

Costs and key points of the production of rabbits on pasture

The production of rabbits on pasture mainly has two types of costs, since the costs of setting up the pasture are considered external to the system followed: (1) **costs of installing the infrastructure**, which includes permanent external fencing, interior fences and mobile shelters; and (2) **daily running costs**, which include time for workers to move the animals on the pasture, and time to clear the plot before the rabbits pass through (only in spring).

■ Quantification of the costs of producing rabbits on pasture

The quantification of producing rabbits on pasture (Figure 1) is based on calculating three different types of costs:

1. Cost of setting up the pasture.
2. Cost of installing the infrastructure.
3. Cost of daily maintenance of the system.

Next, we will describe the different alternatives that we have analysed for each of these processes, indicating the costs they represent and their variability (Table 1).

1. Cost of setting up the pasture. This cost includes defining a breeding area where there is or will be a pasture. The **cost of installing the pasture depends on its area**. For 40 rabbits in a rotation of 60 days, an approximate area of 0.96 ha is considered adequate. This corresponds to a **daily area of 160 m² (plots of 16x10 m) for the 40 rabbits**. Therefore, two situations arise:

- If the exploitation of rabbits is to be carried out in an **area where there is already a pasture, the cost can be considered 0**, since the activity of moving the rabbits itself allows the pasture to be maintained without an additional cost.
- **If there is no pasture in the area chosen for exploitation, costs are incurred to develop it**. These costs can be found in the sheet corresponding to the set-up of a pasture ("Costs and key points of setting up a pasture").

2. Cost of installing the infrastructure. This cost includes the **exterior fencing of the entire pasture area**, the interior fences to separate the daily plots, and the mobile shelters. The costs of such infrastructure are the following:

- The permanent exterior fence is approximately **650 m for the area calculated for 40 rabbits**, although it varies depending on the shape of the plot. This fence is made with **hunting mesh** (€3/m) because there are dogs protecting the rabbits from predators. If there were no dogs, we would have to look for a more resistant mesh. For its part, the **interior mobile fences** that delimit the daily plots are made by us, a total of 10 units of 3x0.9 m, each costing about €15.



Figure 1. Rabbits on pasture, Planeses (La Garrotxa, Catalonia). Photo: Marc Gràcia.

The design is the same as for pasture chicken production.

- **A shelter consists of a self-built iron structure without a floor** (3 x 4 m) with a raised structure and wheels so that it can be transported by hand every day. It has a canvas roof with cane on top that serves as protection (in total €200 per refuge). A piece of wood is placed at the bottom of each shelter to protect the animals that hide underneath (€90).

3. Daily running costs of the system. The daily running of the entire rabbit system basically includes: the **daily movement of the animals to the corridors established in the pasture**. Food has practically no cost. The starting point is 4-week-old rabbits that have been raised on the farm by their own mothers (see the corresponding sheet on the production of young rabbits).

- **Moving the animals includes moving the mobile fences and the shelter.** This represents a total of 0.5 h of a farm worker during the 60 days in which the growth of the rabbits is maintained.
- In spring, it is often necessary to **clear the brush** before the rabbits' pass, because the large amount of grass makes it difficult for the cages to move and the animals to move around the plot. **Rabbits easily eat cut grass.**
- **Rabbits feed mainly on grass**, which represents between **80 and 100% of their diet**. Therefore, there is no additional cost of feeding the rabbits.

From these considerations, we can establish a series of simple calculations to estimate **the total costs of the production of rabbits on pasture**. These calculations are based on raising a batch of 40 rabbits. The total cost is the sum of two costs, since the third cost, that of preparing the pasture, is considered in the corresponding sheet:

$$C_{\text{total}} = C_{\text{infrastructure}} + C_{\text{daily operation}}$$

Installation of infrastructure, the sum of two costs:

$$C_{\text{fences}} = 650 \text{ m} \times \text{€ } 3/\text{m} \text{ (outdoor fence)} + 10 \text{ units} \times \text{€ } 15/\text{unit} \text{ (mobile fences)}$$

$$C_{\text{shelter}} = \text{€ } 200 \text{ (shelter)} + \text{€ } 90 \text{ (wooden base)}$$

Daily operation:

$$C_{\text{movement}} = 0.5 \text{ h/day} \times \text{Salary/h(per batch)}$$

$$C_{\text{clearing}} = 0.5 \text{ h/day} \times \text{Salary/h}$$

$$C_{\text{feeding}} = 0$$

■ Considerations on the optimal strategy for rabbit production on pasture

We must consider the following **key points** in the production of rabbits on pasture:

- These **costs do not include preparing the land for pasture**, which is a significant cost when starting a project. The details of these costs are in the sheet corresponding to the pasture.
- It is **much more profitable to raise our own young rabbits on the farm than to buy them**, it requires minimal installation for females and males, but it pays off quickly.
- **It is proposed that the rabbits remain on the farm for up to three months** (one month with their mother and two

in the pasture). At that time, they are not very big, but in general consumers prefer them rather small.

- At certain times we can add some **vegetable supplements**: if the grass is very tender, it is advisable to put something with more fibre **such as oak leaves**.

- **A key point in the breeding of rabbits is that they are very susceptible to predators**. Therefore, we must protect them well, even the dogs that watch them can harm them.

- Another fundamental point is that **they are also sensitive to many viral diseases**. Therefore, we must be very aware of when and what to vaccinate them with.

Parameter	Unit	Value used	Variability and causes
Pasture area per rabbit	m ² /rabbit and day	4	-
Rabbit shelter cost (includes the structure and the protective wood)	€/shelter	290	These are self-built with a galvanised tube structure. They can be made of wood, which is somewhat cheaper.
Cost of exterior fence with hunting mesh (includes mesh and bars)	€/m	3	It is a fence made with hunting mesh because there are dogs on the farm. If there are no dogs, the type of fence must be more resistant (e.g. simple torsion mesh) and the cost can increase up to €8-10/m.
Cost of mobile fences 3x0.9 m	€/fence	15	These are self-built with a galvanised tube structure and chicken wire.
Time to move the plot	h	0.5	If it rains, it takes a bit longer.
Age at which rabbits are placed in the pasture	week	4	It could be done a bit later but not before because they are too small.
Number of days of growth of rabbits on pasture	day	60	It may vary slightly between seasons.

Table 1. Parameters used to calculate the costs of forest harvesting, indicating the values used in Polyfarming and any variability that can occur in these values.