



## Revisiting the use of reeds on organic farms in the Atlantic marshes

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## REVISITING THE USE OF REEDS ON ORGANIC FARMS IN THE ATLANTIC MARSHES

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RÉPUBLIQUE  
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INRAE



# The research farm

Experimental farm belonging to



the French National Research Institute for  
Agriculture, Food and Environment

Mixed crop-livestock farming system (160 ha),  
organic farming since 2017



**Transi'marsh was launched in 2009**

**→ a system-experiment dedicated to the agroecological transition for  
farms in marshes**

<https://www6.nouvelle-aquitaine-poitiers.inrae.fr/dslp/>



## Context

The herd spends 5 months of the year in a building (early November → early April) in free stalling

Needs for straw:



120-130 t / year



**Tracking down innovative practices**  
funding from the Région Nouvelle-Aquitaine



## → exploring alternative sources of bedding

One of the principles of agroecology:

Preserving the natural resources present on a farm (by maintaining their renewal capacity) and the associated ecosystem services

**What natural resource present in marshlands could  
be used for bedding?**



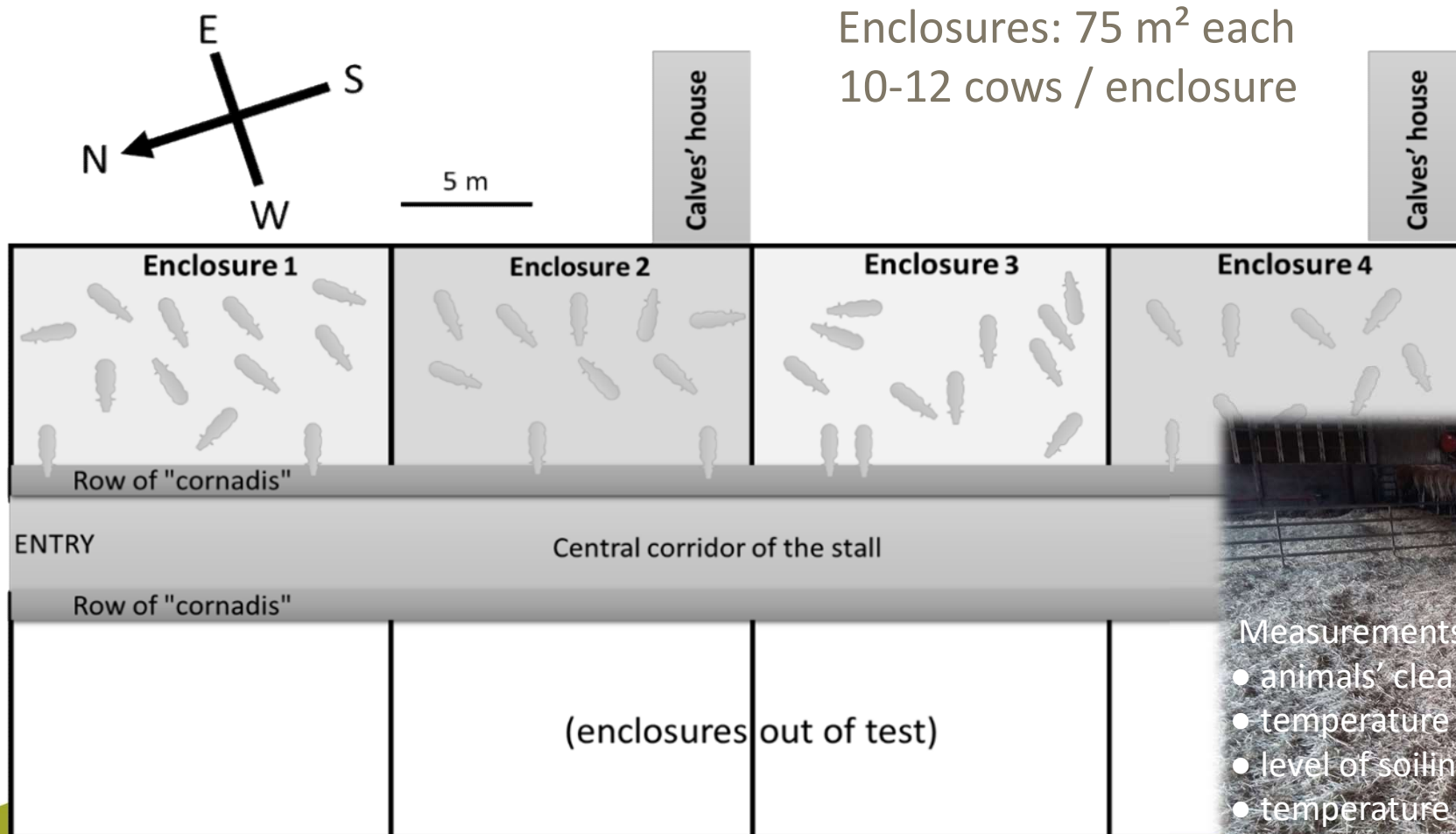
Why not the common reed?  
*Phragmites australis*







# The experimental design



- Measurements/observations :
- animals' cleanliness
  - temperature of bedding
  - level of soiling of bedding
  - temperature and humidity in the sheds



# Results

- Animal cleanliness:

2018: the quantities of bedding (straw or reed) were not sufficient to keep the animals clean

2019: the animals were kept cleaner than in 2018. By increasing the amount of bedding (~ 5 kg/m<sup>2</sup> of bedding at each mulching, with 3 mulchings per week), no significant difference in the cleanliness of cows between straw and reed bedding



## → Reeds used as bedding are as effective as straw



- Cost of reed: €53 / t (in 2018) and €92 / t (in 2019)

It can compete with straw economically

It is at best half the price, and at worst about the same price as buying straw 'delivered to the yard' (~ €100 / t)



## → The closer the reed bed is to the farm, the more competitive it is

# What is reed worth as pasture fodder?

A test of grazing on a small reed bed (~ 2 000 m<sup>2</sup>) in August 2018...



The composition of simulated bites:

	Fodder unit	Crude protein content	Clutter unit
Reed	0.61	108 g/kg DW	1.54
Permanent grassland	0.61	60 g/kg DW	1.29



# Conclusion and implications of this study

Reed is a good alternative to cereal straw

Its cost can be competitive compared to straw

Reed can also constitute a good additional fodder in summer as this plant has interesting nutritive value

➔ Reeds could be given a place on organic livestock farms that wish to make better use of natural resources, while also preserving them and biodiversity!

Many advantages of this natural resource

Provided that the reeds are **'managed' sustainably**:

Respecting the biological cycle of the plant by harvesting late in the season enables the reed beds to retain their role as a habitat for many animal species



The trials, visited by farmers (December 2019)

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- The Charente-Maritime *Département*



## Utilization of Common Reed (*Phragmites australis*) as Bedding for Housed Suckler Cows: Practical and Economic Aspects for Farmers

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**Abstract:** The common reed (*Phragmites australis*) has long been used in wetlands of the French Atlantic coast as fodder and bedding or roof thatching, among other uses. This article explores the practical and economic aspects of utilizing common reed for housing suckler cows compared to straw. Based on a study conducted over two years on a research farm of the French National Research Institute for Agriculture, Food and the Environment (INRAE), located in the marshes of Rochefort-sur-Mer, we show that reed is a good alternative to cereal straw and its cost is quite competitive compared to straw; the closer the reed bed is to the farm, the more competitive it is. By mobilizing the concept of restoration of natural capital, we lay the foundations for a debate on a possible revival of this ancient practice, with the idea that ecological restoration of reed beds can benefit biodiversity and the economy of wetlands farms.

**Keywords:** mixed crop-livestock farms; bedding; restoration of natural capital; reed beds; wetlands; bioeconomy

### 1. Introduction

In 2019, approximately half of the 17.3 million tons of cereal straw produced in France was used as bedding for livestock [1]. Many livestock or mixed crop-livestock farms are not independent in terms of straw for housing their animals. Yet straw is an agricultural resource that in some cases

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Thank you!

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