Determining the costs and revenues for dairy cattle

Short Training Course on Agricultural Cost of Production Statistics
For integrated systems: meat - milk - forage crops:

**Crop entreprise**

- **Revenues are:**
  - Proceeds from the sale of crops
  - Amount used by the livestock entreprises, valued at market price

- **Cost are:**
  - Related to crop (fertilizers, labor, etc.)

**Meat entreprise**

- **Revenues are:** Generated by the sale of animals for slaughter

- **Costs are:**
  - Specific expenses related to livestock
  - Cost is the amount of forage from farms used for meat cattle, valued at market price
1- Definitions

**Production costs** associated with dairy farming:

- All expenditures incurred in raising cattle for milk production: feed, insemination, veterinary cost, etc.
- All expenditure incurred specifically for the "milk" workshop: milking, repair and maintenance of machinery and tools, etc.
- The fixed cost of capital used by the dairy operation

**Revenues** associated with dairy farming:

- The sale of fresh milk
- The sale of cheese, cream, butter or other products processed on the farm?
- The costs associated with the purchase of cattle for the dairy should be accounted for as investments.
2- Questions and assumptions

• Dairy is almost always coupled with the production of meat (joint products) and possibly that of crops (e.g. forages).

• It is therefore essential to spread the costs of operating in different activities (milk - meat - other): What allocation?

• The cost and revenue accounting methods depend on the nature of the activities:
  
  o Joint activities: with main activity the production of milk and secondary activity which sale of calves, heifers, etc.
  
  o 2 distinct activity : one fore milk and one for meat
Main production: milk and dairy products (processed on the farm)

Side Productions: calves, heifers, culled cows

2 cost computing options:

Option 1: Animal sales are considered as revenue for the dairy enterprise

- Revenue can be separated into secondary products
- Can result in overestimation of the cost / liter of milk
Option 2: The costs of milk production are isolated

- Revenue from the sale of animals are deducted from the total cost of the dairy activity
- This deduction is only possible at the level of the total cost and not at the level of its components
- It is assumed that the income generated by the joint product is equal to its cost of production
- It is not needed necessary to use allocation keys in neither case.
The farm has two (or more) distinct activities:

- The dairy activity, with its by-products
- The breeding of animals for meat production
- Crop related enterprise (forage)

In this case we need to account for costs and revenues separately for each activity:

- **For the separable costs** (labor related to milking, fertilizer for crops, machinery / specific tools, etc.), accounting is done directly for each activity

- **Non-separable costs** (feed used for dairy and beef cattle, energy, etc.) must be allocated to each activity using appropriate allocation keys
Situation 2: mixed entreprise dairy/meat (2/4)

Possible allocation keys for joint costs between the milk and meat enterprises:

**Feed costs**

- **Feed cost**: for all livestock multiplied by the share of dairy herd in the total herd (number of heads).
- **Pasture**: cost for all livestock multiplied by the share of the dairy herd grazing in all animals of the farm.

**Other variable costs**: the number of heads can also be used as an allocation key, especially for labor, water consumption, veterinary fees, etc.
The use of these inputs is a function of the size of the herd.

- **fixed and undivided expenses** (maintenance of buildings and machinery, energy, labor, overhead, taxes, finances, etc.): Cost for all livestock multiplied by the share of dairy enterprise in value added of the farm (milk + meat).
- **If the farm also grows plant products**, a first allocation may be needed: cost for the entire farm multiplied by the respective share of crops and livestock (milk and meat) in the total value added of the farm.
Dairy entreprise

• **Revenues**
  - Generated from the sale of fresh milk
  - Generated from the sale of processed dairy products (on the farm)
  - Generated from the sale of calves, heifers and culled cows

• **Costs**
  - Expenses related to Dairy entreprise
  - Forage quantity supplied by the farm and used for the dairy herd, valued at market price
