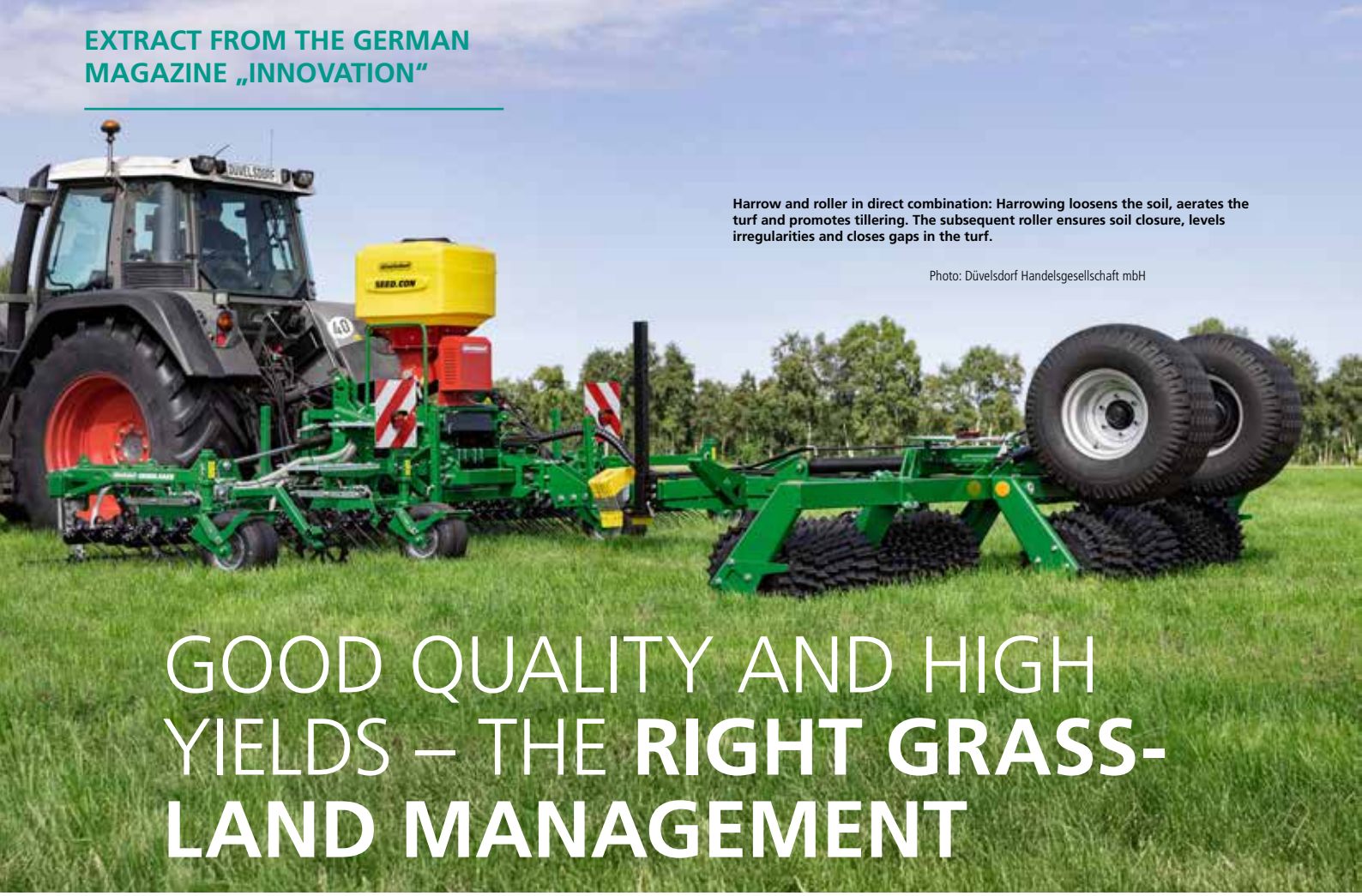

Harrow and roller in direct combination: Harrowing loosens the soil, aerates the turf and promotes tillering. The subsequent roller ensures soil closure, levels irregularities and closes gaps in the turf.

Photo: Düvelsdorf Handelsgesellschaft mbH

# GOOD QUALITY AND HIGH YIELDS – THE **RIGHT GRASSLAND MANAGEMENT**

Keeping grassland in good condition over many years requires farmers to pay special attention and have a certain instinct for managing the plant population. The aim is to consciously promote high-quality forage grasses, legumes and desired herbs.

Site-appropriate use and active maintenance are key components in maintaining productive grassland. Putting this into practice is often challenging: extreme weather conditions and pests such as mice, crane flies and grubs are increasingly affecting the arable land. At the same time, strict legal requirements must be observed, such as regulated ploughing up of grassland, restrictions on the use of herbicides and the Fertiliser Ordinance that has been in force in Germany since 2017. These circumstances make it difficult to secure the long-term feed base for high-performance animals. That is the reason why it is even more important to exploit all available options in maintenance and management measures in order to keep stocks at a high level.

## PLEASE NOTE!

If nitrogen reductions are required due to fertiliser regulations (e.g. „red areas“ in Germany), this should be done later in the year or fertilisation should be omitted entirely for the last cut.

### Maintenance work on grassland

Grassland management begins with checking individual areas for stand composition, density of sward and possible damage caused by pests. It is important to detect any changes in the sward as early as possible and take appropriate maintenance measures.

Table 1 shows the most important maintenance tasks you can carry out to ensure the quality of your grassland. It also explains which maintenance tool is best suited to each procedure.

The most important measures are harrowing and reseeding. Intensive cultivation of the fields results in a decline in the growth power of forage grasses each year. Regular reseeding with high-yielding varieties ensures the performance level of the grassland.

In addition, the type of use influences the botanical composition of the grass stand. Grazing or combined use of grazing and cutting is generally characterised by a higher sward density, as grazing promotes the growth of above-ground stolons, for example in smooth-stalked meadow grass. This positive trampling effect is absent in pure mown areas, resulting in a more open sward. In such cases, harrowing combined with reseeding with high-quality grass species is particularly recommended, as this is an effective way of closing gaps.

## Adjusting fertilisation

In addition to complying with legal requirements, efficient fertilisation is crucial. Spreading manure close to the ground using trailed shoes has proven to be a practical compromise in order to fertilise with as little loss as possible while ensuring stable yields. This method requires favourable weather conditions to minimise gas losses. Organic fertilisation should take place early in the growing season so that the nitrogen released can be utilised as effectively as possible for subsequent growth.

In addition, separating the manure beforehand can be a great advantage. The liquid phase infiltrates the soil much better, acts faster and leaves hardly any residues in the crop, which reduces the risk of forage contamination. Mineral supplementary fertilisation should also be carried out in spring.



## Macronutrients at a glance

In terms of macronutrients, phosphorus is usually covered by organic fertilisation, but potassium in particular should be taken into account. In intensive dairy farming, the potassium content in manure is only slightly higher than the nitrogen content. This means that at 170 kg N/ha via manure, often less than 200 kg/ha of potassium is applied, making mineral potassium fertilisation necessary for intensive grassland. In addition, a mineral sulphur supplement should be applied to the first cut: 20–30 kg/ha of sulphur as a supplement to the manure application are necessary to meet the demand.

Liming should not be neglected: Legumes, forage herbs and the majority of preferred forage grasses thrive best at optimal soil pH values, i.e. those adapted to the location.

## Conclusion

Maintaining grassland in good quality over the long term requires targeted maintenance, site-appropriate use and a great deal of expertise. Harrowing, reseeding and efficient fertilisation in line with demands are key factors here. This is the only way to achieve stable and ensure high yielding crops despite extreme weather conditions and strict regulations.

### TABLE 1: IMPORTANT FIELD MAINTENANCE FOR BETTER GRASSLAND QUALITY

| Maintenance | Smooth roller | Drag with | | Harrow with rail | Link roller |
|---|---|---|---|---|---|
| | | Cast iron triangles | Tines | | |
| Spread vole/mole hills | – | +++ | +++ | ++ | – |
| Aerate the grass sward (encourage tillering) | – | + | + | +++ | – /+ |
| Reduce the proportion of low-quality grasses | – | + | + | ++ | – |
| Remove manure/cow dung from crops | – | + | + | ++ | – |
| Recompact frozen soil | +++ | – | – | – | – /+ |
| Working speed | 5 km/h | 6–10 km/h | | 10–12 km/h | 5–10 km/h |

Source: Alfons Fübbeker, Chamber of Agriculture Lower Saxony
+++ = very good, ++ = good, + = average, – = not possible


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