



Technical leaflet

Golden rules for a successful grazing management in a mountain environment

1 Description of the innovation

The forage production in South Tyrol relies mainly on meadow management. However, in the last years, some innovative farmers switched their focus on grazing management, aiming at improved labour efficiency, animal welfare and product image. As a difference to other European regions and countries, South Tyrol has unfavourable topographic and structural features (mainly steep slopes, small grassland area per farm) and no well and broadly established knowledge concerning grazing management in the agricultural practice.

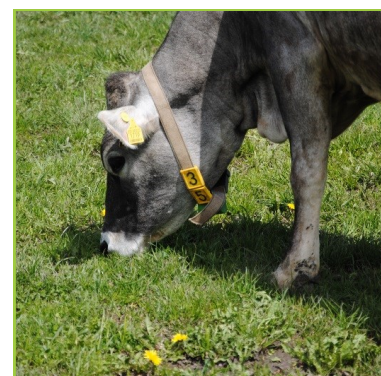
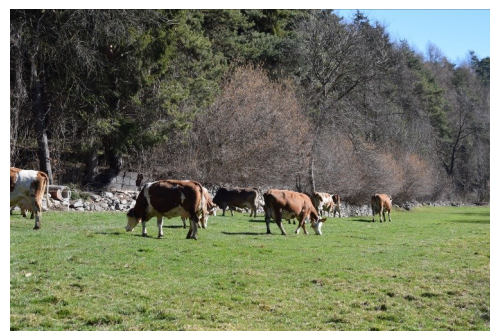
Summarising the experience and the knowledge of eight innovative farmers taking part in the practice & science meetings in the Inno4Grass project, the following golden rules should be followed, irrespective of the grazing system, in order to ensure a successful grazing management.

- **Start grazing early!**

Animals should be turned out as soon as or even before grass growth becomes visible. This allows the animals to gradually adapt from the winter ration to the fresh grass and to be fully adapted to grazing as soon as the main grass growth phase starts. Avoid turning out animals at grass growing heights exceeding 12-15 cm, as this leads to high proportion of waste forage and difficulties in achieving post-grazing target heights (3-4 cm).

- **Take a learning phase into account**

All grazing systems require a learning phase. A constant observation of grassland and a fast reaction in terms of grazed area/stocking rates to changing weather conditions and grass growth during the grazing season (very low growth rates in early spring, strong increase of the growth rates during spring, decrease of the growth rates in summer, very low growth rates in late summer/autumn) is necessary. Measuring grass growth (i.e. grass height or grass yield), at least in the first phase, allows a better understanding of the current status of the grazing areas and to take sound decisions concerning the management.



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- **Maintenance**

A cleaning cut once per year allows keeping plants avoided by the animals (including the dung patches) under control and ensures a homogenous regrowth.

If cleaning cuts are performed during the growing season, this should be done at a high cutting height (i.e. 10 cm) to prevent large forage contamination with animal excreta.

Converting meadows into pastures requires often accompanying measures to ensure a high proportion of species tolerating grazing in the sward. To this aim, a periodic overseeding with such species (i.e. *Poa pratensis*, *Lolium perenne*) or reseeding is pivotal to achieve dense swards and to prevent vegetation gaps and the establishment of undesired species.

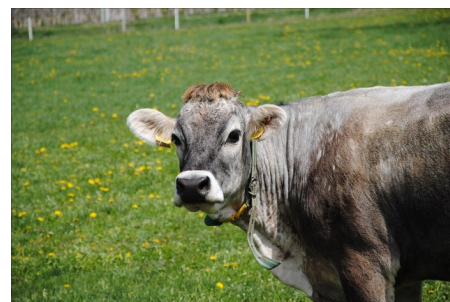
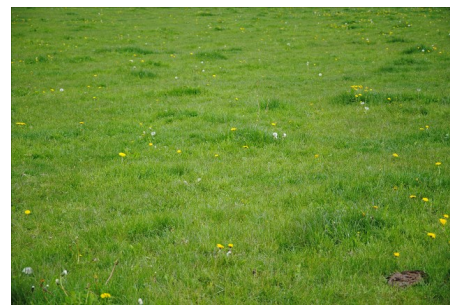
- **Use the appropriate animals and breeds suitable for the respective slope inclination**

In principle, grazing with cattle on slopes is possible.

However, it is important to keep the appropriate breed. For grazing steeper slopes, it is recommended to keep lighter cattle breeds, e.g. Tyrolean Grey, because they are better suited and better adapted to the slopes. Due to their higher weight, heavier breeds, e.g. Holstein Frisian, can destroy the sward because of animal trampling.

During wet weather conditions, grazing on slopes should be avoided in order to protect the sward.

On steeper slopes grazing with cattle is not possible anymore. On these areas, grazing with small ruminants (sheep, goats) would be a good alternative. Due to their low body weight, even grazing on extremely steep slopes is possible.





- **Fertilization**

To find the adequate time for fertilising the grazing areas is not always simple.

The fertilisation in spring, during the vegetation period and in autumn, depends on the vegetation and the weather. Especially in spring, it can be difficult to find a suitable date for the fertilization of pastures. On one hand, grazing should take place as early as possible. On the other hand, the winter ban on fertilisation ends only with the end of February, and a certain rest period must be kept after the application of slurry.

Also in autumn, the time available for fertilisation between the end of the grazing season and the start of the winter ban on fertilization (1st of December) may be very short. Additionally, the ground may be frozen or covered with snow even before December.

For short sward grazing (German: Kurzrasenweide), the adequate nutrient supply only with farm fertilisers may be even more difficult. The animals graze on the whole area during the entire vegetation period and therefore for fertilisation, labour-intensive fencing of partial areas is necessary. Moreover, a certain rest period must be taken into account, before the grazing area can be used again by the animals.



- **Fences**

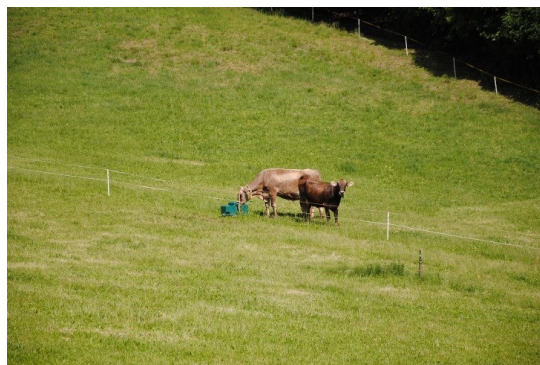
For efficient grazing, safe fences are a prerequisite and must be set up in spring before the grazing period begins. Depending on the grazing system, continuous fencing of sub-areas may be necessary during the entire vegetation period. The different fence systems (barbed wire fence, electric fence, mobile or fixed fence) have to be adapted to the respective grazing system and the respective animal species.



- **Water**

On the grazing area, sufficient water points with good water quality must be available for the animals.

An even distribution of water points enhances the distribution of excrements over the entire grazing area. Short ways to the next water point decrease the stress for the animals, and reduce the sward damages.





Advantages

- Reduction of labour input in comparison to the indoor feeding, particularly in topographically disadvantaged areas (steep slopes)
- Less dependence from the price fluctuations of concentrates
- Reduction of the consumption of agricultural fuel
- An adequate stocking rate, combined with a targeted overseeding, results in a dense sward with low weed pressure
- The grazing management meets the increasing request of the public opinion for the landscape scenery “cows on the pasture”
- Regionality and closed nutrient cycles are becoming increasingly important both for tourists and consumers; this increases the potential for the marketing of the animal products
- Improvement of the quality of animal products because of the summer pasture



Disadvantages/Prerequisites

- Availability of grassland areas suitable for grazing management (enough contiguous areas located close to the farm buildings, moderate steepness, acceptable distance of the larch pastures from the farm buildings) must be given
- Acceptance of the shift of the criteria to evaluate the personal success from maximum yield (revenue-oriented) to an economic productivity of the labour (income-oriented) should be given
- Relatively complex organisation of work; grazing management is not standardised and should be trained
- As grazing is not acknowledged in terms of price by the local dairies, a targeted marketing strategy for the valorisation of this high-quality product is necessary
- Performing at least one cut per year on all grassland areas is necessary to get payments on behalf of the EU (Measure 10 *Agrienvironment and climate measure* and Measure 11 *Organic farming* of the Rural Development Plan)