

COMPARISON OF CATTLE IDENTIFICATION COSTS USING CONVENTIONAL OR ELECTRONIC SYSTEMS IN SPAIN



C. Saa, M.J. Milán, G. Caja and J.J. Ghirardi

Grup de Recerca en Remugants, Departament de Ciència Animal i dels Aliments

Universitat Autònoma de Barcelona, Spain

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INTRODUCTION

A recent report of the European Commission on Regulation EC 1760/2000, showed the current **deficiencies** of conventional identification and registration (ID&R) **systems in cattle** and recommends the use of an electronic ID system.

The aim of this study was to evaluate and to compare the costs of three strategies of ID and R of cattle population in Spain.

MATERIALS & METHODS

Strategies evaluated were:

- **Conventional ID (CID):** 2 plastic ear tags (1 € each; 6% annual losses).
- **Electronic ear tag ID (EID):** 1 electronic ear tag (2.2 € each; 3% annual losses) and 1 plastic ear tag.
- **Electronic bolus ID (BID):** 1 electronic bolus (2.5 € each; 0.3% annual losses) and 1 plastic ear tag.

The entire Spanish cattle population in 2002 (**6.5 million**) and three standardized types of farms: dairy (100 cows), suckler (600 cows) and fattening (1,000 calves/yr) were evaluated.

RESULTS & DISCUSSION

CID strategy showed the lowest for ID&R, but rate of ear tags losses and lack of automatic transfer and data management impaired the reliability of the entire system. EID and BID strategies showed similar costs, being their main cost components the equipments required and the initial identification devices. Both allowing automatic data management, and guaranteeing the traceability.

Table 1. Cost of ID&R strategies in the Spanish cattle population.

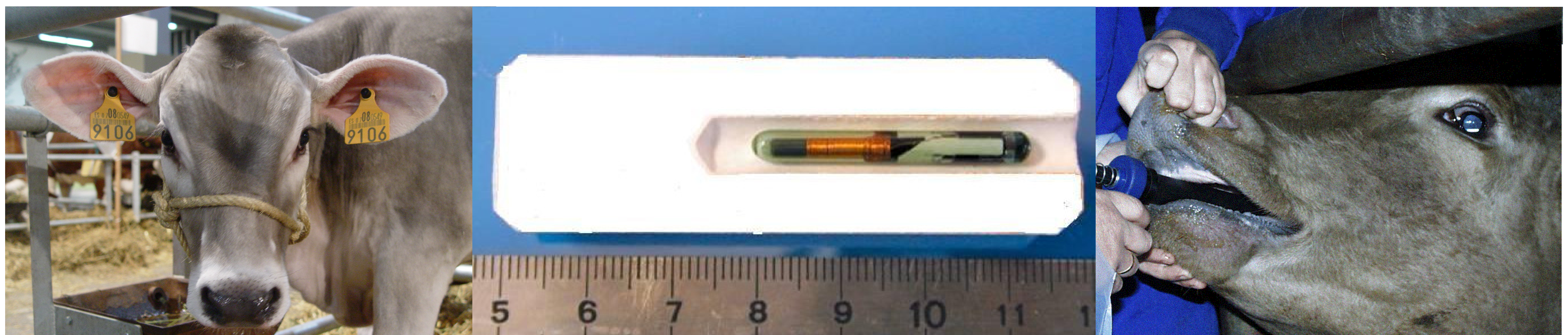
Item	CID	EID	BID
Devices ID, %	16.4	20.7	22.3
ReID, %	14.7	10.6	6.2
Labour cost, %	13.0	7.6	6.4
Movements-readings:			
- among farms, %	24.9	1.7	1.2
- in abattoir, %	8.6	0.5	0.5
Recovery in abattoir, %	1.3	1.0	1.0
Data base, %	13.7	10.9	10.7
Equipment required, %	7.4	47.0	51.7
Total costs: (€ · yr ⁻¹) × 10 ³	30,500	38,538	39,249
€ · animal ID ⁻¹ · yr ⁻¹	12.20	15.42	15.70

In farm type evaluation when the number of animals is greater, the labour cost increase in the same proportion and the equipments cost per animal identified decrease.

Table 2. ID costs according to farm type.

Farm type (€/animal ID · yr)	CID	EID	BID
Suckler cows	6.98	6.18	5.70
Dairy cows	6.91	6.86	6.52
Fattening calves	1.83	0.92	0.61

This evaluation did not consider others costs and benefits usually associated with ID&R systems (diseases programmes, performance recording, genetic improvement, etc.) that could be increase the number of annual readings and registrations, increasing the total annual cost of the system.



CONCLUSION: Size of cattle farms and price of electronic devices & reading equipment are the main key factors for the implementation of electronic identification systems (EID & BID), the both showing similar costs in cattle.

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