

# EBroilerTrack Sound (ITAVI): Monitoring broiler stress in slaughterhouse through acoustic analysis



**aWISH**  
ANIMAL WELFARE INDICATORS AT  
THE SLAUGHTERHOUSE

ITAVI is a French national institute for applied research in poultry, rabbit and fish. The pre-slaughter waiting period is a stressful moment for broilers in slaughterhouses. Before entering the slaughter line, birds may be held in an area for up to 10 hours, with an average waiting time of 5 hours. Although the environment is somewhat controlled, the temperature is not automatically regulated, which can lead to fluctuations in conditions that impact animal welfare, depending on how full the room is. The waiting area is typically very noisy due to the constant movement of motorised equipment used to handle the containers. The high level of background noise presents a significant technical challenge for isolating the animals' vocalisations from surrounding industrial sounds.

To address this issue, ITAVI has developed an innovative solution designed to monitor the stress levels of broilers during the waiting period. The system uses advanced acoustic analysis models to identify specific vocal indicators of stress, such as distress calls, fear calls, and calls expressing discomfort. The system also continuously monitors the overall sound intensity level in the room.

This acoustic monitoring can alert slaughterhouse staff to elevated stress levels in the animals. This enables staff to take timely action to improve animal welfare outcomes, such as adjusting environmental conditions (e.g. ventilation and lighting).



Fig.1 - EBroilerTrack Sound analysis in Slaughterhouse



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Website



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