

Managing cows in pasture through intensive controlled grazing

Intensive controlled grazing is based on the fact that the **herd of cows moves every day** from the plot where they are to another that is the optimum grazing point. In this way, **the cattle spend a short time in each plot** and there is no risk that they will feed on the sprouts of the first plants they ate. In addition, the compaction effect of the soil by trampling is much lower. **This type of management is designed by dividing the pasture into permanent plots** of a similar size, which can be reached by a system of roads.



Figure 1. Cows grazing in one of the plots delimited for the application of the intensive controlled grazing system. Photo: MJ Broncano, CREAM.

In the Polyfarming system the herd of cows is **managed by intensive controlled grazing**. This technique is characterised by using very high stocking densities in small spaces with a very short stay and a very long recovery period. **The objective is to guide the cattle to eat the best pasture, without degrading the soil or the plants (Figure 1).**

■ Dividing the meadow into plots and moving the herd

Intensive controlled grazing establishes a grazing plan in order to control the state and evolution of the vegetation and thus determine the ideal time for cows to graze. To do this, a system is designed where **the grass is divided into permanent plots of a similar size by means of fences and wires (Figure 2).**

This grazing plan **guarantees that the animals move from the plot they are in to another that is the optimum grazing**

point, always considering when the animals last entered. The **time return** daily to the same plot varies: in spring it usually takes the animals around **25 days** to return to it, while in summer it takes longer, between **60 and 70 days**. For the system to work properly at least **as many plots are required as there are days for the longest return period.**

The optimal time for cows to graze on a given plot is just before the plants reach maturity. If the animals graze before the optimum time, the grass is consumed before the plant has recovered its reserves and, therefore, the plants can end up deteriorating. However, **if the animals graze later, they will not take benefit from all the nutrients that the pasture can offer them.**

The cows are transferred from one plot to another via the roads designed for this (Figure 3). Movements can take place daily or twice a day and the animals can occupy a complete plot or just part of it, depending on the state of the vegetation.

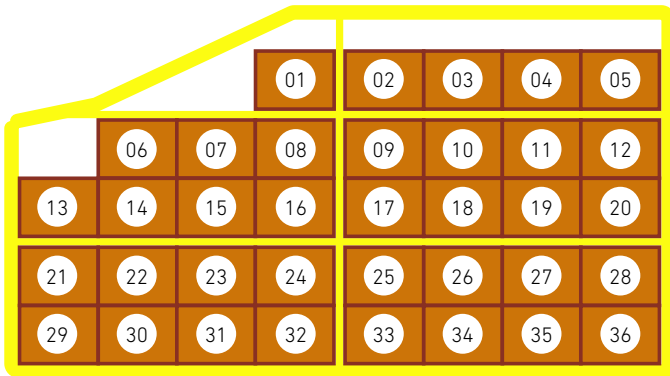


Figure 2. Design of the system of plots into which the pasture is divided to apply the intensive controlled grazing system. The numbers indicate plots, the yellow lines are the paths for the herd to move between plots.



Figure 3. The cows move from one plot to another via the roads designed for this. Photo: AV Video.

■ Cow management infrastructure

A series of infrastructures are needed to manage a herd of cows by means of intensive controlled grazing. The most important is fencing all the plots using electric wire. **The plots and paths are permanent**, but the system of wires and posts that limit them can be modified, in case interventions such as mowing the grass or the specific reduction of the size of the plot are necessary.

The system of hoses that lead the water to the troughs, which must be in all the plots, is another fundamental structure to be able to carry out this management system properly. Finally, if the cows are dairy, **another basic infrastructure is the milking barn**, which must be in a central area of the pasture surface to reduce daily movement.

■ Feeding the cows

Cows are herbivorous animals, so **they get all their food from plants**. For a good part of the year, much of their food is obtained directly from the pasture. However, **in some months the grass does not grow and additional forage must be provided to complete their feeding** (Figure 4).

This forage **can come from the farm itself**, from grass cut in months when there is a surplus. If the farm's own fodder is not available, **it must be purchased**, and it must be considered an investment to improve the farm, it is an import of carbon that must return to the soil via cow excrement.

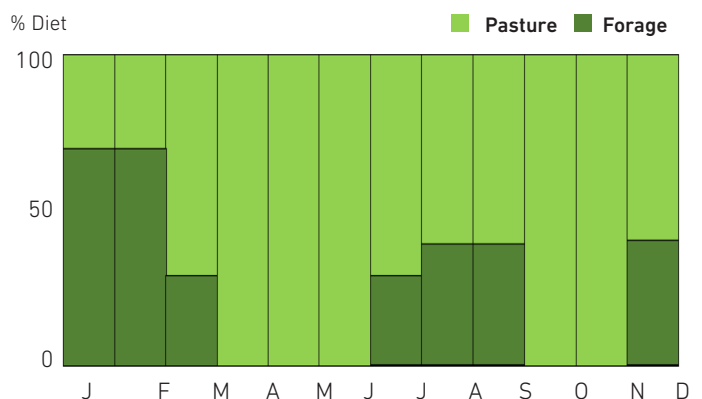


Figure 4. Proportion of the cows' diet that comes from pasture or forage purchased in different months of the year. The data are from the Planeses farm, from the year 2019.

■ Benefits of cow management through intensive controlled grazing

Managing cows on pasture through intensive controlled grazing has clear **benefits both for the environment and for the farms that carry it out**.

- It is **achieved when the pasture produces the maximum for each season** and the animals consume it at the best time.
- **Cattle droppings help improve soil fertility by increasing organic matter and nutrients.**
- The little time that the animals spend in the plot **prevents them from having a compacting effect on the soil.**
- It helps to create and maintain high quality pastures with **a very important carbon sequestration effect** in the soil.
- It produces **meat and milk with a higher nutritional value.**