179211	-0.416	0.923223632	0.571587
88	0.509587	0.514685	0.990095	0.009	0.490413025	0.485315
89	0.618137	0.694566	0.889962	0.122	0.381863035	0.305434
90	0.362267	0.594077	0.609799	-0.360	0.637732575	0.405923
91	0.724012	0.828364	0.874026	-0.305	0.275988352	0.171636
92	0.548067	0.753432	0.727428	-0.361	0.451932599	0.246568
93	0.243731	0.30116	0.809306	-0.104	0.7562695	0.69884
94	0.112678	0.268095	0.42029	-0.234	0.887322482	0.731905
95	0.765066	0.80443	0.951066	0.152	0.234934098	0.19557
96	0.519839	0.616497	0.843214	-0.273	0.480161058	0.383503
97	0.468666	0.496915	0.943152	-0.113	0.531333589	0.503085
98	0.952206	0.974963	0.976659	-0.062	0.04779398	0.025037
99	0.774497	0.797749	0.970853	0.041	0.225502573	0.202251
100	0.392128	0.411812	0.9522	-0.074	0.607872207	0.588188