
PigStun
Developing non-aversive stunning methods for pigs

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PigStun Webinars April 2025

Introduction

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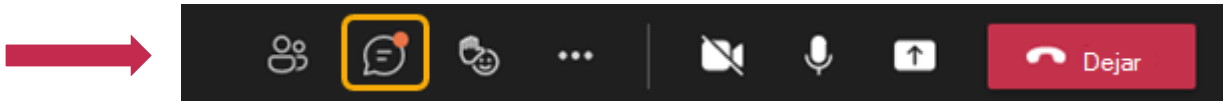
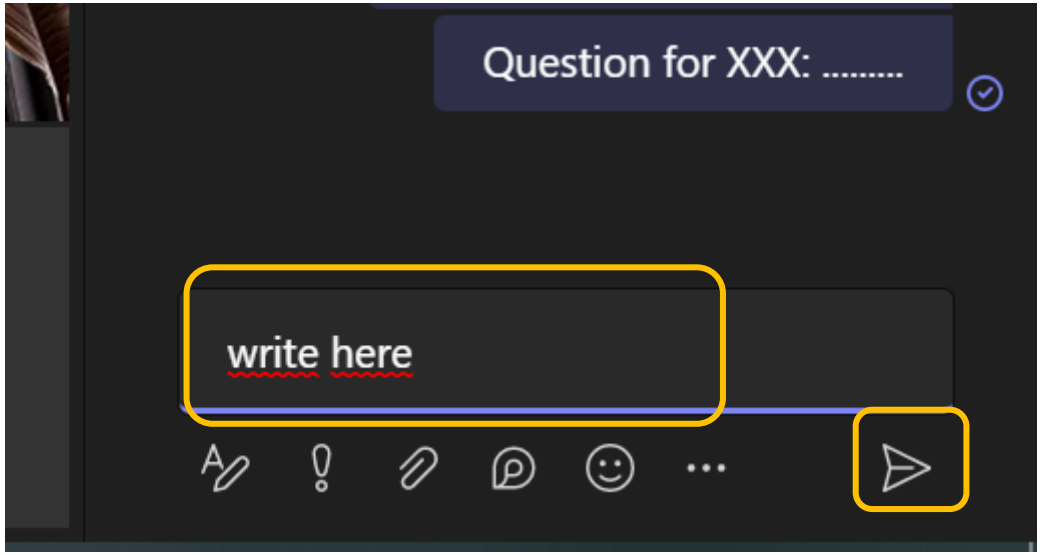
Instructions

Send your questions at any time during the webinar by:

- Sending an email to aida.xercavins@irta.cat
- Or using the chat





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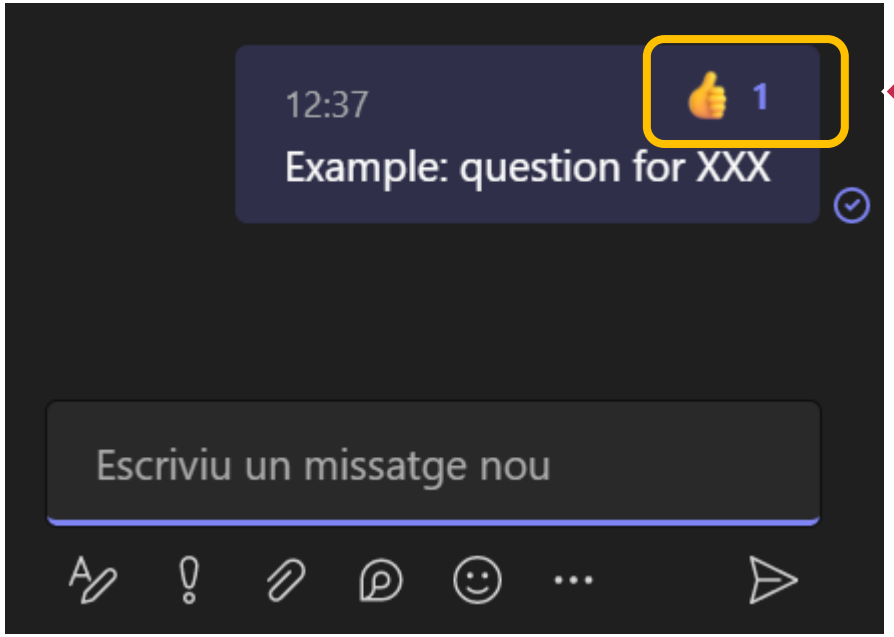
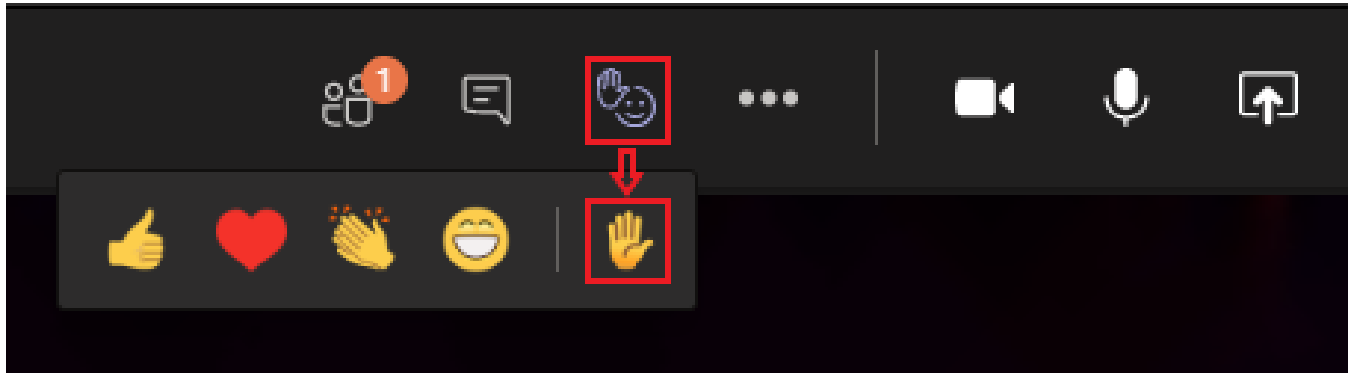


Question successfully registered

Instructions

- During the discussion we will address as many questions as possible, in chronological order.
- If you still have any concern, or you want to further discuss the given answer, please use the option “**raise hand**”:



Then **we will / you can open your microphone, turn on your camera** and speak.

Thank you for your collaboration!

General objective

The **main objective** of PigStun is to

Encourage EU pig slaughterhouses using high carbon dioxide concentration for stunning pigs to convert to more animal welfare friendly systems

To achieve this aim, we

- **Developed** technical specifications for promising alternatives
- **Pilot tested** them to collect data on meat quality and animal welfare
- **Extrapolated** the test settings to commercial scale
- **Postulated** economic and ‘ease of conversion’ implications

Execution of the project

The project is divided into 5 Work Packages

- WP1. Descriptive phase
- WP2. Planning phase
- WP3. Implementing phase
- WP4. Analytical phase
- WP5. Dissemination phase

WP1. Descriptive phase

The specific objectives of WP1:

- To **describe stunning practices** for pigs in high throughput slaughterhouses in the EU
- To **identify the main drivers** that influence the choice of slaughterhouse operators for a stunning practice.

WP2. Planning phase

The specific objectives of WP2:

- To **select four alternative stunning systems**,
- To **describe the assessment protocols** for testing and comparing the alternative stunning systems
- To **define benchmark ranges** for a limited number of indicators for existing CO_2-stunning and electrical stunning methods under commercial conditions.

WP3. Implementing phase

The specific objectives of WP3:

- To identify **baseline values** for the promising stunning methods that are to be tested.
- To identify **benchmark values** for existing CO_2-stunning and electrical stunning methods under commercial conditions.
- To implement and **pilot-test at a practical scale four alternative stunning systems**, to obtain pre-defined performance data from the four alternative stunning systems.

Specific objectives of WP4:

- **To analyse data** from each selected alternative regarding i) Stress during the Handling phase ii) Aversiveness during the Stunning phase iii) Effectiveness of the stunning, iv) Meat Quality and economic parameters v) environmental effects.
- **To compare these results** across alternatives and to a benchmark with high concentration of CO_2 or electrical stunning
- **To provide recommendations** regarding alternatives to high concentration CO_2 stunning on the basis of the results.

WP5. Dissemination phase

The specific objective is:

- To conceive and execute a communication and dissemination plan to share project results with the target public

Alternative stunning methods

1. **Optimized CAS process:** This system facilitates pre-grouped animals transported into a CAS system and continuously checks and optimizes the gas climate. Starting point is high concentration CO_2.
2. **Argon retrofit system:** This is a gas stunning system that can be retrofit into existing Dip-Lift and paternoster stunning systems to allow for stable inert gas mixtures at very low oxygen levels.
3. **Helium:** It involves helium in a new designed Lift system one- or two-phase stunning system in combination with nitrogen.
4. **Improved Electrical Stunning:** This approach aims to improve the process of electrical stunning with special emphasis on throughput rate, pre-stunning handling, design of raceways and entrance of pigs into the stunner.

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