

# Carmelo Mastroeni

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KEY-WORDS:  
SILAGE – FORAGE ANALYSIS – SILAGE  
MANAGEMENT - FERMENTATION

## PROFILE

I am a second-year PhD student in Animal Nutrition, specialized in silage evaluation, silage management, forage analysis and fermentation

## AFFILIATION

Department of Animal science,  
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## LANGUAGES



Mother language



Level B1

## HOW TO REACH ME

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## PROJECT TITLE

**Use of oxygen-barrier films on silage to reduce the use of plastics on the farm, greenhouse gas emissions from silage bunker and improve the fermentation quality of forages**

### Steps of the research

- Evaluation of silage quality (fermentative, chemical and microbiological parameters)
- Silage management: harvest period, storage, fermentation pathway and feed-out phase
- Using of new oxygen barrier films to improve silage quality and mitigate plastic using at farm level
- Evaluate how several type of Lactic Acid Bacteria (LAB) can be used ad potential vehicle to mitigate volatile organic compounds (VOCs) emission
- Baled silage: ensiling large-round bales as an alternative technique to preserve forage

### Main Results

Using new oxygen barrier films is an opportunity to reduce plastic amount at farm level, enhance silage quality improving fermentation pathway.

### Why should you care?

Silage is widely used to feed dairy cows, it's crucial to evaluate silage quality considering all the features that are involved during the ensiling process to obtain a final product that can be as good as safety for the herd. Using new oxygen barrier films can be an opportunity to enhance silage quality in addition to a proper LAB or silage additives choice to vehicle fermentation pathway, and to mitigate plastic use reducing livestock footprint in a ecological contest.