

Controlling Avian Flu and Protecting People's
Livelihoods in the Mekong Region

Smallholder Poultry Production in Thailand

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A Collaborative Research
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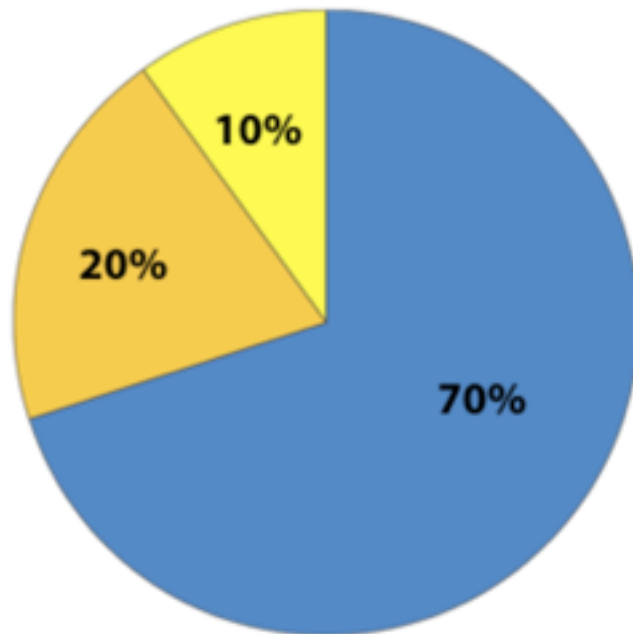
Outline of Presentation

- Background
- Methods
- Overview of data set
 - Resource Flow Surveys
 - Consumer Surveys
- Findings
- Policy Recommendations

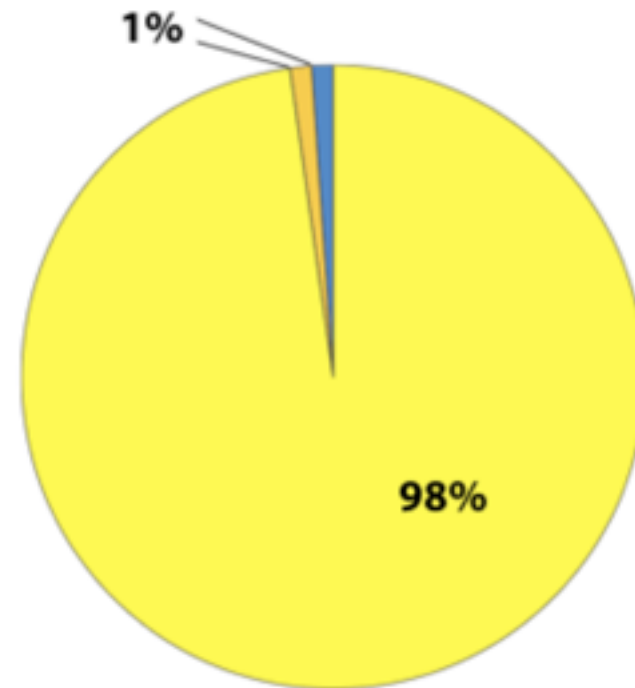
Background

Thai Poultry by Production System

Percent of Poultry Production



Percent of Poultry Producers

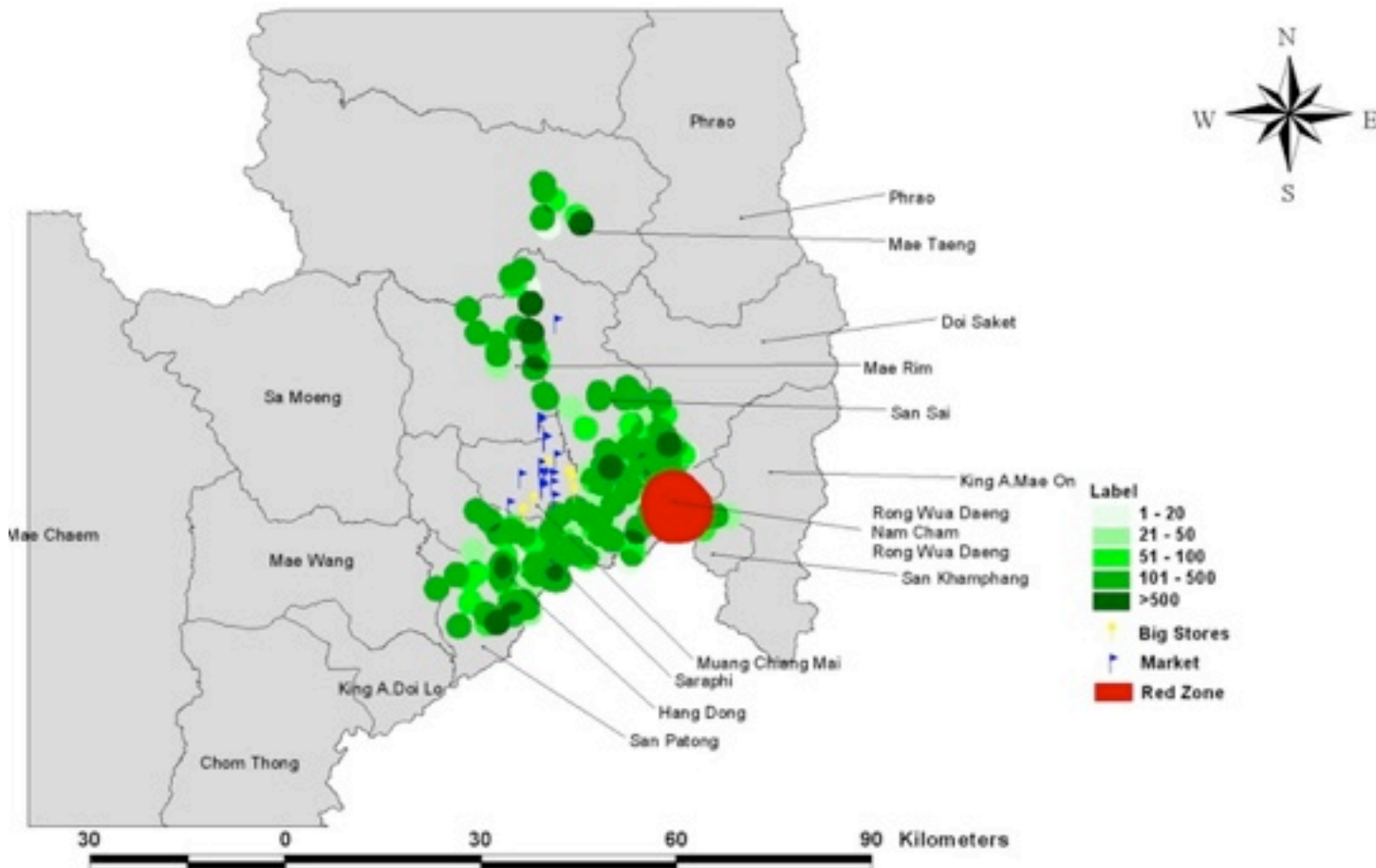


Methods

- Sample Area
 - Three Provinces
 - Chiang Mai
 - Khon Kaen
 - Nahkon Phanom
 - Two Regions per Province
 - Rural - Farmer, Aggregator
 - Urban - Market, Consumer

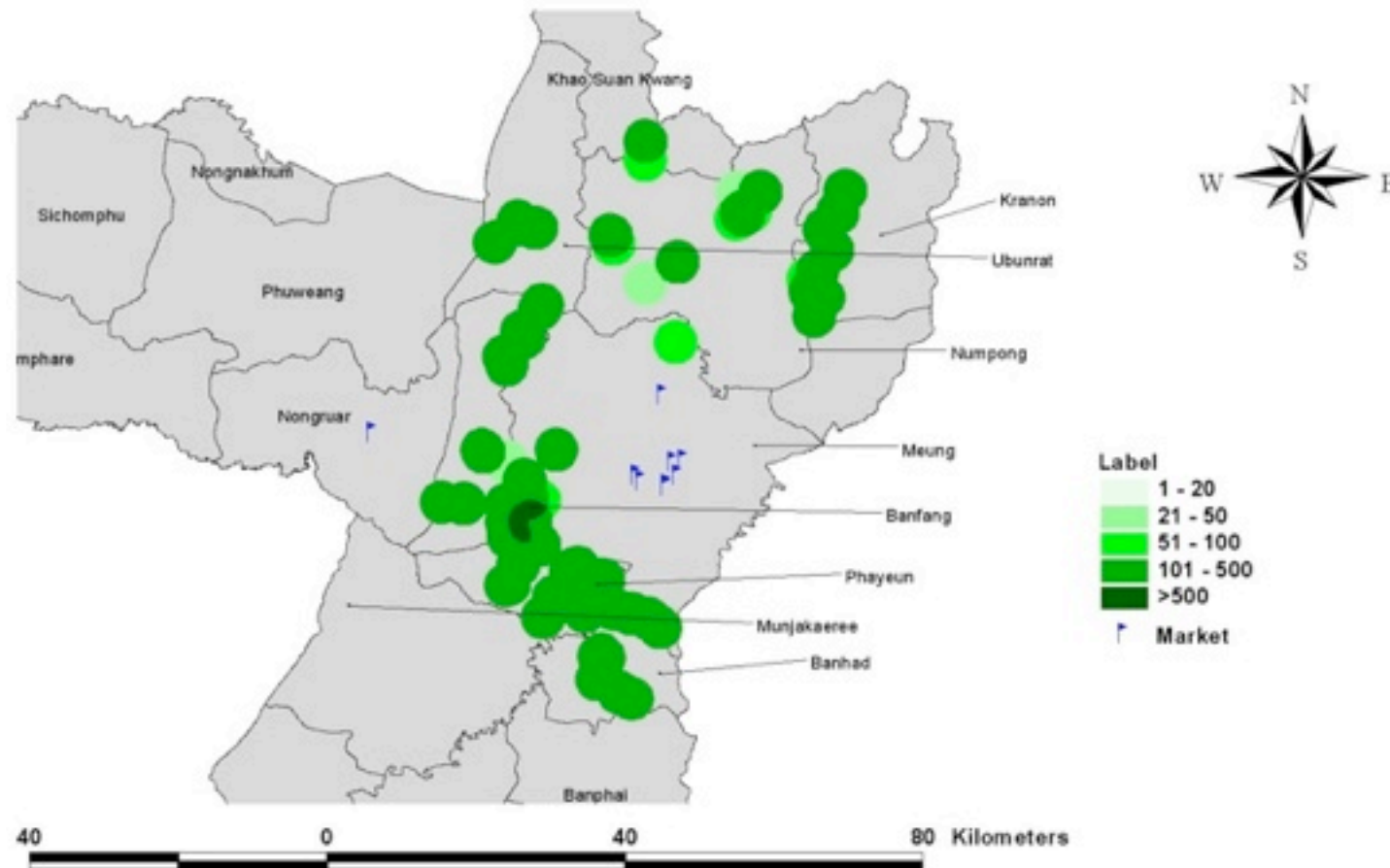
Map of Observations

Chiang Mai



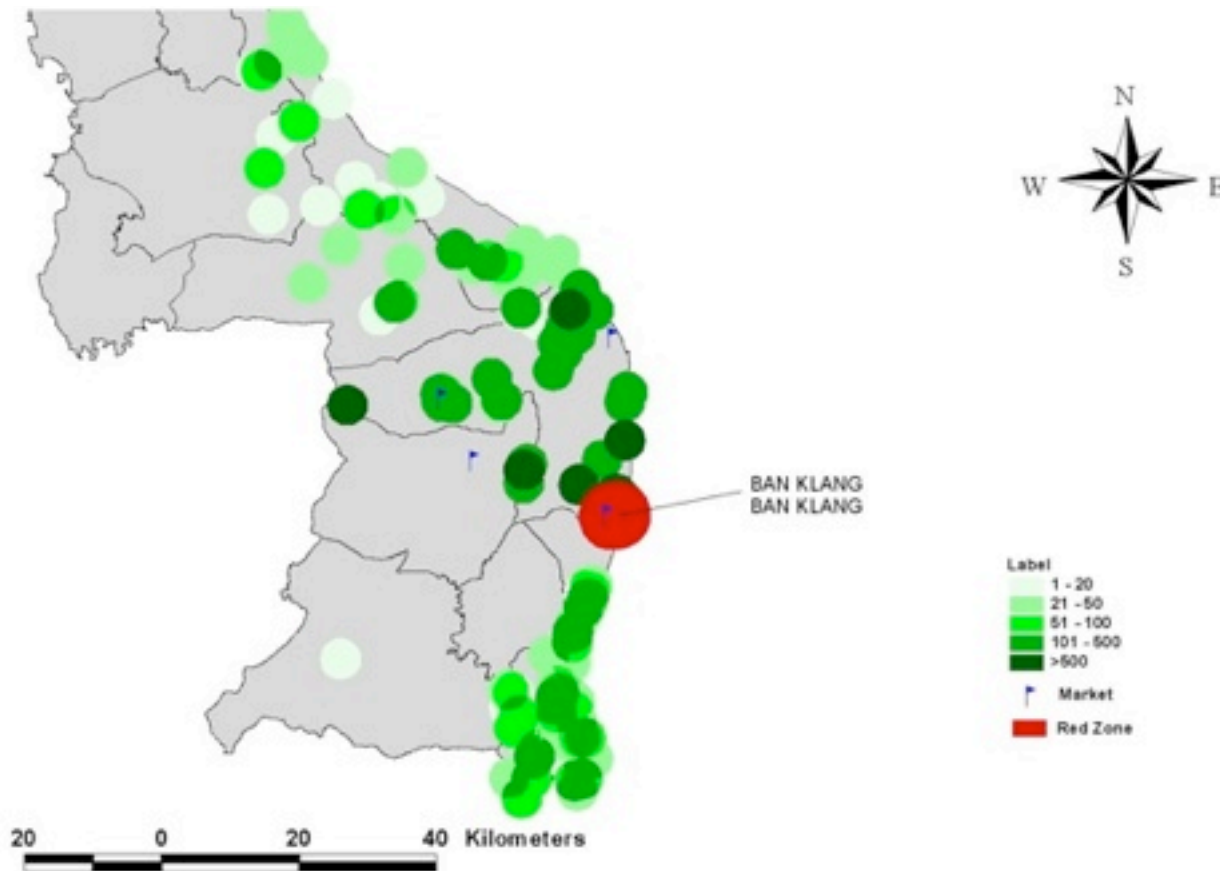
Map of Observations

Khon Kaen



Map of Observations

Nakhon Phanom



Resource Flow Survey

- Sample Size

	Chiang Mai	Khon Kaen	Nakhon Phanom	Total
Smallscale Producers	617	589	401	1,607
Contract Farmers				
All				

Resource Flow Survey

- Sample Size

	Chiang Mai	Khon Kaen	Nakhon Phanom	Total
Aggregators				
Market Vendors				

Consumer Survey

- Sample Size

	Chiang Mai	Khon Kean	Nakhon Phanom	Total
Consumer Surveys	498	582	285	1,365

Methods

- Resource Flow Survey
 - Small Farmer
 - Districts within 50 KM of the urban center
 - Sought out households raising poultry in two stages
 - 1. List villages with >5 households raising poultry
 - 2. Randomly select villages for study inclusion
 - Contract Farmer
 - Sought out within small farmer sample area based on information from contractors, DLD, traders, and small farmers.
 - Aggregator
 - Interviewed at markets, trading points, and when encountered during farmer surveys
 - Market Vendor
 - Full coverage of vendors within consumer survey sample area

Methods

- Consumer Survey
 - Two Samples
 - SES sample - 1/3 of households selected based on their inclusion in the 2006 SES
 - Observations linked to SES observations
 - Control Sample - 2/3 of households were selected using a two-stage random sample (tambon and villages)
 - households in the village listed
 - Initial household was randomly selected
 - » Every 4th household interviewed
 - 15 observations per village

Methods

- Enumerators recruited from local universities
 - Resource Flow Surveys
 - Male students traveled to remote villages in pairs
 - Consumer Surveys
 - Female students visited households wearing school uniforms

Overview of Data

- Resource Flow Surveys

- Household characteristics
- Production techniques
 - Detailed information on inputs and outputs of poultry production
 - Production costs and incomes
 - Bio-Security
- Trading Relationships
- GPS Coordinates (Farmer, Vendor)

Overview of Data

- Consumer Surveys

- Household characteristics
- Poultry product purchasing habits
- Pricing information
- Attitudes toward attributes of poultry products

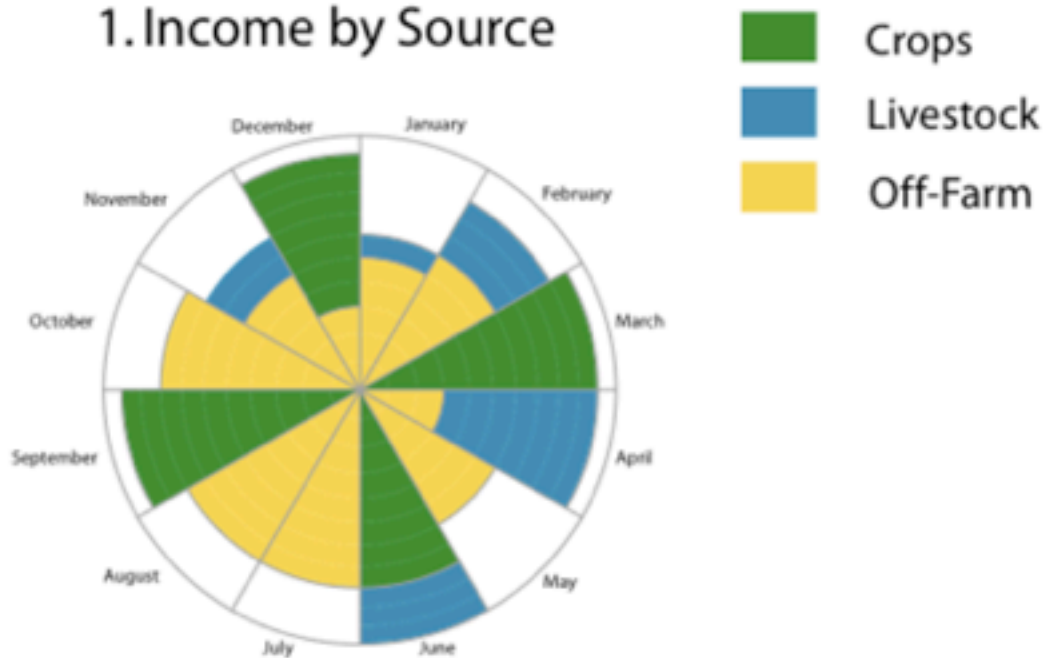
Findings - Smallscale Producers

- Smallscale poultry producers (<100 birds)
- Financed by personal savings and ancillary income
- Raise indigenous breeds of chicken
 - 25 percent raise fighting cocks
 - On average 5 - 10 birds
 - 15 percent also raise some ducks
 - On average ducks account for a quarter poultry flock size
- Cash Income from poultry production:
 - Chiang Mai - 6 percent of total income
 - Khon Kaen - 2 percent of total income
 - Nakhon Phanom - 4 percent of total income

Findings - Smallscale Producers

- Seasonality of Household Economic Activities

1. Income by Source

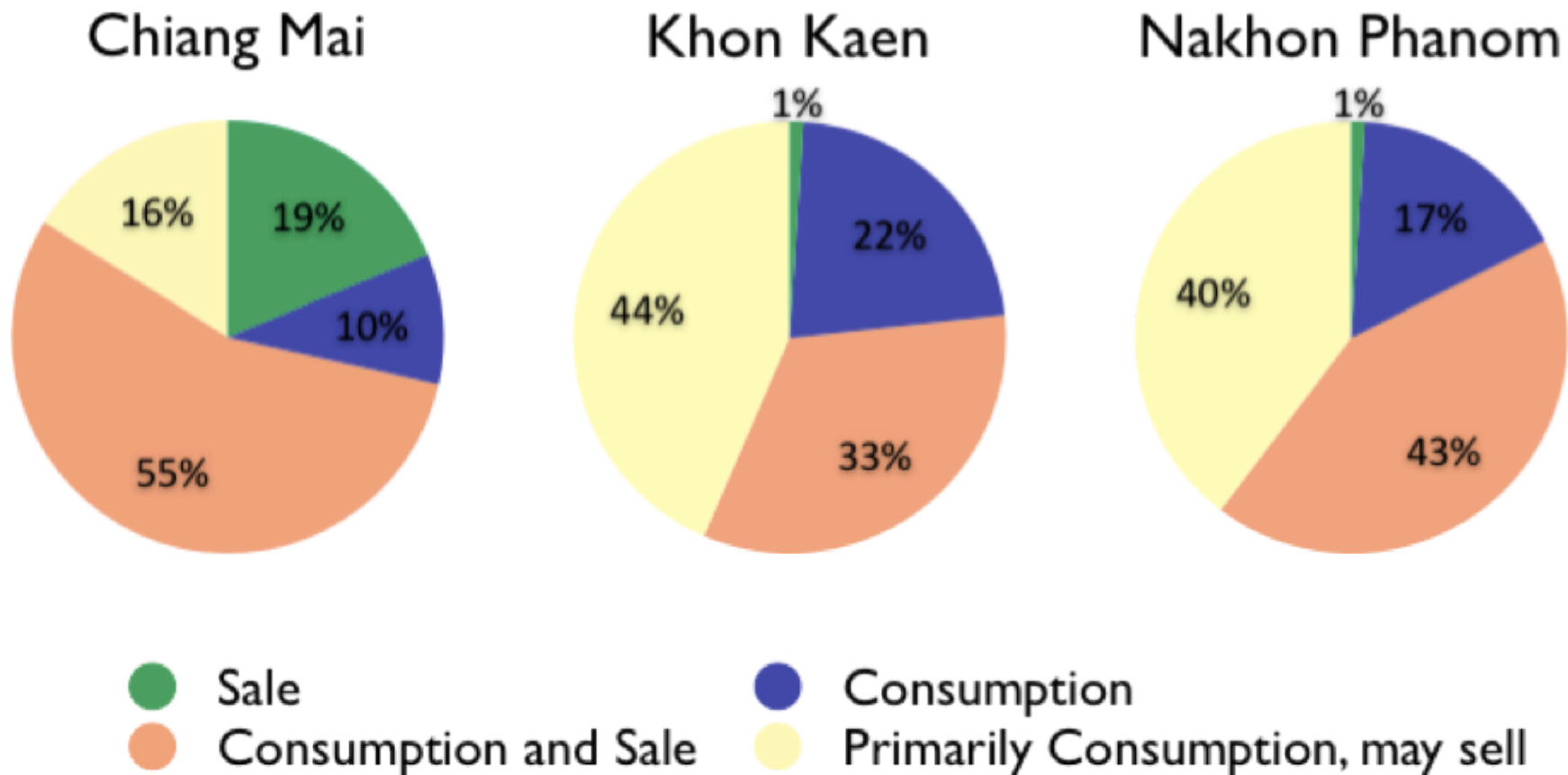


2. Labor Allocation



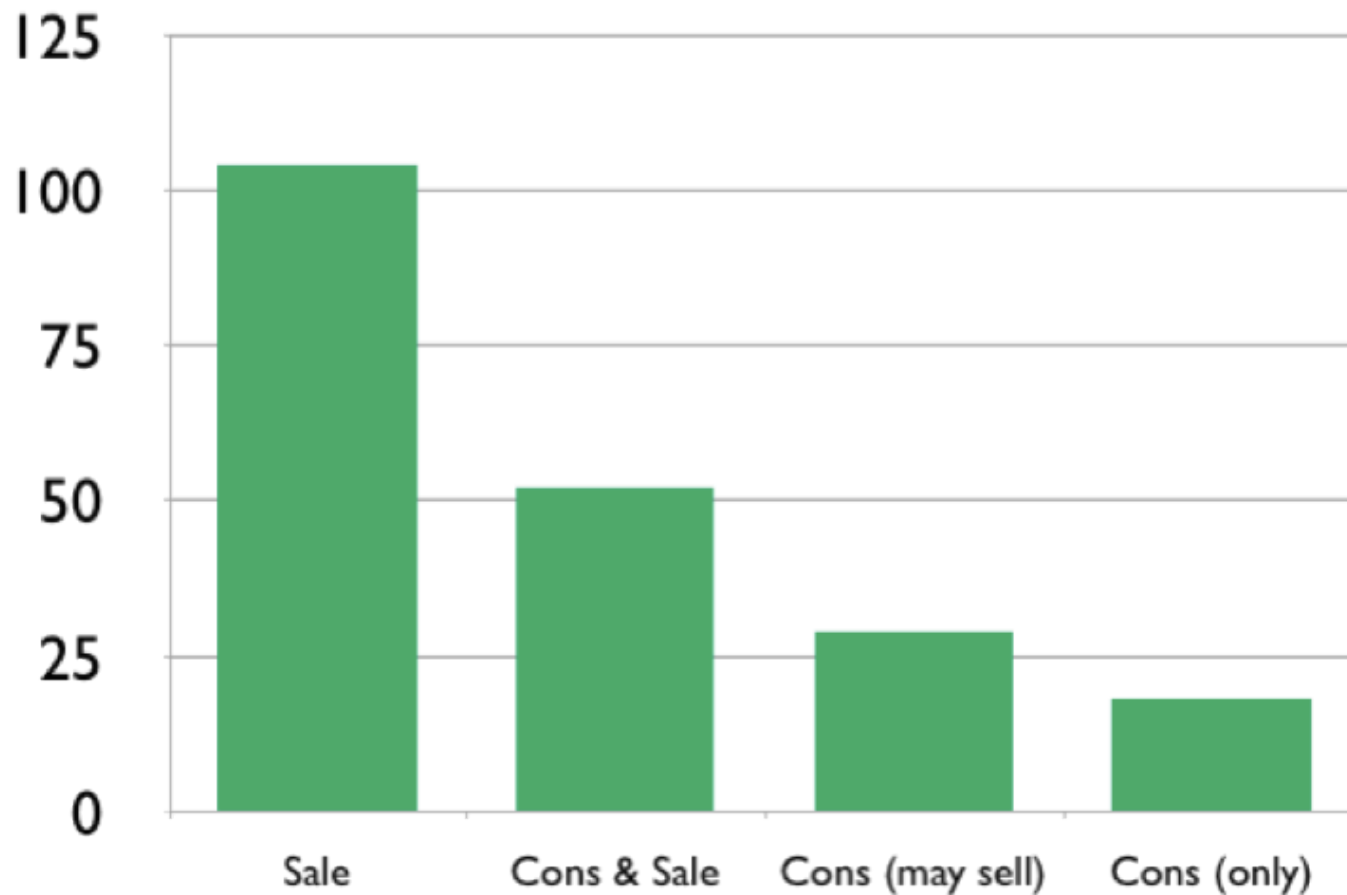
Findings - Smallscale Producers

Why do you raise poultry?

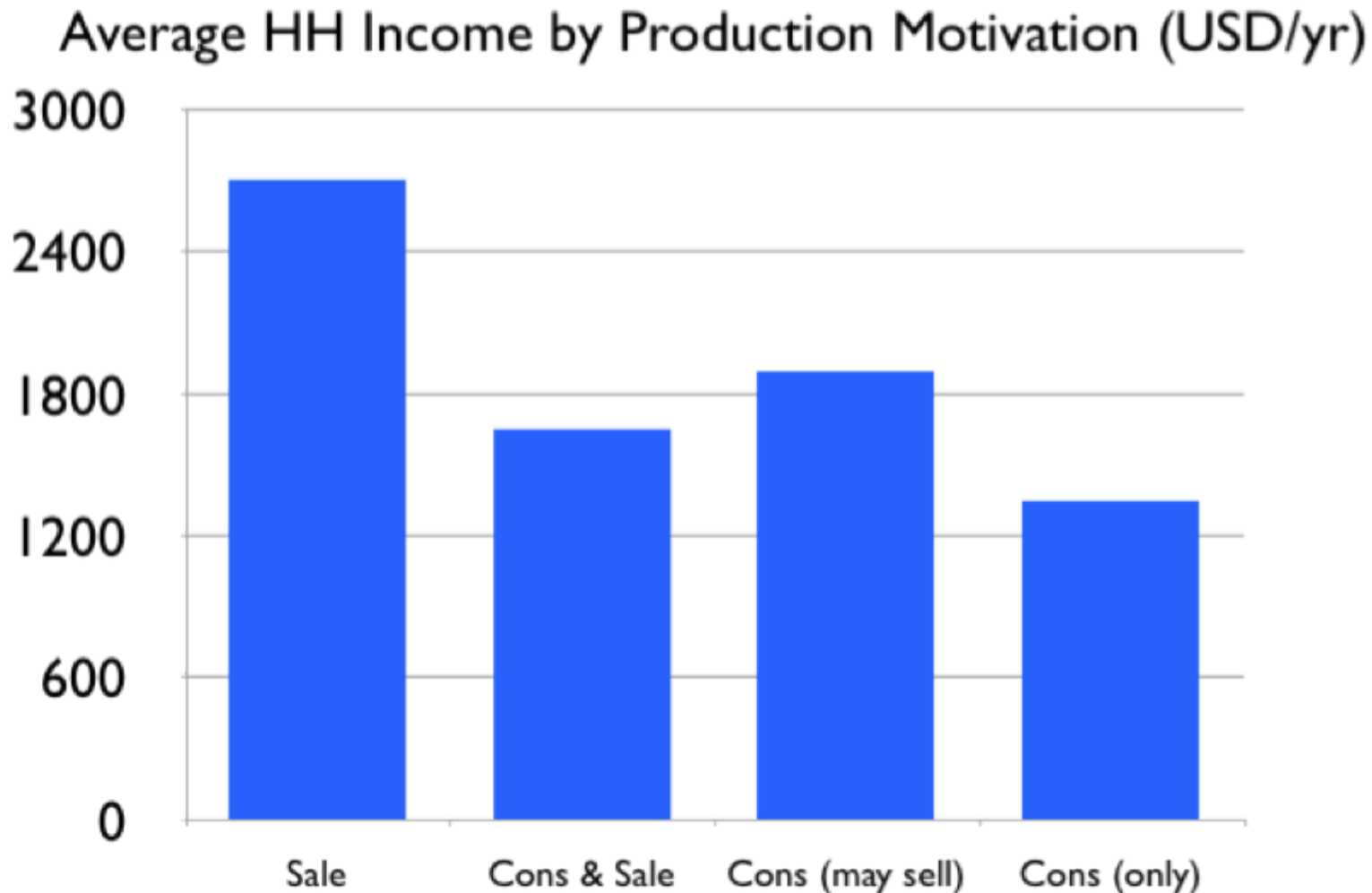


Findings - Smallscale Producers

Average Flock Size by Production Motivation (head of chicken)

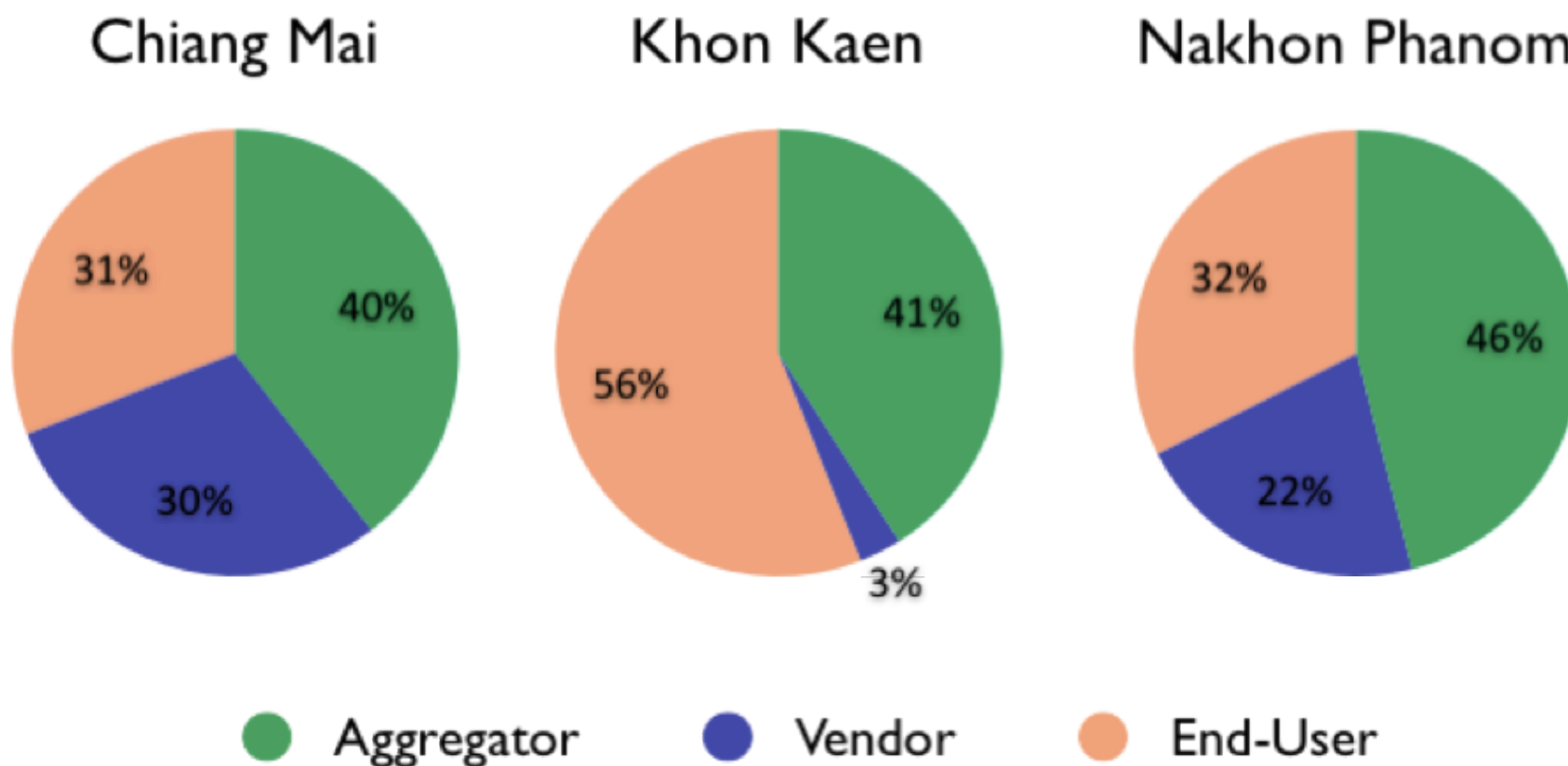


Findings - Smallscale Producers

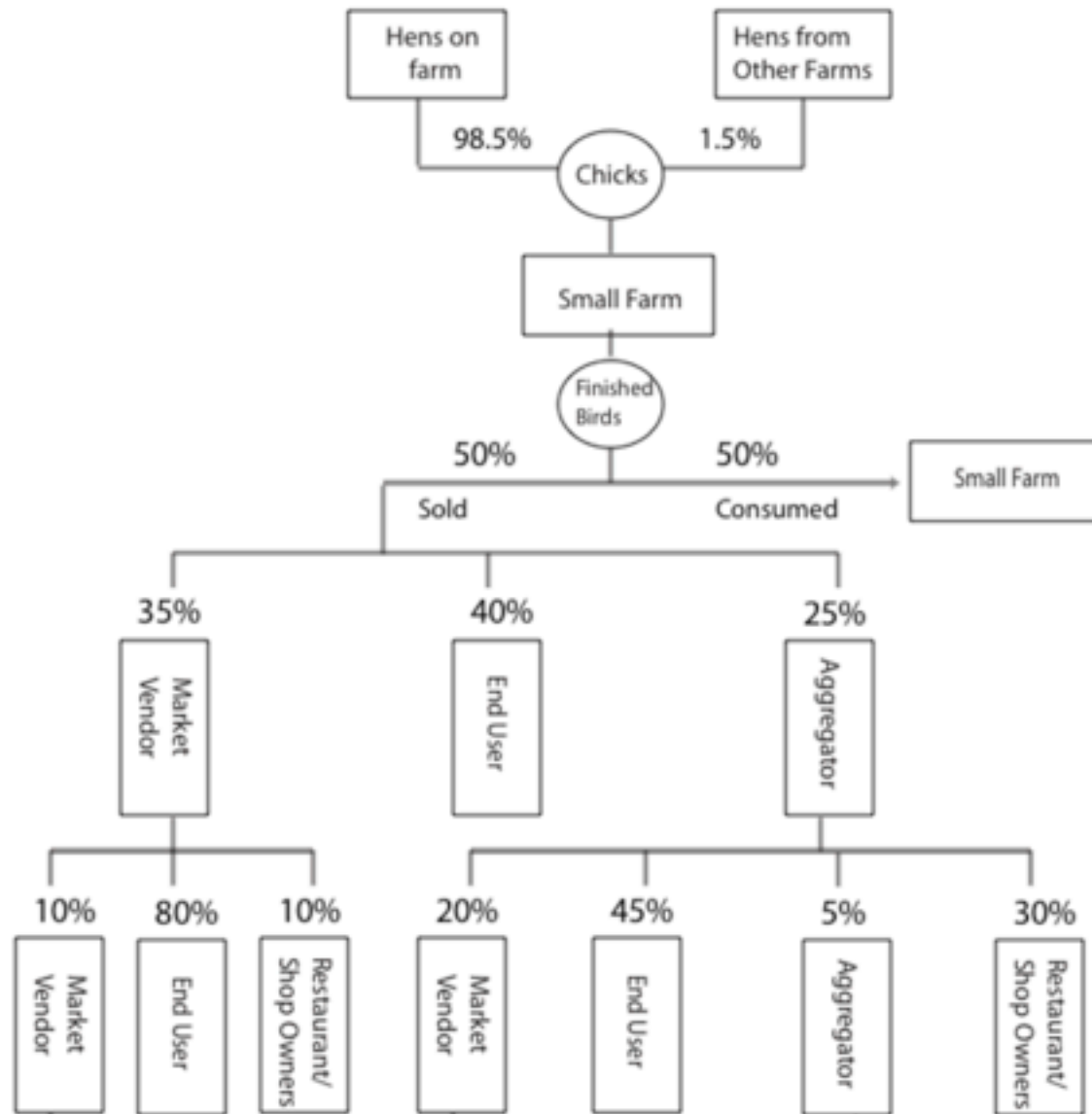


Findings - Smallscale Producers

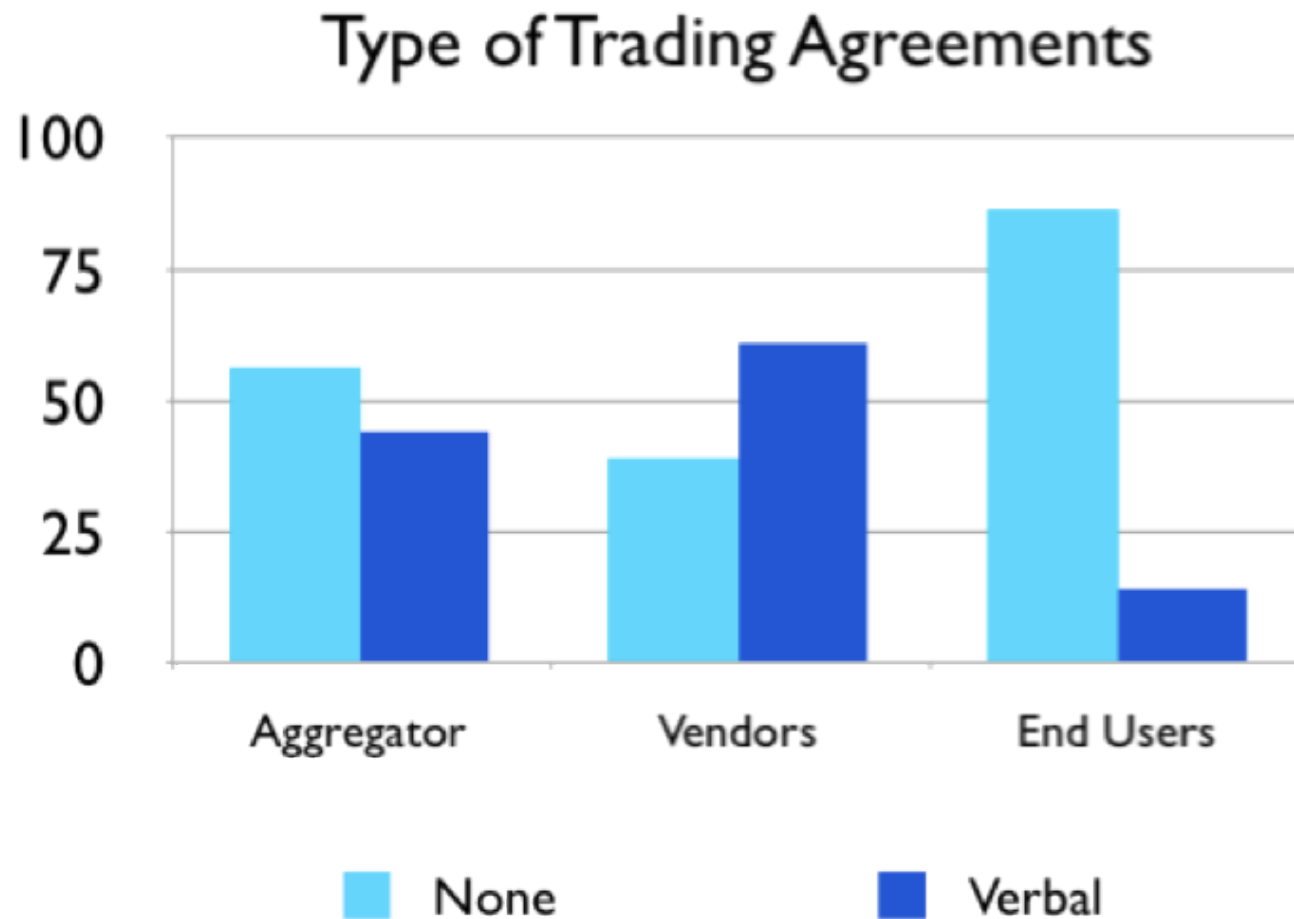
Who do smallholder sell poultry to?



Smallholder Supply Chain Summary



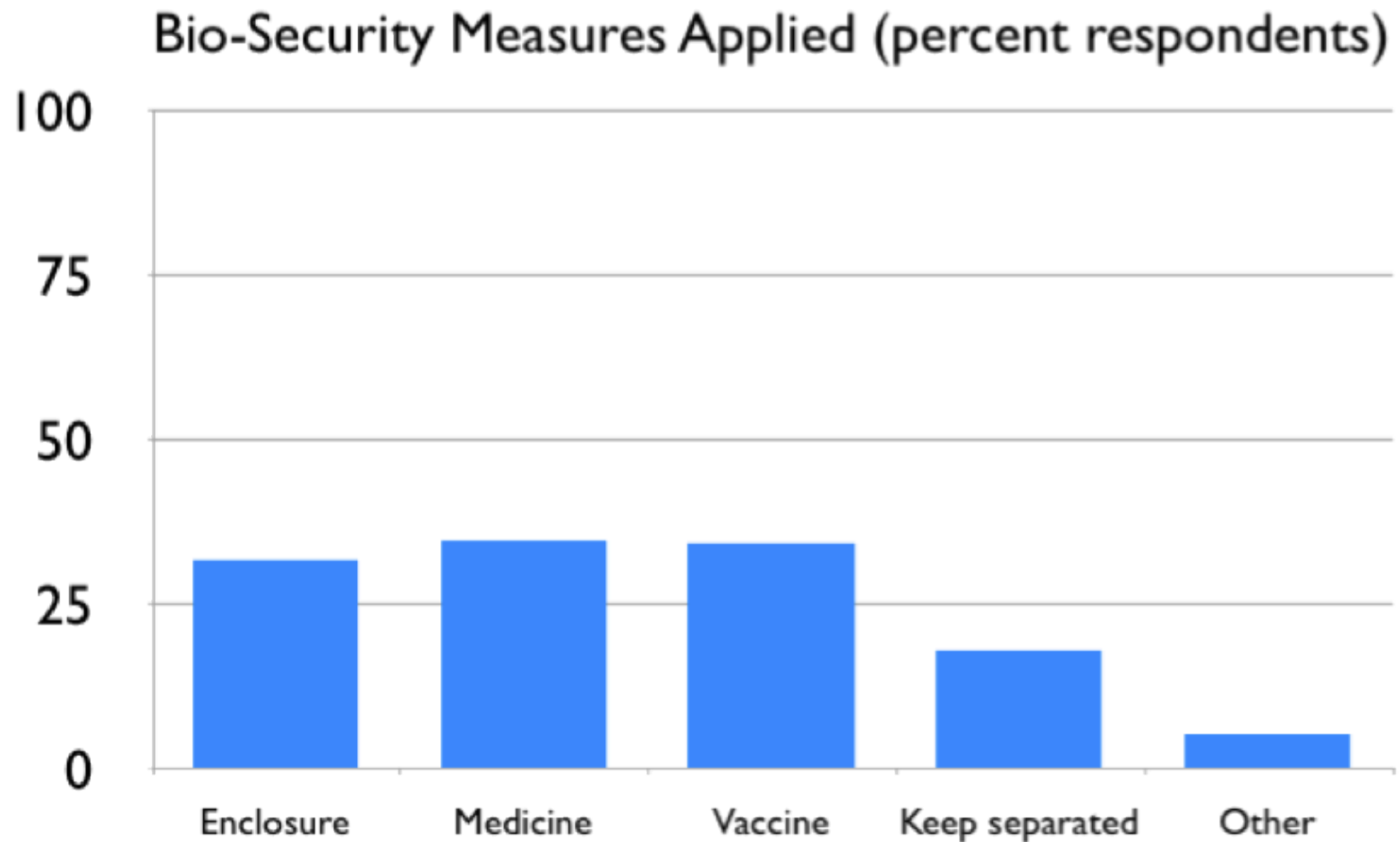
Findings - Smallscale Producers



Findings - Smallscale Producers

- Verbal agreements consist of
 - Pre-determined time of purchase (90 percent)
 - Pre-determined price (85 percent)
 - Pre-determined quantity (85 percent)
- On average farmers sell to 4 different sources per year

Findings - Smallscale Producers



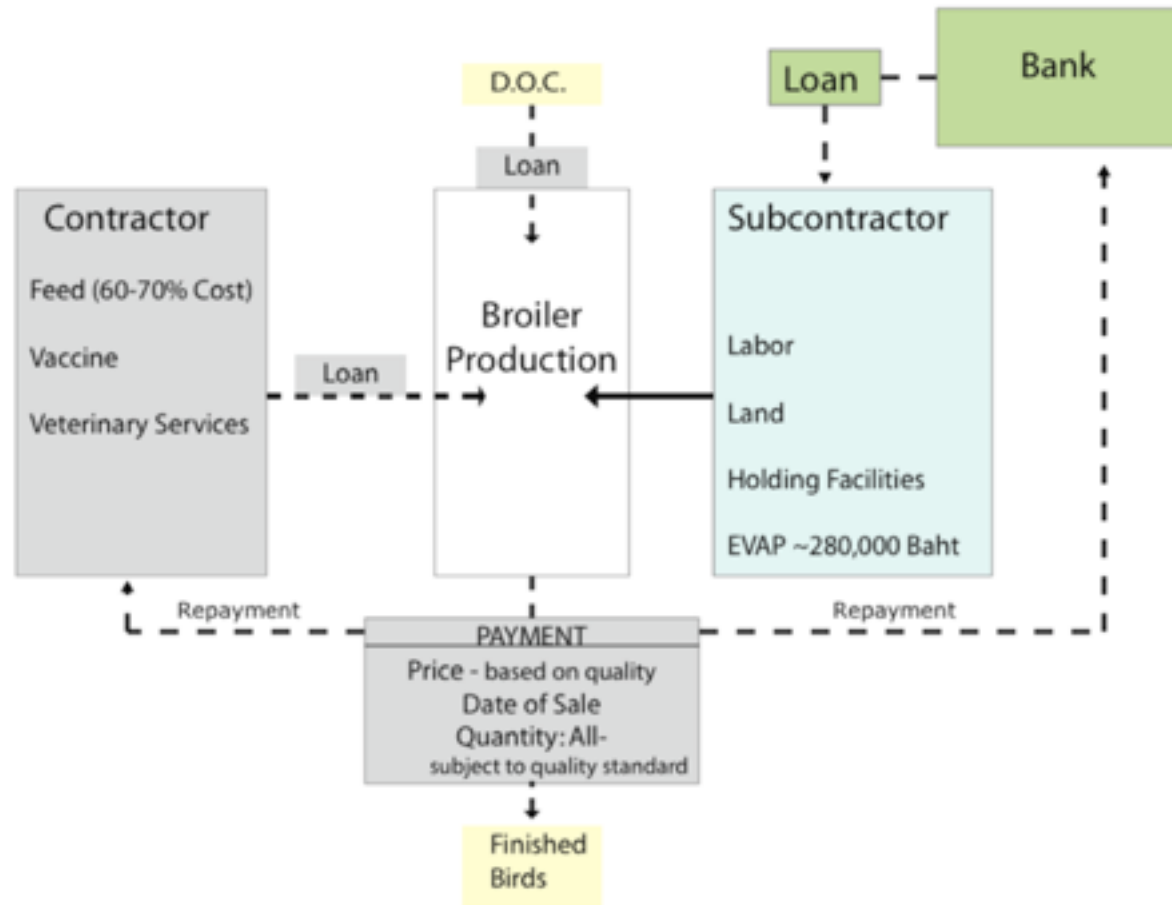
Findings - Smallscale Producers

- 2 SLIDES ABOUT HPAI EXPERIENCE
 - 1. CULLING
 - 2. RESPONSE

Findings - Contract Broiler Farm

- Contract Farmers
- Approximately 10,000 birds
- Contracting includes agreements about
 - Price, time & quantity of purchase (100 percent)
 - Feed (90 percent)
 - Chicks (85 percent)
 - Production Technology (30 percent)
 - Veterinary Services (60 percent)
 - Vaccines (90 percent)

Findings - Contract Broiler Farms

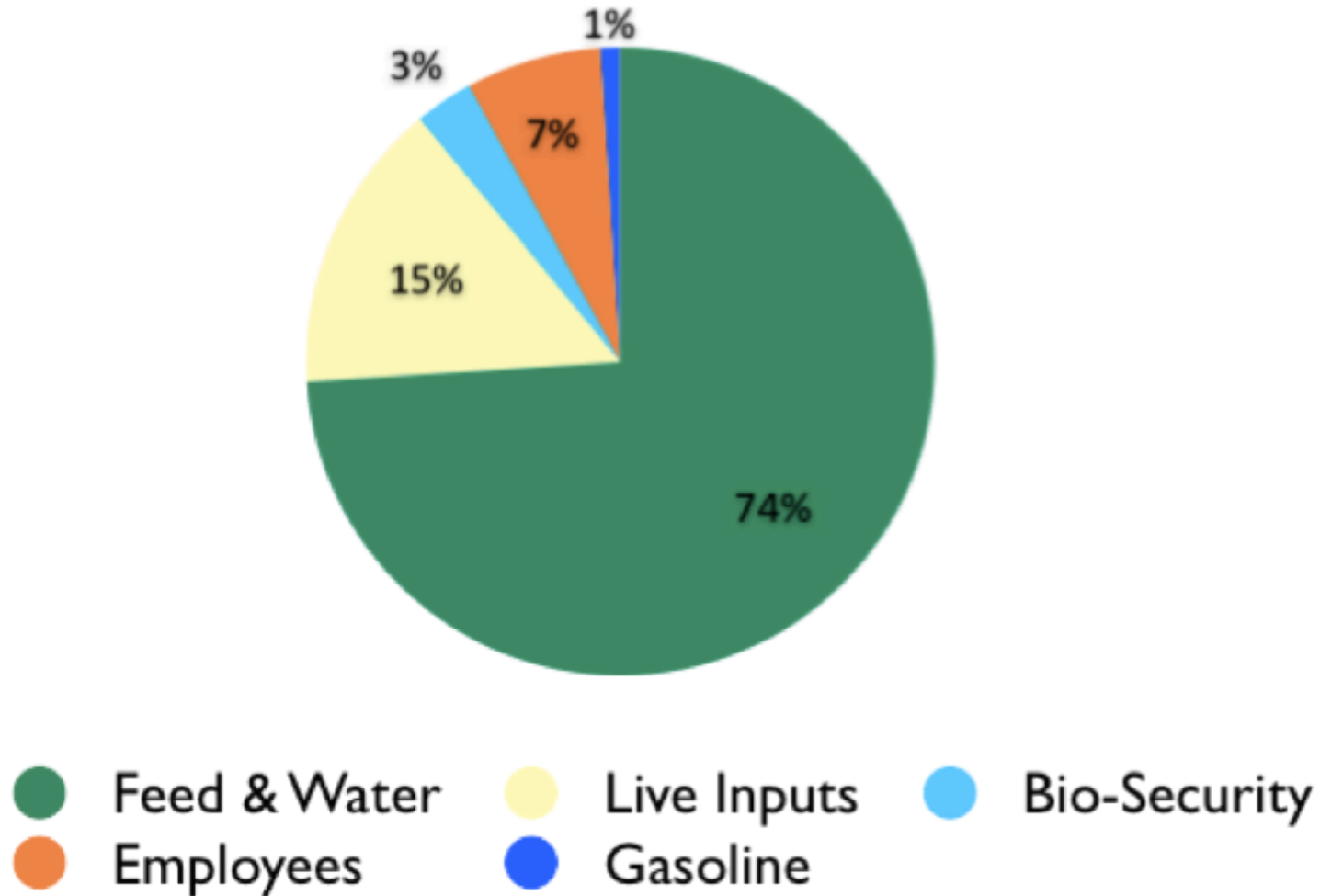


Findings - Contract Broiler Farms

- Contract Broiler Farms
- Funded by:
 - Personal savings (70 percent)
 - Family Loan (30 percent)
 - Ancillary Income (25 percent)
 - Micro-finance/NGO Loan (15 percent)
 - Formal bank loan (10 percent)
 - Loan form village moneylender (5 percent)

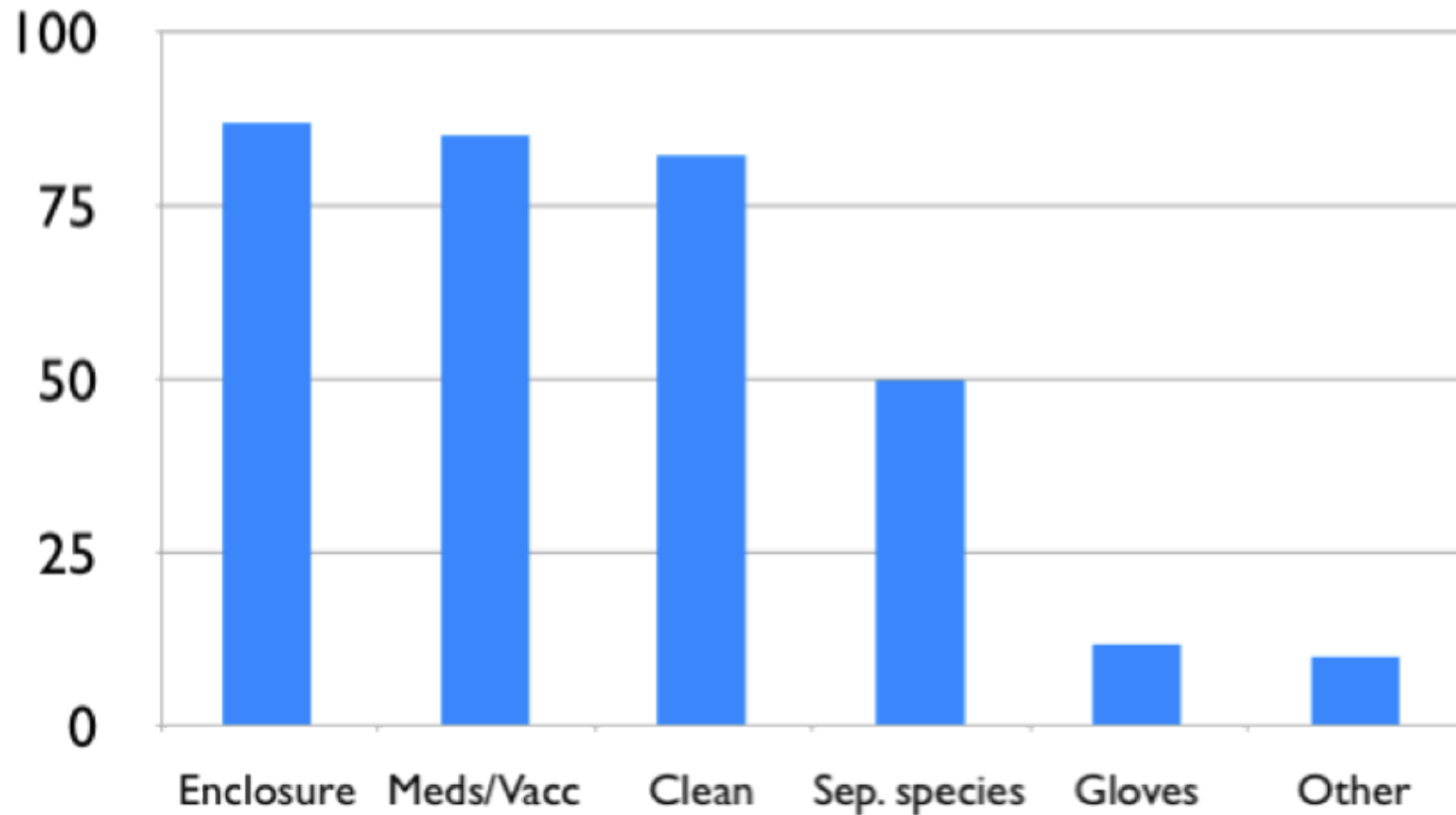
Findings - Contract Broiler Farms

Costs of Contract Farming *UPDATE PIE CHART



Findings - Contract Broiler Farms

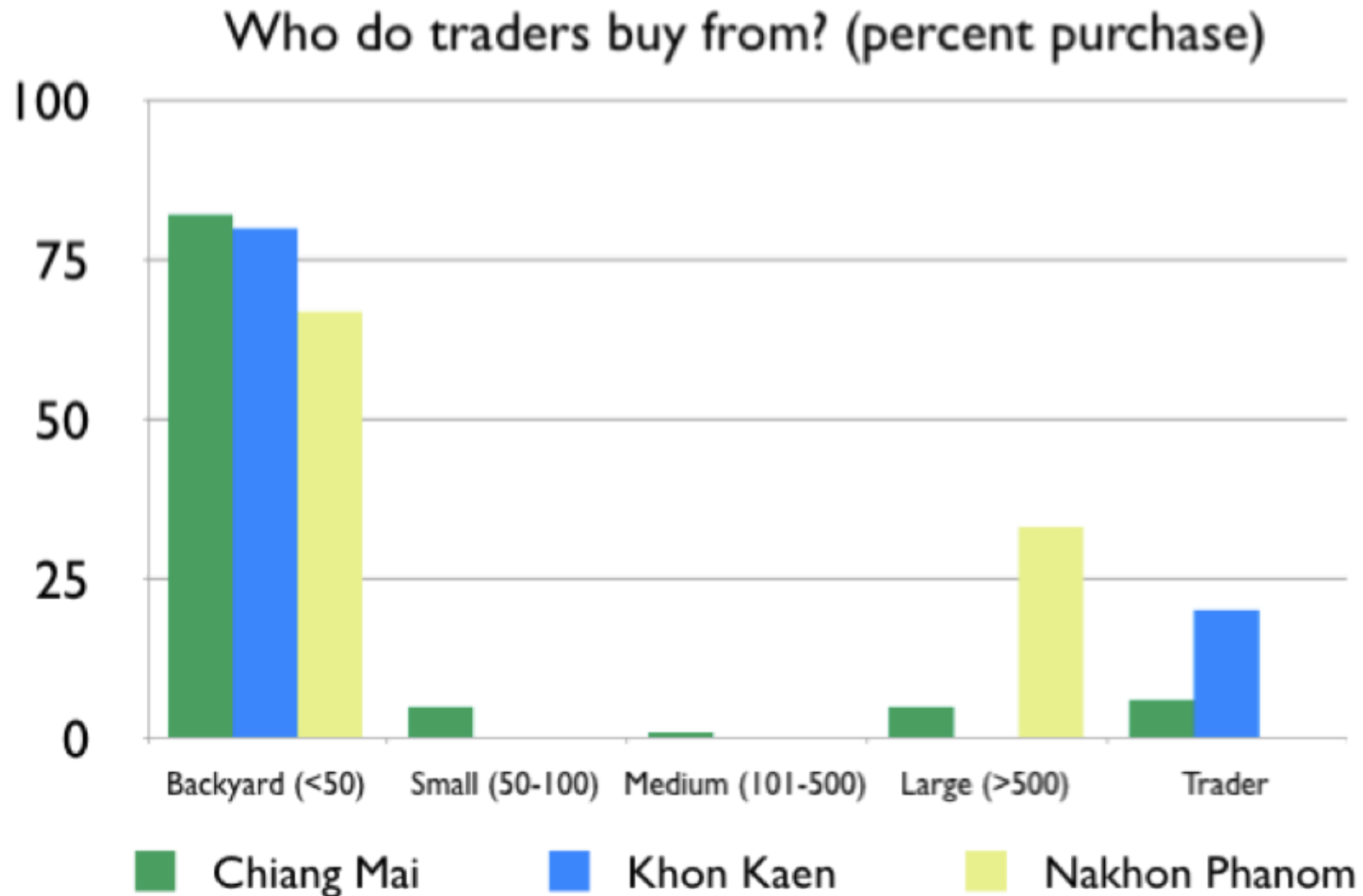
Bio-Security Measures Applied (update)



Findings - Aggregators

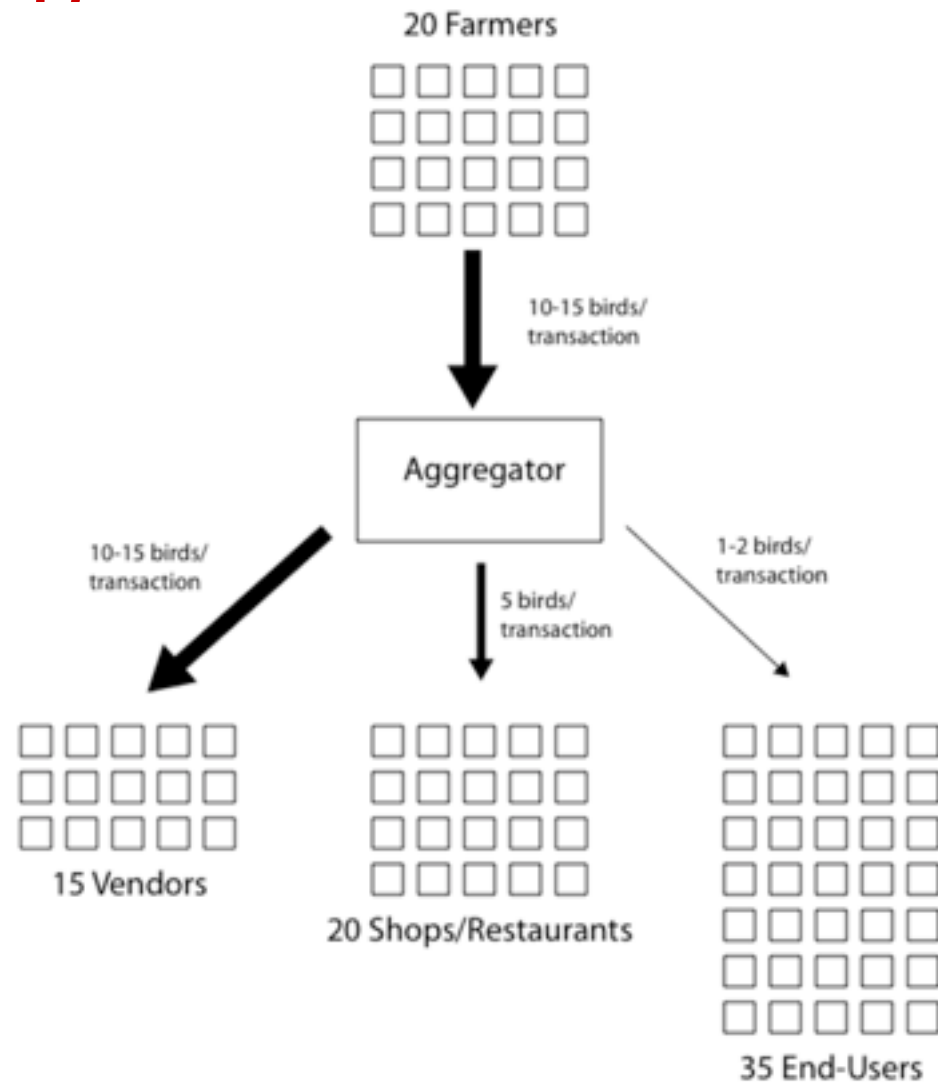
- Indigenous chicken meat is the primary product traded
- Trading accounts for approximately 75 percent of household income
- On average, trading volume is :
 - Trade 200-250 chickens per month
 - Purchase from 20-25 different farmers per month
 - Sell to 75-100 different source per month

Findings - Aggregators



Findings - Aggregators

Overview of Monthly Aggregator Transactions



Findings - Market Vendor

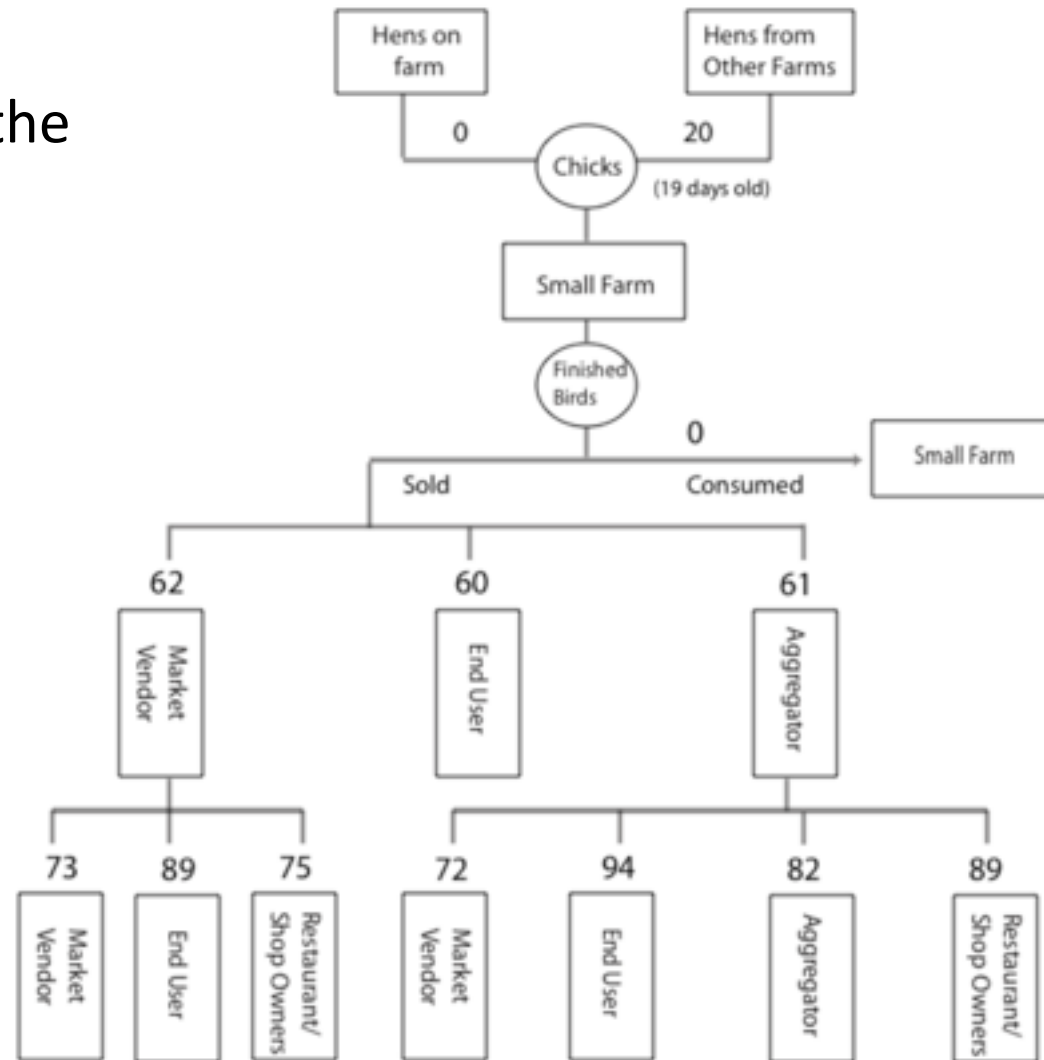
- Market Vendors
- Vendors sell
 - Industrial chicken (85 percent)
 - Indigenous chicken (20 percent)
 - Cross-bred chicken (10 percent)
- Average trading volume
 - 20-25 head of indigenous chicken per day, or
 - 50-60 head of cross-bred chicken per day, or
 - 90-110 head of broiler chicken per day

Findings - Market Vendor

- Slide about Trading Relationships (source of purchase)

Findings - Resource Flow Surveys

Summary of Pricing Along the Smallholder Market Chain



Findings - Consumer

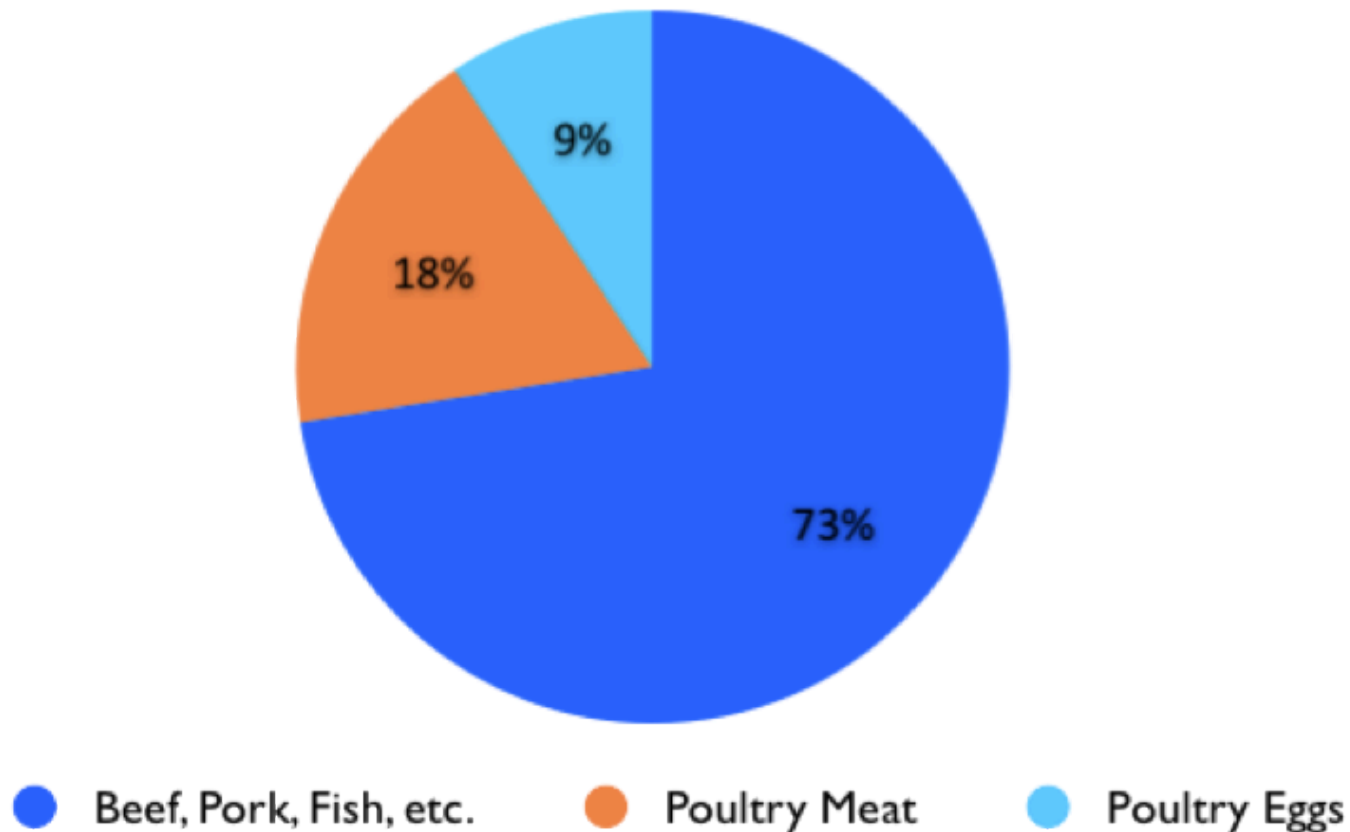
- 25 percent of respondents do not have kitchens (and thus do not purchase unprocessed poultry meat)
- On average, purchase 1.2 kg of chicken meat/week
 - 60 percent industrial chicken
 - 25 percent indigenous chicken
 - 15 percent cross-bred chicken
- Form of meat purchased:
 - Industrial and cross-bred chicken is generally parts
 - Indigenous is generally whole but slaughtered

Findings - Consumer

- Respondents visit the market
 - More than once per day (15 percent)
 - Once per day (40 percent)
 - Less than once per day (45 percent)

Findings - Consumer

Percentage of Total Household Meat Expenditure by Product

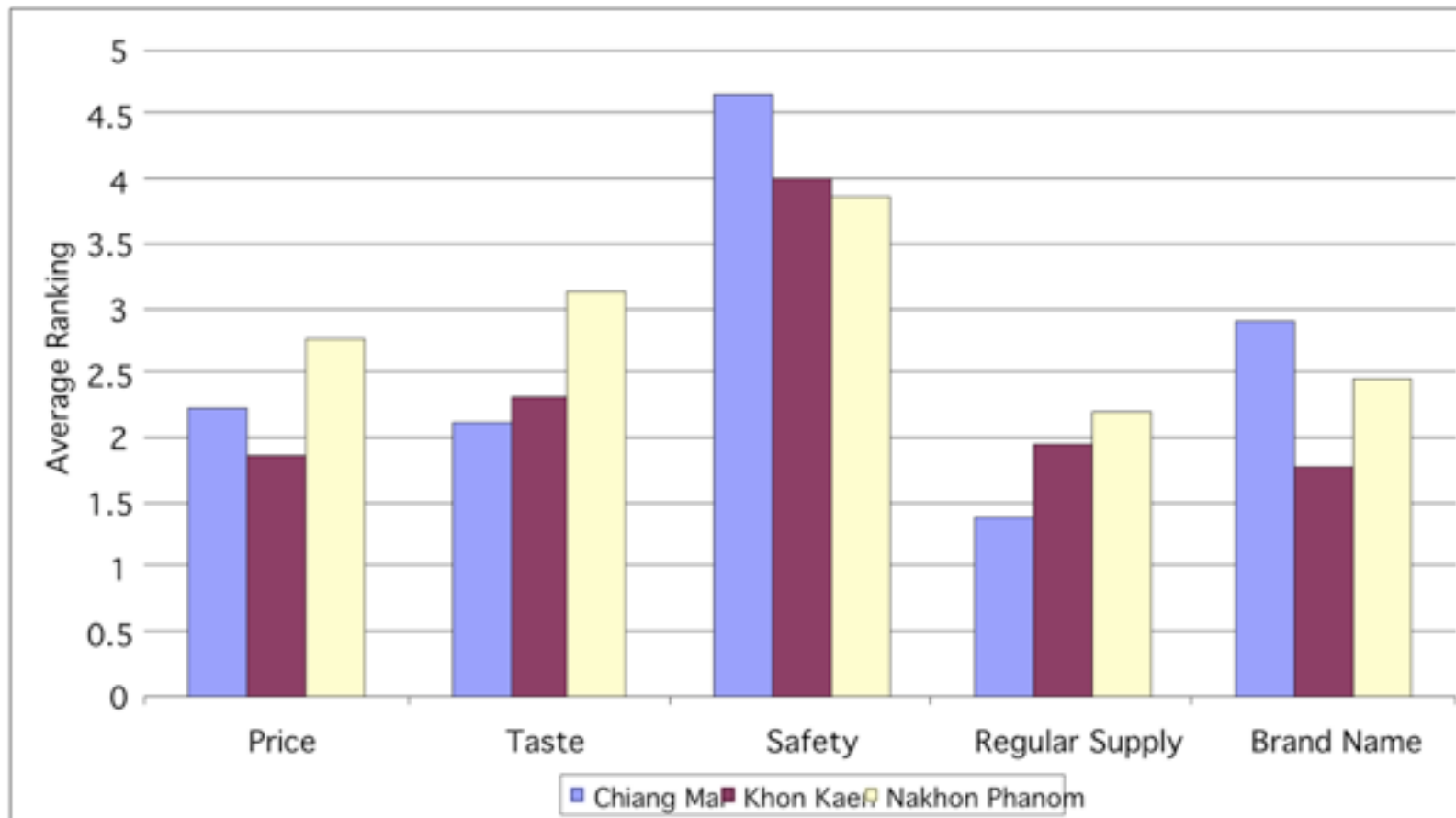


Findings - Consumer

- SLIDE ABOUT PREFERENCE FOR LOCAL BREEDS

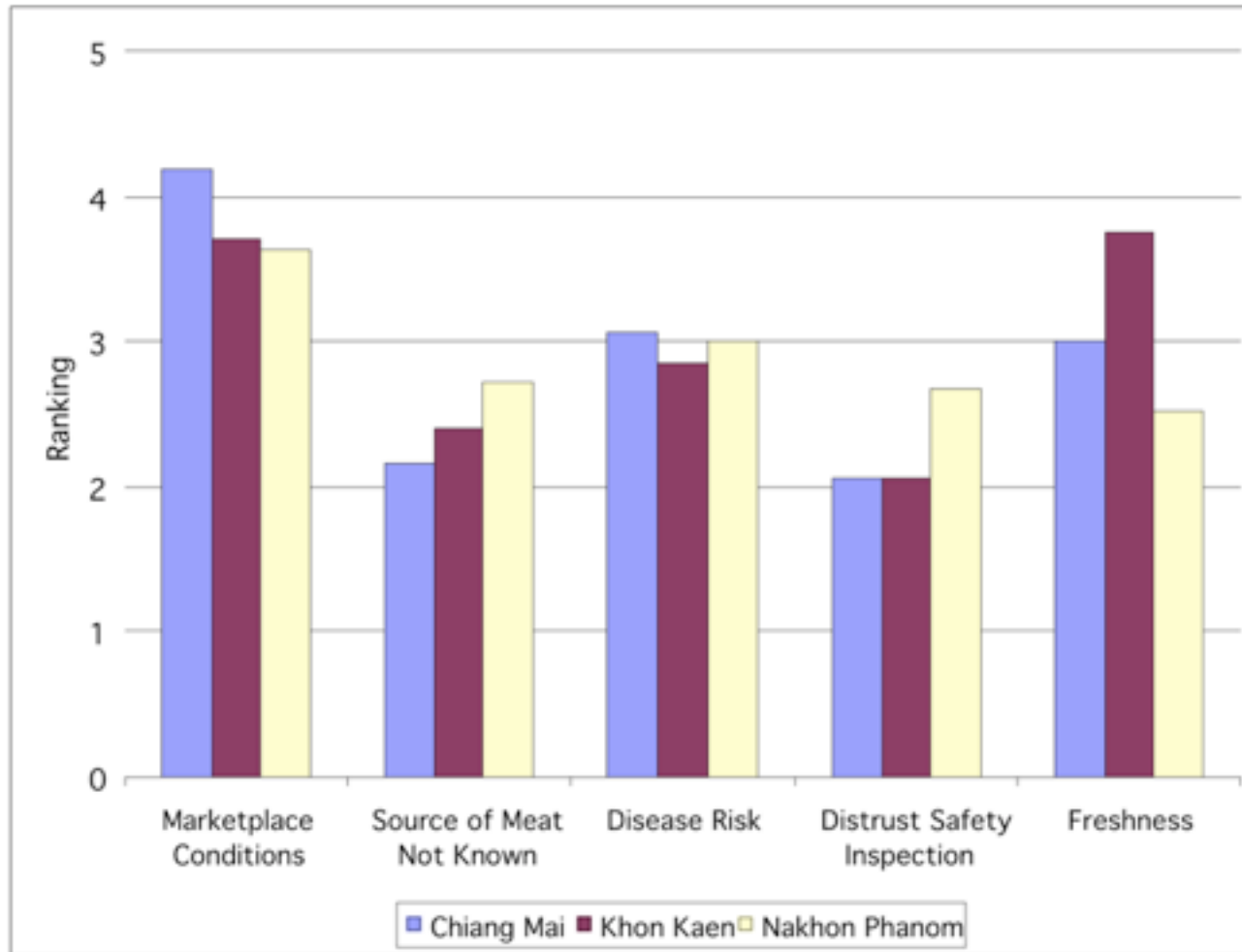
Findings - Consumer

Importance of Poultry Meat Attributes



Findings - Consumer

Average Ranking of Safety Concern by Location



Findings - Consumer

- Willingness to Pay slide (Interest in certification)

Summary of Findings

- Small-scale poultry producers are unlikely to adopt bio-security measures
- Recent changes in market conditions, as an indirect result of the HPAI outbreaks, are making it very difficult for some small-scale poultry farmers to sustain their enterprise
- Poultry rearing for consumption continues, however, the prospects of livelihood from poultry is diminishing, particularly in Khon Kaen.

Summary of Findings

- Despite similar sizes in market catchment areas, consumer preferences, and poultry production levels, local poultry is much less commonly consumed (or available) in Khon Kaen than in Chiang Mai
- Consumers prefer the taste of local breeds, but primarily consume industrial breeds.

Policy Recommendations

- Smallholder farmers are unlikely to adopt compulsory bio-security measures given the current incentives structure
- Consumers continue to exhibit a preference for local poultry breeds and are willing to pay more for this preference
- Poultry sector transition will surely continue in Thailand, however, abrupt changes could destabilize the country's economic vulnerable rural majority

Policy Recommendations

- Policies that seek to phase out smallholder production, or impose difficult to meet safety regulations on smallholders will not result in improved bio-security
 - May drive production underground
 - 6 in 10 respondents were not worried AT ALL about HPAI (to families or flocks)
 - Expected mortality rates are very high already
 - General disinterest toward applying bio-security



Programs requiring improved bio-security would have to be presented as an opportunity to reap higher profits in order to be effective.

Policy Recommendations

- The government can reinforce the efforts of farming groups that currently practice safe production practices, while actively recruiting farmers interested in doing so
 - Could be modeled on western agricultural producer cooperatives (primary guarantors of product quality and safety in OECD countries).
- Access to information and technology can be improved for small-holder farmers, particularly with respect to product quality, pricing, and other market conditions

Policy Recommendations

- Micro-credit schemes
 - Accelerate technology adoption and modernization
 - Improve product quality/reliability
 - Lead to established brands
- Rudimentary education with respect to contracting, negotiating, and conflict resolution would improve the terms of participation of small holders
- Local officials need to be better informed about the socioeconomic benefits of sustainable small-holder supply chains

Policy Recommendations

- Prior to 2003 there were several projects attempting to reconfigure regional small-holder supply chains in order to improve farmers' livelihoods
 - In light of HPAI, these projects have taken a back seat to bio-security concerns
- Our opinion is that these objectives can be complimentarily met through carefully planned measures, resulting in the coordination of reduced HPAI risk in coordination with improved rural livelihoods.



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