

Reducing Dirt in Hay

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Soil contamination of forage from pocket gopher infested fields can be a major concern that a grower may not even be aware of unless trying to balance a ration with forage from an infested field.



Pocket gopher mound

Pocket gophers, sometimes called moles are fairly well known to most hay growers throughout Manitoba.

The damage they do by cutting off the roots systems of forages like alfalfa isn't always noticed immediately. What is more notable is the damage that the mounds do to equipment and the overall yield of a stand.

Forage contains ash. This ash comes from two sources: internal, e.g. minerals like calcium, magnesium, potassium and

phosphorus, and external, e.g. dirt, bedding, sand, etc. The average internal ash content of alfalfa is about 8 percent and of grasses is about 6 percent. Additional ash in a hay or silage sample is contamination from dirt, sand, etc. Looking at some feed results out of Wisconsin we see levels as high as 18 percent, which means that these producers are feeding their cattle a lot of dirt. Here in Manitoba I don't suspect that it would be any different.

Hay fields that are heavily infested with mole hills can contribute to the external source of ash that shows up in feed. Every time the harvesting equipment encounters a hill it spreads soil from that mound on to the freshly cut forage that then makes its way into the hay or silage.

Because pocket gophers burrow underground their burrowing unearths mounds of soil that are large and make the ground rough and hard on haying equipment. Rotating fields out of forage into annual

Type	Statistic	% Ash
Haylage	Average	12.3
	Maximum	18.0
	Minimum	5.7
Hay	Average	10.3
	Maximum	17.6
	Minimum	8.8



1Dirt in alfalfa due to Pocket Gopher mounds

crops discourages pocket gopher activity but it usually results in them relocating to nearby forage fields.

Where forage stands are still productive producers wanting to extend the productive life of a field will look at leveling the mounds every couple of years early in the spring.

Typically this might be done using a blade or set of blades set at least $\frac{3}{4}$ of an inch above the ground so that the only time it comes in contact with the ground is when it hits a hill.

The following video shows some of the ideas that producers have tried when it comes to developing equipment that will level mounds in hay fields.

<https://www.youtube.com/watch?v=jdKjQaZkvxc>

Although a lot of the implements can be set to apply the full weight of the machines on the blades caution should be considered as to timing of the operation. When leveling alfalfa fields one needs to be aware of new growth buds that develop from the crown at the soil surface. Dragging a field when these new buds are appearing could damage them requiring the plant to send out new buds thus delaying spring new growth. Setting blade height to avoid damaging the plant but still level the mounds should be considered.

Controlling pocket gophers in a forage field can be very difficult and time consuming. A better approach might be to consider approaching the problem with the goal of managing the problem with a variety of techniques such as trapping, rodenticides and crop management practices.

For more on this go to the Manitoba Ag publication [Northern Pocket Gophers](#)