

FACT SHEET:

Managing a Mice Plague in Hay Stacks



FEEDcentral

HAY & GRAIN › BUY › SELL › TEST

Fact Sheet – Managing a Mice Plague in Hay Stack

1. Causes:

Mice are commonly known to build up where there is an abundance of feed; and a warm autumn.

1.1 What Constitutes a Mouse Plague?

The CSIRO rodent research group generally considers anything over 500 mice per hectare as being a plague.

Mice living under field conditions have a seasonal pattern of breeding. This generally begins in early spring and can continue into late autumn the following year.

| | |
|-------------------------|----------------|
| Daily feed intake | 1-3 grams |
| Daily water intake | 1-2 grams |
| Gestation period | 19-21 days |
| Age at weaning | 21 days |
| Age at mating | 6-10 weeks |
| Litter size | 5-6 |
| Adult weight | 12-30 grams |
| Breeding season | All year |
| Begin to eat solid food | 11 days |
| Eyes open | 11 days |
| Sexual cycle | Until pregnant |
| Duration of cycle | 4 days |
| Life span | 1-2 years |

Reference: Marsh, R.E. & Howard, W.E. The House Mouse. Its Biology and Control (1977)

Mice living in unfavourable seasonal conditions may have a shorter breeding period, while those with nests and good cover are likely to have an extended breeding period. Research suggests that it is the quality more than the quantity of food that extends the breeding season.

Note: We have developed this fact sheet because there is little available information on controlling mice in hay sheds.

2. Risks Associated with a Mouse Plague in Hay:

- 2.1 Inventory Loss- hay, straw, grain, silage
- 2.2 Chemical Contamination of the ration via poisoned mice entering the ration
- 2.3 Degrading of the physical ration via smell of the mice
- 2.4 Botulism associated with cattle eating dead mice
- 2.5 R.A.M – restricted animal material entering the ration
- 2.6 Human health – meningitis

3. Management:

Like most problems sound management eliminates most of the risks above. Early detection and early action is critical. Where ever possible making the environment unappealing is vital, keeping in mind mice also require a drinking source so minimizing access to water is important.

3.1 Baiting

These days the most common control option is baiting.

- With increased activity be it viewed or higher than normal take up of bait, you must.
 - Increase baiting numbers substantially and immediately.
 - increase your inspection / auditing time frames of site.
 - For a period of time, or until you are sure of the required level of regular baiting, check bait stations / baiting every 24-48 hours. This will provide you with regular reporting on any infestations you are facing. This should also drive increased or decreased future action required.
 - Look for what they like; easy access, cover your entry and exits very well.
- Bait Stations; whatever you do **don't hold back** on the number of bait stations, in particular round Fodder & Grain storage.
 - If there is a source of food other than bait stations, regardless of the quality or quantity of the food source, the mice may not eat at your bait stations if they are too few or too far apart, eg. if you have bait stations 15-20 feet apart and you are not getting kills, you need to place them closer and more often. Shorten the distance 6-12 feet apart.
 - Place your bait / stations as close as you can to, or right up against walls. They like to travel these areas, if your bait is too far from this area they may just run past and miss them. Mice will live above and below the food source, make sure you cover all areas.
 - Place bait stations as close as you safely can to the actual food source.
 - Inside and outside of areas / sheds, ensuring you are covering entry and exits of sites.
 - Water sources, reduce these as much as you can, 'no dripping taps'.
 - Avoid any possible contamination of bait stations. For external bait stations ensure where ever possible they are attached to a solid object (light chain or rope) as a strong breeze / wind can move the station from where you need it. Or place a rock on top of it.
 - Number your bait stations; helps keep track of certain areas of one site that is being hit hard. Allows you to concentrate / lift your attack and allows you to develop written reports for day to day comparison.

Note: Mice enjoy a varied food source so even where there is large amount of food available, they look for choice – which makes bait attractive to them.



Although we recommend you make your own decision on your choice of bait, the following we have found to be very successful in fast knockdown. The 'Tomcat II' (red block) for bait stations & 'Mouse Off' Grain Based bait. 'SureFire' is another brand of block we have had good success with. Liquid drink bait is also available but this does require higher hazard control and application training being a liquid.



When the fight is on make sure you stock up



Baiting can be costly so it is worth spending the time and effort in getting it right. The one advantage baiting has over fumigation is that you can manage it yourself or your team internally very safely and cost effectively. There are a number of suppliers be they your local rural supply store or on-line.

Note: It is recommended by some that you rotate the type of block you use; mix up the choice of bait eating. Currently stocks of all forms of baiting are in low supply at a number of stores.

Risk Assessment For Baiting: Apart from seeing mice, some form of monitoring is advisable to estimate:

- the population
- the possible level of damage
- the impact on non-target species.

Cost of Baiting:

Over a full year, where the mice were in plague proportions, for 2-4 months Feed Central estimates that the cost of baiting is around \$5-10 per tonne. Approximately \$2 per tonne is the cost of the bait, the remaining is the labour component. **Risk assessment for baiting will also need to be completed.**

Bait links

http://esvc000092.wic050u.server-web.com/surefire/product_show.aspx?i=75

<http://en-au.tomcatbrand.com/msg/gosite/Tomcat/home>

http://www.belllabs.com/product_details/australia-agricultural-final-blox

<http://www.animalcontrol.com.au/mouse-baits1.htm>

3.2 Fumigation

Fumigation is also possible. There are experienced people who have fumigated hay for mice in other states.

Including Simon Ball Simon Ball
Australian Fumigation P/L
PO Box 1556
Port Adelaide 5015
Ph 08 8447 6355 Fx 08 8447 6350
M: 0417 833 223 Simon: 0448 061 809
E: austfumi@senet.com.au

Products include; **AGROCELHONE® C SOIL FUMIGANT**; ACTIVE CONSTITUENT: 985 g/kg CHLOROPICRIN. There are also local licenced fumigators.

3.3 Natural Control Measures:

A mice plague is a natural event; in a similar way all plagues eventually come to an end. Wet and cold weather force the mice into stacks of hay, it also makes **them less active, upsets their breeding cycle and causes disease.**

Mice also get an infection called Lumpy Tail.



Lumpy Tail is spread by mice biting and fighting each other. It may be possible to help nature by transporting mice infected with “Lumpy Tail” between sites, but this is untested.

3.4 Other Management Options Include:

Rolling bales prior to using to get live and dead animals out of the bales; feeding stacks as fast as possible.

Additional information:

https://grdc.com.au/uploads/documents/GRDC_Mice_FS.pdf
and <http://www.pestsmart.org.au/pest-animal-species/mouse/>

If you have additional knowledge that you would like to share about mice in hay and would like to discuss or find out more on how we at Feed Central protect our Hay storage sites, please feel free to contact; Rachael Williams on (03) 5823 0000 or rachaelwilliams@feedcentral.com.au
Tegan Taylor on (07) 4630 4899 or tegantaylor@feedcentral.com.au

Disclaimer: Feed Central has prepared this information as there is a shortage of information on this subject, this is not complete or “expert” advice. Please do your own research and make your own decisions. Feed Central Pty Ltd will not be held responsible for decisions made and action taken as a result of information in this fact sheet.

Written By: Cieran Maxwell, National Supply and Quality Services Manager, Feed Central and Tim Ford, Managing Director Feed Central, June 2016