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The U.S. Government's Global Hunger & Food Security Initiative

Feed the Future Africa Great Lakes Region Coffee Support Program (AGLC) Policy Roundtable

Topic: Rewarding Farmer producers of high quality coffee through higher prices

May 2016• Kigali, Rwanda

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Introduction to the Challenge

AGLC Background

- AGLC is a 3-year USAID-funded initiative that addresses 2 major challenges in the coffee sector in Rwanda (and the Africa Great Lakes region)
  - Reduce antestia bug/potato taste defect (PTD)
  - Raise coffee productivity
- Partners
  - Rwanda: Inst. of Policy Analysis and Research (IPAR) and Univ. of Rwanda (UR)
  - USA: Michigan State University (MSU) and Global Knowledge Initiative (GKI)
  - Numerous public and private sector partners
- Components: • applied research • policy engagement • capacity building

Applied research component

- AGLC draws upon a broad mix of quantitative and qualitative methodologies, including:
  - Coffee farmer/household surveys (and CWS survey)
  - Experimental field/plot level data collection
  - Key Informant Interviews
  - Focus Group Discussions
- Comprehensive coffee sector data base
  - Goal to integrate information from these four data collection activities
  - Provide empirical basis for policy engagement and farmer capacity building

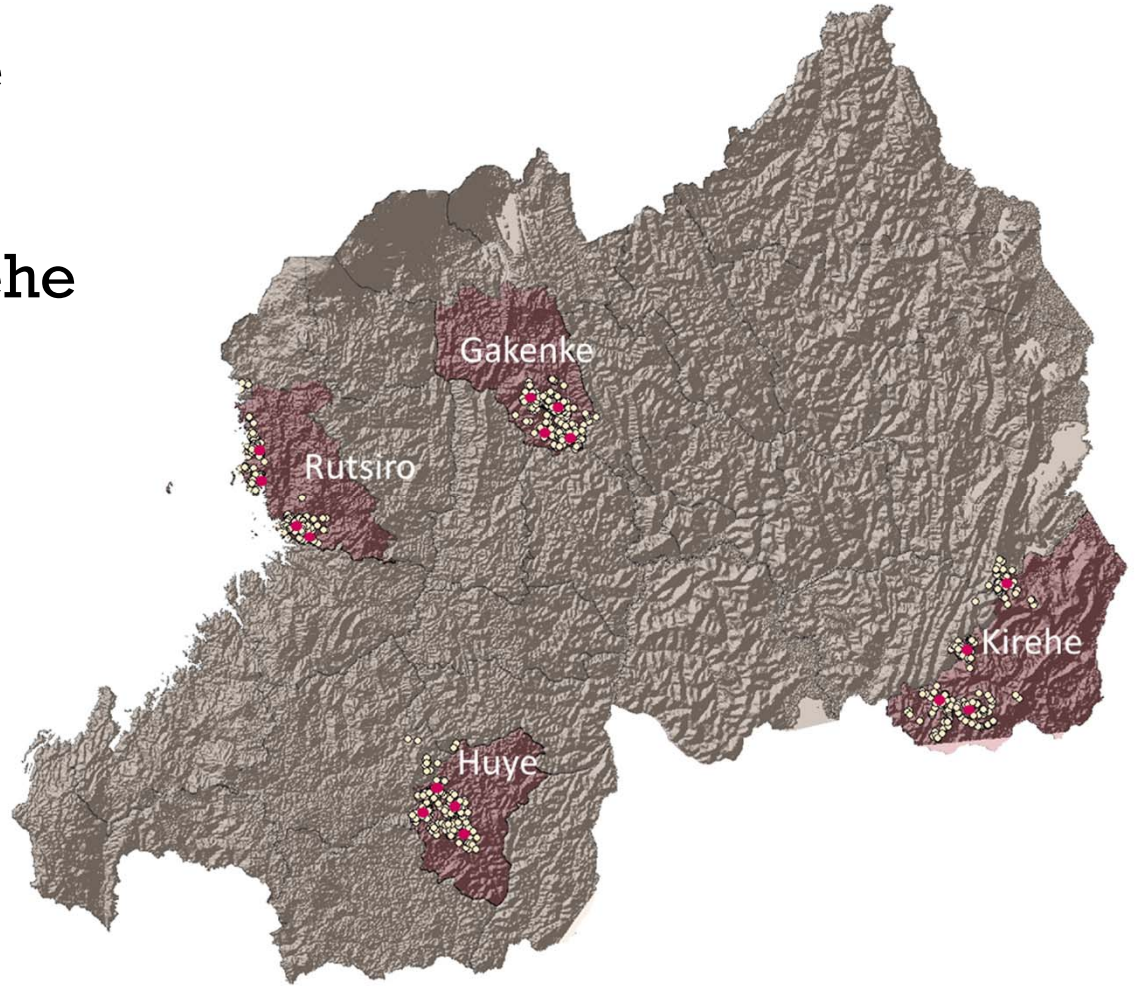
Guiding question:

How might we ensure that producers are rewarded for producing high quality coffee through higher prices?

Methodology

Baseline survey of coffee growers

- Geographically dispersed sample across four coffee growing districts: Rutsiro, Huye, Kirehe and Gakanke.
- 4 CWSs in each District (2 cooperatives, 2 private)
- 64 HHs randomly selected from listings of each of the 16 CWSs
  - (64 x 16 = 1,024 HHs)



Baseline survey, cont.

- Focus on fully-washed coffee. Sample does not include HHs not on CWS listings
  - Advantage: In depth focus on core of Rwanda's coffee sector strategy (FW)
  - Disadvantage: Ordinary coffee (parchment) producers underrepresented
- Survey instrument includes diversity of topics:

  • coffee growing practices • antestia control practices • cost of production • coffee field size • number of trees • slope • location (GPS) • cherry production & cherry sales • landholding • equipment & assets • household income • barriers to investment in coffee • basic household demographics
- Programmed (in *CSPro*) on 7" tablets for data collection
- 10 enumerators (working in 2 teams of 5)

Qualitative Data

- Key informant interviews
  - Key coffee sector leaders including public sector representatives, farmer organizations, and private sector stakeholders.
  - Focused on challenges identified by stakeholders and provided insights into critical areas of convergence and disagreement among various specialty coffee sector stakeholder groups.
- Focus group discussions
  - Held with major coffee stakeholder groups including coffee farmers, washing station managers, coffee exporters, others.
  - Groups of 5-7 members of each stakeholder group

Fieldwork

AGLC Baseline survey interview with farmer in Gakenke

Focus group discussion with farmers at Buf Café washing station

Overview parameters of sample

- Head of HH 81.5% Male; 18.5% Female
- Head of HH completed primary school: 38.1%
- Mean age of head of HH: 51 years
- Median number coffee trees on farm: 400
- Head of HH member of cooperative: 55.4%
- Median cherry produced in 2015: 600 Kg
- Mean cherry price received in 2015: 198 RWF
- Median HH cash income: 340,000 RWF
- Share of total cash income from coffee: 44%
- Percent of coffee farmers reporting antestia: 55%

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Research Findings

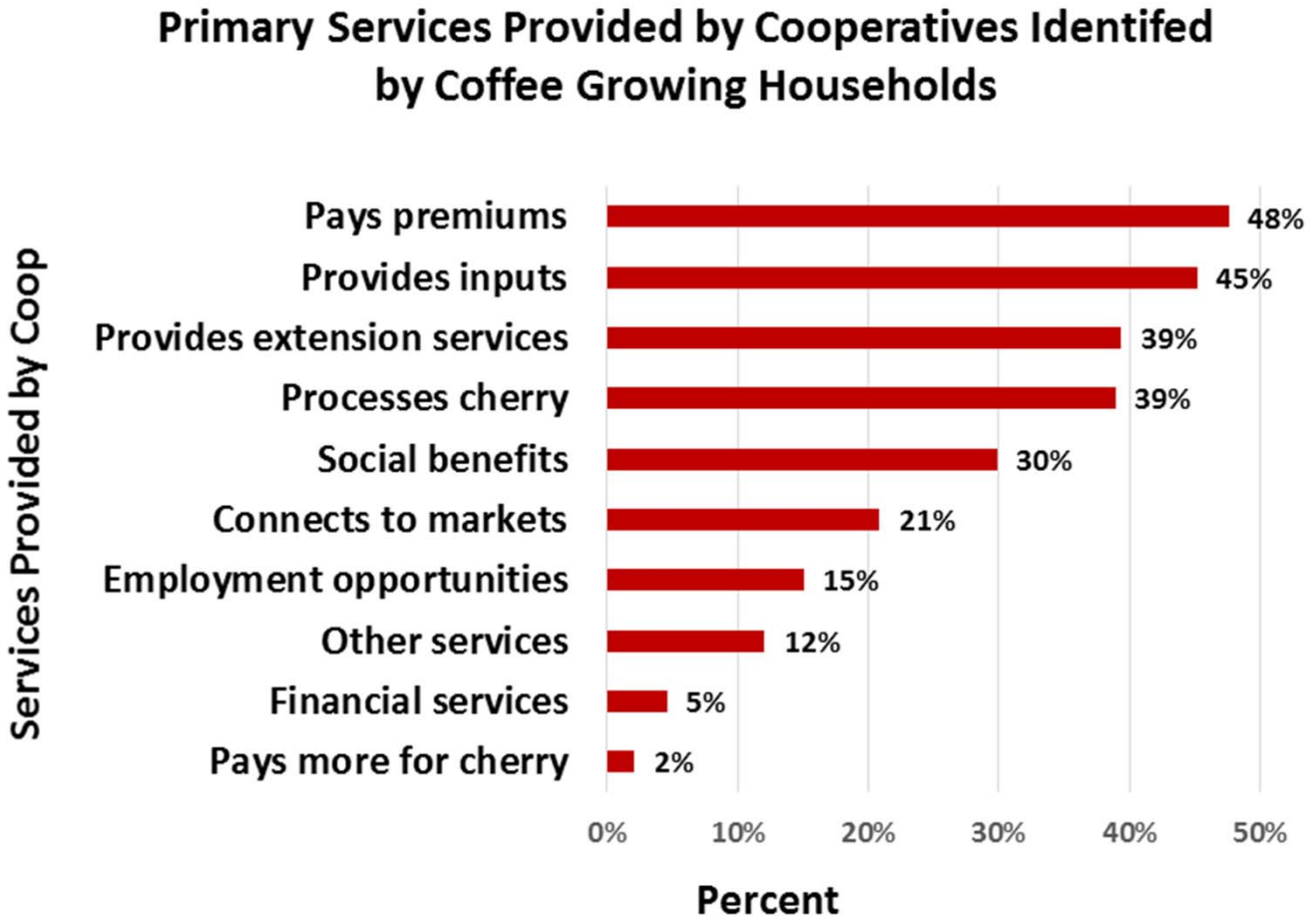
Sub-questions addressed in findings

- What services provided by cooperatives?
- Who receives the premium ?
- Who does provide the premium ?
- What are the key determinants of access to premium?

Premises to challenge

1. Long-term success of the sector depends on production of high quality coffee
2. Premium are important incentives for high quality coffee production
3. Some farmers receive premium and others not while they have contributed to the business success . This brings the notion of equity in the structure of distribution of premium
4. Cooperative membership seems to be a condition to receive the premium while not all coffee farmers are cooperative members

Premiums are seen as an important service provided by the cooperatives



Premiums are more often paid by coops than by private CWSs

Percent of Households Receiving Premiums

Premiums received?	Percent
Yes	29%
No	71%
Total	100%
N	1,024

Source of Premiums Paid

Coop/Private CWS	Percent
Coop CWS	67%
Private CWS	33%
Total	100%
N	302

Farmers at high elevations are more likely to receive Premiums

Percent of Households Receiving Premiums by Elevation

	Received premium		
Elevation (m)	No	Yes	Total
<= 1500	13.1%	4.0%	10.6%
1501 - 1650	25.6%	19.8%	24.0%
1651 - 1750	20.6%	30.0%	23.1%
1751 - 1850	21.5%	31.1%	24.1%
1851+	19.2%	15.0%	18.1%
Total	100.0%	100.0%	100.0%
N	743	273	1016

X^2 sig. =0.000

Farmers with 200 or fewer coffee trees are less likely to receive Premiums

Premium Received by Number of Trees on Farm					
	Number of Productive Trees on Farm				
	<= 200	201 - 400	401 - 800	801+	Total
No	80.1%	72.4%	68.4%	72.3%	73.1%
Yes	19.9%	27.6%	31.6%	27.7%	26.9%
Total	100.0%	100.0%	100.0%	100.0%	100.0%
N	236	286	256	238	1016
X^2 sig. =0.030					

Cooperative membership and high elevation provide greater access to premiums, all else equal

Logistic Regression: Premium Received by Selected Household and Ecological Determinants

HH and Ecol Determinants	B	S.E.	Wald	Sig.	Exp(B)
Age of head of HH	-0.003	0.006	0.317	0.573	0.997
Educ of head of HH	-0.039	0.071	0.301	0.583	0.962
Coop member	**1.438**	**0.173**	**68.837**	**0.000**	**4.211**
Active adults in HH	-0.011	0.048	0.057	0.812	0.989
Gender of Head of HH	0.282	0.195	2.088	0.148	1.325
Cherry sales 2015	0.000	0.000	2.000	0.157	1.000
Elevation	**0.002**	**0.000**	**10.661**	**0.001**	**1.002**
Constant	-4.741	0.934	25.763	0.000	0.009

ANOVA: Estimated Cost of Production, Gross Margins and Productivity by Premium Received, Adjusted for Gender and Covariates*

Cost of Production, Gross Margins and Productivity Measure	Premium Received	N	Predicted Mean: Unadjusted	Predicted Mean: Adjusted for Factors (Gender of HHH)	Predicted Mean: Adjusted for Factors and Covariates*	Sig.
Cost of production	No	721	176	177	176	0.206
(RWF) per KG of cherry	Yes	269	162	161	164	
Gross margin	No	721	115	114	117	0.103
(RWF) per tree	Yes	269	145	147	140	
Gross margin	No	721	1,086	1,080	1,097	0.728
(RWF) per day of labor	Yes	269	1,135	1,152	1,105	
Productivity (KG cherry)	No	721	1.64	1.63	1.64	0.000
per tree	Yes	269	2.09	2.10	2.07	
Productivity (KG cherry)	No	721	10.9	10.9	11.0	0.885
per day of labor	Yes	269	10.8	10.9	10.6	

Covariates: Nbr of trees, Total HH income, Total land owned, Age of HHH, Educ. of HHH and Active adults in HH

Summary and discussion points

Recap of challenge and findings

- Provision of more premium may increase quality coffee production
- Premium increases productivity per coffee tree
- Being in a cooperative is an enabler to receive premium all else equal.
- Farmers in hilly locations above 1601 m asl. have greater likelihood to receive premium because of quality coffee.
- Premium is an incentive to supply coffee to CWS.

Discussion questions

- What can we learn from this data?
- How should we articulate and understand the challenge? What is missing from this picture?
- What sorts of components would be needed in a solution that effectively and equitably provides producers with premiums for quality?
- What policy levers might effectively meet these specified components?

Thank You!

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