Consumer Preference and Willingness to Pay for Egg Attributes from Hen Fed Insect-based Feed in Kiambu County, Kenya

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Introduction

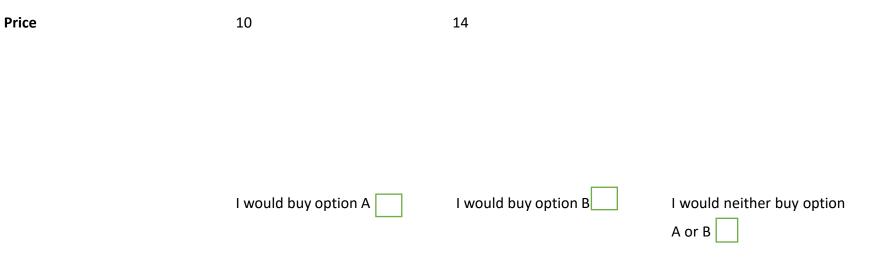
- The use of insect based feed aims at improving poultry production, consumer driven demand for these products is a key aspect in contributing to its uptake.
- To inform the notion, consumer survey was \bullet carried out to collect preference and willingness to pay.

Fig 1. Choice card Egg characteristics Egg 1 Egg 2 None Size Large Medium Yolk colou Pale yellow Feed type

Methods and Materials

- A survey was conducted in market areas and • households in 2020, 200 respondents were randomly selected to represent egg consumers in Kiambu County.
- A semi-structured questionnaire was prepared and used to collect information through personal interviews by trained enumerators.

Understanding preferences of consumers for \bullet bundle of egg attributes will facilitate effective production using insect-based feed.



The questionnaire collected information on household and institutional characteristics and CBCA on consumers' preferences on egg attributes (fig 1).

Results

Table 1. Random parameter logit estimates for consumer
 preferences for egg attributes.

Attributes	Coefficient	Standard error	P value	
Price	-0.167	0.046	0.000***	
Small	1.450	0.203	0.000***	
Large	0.918	0.197	0.000***	
Golden yellow yolk	1.912	0.163	0.000***	
BSF based feed	0.893	0.140	0.000***	
Derived standard deviation	s of parameter distributions			
Small	0.062	0.171	0.719	
Large	-0.302	0.229	0.188	
Golden yellow yolk	0.715	0.146	0.000***	

Conclusions

- There is a positive preference for eggs produced from hens fed on insect based feed.
- The consumers have heterogenous preferences that might be influenced by other factors.
- There is a need for sensitization on the alternative sources of protein



MWTP	lower limit	upper limit

Attributes				
small	8.70	3.56	13.84	
large	5.51	0.94	10.08	





Golden yellow	11.47	5.55	17.40

1.37

9.35

5.36

BSF

BSF based feed	1.131	0.122	0.000***
Log likelihood	-918.38		
Adjusted Pseudo-R ²	0.3930		
n (respondents)	200		
Number of observations	4800		

Table 3. Perception of attributes.

- The statistically significant standard deviations \bullet show that consumers have heterogenous preference for eggs produced from hens fed on BSF based feed.
- The price coefficient was negative as expected, this indicates that increased demand.
- The positive significant preference for BSF based feed
- All the attributes were significant hence suitable \bullet for this study.
- The price attribute coefficient estimate is

Variable	Percentage of responses(n=200)	
Willingness to consume	70.5	
Awareness of use insects in poultry feed	65	
Relative importance of egg attributes		
Price	86	

Consumers are willing to pay higher amounts Kshs 6 to 18) per egg for golden yolk eggs compared to any other attribute.

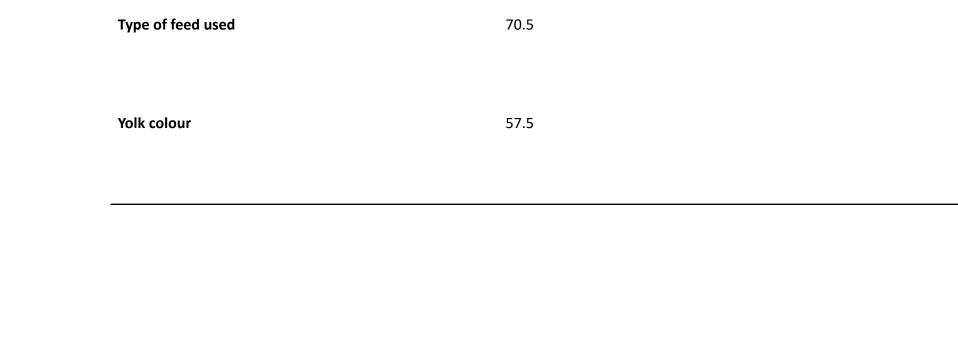
Consumers were willing to pay more for smaller eggs than larger eggs (Tab. 2)

There was a positive WTP for all attributes (Tab. 2)

Up to 65 percent of the consumers were aware of the use of insects in poultry feed. (Tab. 3)

Generally, 70.5 percent of the respondents were willing to consume the eggs (Tab. 3)

significant and with the expected negative sign.



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Size



International Agricultural Research

