

Pasture management on horse properties

Fact Sheet series for the Small Rural Landholder

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A common issue on smaller equine holdings is the overgrazing of pastures. This can lead to degradation of soil structure and reduction in groundcover, increases in surface erosion and compaction; and selective grazing which promotes weed dominant species.

- These on-ground impacts reduce the long term productive capacity of pastures and feed availability.
- There is more emphasis on supplementary feeding strategies which are costly and time consuming.
- Paddocks burdened with weeds, erosion and compaction also impact on amenity and reflect poor landscape health.
- Pastures will always benefit from rotational grazing with horses running as a mob like other grazing animals.
- The common practice of isolating each horse by set stocking every paddock is in most cases unnecessary.
- Set stocking promotes the level of internal parasite populations on pastures.

Grazing strategies

The absolute minimum forage requirement for horses and ponies is 1% of their bodyweight in dry matter (DM) per day to ensure gut motility and enhance other physical and psychological benefits.

Depending on body condition, work load and climate, this requirement can easily increase up to 3% bodyweight DM. Often this increased requirement for DM coincides with a reduction in pasture growth and quality over the winter months, hence working out a carrying capacity year round can be complex.

Managing feed demands

It is better to assume a higher requirement for feed on the ground than to underestimate and have to rely on supplementary hay as the basis of DM requirements. However, many properties will overstock to increase agistment income from private paddocks; and in these situations the DM requirements can be easily transferred to hay quantities for planning a hay budget. Table 1 outlines the minimum area for set stocking required to maintain a single horse, year round, according to pasture class.

Animal	DSE* equivalent	Pasture class DSE/ha (examples only)	Pasture type/condition corresponding to pasture class (examples only)	Number of animals able to be maintained on 1ha year round	Total area (ha) required to maintain a single animal year round	Total area (acres) required to maintain a single animal year round
Horse	10-18.7	3	Native/unimproved 'old style' pastures, overgrazed pastures	0.16-0.3	4.3-6.2	10.6-15.3
Horse	10-18.7	6	Improved native and mixed introduced/native pastures	0.32-0.6	1.6-3.1	3.9-7.6
Horse	10-18.7	10	Improved pastures including legumes on poor soils	0.53-1	1-1.87	2.47-4.6
Horse	10-18.7	15	Improved pastures including legumes, good soils	0.8-1.5	0.6-1.25	1.5-3
Horse	10-18.7	20	Improved pasture with legumes, good soils, fertiliser program	1-2	0.5-0.9	1.2-2.2

*45kg dry merino ewe/wether at maintenance

NB: One hectare (1ha) equals 2.47 acres

Table 1: Example of pasture classes and condition and number of animals able to be set stocked (adapted from Table 1 in Pastures – carrying capacity)

Sufficient forage - reduces the chances of feeding aggression and the potential for injuries between other horses or fences, when horses are occupied with grazing.

Maintenance and environmental benefits

- less time and money is required to buy in supplementary feed and more ground cover providing top soil stability and fewer opportunities for weed problems.



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COMMON GROUND



Rotational grazing programs

If we plan to keep our pastures in the active stage of growth and optimise feed from pasture, then implementing a rotational grazing system can work well, providing stocking numbers are strictly maintained. Keeping horses on healthy, actively growing pasture has so many health benefits, especially when they are able to be interact with a buddy or two. Horses at pasture who have sufficient grazing will move more, graze for longer and be healthier and happier than a horse with restricted feed times or reduced (and isolated) living space.



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Lack of area - the reality of many horse properties is a lack of area to rotationally graze without largely reducing stock numbers. They are often set up with very small paddocks aimed at housing horses individually. Even on these properties it is possible to introduce rotational grazing with a little planning and reap the benefits.

Rotational grazing system strategy

A successful rotational grazing system will typically introduce stock into the paddock when pastures are 15cm height, allowing them to be grazed no lower than 5cm.

Once this height is achieved stock are moved into the next paddock with the expectation that the previously grazed paddock will have at least 30 days rest (longer in cold periods). This system can be adapted to strip grazing however is more time consuming and may not suit larger scale agistment properties.

Figure 1 (below) is of a single horse weighing approximately 500kg, consuming 3% of its body weight in DM per day (15kg) during winter.

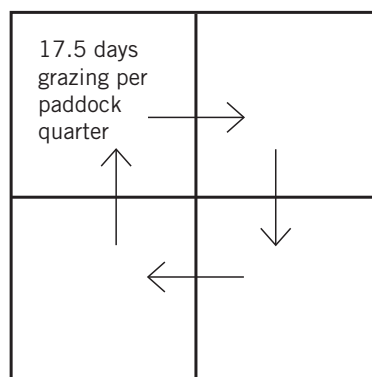


Figure 1: A simple example of a one acre paddock, split into quarters to enable continuous grazing for a single 500kg horse consuming 15kg DM (3% of its bodyweight) per day on moderate pastures at 10cm height

We are assuming that pasture quality and quantity is moderate at a height of 10cm, so only just enough time resting will occur to allow pasture recovery on this system.

With these figures, one acre will sustain this horse for approximately 70 days at the required DM before supplementary feeding is required.

Paddock configuration

If the horse has access to the whole paddock, it will selectively graze the entire acre well before 70 days, and no resting can occur for pasture recovery.

To avoid this, we can split the paddock into quarters with temporary fencing, and allow 17.5 days of grazing in each quarter.

The first quarter will therefore have had 52.5 days of rest to allow it to recover for grazing.

This may not eliminate the need for supplementary feeding, as we are estimating pasture growth and DM requirements, so individual conditions and dietary requirements will differ.

However, this strategy will help in keeping the pastures in better health and active growth, along with providing some grazing to the animal at all times and reducing the need to rely on supplementary feed.

It also assists in parasite control and grazing times can be reduced or increased to adjust to seasonal or individual requirements.



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