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Holistic management and planned grazing as climate adaptation strategy in semi-arid areas

Continuous grazing in semi-arid areas might lead to a significant reduction in pasture productivity, quality and grass biomass recovery after the dry season. The short term effect is a decrease in fodder reserves, need for extra feed inputs for the herd, with consequent higher economic and environmental pressure for the farm. The long term effect in Mediterranean agrosilvopastoral systems, such as dehesa and montado, might be a more rapidly degradation of the ecosystems towards desertification. The adoption of Holistic Management allows to reverse this trend and to make more climate resilient pastures.



The holistic grazing management approach, introduced by Allan Savory over 40 years ago, aims to use locally available resources to reach set goals by continuous monitoring and adjusting operations of rotational grazing. The concept is inspired by the grazing patterns of wild herbivores that spend a short time in a small area before moving on, leaving behind large amount of manure, urine and considerable plant residues, including roots which contribute to soil carbon and nutrients supply. The project Desert-Adapt offered to its partners and stakeholders a course on this topic at ADPM in Mertola in 2019 as part of the capacity building action to support farmer in the implementation of their land management plan, DAM plan (Desertification Adaptation Model).

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Holistic management and planned grazing: Key Principles

The Holistic Planned Grazing is based on time-controlled grazing systems. Managers subdivide their land into grazing paddocks demarcated by fences or natural barriers, in order to be in control of the livestock movements. The Holistic Planned Grazing tries to

ensure that the livestock is in the right place, at the right time, for the right reason, and with the right behavior.

The length of time of grass exposure to grazing, and hence its recovery time, are crucial elements to avoid overgrazing and hence pasture degradation.





Holistic Planned Grazing consists of several consecutive steps:

- Planning correct grass recovery periods
- Maximizing density for a minimum time in order to optimize the benefits derived from animal grazing
- Estimating pasture carrying capacity to avoid overgrazing and to satisfy the wildlife needs too
- Creating a grazing plan chart to easily monitor, adjust and control the grazing timing
- Creating a detailed plan for the growing season to obtain the maximum amount of high quality forage throughout the year
- Creating a detailed plan for the non-growing season to prepare soil and plants for the new growing season and to ration out the remaining forage (drought reserve)
- Monitoring of the plan for targeted interventions and adjustments

Holistic management and planned grazing: Benefits

- Mitigating the effects of drought periods
- Increasing pasture health and productivity
- Stabilizing livestock production
- Improving wildlife habitat and biodiversity



Holistic management at site L9: Madeira

Our Portuguese partner L9 Madeira has decided to adopt the Holistic Managment Planning as part of the Desertification Adaptation Model plan for his farm. He is now implementing the plan on his land. The farm breeds sheeps and cows and has been experiencing over time a critical decrease of health, requiring external interventions productivity and like grass intercropping with leguminous and fertilization, with, however, minor results. The low grass productivity induced by a combination of overgrazing and drought requires the production of significant amounts of feed (grains) to support the animals in the driest periods, which have been increasing in lenght and strenght in the last decade. Another consequence of the low grass productivity is an almost bare soil exposed to erosion processes during the driest months, once the animals have grazed the available grass biomass. In the next newsletters we will be able to follow the positive results of the adoption of this sustainable land management scheme farm on performances.