

Financial viability of two dairy farms: Comparative Mexico and Catalonia



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Objective

Economical evaluation of two intensive dairy farms, one of them situated in Osona, Catalonia region and another in the dairy basin of Tizayuca, Hidalgo, Mexico. Both are high cattle density regions.

Material and Methods

Survey on farms: 2 farms were surveyed to find data about their structure, management, production level, costs and incomes.

Economical index: Total Cost, Costs/Cow, Costs/Liter, Total Incomes, Benefits, Threshold of profitability.

$$UR_L = (C_F - I_F) / (I_{MV} - C_{MV})$$

Results

- The Catalan farm, despite having 48% fewer heads than the Mexican farm, achieves a 13% lower production. This is because the milk produced per cow in lactation and day is 62% higher.
- Mexican farm has 5% more total annual cost, because the food expenses. But the cost of manpower is 2.5 lower.
- Catalan cost/cow is almost twice than in Mexico. But cost/liter is quite similar.
- Both farms have benefits above 20000€/year.
- Threshold profitability in liters is 1611676L/year in Osona and 2947202L/year in Tizayuca, that is, 17.7L/cow in lactation and day in both farms.**

Graphic 3 and 4: Threshold profitability in liters

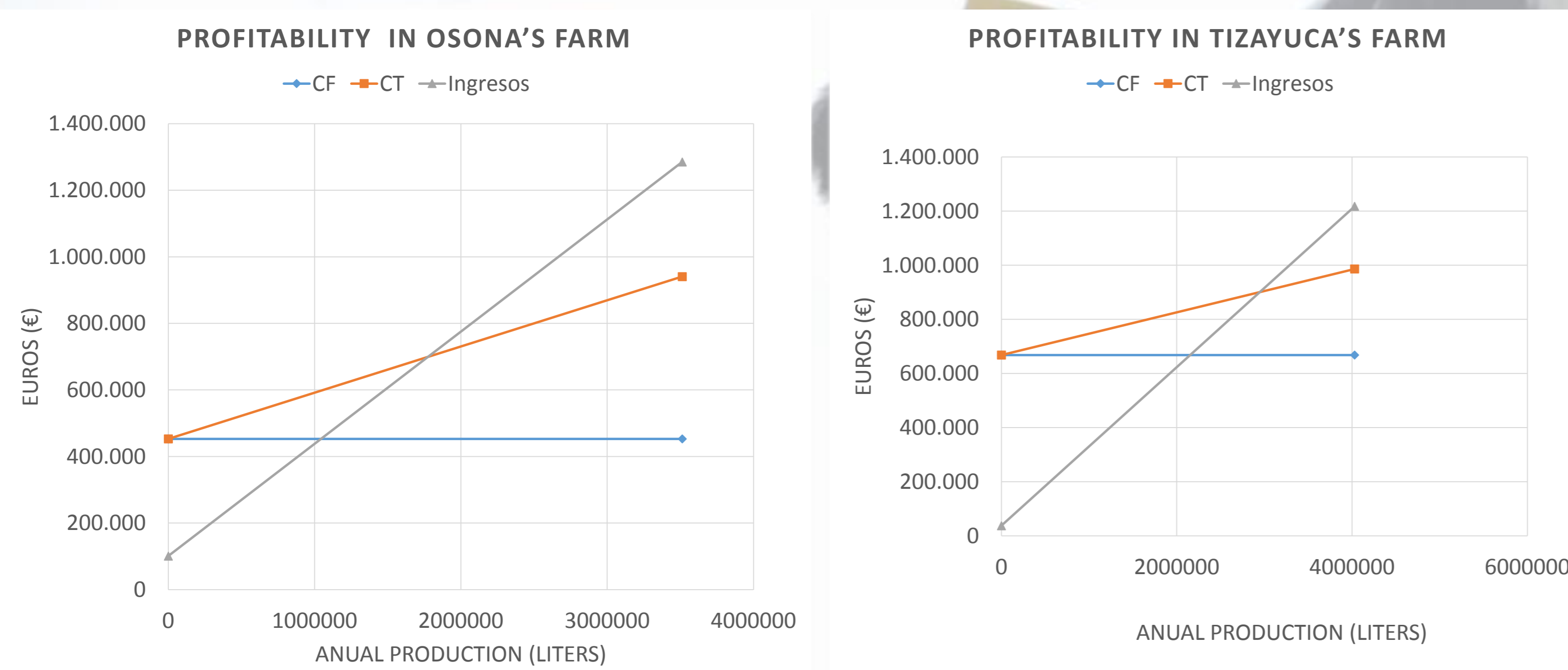


Image 1: The region of Osona

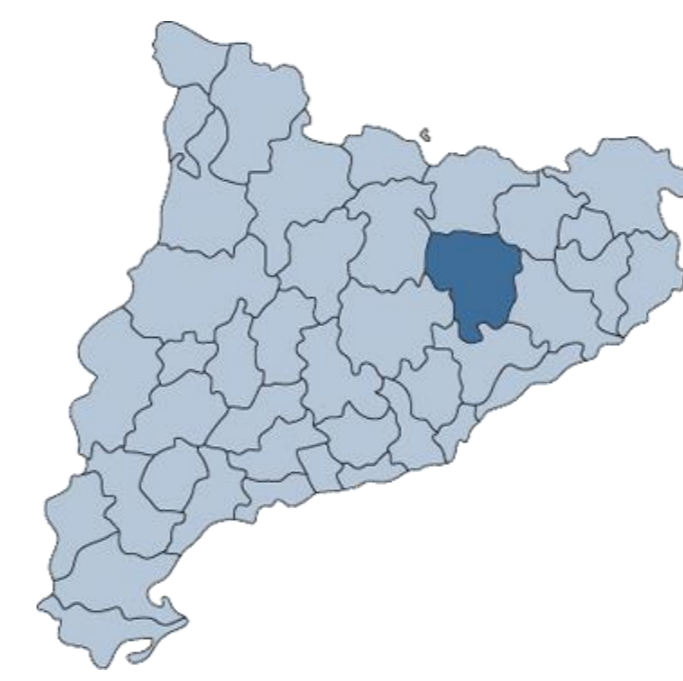
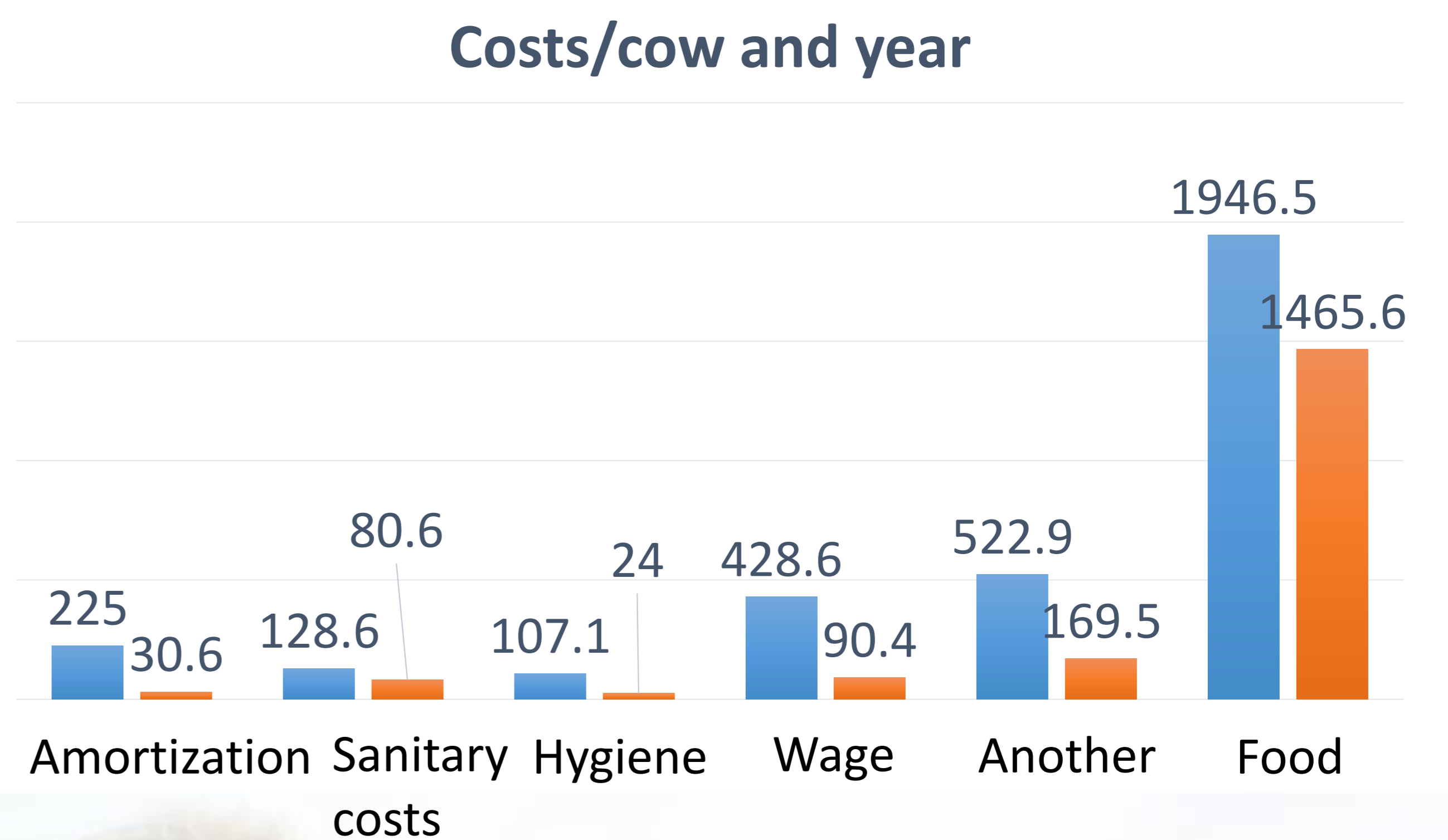


Image 2: The region of Hidalgo

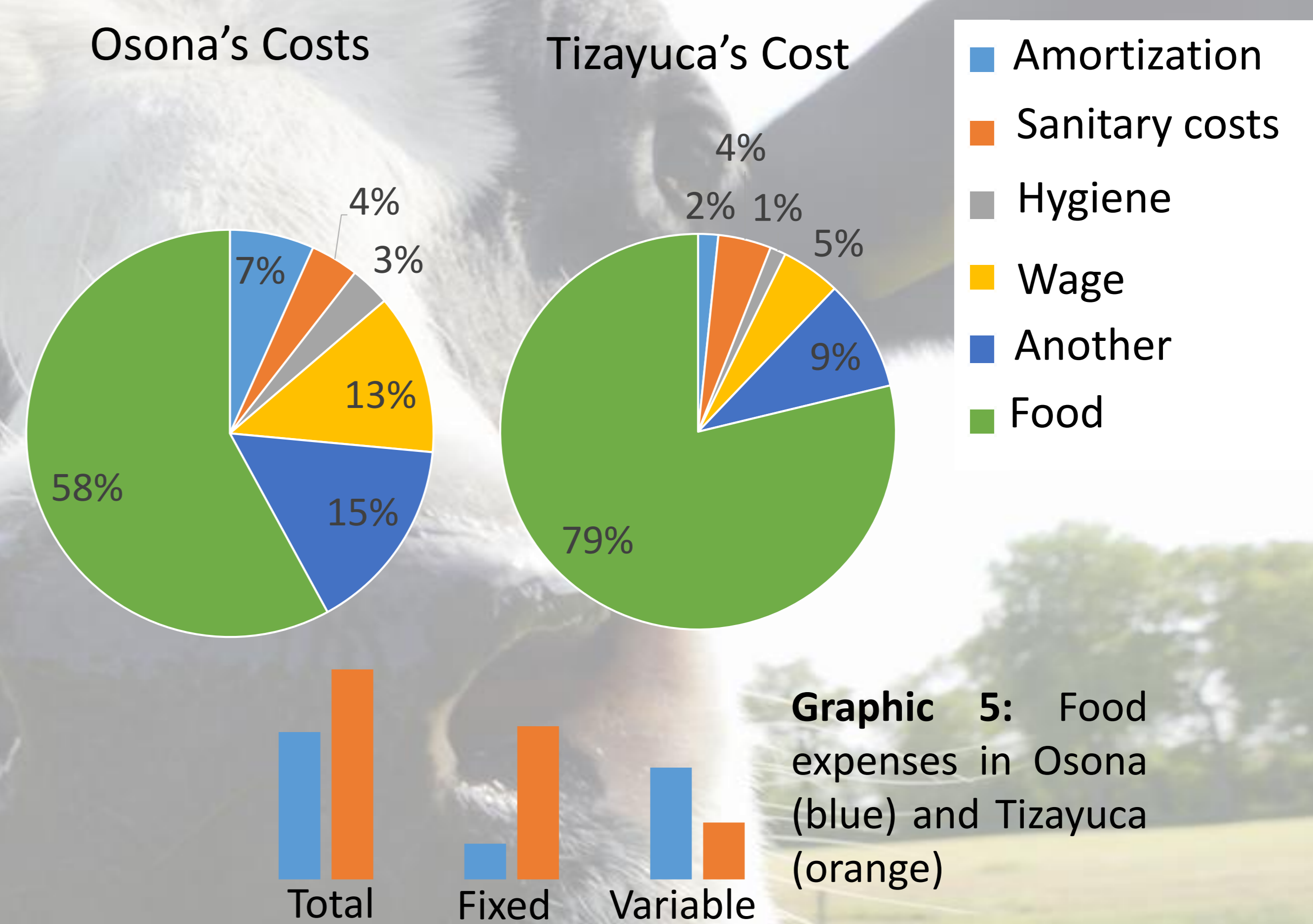
Table 1: Description of the farms

	Osona's farm	Tizayuca's farm
Cows in lactation	250	460
Dry cows	30	70
Reposition (%)	35	20
Liters/Cow in lac/day	38.5	24
Liters/year	3513125	4029600
Sale Price (€/L)	0.320	0.293

Graphic 1: Costs for cow and year in Osona (blue) and Tizayuca (orange)



Graphic 2: Weight of different costs in each farm.



Graphic 5: Food expenses in Osona (blue) and Tizayuca (orange)

Conclusion

- Genetics, environment and climate affect the difference in production/day, but the most important factor is **feeding**. Diet is also a decisive economical factor, so accurate formulation determinate a farm viability.
- When the cost of labor force increase the farms has to invest in infrastructure.
- The difference between yield point and actual production is higher in Catalonia.
- Intensive dairy farming has similar threshold profitability in liters in different territories around the world.**
- To reach a balance of costs and incomes the farms has to adapt to reality of its territory.
- Look to the future, is more profitable and environment sustainable to increase production per cow than herd size.