

TEACHING AND LEARNING BEYOND-THE-BOOKS: DAIRY FARM EXPERIENCES

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ABSTRACT

Dairy science has a great relevance in agriculture and in Animal Sciences education. In the European Union the total cow's milk collected, by dairy farms rounds the 154 million tonnes in 2017 (see Figure 1.) (1). For a better student's acquisition of knowledge and skills, the learning process needs to have a theoretical and practical approach. Therefore, field trips and academic internships into dairy farms, with protocols with universities, can strongly contribute to the student's academic learning (2). Academic institutions, with experimental farms, have a great relevance since students can have a daily practice and have a responsibility for various kind of activities. The Science and Technological School of Évora's University holds an experimental farm called Herdade da Mitra, that is managed in partnership with Z.E.A. - Sociedade Agrícola Unipessoal, Lda, and protocols with commercial dairy farms that are open to receive students and give them the opportunity to evolve and develop their skills acquired at university.

At the experimental farm the aim is self-sustainability and to lend the opportunity for the Animal's Science, Zootechny, Agronomy and Veterinary students to practice what they learn inside the classroom. The farm activities supervised by the teachers give student's competences on dairy farm management: nutrition, reproduction, milking and animal health and welfare. At the commercial farms, besides a business and good dairy farms practices' knowledge, it's of huge importance a symbiotic relationship between the dairy farm manager and the students, supplemented by the academic supervisor.

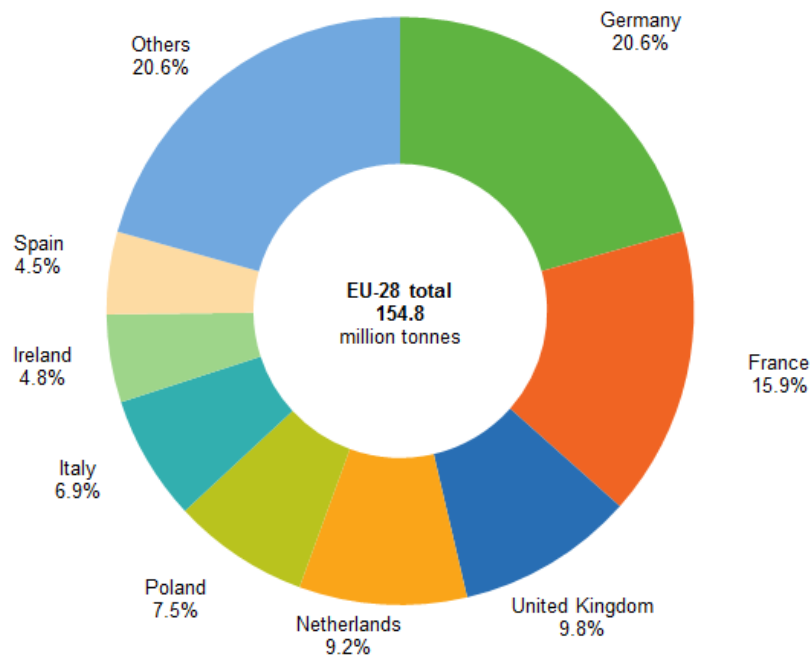
Teaching and learning beyond-the-books aids students to quickly progress into farm managers, acquire tools for research work and have more employment opportunities.

Keywords: dairy farms; education; outside classroom.

REFERENCES

1. Eurostat. Milk and milk product statistics [Internet]. 2017. Available from: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Milk_and_milk_product_statistics#Milk_production
2. Kitchen and Sebright. Students Gain Hand-On Experience Through Dairy Farm Internships. Farmshine newspaper. 2013

ANNEX



Source: Eurostat (online data code: apro_mk_pobta)

eurostat 

Figure 1 Collection of cow's milk by dairies, 2017 (% share of EU-28 total, tonnes)

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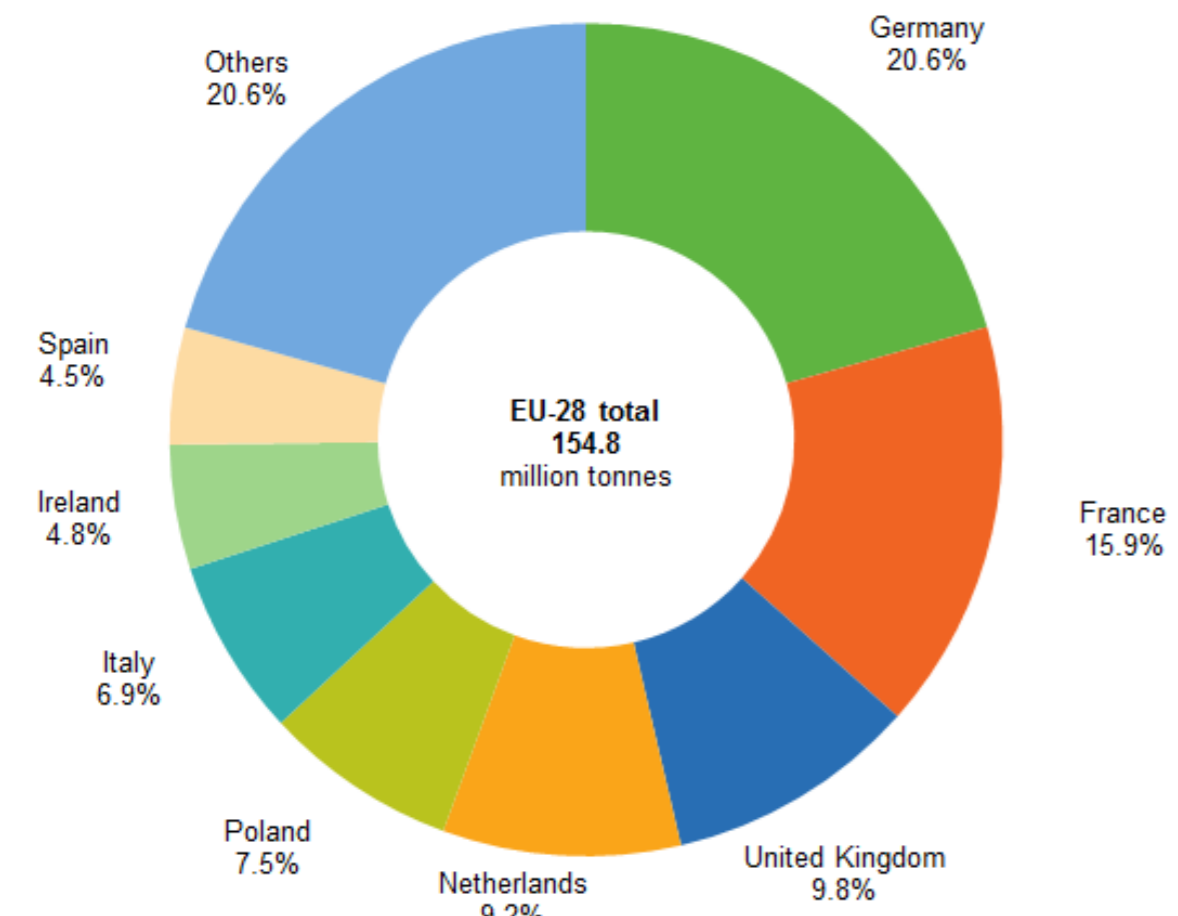
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1 DAIRY SCIENCE IMPORTANCE

Collection of cows' milk by dairies, 2017
(% share of EU-28 total, tonnes)



Source: eurostat

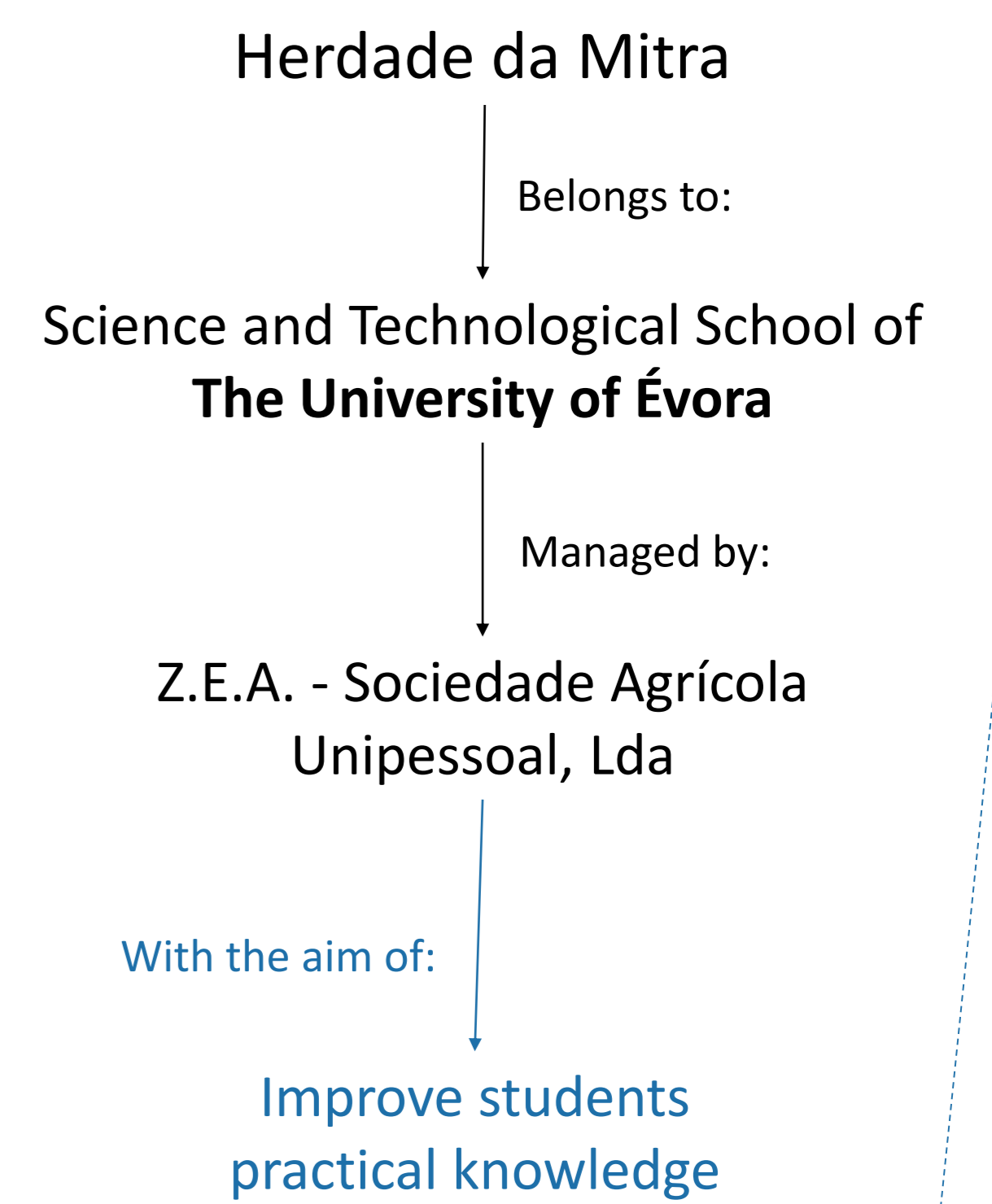
Dairy science explores the technology and science behind the production of milk and milk products.

Dairy science students must learn everything from raising cattle to managing a dairy plant.

2 KNOWLEDGE OF THE SUBJECT

- Animal nutrition;
- Reproduction;
- Lactation;
- Animal health and welfare;
- Business.

3 EXPERIMENTAL FARM

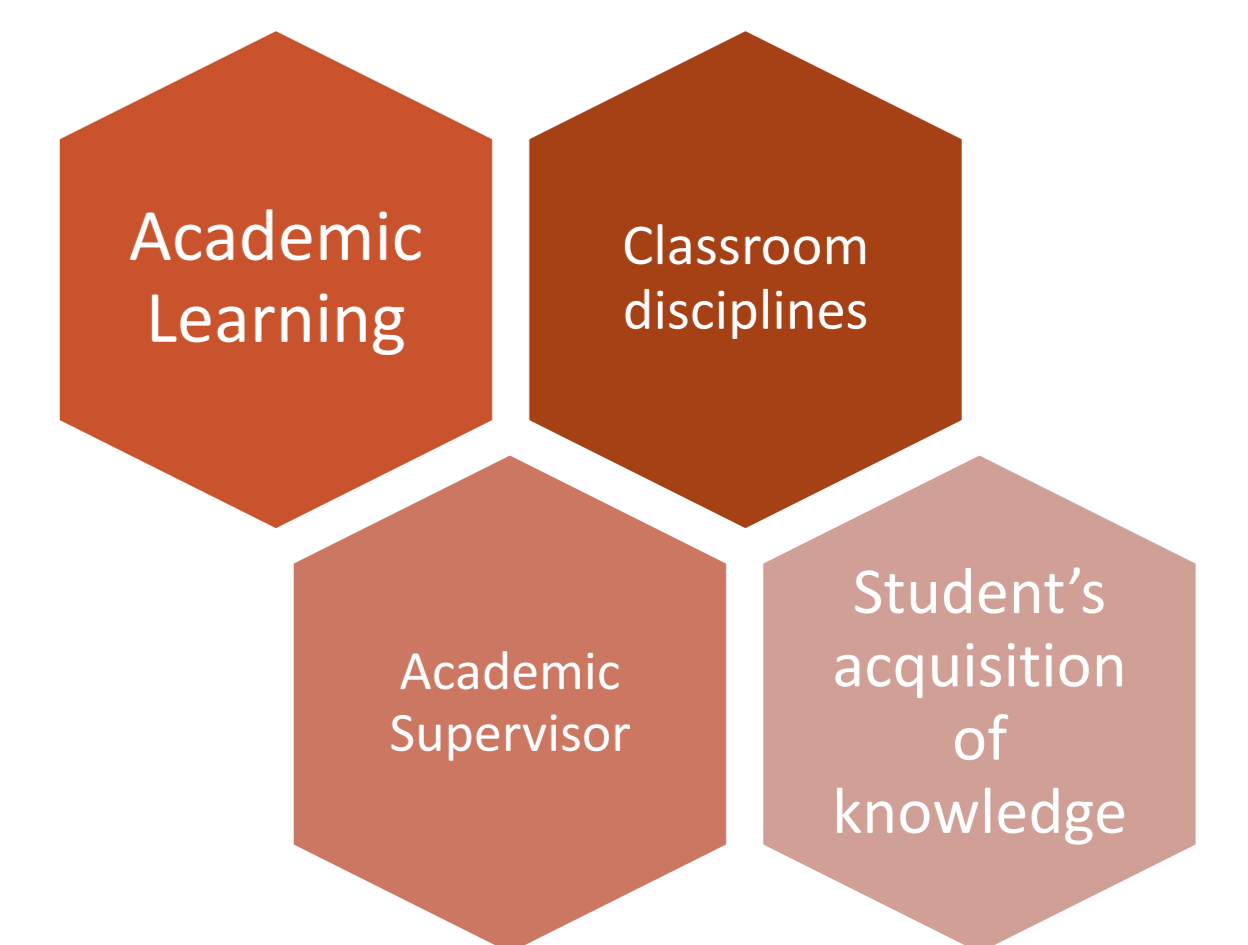


5 STUDENTS PRACTICAL APPROACH



Opportunity to **evolve** and **develop** their skills acquired at university

4 Teaching and supporting students learning



6

PROFESSIONAL AND PERSONAL SKILLS

It is of huge importance a symbiotic relationship between the **dairy farm manager** and the **students**, supplemented by the **academic supervisor**.

Modern and well established scientific principles, practices and skills should be used to obtain maximum **economic benefits** from dairy farming

Teaching and learning beyond-the-books aids students to acquire tools for **research work**, have more **employment opportunities** and quickly **progress** into **farm managers**.