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



Initial Observations on the Effects of Geographic Zoning in Rwanda's Coffee Sector

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

March 2017 • Kigali, Rwanda



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Roundtable Introduction



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 questions:

- How might we understand the effects of zoning in year 1?
- How might we apply learnings from year 1 of zoning to actions in subsequent years?

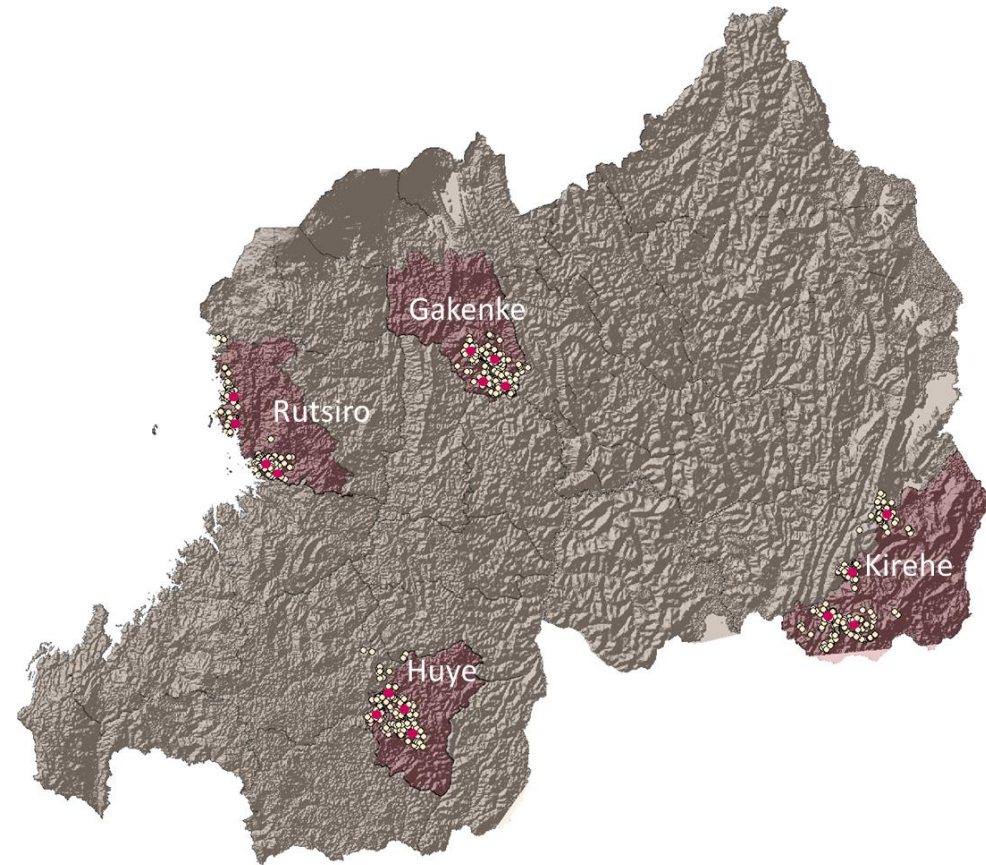


Methodology



Baseline/Midline Survey of coffee growers

- Geographically dispersed sample across four coffee growing districts: Rutsiro, Huye, Kirehe and Gakenke.
- 4 CWSs in each District (2 cooperatives, 2 private)
- 64/32 HHs randomly selected from listings of each of the 16 CWSs
 - Baseline (64 x 16 = 1,024 HHs)
 - Midline (32 x 16 = 512 HHs)



Baseline & midline 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 (Fully-washed coffee)
 - Disadvantage: Ordinary coffee (parchment) producers underrepresented
- Survey instrument includes diversity of topics:
 - coffee growing practices • antestia control practices • cost of production • coffee field characteristics • cherry production & cherry sales • basic household demographics • effects of zoning policy • coffee risk relative to other crops • food security • climate change
- Programmed (in *CSPPro*) 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





Research Findings





Recap of what we learned from 2015 findings

1. Low and stagnating coffee production coming up short of targets for growth
2. Producer prices 25-30% below other coffee producing countries in region
3. Lower productivity (Kg/tree) than others in the region
4. Cost of production is high relative to returns so that a large proportion of growers suffer net losses in coffee
5. Incentives and capacity differs among larger and smaller producers
6. Importance of prices and price stability for farmer investment in higher production and productivity
7. Low farmer investment has contributed to weak/old trees yielding low quality coffee and has invited antestia/PTD

Geographic zoning: What is the zoning policy?

- Designation of geographic zones in which CWS buy coffee
- CWS can buy from a zone; farmers within that zone must sell to that CWS
- Farmers cannot sell outside zone; CWS cannot buy outside zone
- Traders cannot move coffee across zones
- Zones designed and implemented at district level
- Local implementation allows for modification to local circumstances

Sources: NAEB presentation, 2016; AGLC roundtable, May 2016; AGLC Y1 closing workshop, August 2016



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What are the goals of zoning?

1. Improve **traceability** of coffee from farm to market
2. Eliminate the middleman (trader)
3. **Strengthen relationships** between farmers and CWS
(improve input delivery/ extension to farmers)
4. **Increase supply of coffee** to struggling CWS (improve predictability of coffee supply)
5. Increase **farmer incomes**
6. Improve **coffee quality**

Sources: NAEB presentation, 2016; AGLC roundtable, May 2016; AGLC Y1 closing workshop, August 2016



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What are possible risks of zoning?

1. Reduce farmer incomes through lack of competition for cherry (monopsony buying)
2. Weaken cooperatives by splitting their members
3. CWS capacity may not match coffee supply
4. Constraining farmer decision-making

Sources: AGLC roundtable, May 2016; AGLC Y1 closing workshop, August 2016



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Evidence from midline survey

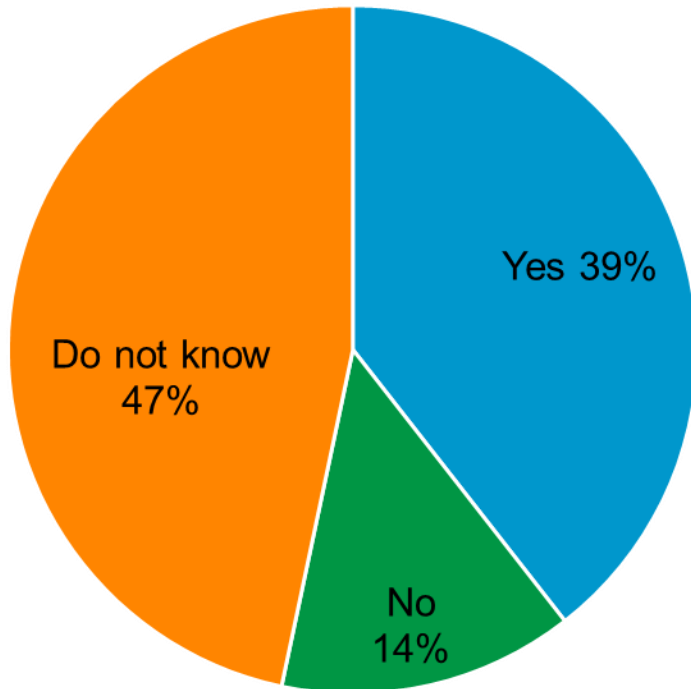
- Data focuses on farmer perceptions
- Some data on price and sale channel

Data centers on:

1. Perceptions of benefits/drawbacks of zoning
2. Cherry price and perception of price
3. Changes in sale channel

Who does zoning affect?

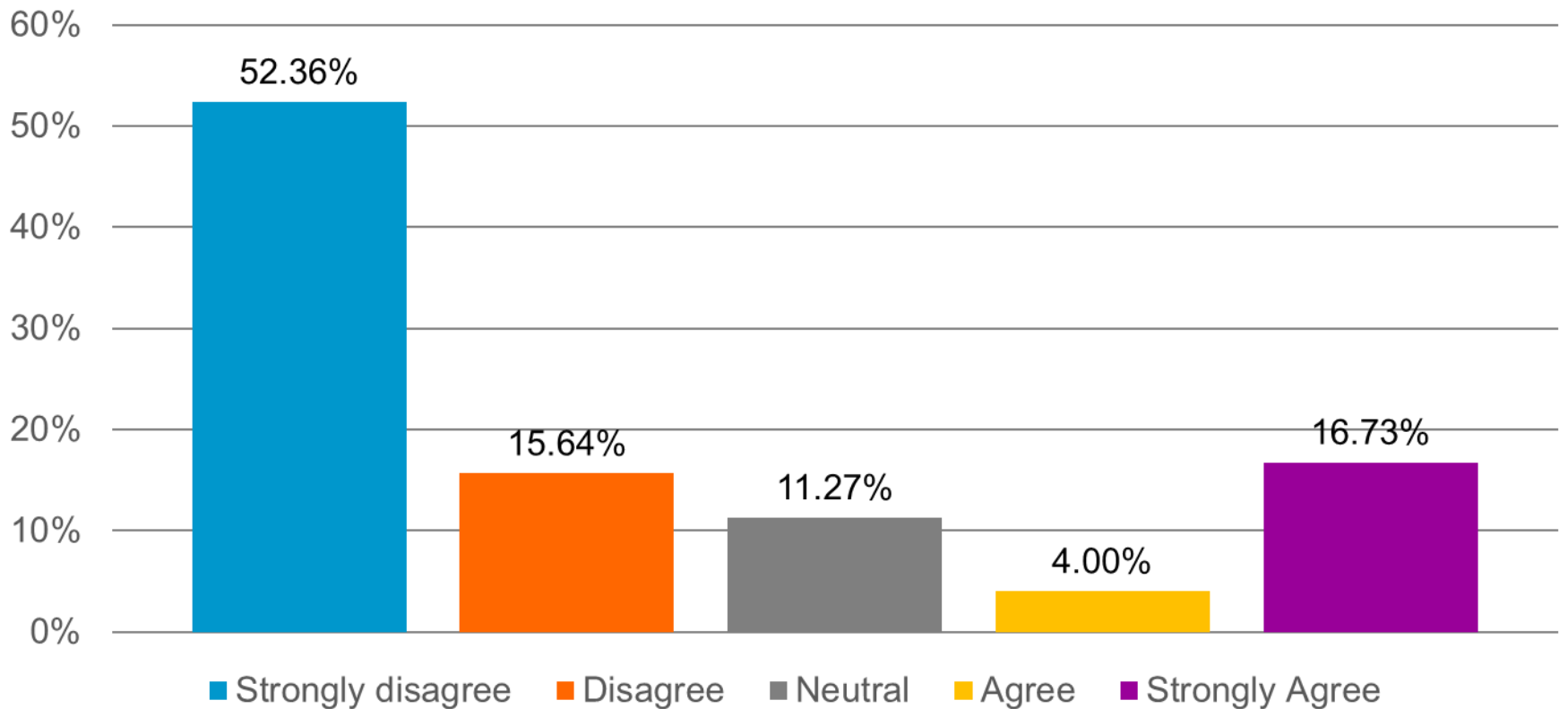
Zoning applies



	Yes	No	Don't Know
Huye	29.69%	15.63%	54.69%
Rutsiro	41.41%	24.22%	34.38%
Kirehe	5.47%	2.34%	92.19%
Gakenke	81.25%	13.28%	5.47%
% of total	39.45%	13.87%	46.68%
Total (#):	202	71	239

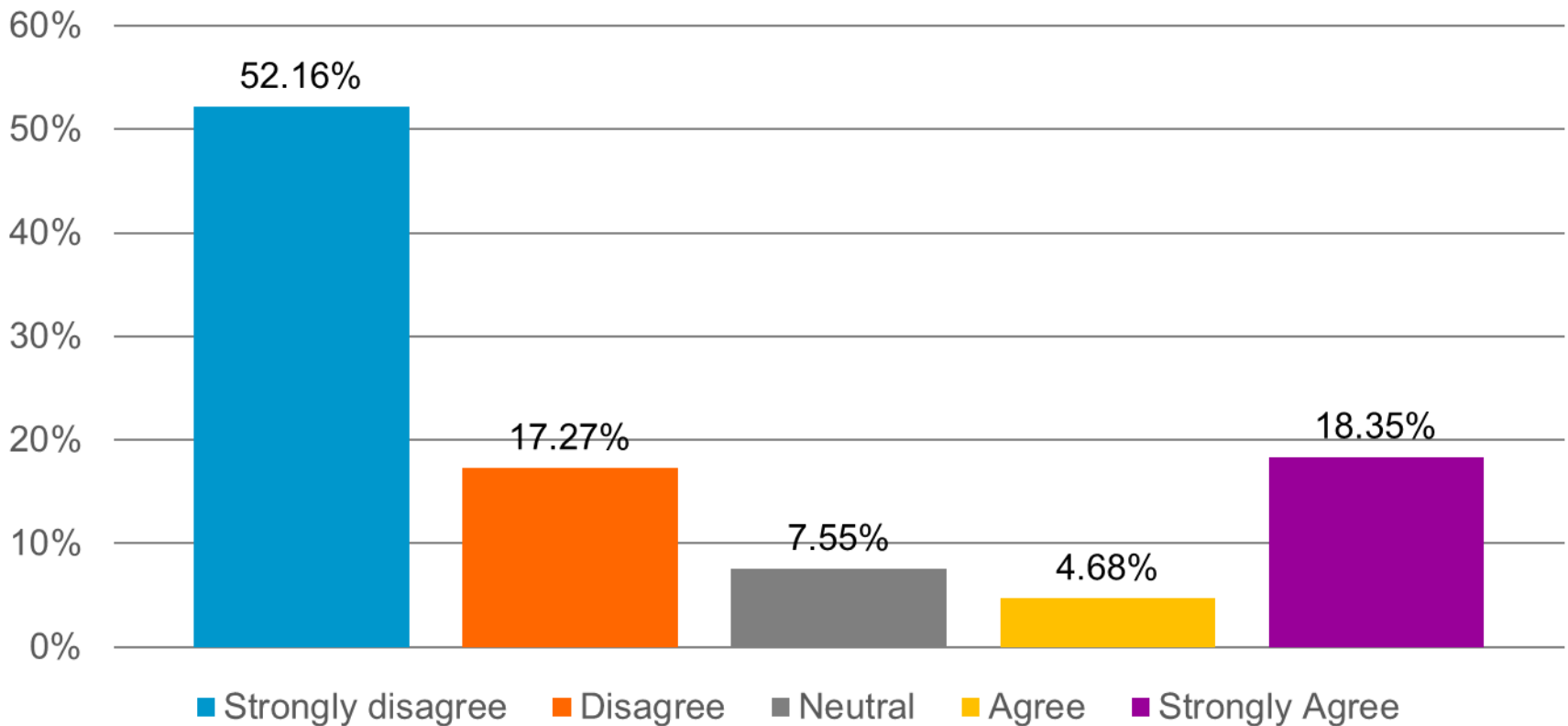
Perceived benefits/drawbacks: Most farmers do not see zoning as beneficial

Zoning is beneficial to farmers like me



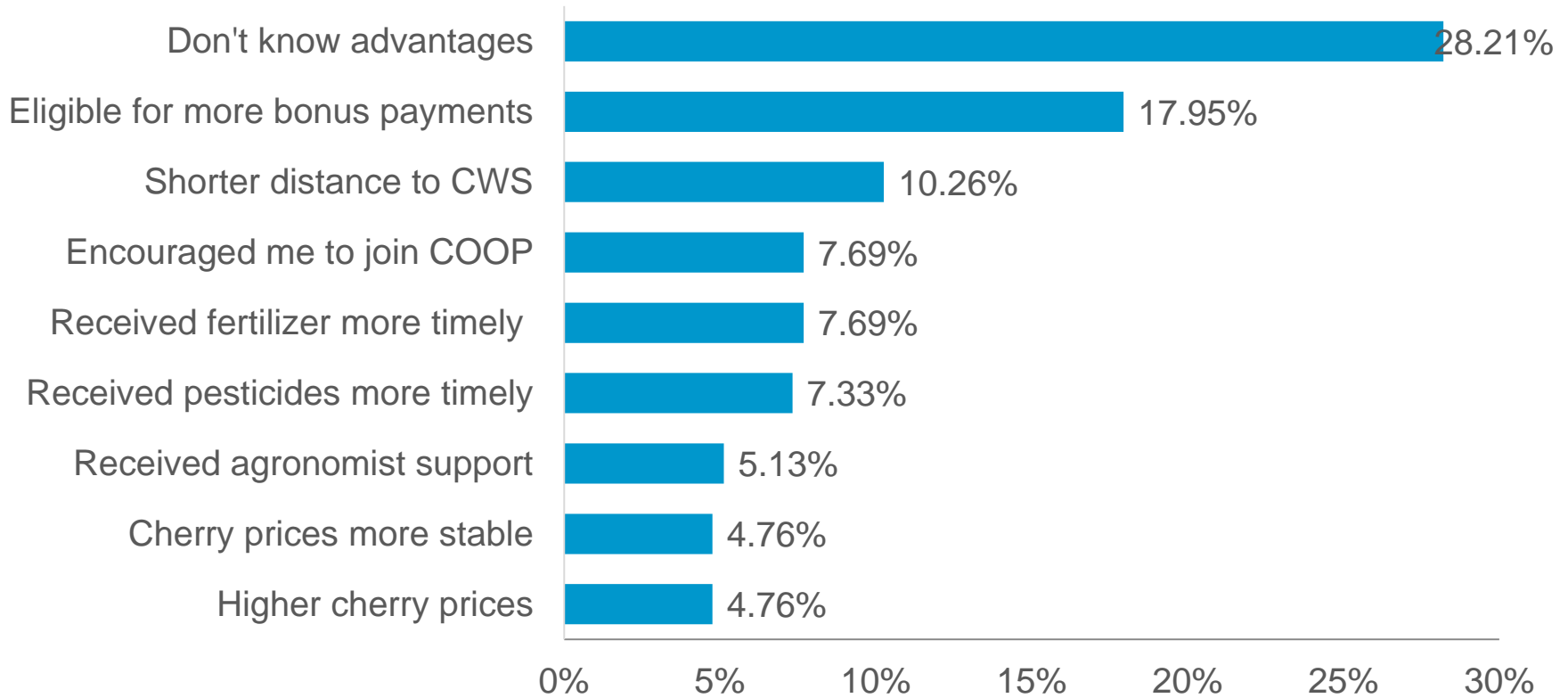
Perceived benefits/drawbacks: Does not incentivize coffee production

Zoning is an incentive to grow more coffee



Perceived advantages of zoning

Advantages of zoning



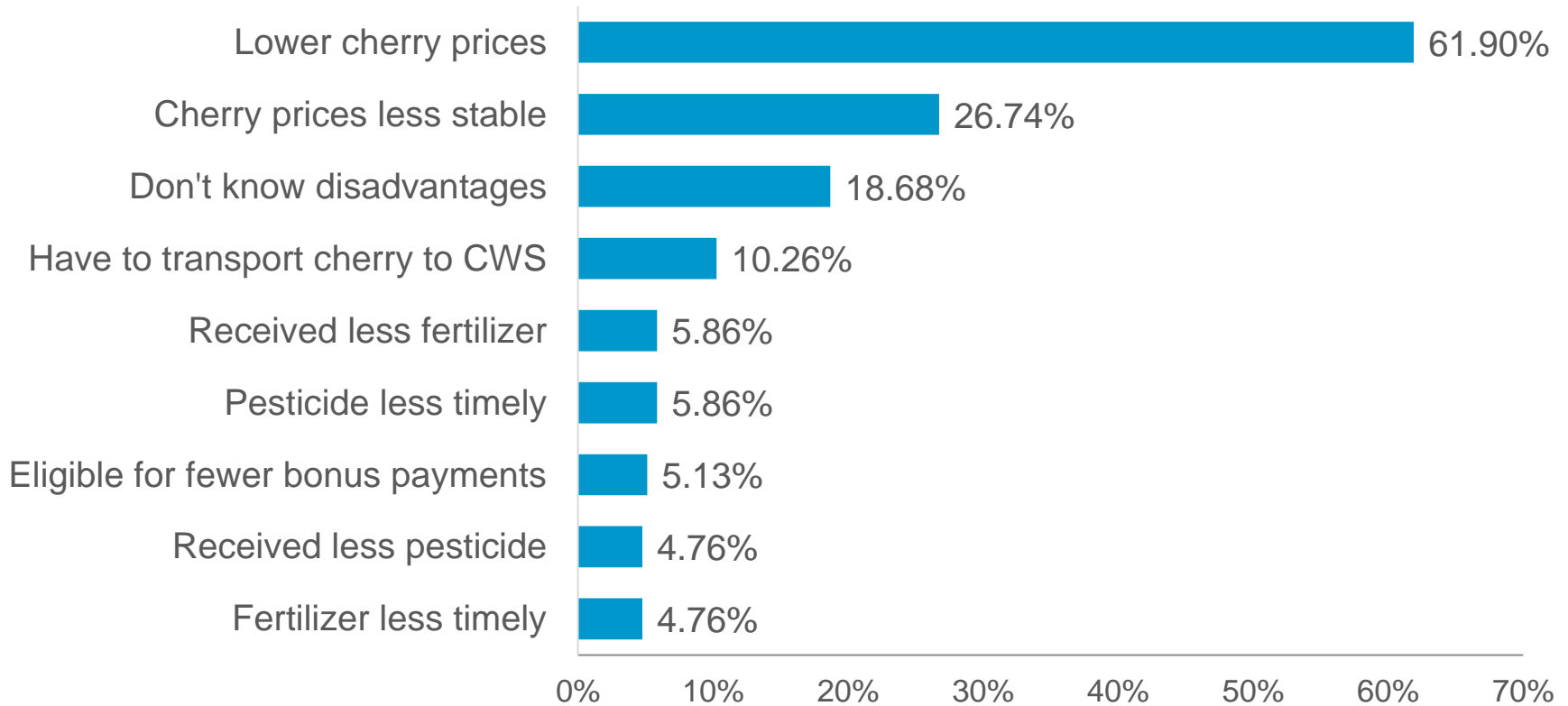
Perceived advantages of zoning: Premiums

Status	Received premium 2015	Received premium 2016	% point change
Zoning	35.50 %	43.07%	+7.57 % points
No zoning	31.43%	33.80%	+2.37
Midline sample	28.21%	35.35%	+7.14

Chi² analysis: No significant difference between the zoning and non-zoning groups in 2016.

Perceived disadvantages of zoning

Disadvantages of zoning

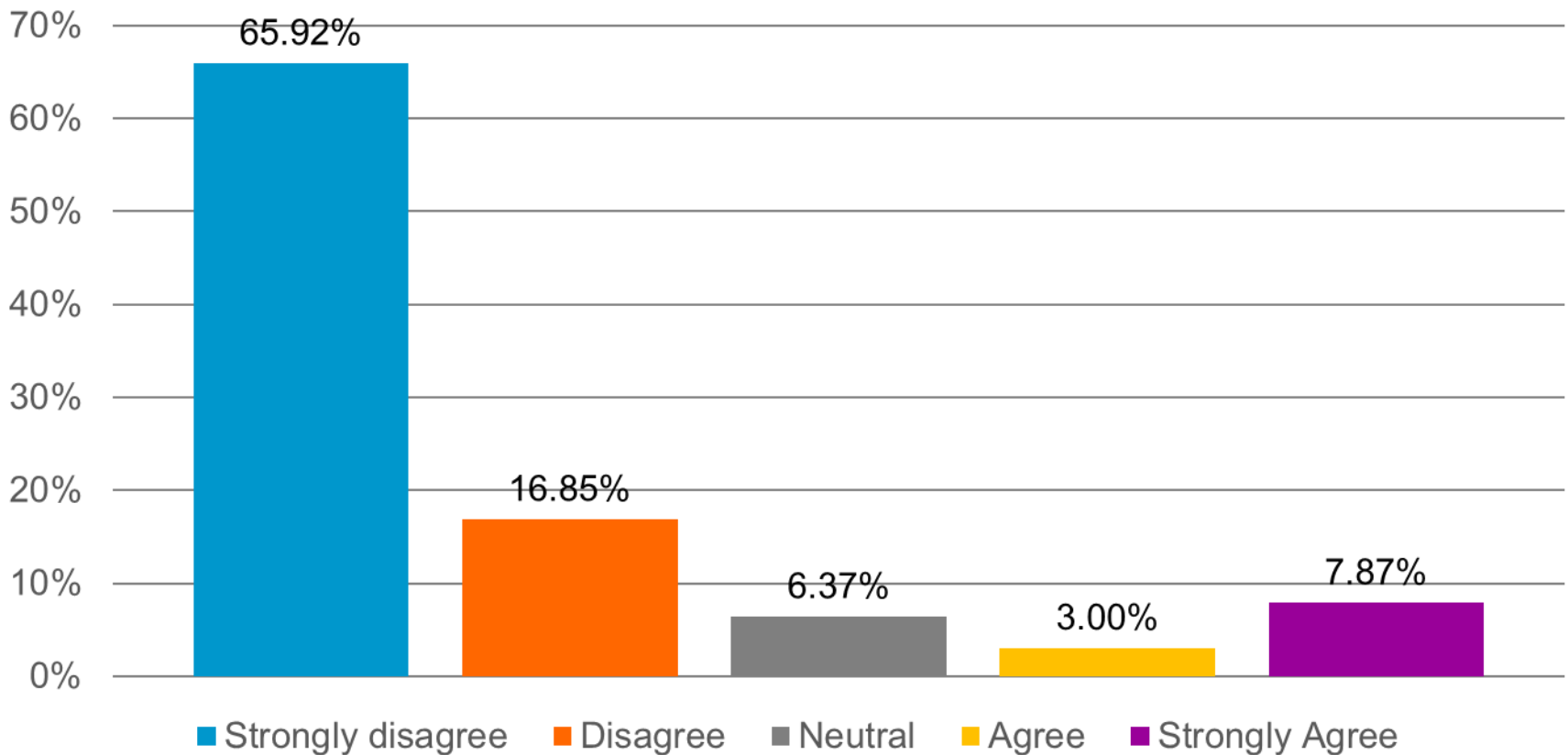


Summary: Perception of benefits/drawbacks of zoning

1. Farmers do not see zoning as beneficial
2. Does not incentivize planting more coffee
3. Some farmers see ability to access bonuses as benefit
4. However disadvantages of price instability and low prices more often noted

Perceived price effects: Does not increase prices

Zoning results in higher cherry price



Actual price effects: No evidence of impact

	Average price per Kg 2015	Average price per Kg 2016
No Zoning	202.5 Rwf (71 HH)	170.14 Rwf (71 HH)
Zoning	206.27 Rwf (202 HH)	173.61 Rwf (202 HH)
Entire midline sample	197.78 Rwf (503 HH)	171.52 Rwf (502 HH)

Regression analysis:
When regressing prices received on whether they were under zoning, controlling for demographics and production variables, there was no effect

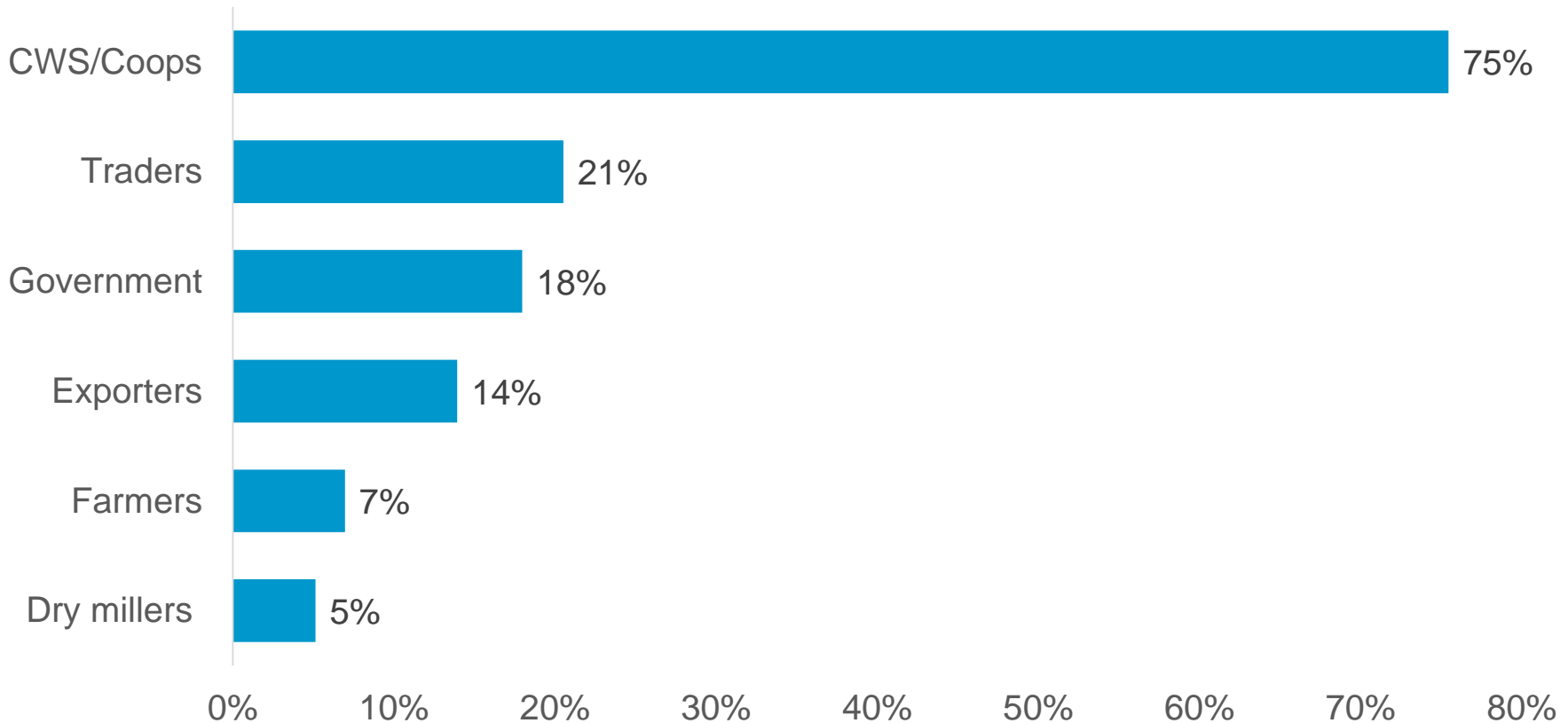


Summary: Cherry price and perception of price

1. Farmers perceive zoning as not increasing cherry prices, and indeed reducing them
2. Actual relationship between cherry price and zoning unclear from data on price per KG under/not under zoning

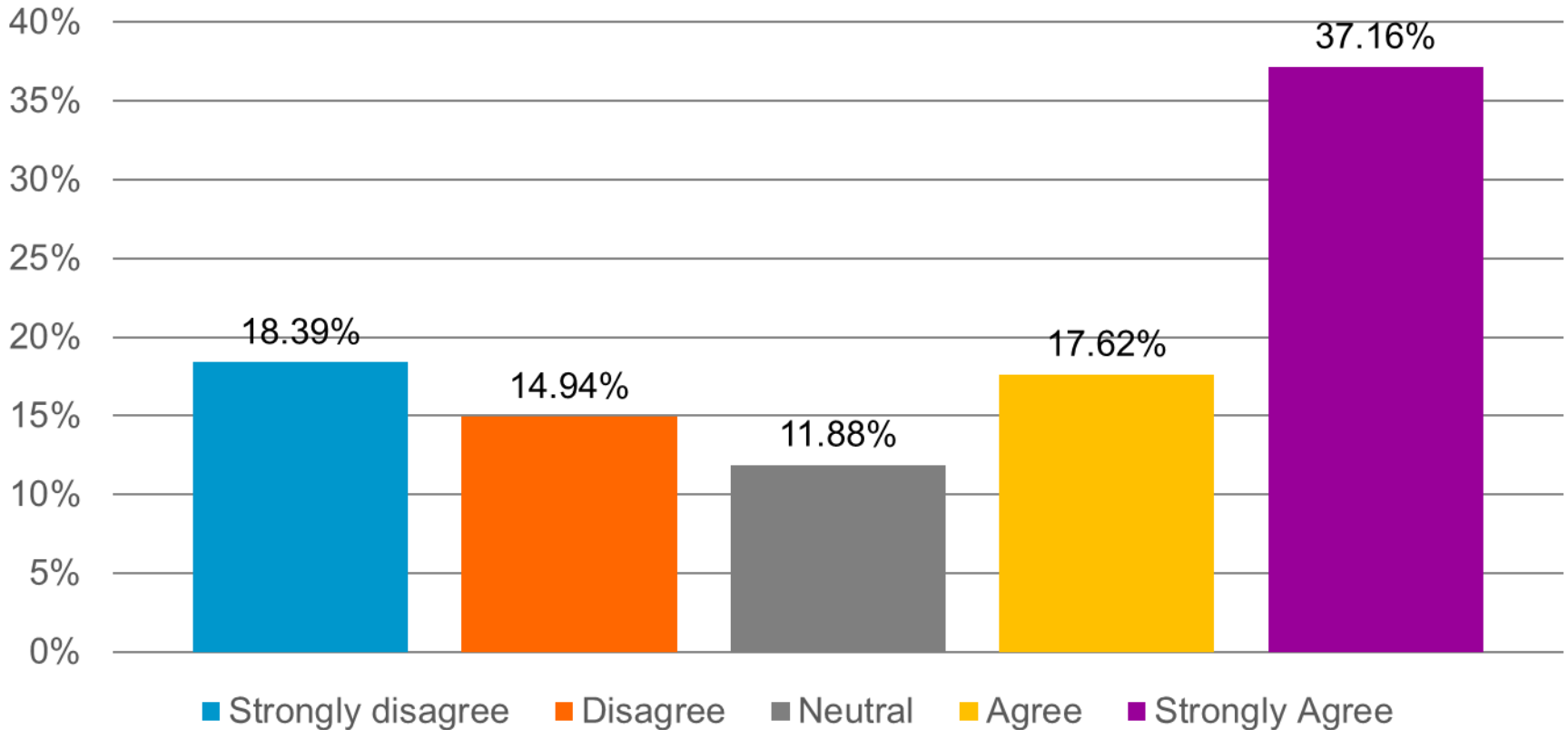
Perceived beneficiaries: Who primarily benefits from zoning?

Primary beneficiary of zoning



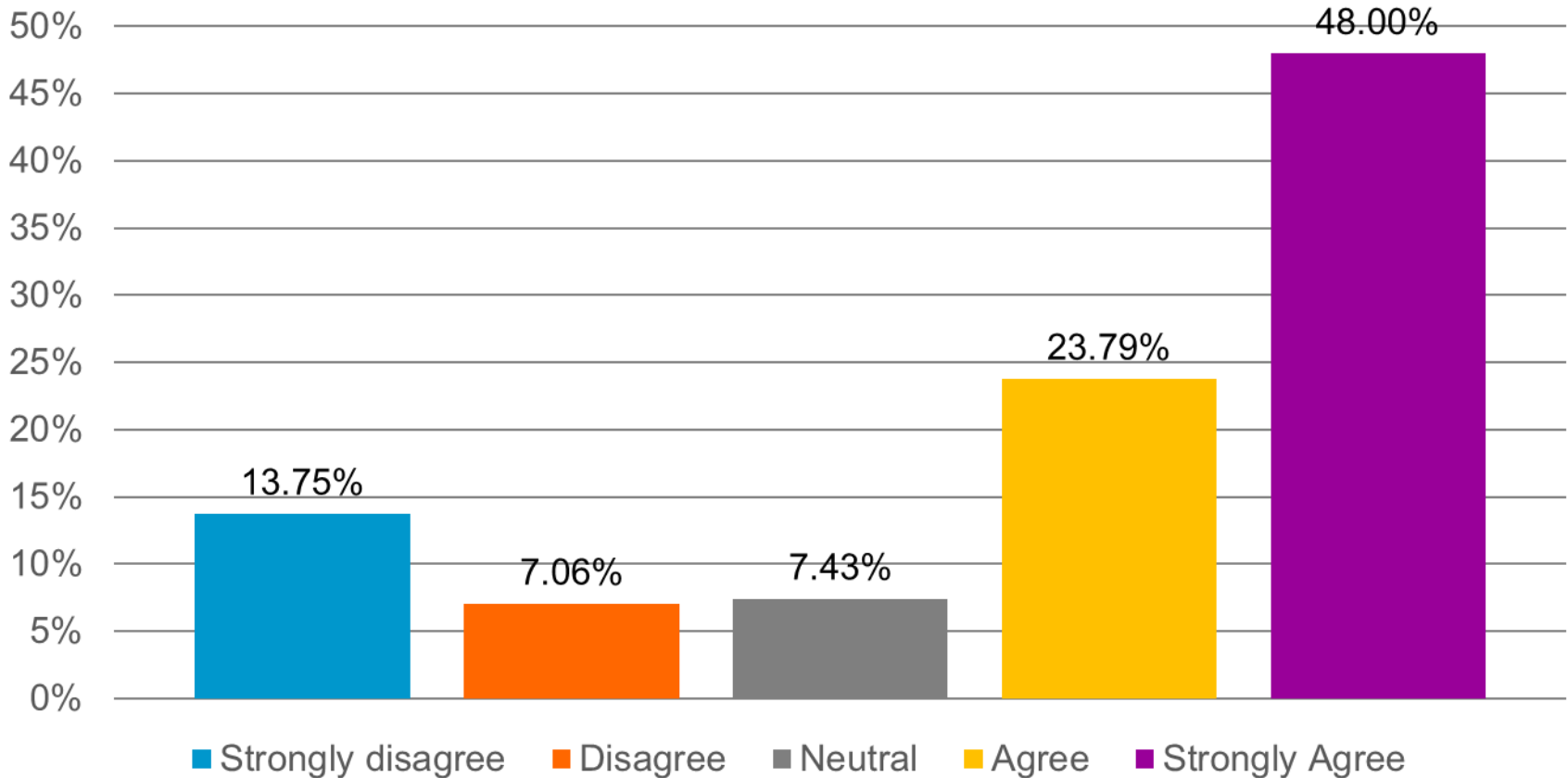
Perceived impact on traders: Reduced number

Zoning reduced number of traders



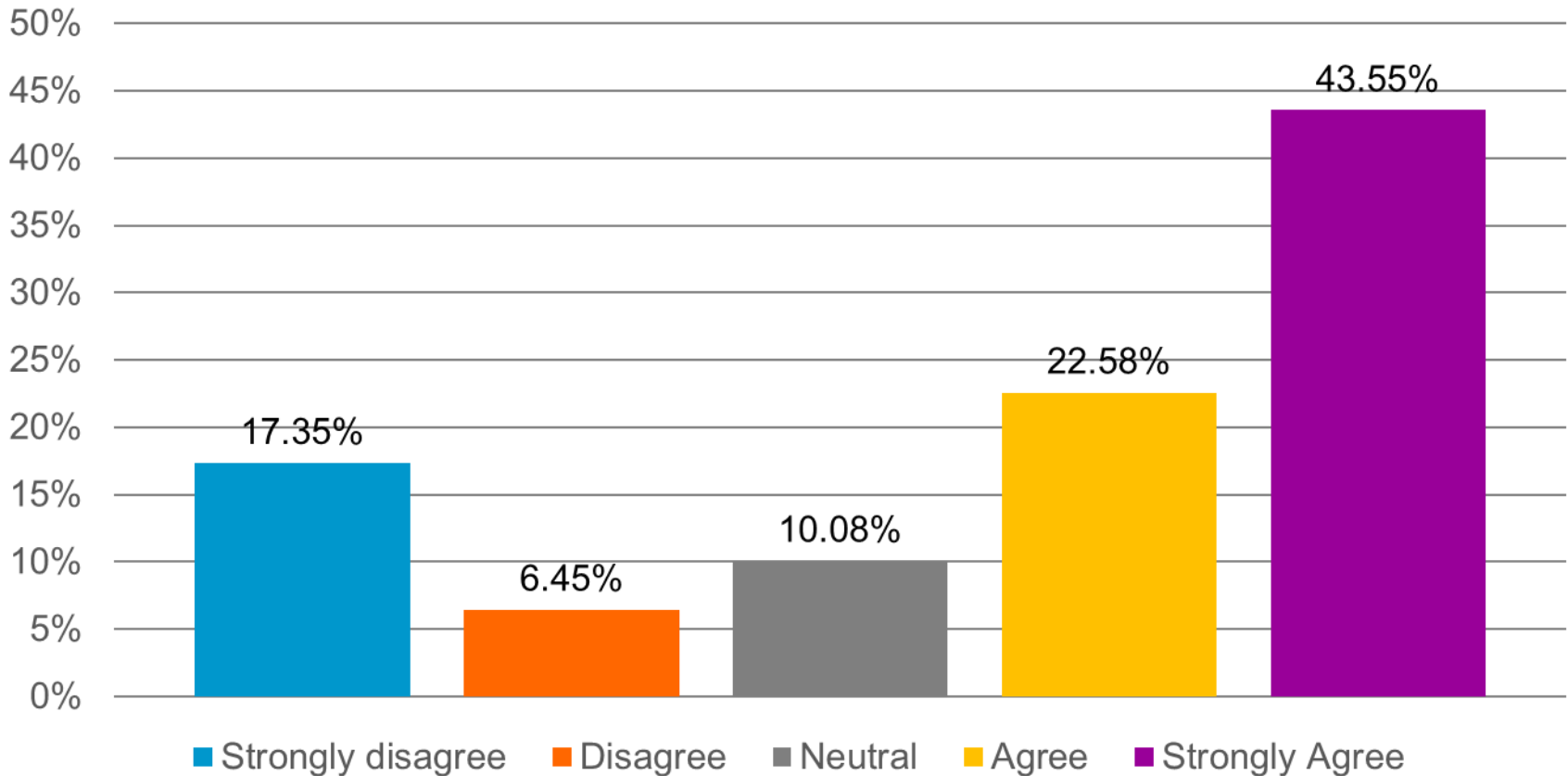
Perceived impact on CWS: Increased cherry

Zoning increased sales of cherry to CWS



Perceived impact on Cooperatives: Beneficial

Zoning is beneficial to cooperatives



Changes in sale channel: Movement to coops

	Main buyer 2015	Main buyer 2016	% change
CWS (Coop)	60.48 %	72.91%	+12.43 percentage points
CWS (Private)	37.55 %	26.29	-11.26 points
Independent trader	1.97%	0.4	-1.57 points
Other	0	0.4	+0.4 points



Summary: Changes in sale channel

1. Farmers see CWS/cooperatives as main beneficiaries of zoning
2. Farmers observed a decrease in traders, and an increase in cherry sold to CWS
3. Sales increased to cooperative-owned CWS; decreased sales to private CWS and traders



Summary & discussion points



Recap of findings

1. Farmers perceive few advantages, and substantial disadvantages of zoning—it does not encourage investment in coffee for them
2. Main disadvantages are low (33.79%) and unstable (14.65%) cherry prices
3. Main advantage (9.57%) is eligibility for bonuses
4. Farmers perceive low cherry prices, however no price difference in sample
5. Some goals of zoning, such as increased sales to CWS and reduced trader activity seem successful

Discussion questions

1. What else do we conclude from the data?
2. What are the implications of farmers' negative perceptions of zoning for productivity and quality?
3. How should we think about farmers' negative perceptions compared to other goals of zoning (e.g. reduced trader activity, increased proportion of cherry at CWS, etc.)?
4. What, if anything, should be considered as a modification to the zoning policy?



Thank You!



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