# Is there a room for using insect meal as a sustainable feeding alternative in chickens and pigs? Consumers' perceptions and willingness to pay

*Nada KAJAD, Zein KALLAS and Adzran MUSTAPA*

CREDA
CENTRE DE RECERCA EN ECONOMIA I DESENVOLUPAMENT AGROALIMENTARI

IRTA UPC

## Introduction

1. **The meat sector is one of the most contributing sectors to the GREENHOUSE GAS (GHG) EMISSIONS, which is bringing controversial discussions at the environmental and societal levels [1].**
2. **FOOD PRODUCTION ACCOUNTS for 26% of global GHG, of which 53% comes from animal production, 29% comes from crops and 18% from supply chain (transportation, packaging and sales) [2].**
3. **At the EU level, TWO REGULATIONS were approved that authorized the use of insect proteins in feed in aquaculture (Nº2017/893), poultry and pig farming (Nº2021/1372).**
4. **Nevertheless, the incorporation of unfamiliar feeding options could impede consumers' purchasing decisions and lead to market rejection.**

### Objectives

1. **To analyse Spanish consumers' willingness to pay (WTP) towards SUSTAINABLE ANIMAL PRODUCTS (chicken, pork and eggs) in animal feeding.**
2. **To assess the IDEAL INFORMATION CONTEXT AND COMMUNICATION path to be provided to consumers in order to increase their acceptance and WTP.**

## Methodology

1. **Data was collected in December 2022 from 1,017 consumers in Spain.**
2. Participants were **partially or totally responsible for the purchase decision at household level** and have **purchased chicken, eggs and pork at least once in the last three months**.
3. **The Contingent Valuation Method (CVM), using the SINGLE-BOUNDED DICHOTOMOUS CHOICE (YES/NO) was used.**
4. **TWO-STEP CVM, the first step was asking respondents to select the interval of prices they are willing to add as a premium. Then the second step was to ask them to value exactly how much they are willing to pay as premium.**
5. **The "cheap talk" and the "Solemn oath" scripts were used to reduce the hypothetical bias [3].**
6. **The information contexts were created based on a VIDEO AND A WRITTEN INFORMATION regarding the impact of animal production on the GHG emissions.**

**Communication channel 1:**

**A written text with an image [2]**
**+**
**A video**

**Communication channel 2:**

**A video**

**Communication channel 3:**

**The simplest information:**
Producing chicken/ pork/ eggs fed by a **SUSTAINABLE** feed with **INSECT** meal proteins implies higher costs for farmers.

## Results and Conclusion

Table 1. *Percentage of extra premium WTP of consumers under the different information contexts.*

| | Percentage WTP (%) by option | | | | | |
|---|---|---|---|---|---|---|
| | Text description + Video | | Only video | | No information | |
| | WTP | Std. dev | WTP | Std. dev | WTP | Std. dev |
| Chicken | **24.01** | 3.24 | **20.80** | 2.17 | **29.12** | 3.06 |
| Pork | **23.10** | 2.87 | **19.56** | 2.31 | **24.21** | 3.44 |
| Eggs | **31.39** | 1.66 | **28.05** | 3.91 | **35.70** | 3.64 |

1. **INFORMATION CONTEXT influences consumers' preferences.**
2. **The SIMPLEST information implies the highest WTP.**
3. **Consumers' AWARENESS, credible sources of information, and open market as purchase outlet were significant drivers of the perception toward insect as a feed.**
4. **High HETEROGENEITY levels were found according to the main characteristics of consumers**

### References

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