Application of Voisin Rational Grazing for the restoration and improvement of pasture productivity in Mediterranean mountain areas

Leader:
Faustina de Solà-Morales i Capdevila, SL

Other recipient members:
Plana-Turró, SC

Other non-percipient members:
Association of Rural Landowners of La Valle de Camprodon

Coordinator:
CREAF

01. Rationale

Voisin Rational Grazing (VRG) is an intensive programmed method of pasture management that accurately monitors the phenological state of the pasture to determine the optimal time for livestock to enter to feed.

The general objective of the project was to serve as a practical reference so that any livestock farmer can assess the application of the VRG and the improvements it brings to the production and sustainability of livestock farms in an environment that is representative of real operating conditions.

Specifically, the objectives were set:

- Demonstrate on a real scale the adaptation of the technical parameters for the application of VRG in Mediterranean mountain conditions.
- Demonstrate the adaptation of the biological parameters of application of VRG (pasture ecophysiology and animal welfare requirements) for a gradient of environmental conditions.
- Demonstrate the adaptation of VRG to the socio-economic conditions of Mediterranean mountain areas by carrying out three participatory processes with experts and livestock farmers to evaluate the pilot experiments.

For the validation and dissemination of VRG, two livestock projects were adapted, with different climatic conditions (rainfall gradient) and starting conditions (recovery of wooded terraces and existing overgrazed pastures), in order to monitor and demonstrate the role of VRG to other livestock farmers and technicians. Both the investments required and the running costs (dedication necessary for the movement of animals) have been analysed.

Moreover, the Optimal Resting Time of the pasture has been determined, which is the result of the combination of knowledge of the ecophysiology of the regrowth of the pasture and the needs of the animals. Production has been compared for different management situations: grazing at the optimum point, grazing past the optimum point, grazing with 5 days of overgrazing (keeping animals on the plot for 5 days), and grazing with 10 days of overgrazing (keeping animals on the plot for 10 days).

Image of the good quality pastures of the Plana-Turró estate. Photo: Operational Group.

Finally, joint meetings were held between experts and livestock farmers on the possibilities and particularities of applying VRG in order to identify the critical aspects for its application to the socio-economic conditions of Mediterranean mountain areas.

02. Results and conclusions

The results obtained in this project have shown that the pilot experiences of VRG, which included planning the adaptation of the technique to the environmental, social and economic conditions of Mediterranean mountain areas, with a special focus on the creation of new pastures in recovered forest areas and the improvement of overgrazed pastures, are a very efficient system for improving the condition of pastures.

Once the pastures are opened up to livestock, the system requires near daily management (at most every 3 days), but the work is considered easy to do. VRG is clearly an option to consider when setting up new projects.

We have also seen the importance of defining the biological parameters for adapting VRG to the conditions of the area, such as the growth curve of the pasture and the calculation of the optimal resting point. It should be noted that the optimal resting point between May and October ranged between 30 and 60 days, which meant that up to five grazing periods were possible. When the resting time was extended, the number of grazing periods decreased very rapidly due to the interaction with the drought, and fell to only three grazing periods. When cows were on the same plot for more than five days (overgrazing) there was a decrease in the growth curve which led to a decrease in growth and a lengthening of the optimal return time, and therefore a decrease in the number of grazing periods and the amount of grass in each grazing. To achieve the benefits of VRG, it had to be applied in a controlled and precise manner.

With regard to the discussion of the possibilities and characteristics of applying VRG in the social and economic conditions of current farms in Mediterranean mountain areas, the technique has generated a certain amount of interest among livestock farmers. However, it has been detected that there is a significant proportion of farmers who see it as similar to what they are already doing. Despite this, no livestock farmers were found to be already applying controlled management that could be considered comparable to VRG. The most common case observed was the system of opening up a new area of pasture every day so that the animals could make better use of the new pasture, but also leaving the eaten pasture open to the animals, leading to overgrazing of the section that had already been eaten.

On the other hand, it has been detected that there is an interest among livestock farmers in VRG, but it has often been confused with controlled management practices that do not meet the criteria of VRG and do not provide the same benefits.

Finally, it is noted that VRG may be a promising technique that is well adapted to Mediterranean mountain conditions if the pastures are grouped together, easily connectable and easily accessible for daily visits. Its application has improved pasture productivity and has been found to be particularly suitable when a new project is started, new pastures are being created or overgrazed pastures are being restored.

In short, it is concluded that in order to achieve the benefits of VRG, it should be applied in accordance with the criteria that define the system.

Cows grazing in one of the plots on the Plana-Turró estate. Photo: Operational Group.

Generalitat de Catalunya
Departament d'Agricultura, Ramaderia, Pesca i Alimentació

The European Agricultural Fund for Rural Development:
Europe investing in rural areas

Project co-financed through Operation 16.01.01 (Cooperation for Innovation) of the Catalan Rural Development Programme 2014-2020.