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**Western Australian Consumer
Preferences for Welfare Friendly
Production of Broiler Meat**

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Contributed paper prepared for presentation at the 59th AARES Annual Conference,
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THE UNIVERSITY OF
WESTERN AUSTRALIA

SCHOOL OF AGRICULTURAL &
RESOURCE ECONOMICS

Western Australian Consumer Preferences for Welfare Friendly Production of Broiler Meat



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Take home messages

- A choice experiment was conducted to elicit consumers' willingness to pay (WTP) for animal welfare friendly attributes
- From the results, it is clear that consumers do care about chicken meat welfare
- This concern does translate into a willingness to pay significant premiums
- While the research does have significant limitations, it is still of value to both the scientific literature and industry stakeholders

Motivation for this investigation

- Poor animal welfare in farming systems in western countries is increasingly an area of concern to consumers, producers, stakeholders and policy makers
- This concern has been seen in the media and academic literature
- Key players throughout the world have responded to consumer demand for improved welfare by producing welfare friendly products



Coles RSPCA Approved Chicken

- In 2010 Coles and the RSPCA jointly released a food production and labelling scheme
- Products have been produced in accordance with the 'RSPCA Approved Farming Standards'
- Designed to raise the welfare of livestock production systems including broilers and increase consumer choice satisfaction



Objectives of this study

To determine:

1. if Western Australian consumers care about broiler welfare
2. what attributes are of most concern to consumers
3. whether, and by how much consumers are willing to pay price premiums for chicken meat with improved welfare attributes
4. any socio-demographic factors affecting consumers' WTP

Methods

Choice Experiments

- Involve an analysis of tradeoffs among alternatives by imitating real purchase situations and allowing an examination of multiple attributes
- Based on two theories:
 - Lancasterian consumer theory
 - Random utility theory



Attributes

Attribute	Chicken meat	Star level
Price (variation from respondents "normal" value)	\$ 0, 2, 4, 6	

An example of a choice set for chicken breast meat presented in the choice experiment

Please choose the option you most prefer

	Option 1	Option 2	Option 3
Stocking density (kg/ m2)	30 ***	30 ***	I do not want either of these options so will purchase different meat.
Ventilation	Improved ventilation **	Improved ventilation **	
Litter quality	Poor *	Average **	
Beak trimming	No beak trimming ***	Trimmed with hot metal blade *	
Price (\$ /kg)	\$ 15	\$ 19	

Option 1



Option 2



Option 3



Survey & Sample Collection

- An online survey was conducted
 - Brief introduction → included incentive and cheap talk script
 - Questions to assess concerns and perceptions of broiler welfare
 - 6 randomly assigned choice questions
 - Demographic variable questions
- Pretest
- Promoted to the Western Australian public
- Done via social networks, social media and postcard drops to suburban houses → online link provided

Results

Sample demographics

- 77.8% of respondents were female
- 78.2% were aged between 18-34
- 32.5% of people have lived or do live on a farm
- 55.13% of people knew someone who lives or works on a farm
- 29% of people had household income above \$100, 000
- 68% of people had completed a university degree

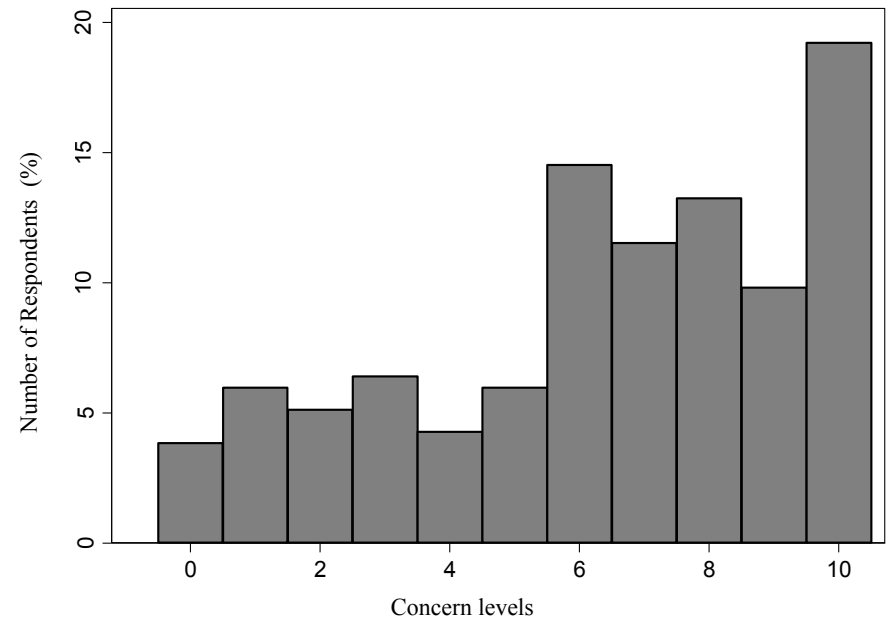
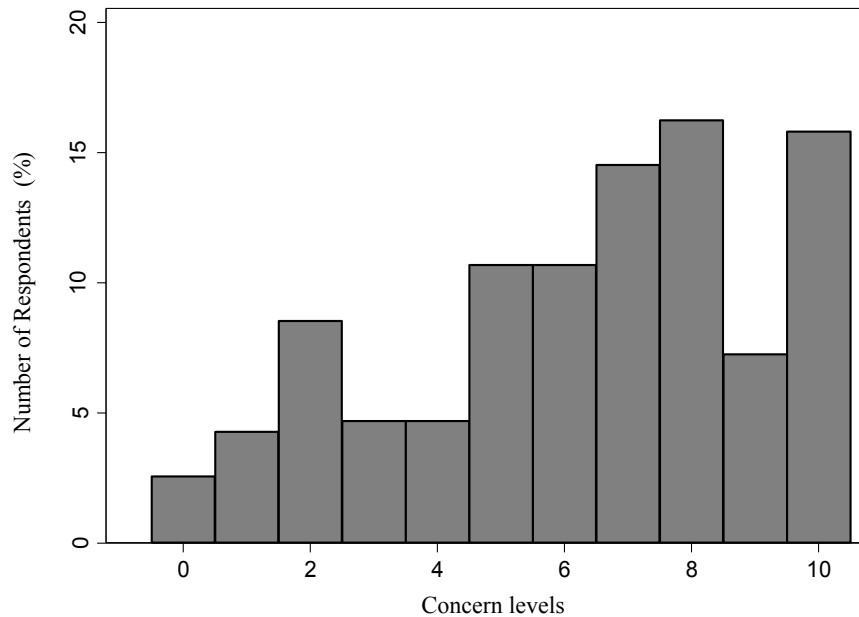


Attitudes and perceptions

- 71.8% of consumers said they were concerned or highly concerned about broiler welfare
- Most consumers responded 'don't know' when asked to rate the 'welfare protection of WA meat chickens'
- 'The conditions under which the chickens are raised' was seen to be the greatest concern to chicken welfare relative to 'slaughter methods' and 'the transportation of chicken to slaughter point'



Concern levels from 1-10 (low to high) upon seeing these images



Conditional logit model incorporating interaction variables and concern levels upon seeing the two images

Variable	Coefficient
Opt-out	-7.945***
Price	-0.361***
Natural ventilation	-1.130***
Natural ventilation x age	0.209**
Improved ventilation	-0.799**
Improved ventilation x age	0.172**
Stocking density	-0.101***
Stocking density x stocking density image	-0.001*
Stocking density x age	-0.013***
Stocking density x is or knows a farmer	0.019**

Variable	Coefficient
Beak trimming hot blade	-0.162
Beak trimming hot blade x beak trimming image	-0.173***
Beak trimming hot blade x female	-0.191
Beak trimming hot blade x completed university degree	0.483**
Beak trimming laser	0.339
Beak trimming laser x beak trimming image	-0.080**
Beak trimming laser x is or knows a farmer	-0.627**
Poor litter quality	-1.167***
Average litter quality	-0.423**

***, **, * Indicate $p > |z|$ at 10, 5, 1%.

Consumer WTP for a unit change in an attribute of chicken breast meat (\$/ kg) based on CLM with interaction variables

Stocking density and interactions	WTP \$/ kg
At sample mean attribute levels	-0.38**
Age=18-24	-0.35***
Age= 65+	-0.53***
Know a farmer/ are a farmer	-0.39***
Don't know any farmers	-0.34***

Poor litter quality	WTP \$/ kg
At sample mean attribute levels	-3.23***

Average litter quality	WTP \$/ kg
At sample mean attribute levels	-1.17**

***, **, * Indicate $p > |z|$ at 10, 5, 1%.

Individual characteristics at sample mean levels unless otherwise stated.

Values are reported in \$AUD.

Consumer WTP for a unit change in an attribute of chicken breast meat (\$/ kg) based on CLM with interaction variables

Hot blade beak trimming and interactions	WTP \$/ kg
At sample mean attribute levels	-3.00***
Have a university degree	-2.16***
No university degree	-3.50***
Female	-3.12***
Male	-2.59***
No concern for beak trimming image	0.46
Very high concern for beak trimming image	-4.32***

Laser beak trimming and interactions	WTP \$/ kg
At sample mean attribute levels	-0.69***
Know a farmer/ are a farmer	-0.47
Don't know any farmers	-2.21**
No concern for beak trimming image	0.72
Very high concern for beak trimming image	-1.49***

***, **, * Indicate $p > |z|$ at 10, 5, 1%.

Individual characteristics at sample mean levels unless otherwise stated.

Values are reported in \$AUD.

Consumer WTP for a unit change in an attribute of chicken breast meat (\$/ kg) based on CLM with interaction variables

Natural ventilation and interactions	WTP \$/ kg
At sample mean attribute levels	-1.38**
Age=18-24	-1.97**
Age= 65+	0.93

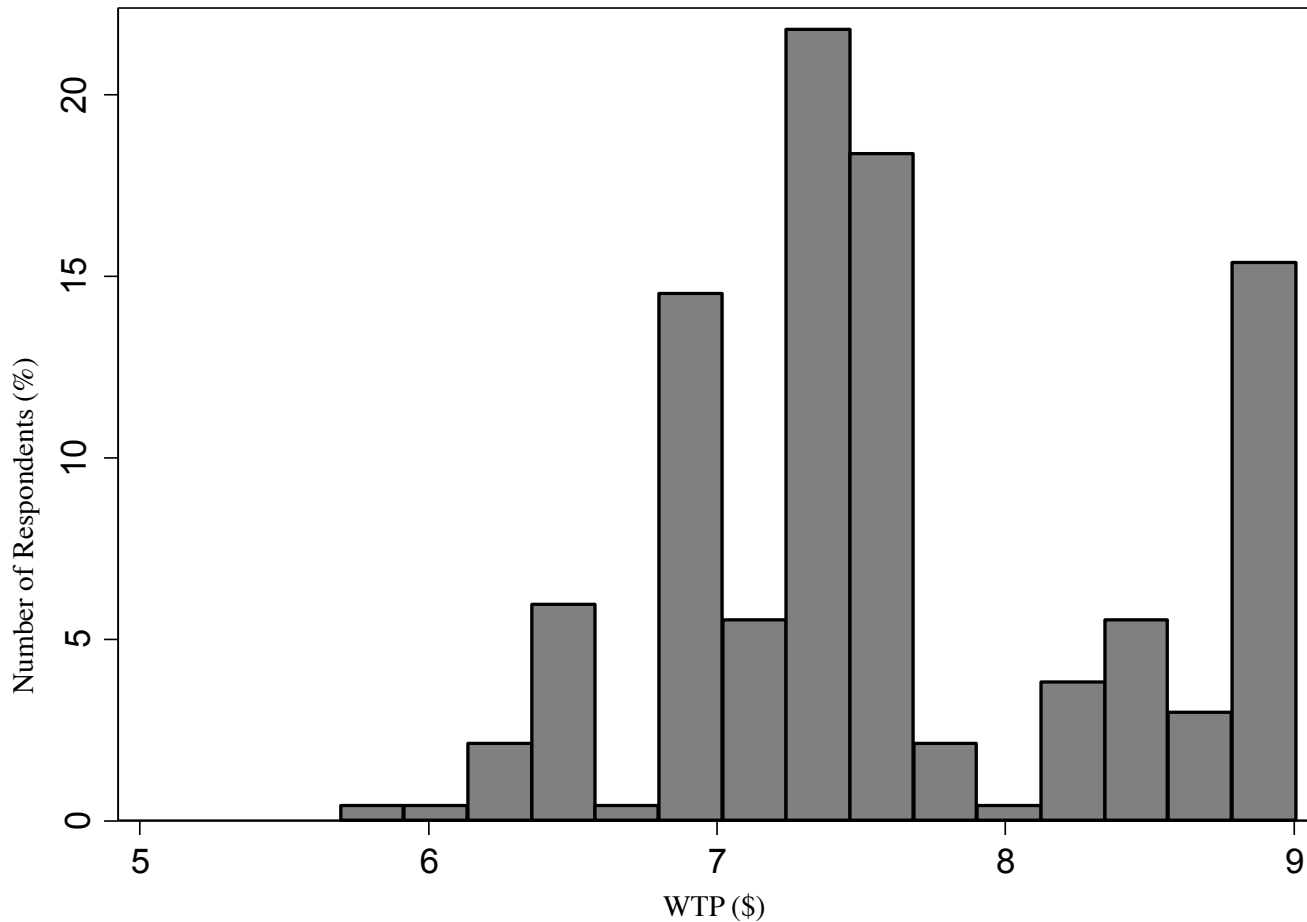
Improved ventilation and interactions	WTP \$/ kg
At sample mean attribute levels	-0.78**
Age=18-24	-1.26**
Age= 65+	1.12

***, **, * Indicate $p > |z|$ at 10, 5, 1%.

Individual characteristics at sample mean levels unless otherwise stated.

Values are reported in \$AUD.

Sample respondents WTP to improve in aggregate, litter quality, ventilation, stocking density and beak trimming from * to *** welfare for the CLM reported in Table 12



Conclusions, limitations and implications

- Producers have a better idea of what attributes consumers are WTP to improve and can assess the feasibility of improvements
- Coles could be charging significant premiums for their higher welfare meat products
- Since the time the study was completed, Woolworths introduced RSPCA approved chicken
- More informative labelling is needed to encourage consumers to pay higher premiums for improved welfare

However

- Consumer concern doesn't always match up with behaviour
- Many broiler production practices were not considered
- Demographic variables do not accurately represent the WA population

Take home messages

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