



BETTER AIR IN THE HORSE STABLE

Strategies & tips for a good stable climate



The stable climate in horse stables plays a key role in promoting the health and well-being of the animals. Inadequate air quality in stables is often responsible for respiratory diseases, which are the second most common cause of malaise in horses (after musculoskeletal injuries). If a horse's respiratory tract is damaged, the healing process is often slow. Moreover, affected animals require special long-term treatment with regard to their feed and bedding.

To ensure a good stable climate for horse husbandry in individual looseboxes, appropriate stable and climate management is essential. Let us now take a look at the factors for ensuring an optimal stable climate and provide you with valuable tips for guaranteeing a horse-friendly environment.

Good air in horse stables – what does it take?

Many aspects impact air quality and, therefore, directly affect the stable climate for horses – including dust content, humidity, air temperature and air circulation, but also the quality of the bedding and feed.

Generally speaking: As descendants of steppe animals, domestic horses of today need plenty of fresh air to feel good and stay healthy. Excessive levels of pollutants in the air can damage their airways due to the horses' very sensitive respiratory tract. Pollution of the air with harmful gases, dust, microorganisms, such as pathogens, and especially molds plays a key role here.

Types of pollutants in horse stables

Harmful gases

Although **carbon dioxide (CO₂)** is not a harmful gas per se, it is a good indicator of air quality. A poor stable climate is characterized by an excessively high concentration of CO₂, i.e. by too much “stale” air. Carbon dioxide (CO₂) is produced through the respiration of living organisms and by the microbial decomposition of urine and feces.

Ammonia is the main harmful gas in horse stables. It is a colorless, pungent-smelling gas that is produced by the bacterial decomposition of nitrogenous substances in urine and feces. The harmful gas can cause an accumulation of mucus in the lower airways, reduced clearance (self-cleaning mechanism) of the bronchi, a feeling of debility and an increased risk of infection. The highest concentration is found near the floor, usually just above the bedding – in other words, exactly where horses spend most of the time with their noses.

In addition to harmful gases, the stable air also contains **microorganisms, such as bacteria, yeasts and fungi**, for example **molds**. Molds are particularly relevant for respiratory diseases, accounting for ca. 50% of the germs.



Dust in horse stables

Dust also plays a key role in terms of the stable climate. It is very dependent on the time of day and varies according to the organization and intensity of work. The changes that can be made to reduce dust are in the areas of **management, roughage and bedding**.

Stable dust is usually considered to be **very fine, solid particles of various sizes** that are of either organic or inorganic origin. Over 90% of the dust is usually from organic material caused by **animals, feed and bedding**. A general distinction is made between respirable fine dust (< 5 mm) and non-respirable dust. The **harmful effect** depends on how deep the dust can penetrate into the airways.

But the time spent in the air also plays a major role. Tiny particles of dust can remain in the air for up to 100 minutes before finally falling to the floor. **This is something you should bear in mind, especially when shaking up hay and bedding**. Needless to say, the formation of dust in stables cannot be completely avoided, but it can certainly be reduced. And we want to help you achieve this goal.

The following five tips are designed to ensure a **good stable climate**.

Tips for a healthy stable climate: Five practical recommendations

1. Ensure regular ventilation

Regular ventilation ensures a **permanent exchange of air** in the stable, thereby **reducing dust**. Whenever possible, windows and doors should always be kept open. In paddock looseboxes or looseboxes with an outside window, horses can access fresh air on their own.

The **optimum temperature** is based on the **outdoor climate**. Horses have excellent thermoregulation capabilities and can, therefore, easily compensate for major fluctuations in temperature. That said, extreme values and drafts should, nevertheless, be avoided. The **optimum humidity rate is between 60 and 80 %**. If the level of humidity is too high, fungi and bacteria can multiply faster.

2. Muck out daily to prevent harmful gas building up

Feces and urine should be removed from the loosebox daily. **Wet bedding**, in particular, **must be completely removed when mucking out** to ensure the **level of ammonia does not become excessive**. Mucking out the stable daily prevents not only respiratory diseases but also hoof diseases.

3. Take horses outside, minimize dust

Whenever possible, horses should spend the day outside the stable to maximize the supply of fresh air and the animals' quality of life. They **should also be outside the looseboxes when carrying out stable work**, as the amount of dust being stirred up is 6 to 7 times higher at these times. If this is not possible, **refrain from shaking up hay in the stable walkway**. It is also advisable to **water the stable walkway before sweeping it**, as this leads to a 10 times lower concentration of dust. The formation of dust cannot be avoided all together, but it can be reduced, for example by regularly cleaning surfaces inside the stable.

4. Make sure that the feed is of good quality

Horses expel a significant amount of moisture when breathing, which can promote mold growth on food stored nearby, such as straw and hay. It might, therefore, be wise to **store roughage away from the animals**, if that option is available. Mold growth has a negative impact on both the quality of the feed and the stable climate.

5. Pay attention to the quality of bedding

Always ensure that the bedding is of a **high quality** and only use **hygienic** bedding suited to your horse. In terms of **dust**, there are also differences between the various types of bedding. Both dedusted and sterile bedding options are available on the market.

Summary: A better stable climate promotes the health of your horses

A good stable climate is crucial for the **health and well-being of horses**. A variety of pollutants in the air can affect a horse's airways and lead to various health conditions.

*A range of measures can be taken to ensure an optimal stable climate. These include **regular ventilation, daily mucking out of the looseboxes, the storage of feed and bedding in suitable locations and the use of high-quality, hygienic bedding**. Implementing these measures consistently helps to ensure a good stable climate. It enhances the well-being of your horses and reduces the risk of respiratory diseases and other health conditions.*

***Rubber loosebox mats** can also contribute to a healthy stable climate, as they **reduce the amount of bedding required and facilitate daily cleaning tasks**.*