

## Grazing management following a rainfall event

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Everyone is dealing with dry conditions, many producers are supplementary feeding, some are complete feeding in confinement or sacrifice paddocks and some producers have completely destocked. The next rainfall event may be a drought breaker or it may just grow some short green feed. It will be tempting to put livestock into green paddocks as soon as possible to reduce feeding costs and get back into production. This article aims to provide guidance on re-introducing livestock to your pasture paddocks.

Following rain, annual plants will germinate and surviving perennial plants will start producing leaves and tillers. This early growth or “green pick” is high in water content and low in dry matter (DM). Dry matter is the important component of the plant because it contains the nutrients livestock need for maintenance and growth. Grazing paddocks too early will reduce the pastures ability to grow as well as having a negative effect on livestock performance. It is important to keep feeding/supplementing until there is enough dry matter in the pasture to maintain livestock.

### When should livestock return to the paddock?

A dry sheep needs at least 400 kilograms of dry matter per hectare (kg DM/ha) per year to maintain body weight. Where dry matter is lower, the sheep will be unable to eat enough grass to acquire the nutrients it needs. For a dry cow approximately 900kg DM/ha is needed for maintenance. Table 1 indicates the required KG DM/ha of tropical grasses required for

different classes of livestock. Plants at younger growth stages will have higher digestibility than plants at older growth stages.

As long as a pasture is vegetative, grazing at 1500kg DM/ha for sheep and 2500 kg DM/ha for cattle should maximize growth rates and production.

If the rainfall event is not sufficient or there has not been follow-up rain, resist the temptation to introduce stock onto pasture paddocks with less dry matter than is needed by your class of livestock. Your stock and pastures will thank you in the long run.

Figure1: Example of Premier Digit Grass dry matter per hectare (Photo C Thompson)



The growth stage or phase of the plant has a significant impact on the plants ability to grow. Phase one plants (often less than 1000kg DM/ha) are generally slow growing as they don't have the leaf area to produce the energy needed for the plant to grow rapidly. Energy is generally high but DM is too low for livestock production. Phase two or vegetative plants are at the optimum stage for plant growth and have high quality and dry matter production. They will have 6-8 leaves and be greater than 1000kg DM/ha.

Table 1: Minimum kg DM/ha to maintain satisfactory production levels for stock grazing tropical grasses. ns = not suitable (Adapted from PROGRAZE)

Livestock Class	65% Digestibility	60% Digestibility	55% Digestibility
Dry Cow	870	1250	2400
Pregnant cow (7-8 months)	1650	2700	7500
Lactating cow with calf (2 months)	2500	4000	ns
Growing cow - 50% of potential growth	1050	1700	4500
Growing cow - 90% of potential growth	2200	ns	ns
Dry Sheep	560	800	1300
Pregnant ewe and lamb	800	1700	2300
Lactating ewe and lamb	1200	ns	ns
Growing lamb- 50 % of potential growth	600	750	1900
Growing lamb- 90 % of potential growth	1300	ns	ns

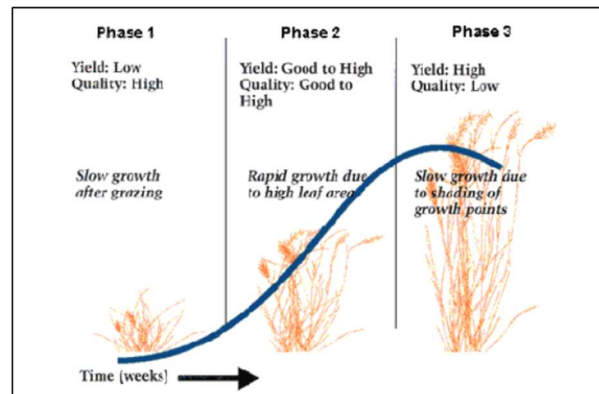
Ideally this is the best time to graze a pasture in a normal season and the earliest a paddock should be grazed following drought.

Depending on the time of season and the pasture composition, this may take four to six weeks. Once the plant hits phase three it has become reproductive. It has a high level of DM, but quality is reduced.

Where possible following drought, it is good management to allow pastures to reach phase three prior to grazing to let them replenish root energy reserves and set seed.

This is particularly important for phalaris pastures in spring. Figure 2 shows the different growth phases of pasture plants.

Figure2: Simplified growth curve of pasture (Source: The PROGRAZE Manual)



### How do I measure dry matter per hectare?

1. Find an area of the paddock that representative of the whole paddock.
2. Using a 50cm by 50cm quadrant, cut herbage and place in a paper bag
3. Dry samples in an oven at 70-80 degrees or using a microwave
4. Weigh samples
5. Use the formula below to calculate kg/DM/ha

$$DM(g) \times 4 = g/\text{square m}$$

$$g/\text{square m} \times 10000 = g/\text{ha}$$

$$g/\text{ha} / 1000 = \text{kg/ha}$$

### For example:

If my dried sample weighs 71g

$$71 \times 4 = 284$$

$$284 \times 10000 = 2840000$$

$$2840000 / 1000 = 2840\text{kg/ha}$$

### Other factors to consider

Following a significant rainfall event, different pasture paddocks will respond differently, depending on the time of year, the composition of the paddock and how it has been managed through the drought period. Due to decreased ground cover, plant that are normally

suppressed by the existing pasture may establish, also some desirable pasture species can be toxic early in their growth phase.

For example:

- Legumes such as clover, medics and Lucerne can cause bloat especially when there is limited grass in the paddock
- Rapid growth of some grasses, cereals, forage brassicas and broadleaf weeds such as variegated thistles can cause nitrate poisoning
- Sorghum grazed early or grazing returned/volunteer grain sorghum can cause prussic acid poisoning
- Rapidly growing phalaris can cause phalaris staggers

## More information

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## Acknowledgments:

This document was developed using the following NSW Department of Primary Industries resources:

Drought Recovery Guide 2005

[https://www.dpi.nsw.gov.au/\\_\\_data/assets/pdf\\_file/0019/131086/drought-recovery-guide-2005.pdf](https://www.dpi.nsw.gov.au/__data/assets/pdf_file/0019/131086/drought-recovery-guide-2005.pdf)

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