ASSESSMENT OF PRODUCTIVE AND MEDICAL CHARACTERISTICS OF ECOLOGICAL DAIRY COW FARMS

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INTRODUCTION

It is possible to observe a growth of ecological dairy farms in Catalonia, in 2020. The European, national and Catalan legislation is forced to adapt to the new requirements. Also, this emerging growth invites us to reflect on the current reality. The determining criteria that define these farms and give added value to the organic product are: more rustic breeds, the housing conditions, reproduction, feeding and healthcare.

Objective: Prospective study of how the Catalan primary sector deals with the main medical problems (mastitis, reproductive issues and lameness) and their treatments.

MATERIAL AND METHODS

- Research of the **current legislation** and **statistics** of the Catalan ecological sector.
- **Dissemination of on-line questionnaires.**
- **Scheduling of visits** to 5 ecological and 1 non ecological farms.
- **Interviews** to farmers and veterinarians related to the sector.

Figure 1: *Can Frigola del Bosc*

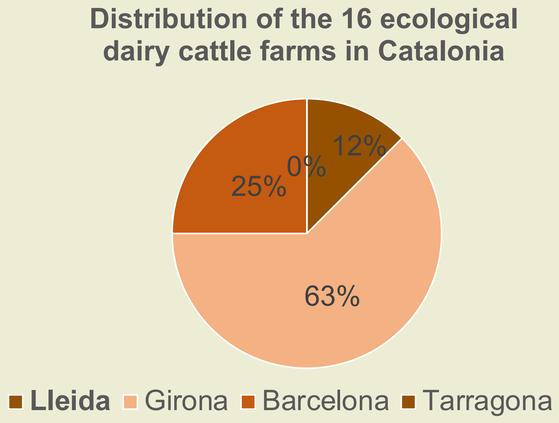

Figure 2: *Distribution 16 farms*

RESULTS

Participation in the questionnaire:

6 ecological and 6 non ecological dairy cow farms.

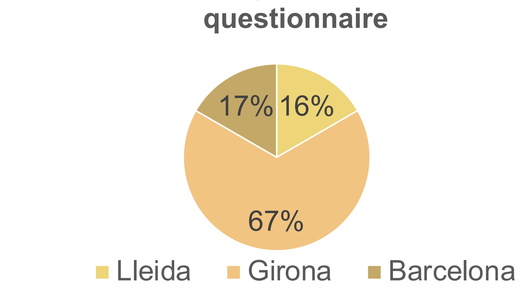

Figure 3: *Distribution of the organic farms in the sample*

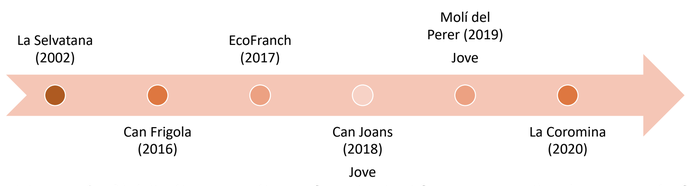

Figure 4: *Distribution over time of ecological farms according to moment of certification*

Visits:

- **La Selvatana**: Ecological farm since 2002 with 142 cows. 26,5 L/cow/d
- **Mas La Coromina**: Large ecological farm. From 400 and 38 L/cow/d to 260 cows and 29 L/cow/d.
- **Mas Molí del Perer:** Ecological farm, small and familiar. 25 -20 L/cow/d.
- **Mas Pascol**: Non-ecological farm of 650 cows. 34,5-35 L/cow/dia.
- **Can Frigola del Bosc**: Ecological, small and family farm. 22 L/cow/d.
- **Can Joans**: Ecological farm of approximately 100 cows and 40 non-ecological pigs. 20 L/cow/d.

Medical features:

Table 1. *Average number of the medical features from the studied farms*

	ECOLOGICAL (6)	NON ECOLOGICAL (6)
% Lameness	**10,8%** **Mild** severity. They tend to indicate "Aigarol- abscés", two indicate "Gavarro" and "Desmatitis digital" as the second most frequent type of presentation.	**16,5%** **Mild** severity. We see more kinds of problems: "Aigarol-abscés" and "Desmatitis digital" as main presentation and we also see others such as "Gavarro", ''Hiperplàsia interdigital", "Llaga a la sola" and "Malaltia línia blanca-abscés"
% Mastitis (RCST)	**8,1%** **260,6 cel/ml**	**19,8%** **211,5 cel/ml**
Dystocia	**Very few**, they tend to indicate none or fetal dystocia	**10%**, they tend to indicate malposition and/or large calf, twins and womb torsion.
Postpartum problems	**0-11%** . Retention of seconds, abortion and metritis	**15.75%** Abomasum displacements, metritis, ketosis and hypocalcemia.

Productive features:

Table 2. *Average of the productive features from the studied farms.*

	ECOLOGICAL (6)	NON ECOLOGICAL (6)
Number of lactating animals	74,83 (50-170)	349,67 (67-1050)
Parts per cow	4,93	2,43
% replacement	15,8%	27,5%
Age at 1st birth	26m	24,26m

Figure 5: *Antenna for activity control application*

Figure 6: *Ear sensor*

Figure 7: *Wi-Fi necklaces*

Figure 8: *Bull*

Alternative treatments:

Only 2/6 ecological farms use alternative treatments as 1st option:

La Coromina: Homeopathy to treat mastitis and lameness.
EcoFranch: Phytotherapy to treat mastitis and diarrhea of calves.

Interviews to veterinarians who use alternative treatments in their daily practice:

Raquel Servitja: OBSALIM METHOD, 61 cards with all the symptoms of ruminal instability.

Jordi Tost: Gav-Allfeed, health protocols based on naturopathy, including the design and application of various products.

CONCLUSIONS

- **Ecological farms seek to** optimize resources, have fewer cows, less milk production, less disease and live longer with more births per cow.
- The **introduction of new technologies** is a good opportunity to improve animal welfare and increase the quality of life of farmers. Investing in prevention is a good ally to reduce the use of chemical synthetic drugs.
- Encourage the education of farmers and the formation of veterinarians who can **promote the use of alternative treatments and advice**.