

# VERMATE PARASITE & STRESS CONTROL MANUAL

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Most health-related problems in animals are due to parasites and stress. Outstanding results are obtained by using Vermate for both issues. In this manual, key management aspects are addressed to ensure the best results when using Vermate.



# HORSES

## PARASITE SYMPTOMS IN HORSES

Poor condition, Ulcers, Colic, Mange, Diarrhoea, rough coat, Lethargic, infertility in stud animals.

## MAIN CAUSES OF PARASITES IN HORSES

Parasites thrive in any imbalanced or stress related environment such as:

- ✓ Exposing the horse to stress, for example travelling or breaking their routine.
- ✓ Metabolic stress due to poor feed quality, high starch, sugar and protein feed.  
Excessive exercise
- ✓ Bad pasture and manure management practices. When horses are kept on overgrazed pastures where manure is not constantly removed, they inhale and ingest the parasite eggs from their own dung. This will make any form of parasite treatment inefficient.
- ✓ Seasonal changes may lead to increased levels of gastrodiscus parasites.

## TREATMENT WITH VERMATE

- ✓ Normal maintenance dosage of 15ml 2 x per day.
- ✓ 60ml Vermate before and after travelling or hard exercise.
- ✓ Individual animals that battle with high parasite loads. 200ml/day for 3 to 5 days.
- ✓ Do faecal counts on animals that show symptoms and concentrate higher dosage treatments on those.



Gastrodiscus parasites

Parasites flushed from the gut after treatment with high dosages of Vermate



# DAIRY CATTLE

Vermate is added to feed or lick rations as a micro-mineral supplement to ensure optimum production and condition. The addition of ruminant microbes also addresses parasite and stress-related problems.

## PARASITE SYMPTOMS RELATED TO DAIRY CATTLE

- ✓ High somatic cell counts. Somatic cell count is the number of dead cells that a cow releases into her milk as a result of stress or parasites. A count of 200-350 is considered good. Above 400 is high.
- ✓ Cows on a full feed ration that do not have access to pasture are exposed to high levels of metabolic stress. Metabolic stress is a major cause of high somatic cell counts.
- ✓ Cows giving birth go through extreme calving stress that leads to high somatic cell counts.
- ✓ Dairy farms are usually in areas prone to liver fluke which is the cause of gall sickness and red water. Liver fluke occurs after long rain spells in wetland areas or veld that are inundated with water for prolonged periods of time. In these cases, animals should be moved to dry areas, away from wet soil or standing water.
- ✓ A huge problem in calve rearing is milk worm or tape worm that causes diarrhea.
- ✓ Gall sickness and red water are also common problems related to calve rearing.

## TREATMENT WITH VERMATE

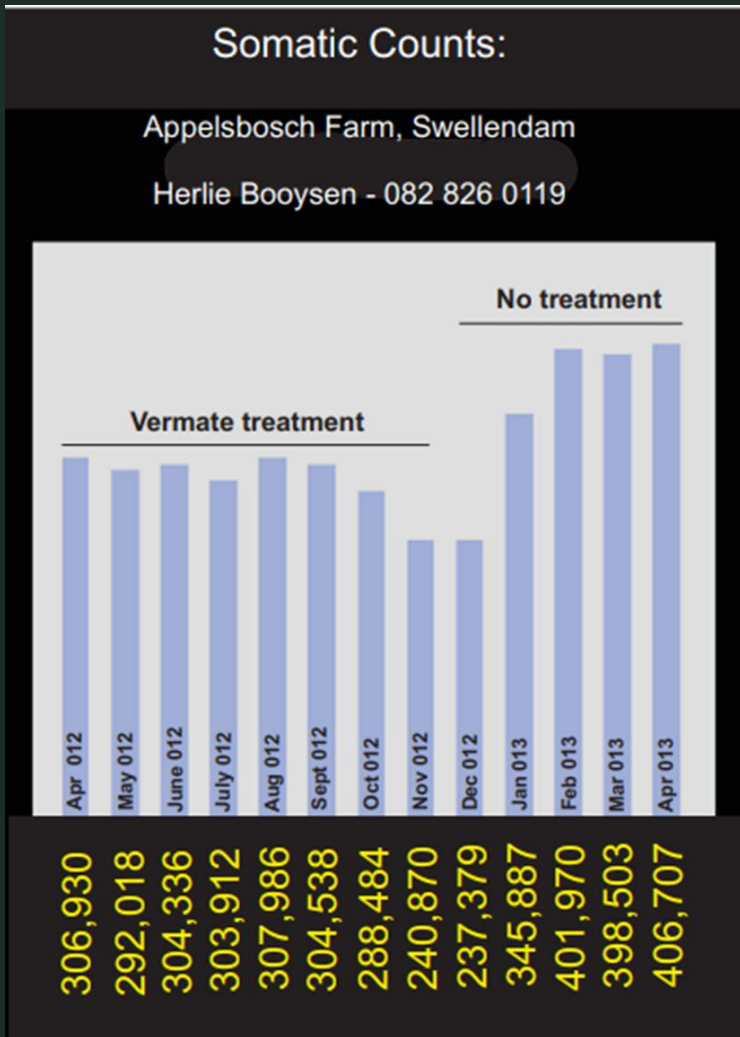
- ✓ 10ml per day.



# EXAMPLES OF SOMATIC CELL COUNT MANAGEMENT WITH VERMATE

EXAMPLE 1: HEAT STRESS - SWELLENDAM

EXAMPLE 2: "UPSTEAM" COWS – HOEKWIL, WC



#SPILL!	1010	1033	3620	1980	830	445	30
1047	890	980	0	367	160	592	350
1260	290	0	0	367	160	614	120
566	330	2453	920	399	920	814	2240
473	0	487	50	1359	540	362	260
622	800	605	690	506	1380	362	260
820	640	727	100	392	1930	327	160
333	150	2460	1580	381	1890	424	110
1799	150	335	90	500	20	302	230
905	0	1084	1100	4590	370	692	100
680	30	679	1820	316	540	405	90
629	1770	307	1220	558	240	892	20
1180	700	312	190	1412	2810		
708	170	653	2150	696	240		
1000	1560	435	2230	301	190		
547	570	840	520	1495	70		
936	630	771	650	323	260		
619	280	360	530	620	130		
1208	500	396	30	604	130		
780	2740	545	1020	487	90		
1304	360	4268	1050	955	290		
341	2880	746	100	307	120		
423	90	0	0	410	100		
510	110	2397	340	660	150		
806	1050	347	720	300	150		
1070	5820	2382	0	357	220		
405	1830	584	560	303	250		



### EXAMPLE 1: HEAT STRESS

A farmer in Swellendam experienced heat stress on his cows during summer which lead to high somatic counts. Vermate brought the somatic count down from an average of 400 to an average of 300 that was maintained during the winter and summer months. The result is showing the trend when the farmer stopped using Vermate after six years. His counts went back to where they had been previously when he didn't use Vermate.

### EXAMPLE 2: "UPSTEAM" COWS

Upsteam cows at a farm in Hoekwil, WC. The cows experienced extreme stress and high somatic counts after giving birth and being separated from their calves. The cows were treated with Vermate for four weeks after calving. The aim was to bring individual counts to below 350 which is considered the green zone that will allow them to be milked again.

The somatic count of 48 out of the 93 cows treated with Vermate was lowered into the green zone during the four-week period. Vermate was administered at a maintenance dosage.

### PRACTICAL APPLICATION

If feed rations are mixed on the farm, Vermate is added at a dose of 10 ml/cow/day. One hundred cows will need 1L Vermate per ton of feed. If feed is premixed, Vermate is applied by hand on the cow's ration in the milk stall at 10ml/cow. This will ensure optimum condition and production.

With calve rearing Vermate is added to the milk at 20ml/L.

With sick or "upsteam" cows Vermate should be administered 30ml/cow/day in the feed ration.

Cows should be dosed with 100ml Vermate once per week until the somatic cell count is within acceptable limits.



# CATTLE ON THE VELD

Vermate is added to feed or lick rations as a micro-mineral supplement to ensure optimum production and condition. The addition of ruminant microbes also addresses parasite and stress-related problems.

## PARASITE SYMPTOMS

Poor condition, Mange, Diarrhea, rough coat, bottle jaw, infertility.

Prolonged rain can lead to liver fluke in areas prone to standing water or wetlands. Liver fluke is related to the cause of red water and gall sickness.

Seasonal changes can lead to bottle jaw (wireworm) infestation.

## PRACTICAL APPLICATION

- ✓ Vermate is added to the lick at 10ml/animal/day. This equates to 1L Vermate per ton of lick per 100 animals.
- ✓ If animals can not be accessed through the lick with Vermate it should be added to drinking water at 10ml/animal/day. It works well to add a plastic bottle with Vermate in, pierced with holes, and add it to the water trough.
- ✓ Individual animals that still show symptoms should be dosed once 200ml orally in order to flush the parasites from the gut.
- ✓ If a whole group of animals shows parasite symptoms, each animal can be dosed 40ml orally. The maintenance dose can then be applied to water or feed ration. Individual animals that still show symptoms should be dosed 200ml orally in order to flush out the parasites.



# FEEDLOT CATTLE

## PARASITE SYMPTOMS

Poor condition; loss of appetite, lethargy, diarrhea, coughing, pneumonia

## PRACTICAL APPLICATION

- ✓ Young animals that are weaned from the field to the feedlot should be dosed 40ml/animal to address adaptation stress and the susceptibility to parasites.
- ✓ Vermate should be added to the feed ration at 10ml/animal /day (1L/ton/100animals).
- ✓ Individual animals that show symptoms should be dosed 40ml once off.

## APPLYING VERMATE

Four different rations are normally used in feedlots namely: starter, grower, finisher, and final finisher. Vermate should only be given with starter and grower rations. The benefits of Vermate are experienced by completing the feed cycle with the grower/intermediate ration which is more economic than the finisher ration, and more effective when given in conjunction with Vermate.



Bottle jaw  
(wireworm)  
symptoms in  
cattle



This is due to a high fibre/grass content and a low starch/maze content in the grower ration. Grass is less expensive than maize. The high grass content in a grower ration is also more favourable to the microbial balance in the rumen compared to the high starch/maize content in the finisher rations. Due to the high starch content in finisher rations, higher levels of antibiotics (Monensin) is added to the finisher rations to counter the effect of an acidic pH in the rumen. High levels of growth hormones/steroids are also added during the finisher phase to accelerate growth of the cattle resulting in excessive stress levels.

### EXAMPLE 1: KARAN BEEF FEEDLOT TRIAL



DIFFERENT FEED RATIONS USED OVER THE 110 DAY FEED PERIOD



# RESULTS WITH VERMATE IN KARAN BEEF TRIAL

A 3.79 difference in feed intake on the starter and 8% difference in feed intake on the intermediate/grower ration was observed over the 110-day feed period. High starch, as well as high levels of antibiotics and steroids in the finisher rations, cancelled the effect of Vermate. Feed intake is related to the feed conversion ratio and production of the animals. Getting an improved feed intake/feed conversion ratio of 8% with Vermate on a cheaper ration with the Karan beef trial shows that Vermate can make a substantial economic impact in feedlot operations.



# ARTIFICIAL INSEMINATION & EMBRYO TRANSPLANTS

## PARASITE PROBLEMS ASSOCIATED WITH AI AND EMBRYO TRANSPLANTS

- ✓ High parasite levels and stress prevent female animals from ovulating.
- ✓ Conception rates are lower
- ✓ Abortion rates are higher
- ✓ Numerous AI and embryo transplant projects have failed due to the fact that stress and parasites could not be managed on a preventative basis.

## WHY ARE ANIMALS MORE SUSCEPTIBLE TO PARASITES DURING AI AND EMBRYO TRANSPLANT OPERATIONS?

- ✓ Animals are kept in confined spaces and are handled more frequently which leads to elevated stress levels.
- ✓ Animals in confinement lead to an increase in parasite levels in the area due to a higher concentration of animal dung.
- ✓ A vicious circle is set off – stress leads to parasites and parasites lead to stress.

## WHAT DIFFERENCE DOES VERMATE MAKE?

- ✓ Vermate provides a highly effective option for parasite management on a low-cost maintenance basis.
- ✓ Humic and fulvic acids in Vermate prevent the production of Cortisol and adrenalin that causes a stress reaction in the animals during intense handling.



# SHEEP AND GOATS

Vermate is added to feed or lick rations as a micro-mineral supplement to ensure optimum production and condition. The addition of ruminant microbes also addresses parasite and stress-related problems.

## PARASITE SYMPTOMS

- ✓ Poor condition, Mange, Diarrhea, rough coat, bottle jaw, infertility, pneumonia, and coughing due to round/lungworm.
- ✓ Prolonged rain can lead to liver fluke in areas prone to standing water or wetlands.
- ✓ Seasonal changes can lead to bottle jaw (wireworm) infestation.
- ✓ Ewes with lambs are often susceptible to parasites due to high levels of stress.
- ✓ Sheep on irrigated pastures are prone to high levels of parasite infestation.

## PRACTICAL APPLICATION

- ✓ Groups of animals that show symptoms should receive an initial dosage of 30-40ml/animal orally. A maintenance dose should be added to their feed, lick or drinking water at 5ml/animal/day. A hundred animals will typically require 500ml Vermate to be added to the lick or feed ration.
- ✓ After initial dosage and applying maintenance dosage only individual animals that show symptoms should be dosed 20-30ml/animal.



# HAND-RAISED CALVES / LAMBS AND ORPHANED BABY ANIMALS

The biggest challenges when it comes to hand-raising calves, lambs, and orphans are diarrhea, parasites, and separation stress. They don't have the microorganisms to digest the surrogate milk and many of them die or just stay weak.

- ✓ If the baby is still very small and bottle-fed, Vermate is given 20ml per 1l of milk as a maintenance dose for prevention.
- ✓ When feed is introduced, Vermate can be mixed into the feed at a ratio of 10ml per animal per day.
- ✓ In the water, it can also be given at a ratio of 10ml per animal per day. Vermate placed in a bottle with small holes in can be added to the water trough and replaced every 2 – 3 days.
- ✓ If the calves or lambs are very weak, sick, or have diarrhea, give a dose of 20 - 40ml in the mouth. This can be repeated after 12 hours if necessary.
- ✓ Then add the suggested daily maintenance dose of 20ml per 1l of milk.



# RACING PIGEONS AND BIRD BREEDERS

## PARASITE/STRESS SYMPTOMS

- ✓ Diarrhea in adult birds
- ✓ Young birds' disease(YBD). Juvenile birds show excessive stress and diarrhea related symptoms.
- ✓ Crop cancer and coccidiosis
- ✓ Lack of performance in racing birds
- ✓ Infertility with breeding birds
- ✓ Poor growth and development of young birds
- ✓ Poor feather quality - dull and hard feathers

## PRACTICAL APPLICATION

- ✓ Vermate is applied at 20ml/kg food and 40ml/L drinking water.
- ✓ Juvenile animals are treated 5ml/bird in the crop within the first 5 days after hatching in order to prevent Young Birds Disease.
- ✓ Vermate should be given undiluted to the birds after exposure to stress. Stress can be weather related, handling, hard training or due to a race, etc.
- ✓ Vermate reduces the amount and extend of cancer and coccidiosis treatments. The aim is to reduce chemical treatments to as little as possible in order to reduce stress on the birds.
- ✓ High dosages of Vermate will result in deworming of the birds. Parasite larvae will typically be excreted with the bird's dung. Larvae will be visible. This mean that the bird has been dewormed – no need for further chemical treatments.

# CHICKENS

## HEALTH BENEFITS WHEN GIVING VERMATE

- ✓ Healthy laying hens lay eggs more regularly
- ✓ Shells of the eggs are stronger, and yolks have a rich orange color
- ✓ Chicks that hatch are lively and strong.
- ✓ Life cycle of laying hens is longer.
- ✓ Good growth rate

## PRACTICAL APPLICATION

- ✓ For optimum health, add Vermate on a daily basis at a rate of 20ml per 1kg of food or 40ml per 1l water.
- ✓ If the whole group of chickens is not well, mix Vermate 1:1 into the water supply for 2-3 days.
- ✓ For individuals that are very sick and not eating or drinking, administer 20ml Vermate into the crop with a crop applicator.

### Note:

For advice on applying Vermate to large-scale chicken farming, contact Wilhelm on [0848455393](tel:0848455393).





# WILDLIFE

## PRACTICAL APPLICATION DURING HANDLING

- ✓ Vermate is administered at 20-30ml/animal/day mixed in feed or applied in drinking water.
- ✓ During capturing or animals being handled, Vermate is added into drinking water 1-2 days before and after the event. Dosage is 80-150ml/animal. This helps to reduce stress during the handling process as well as recovery afterward. The most effective way to add Vermate to the water is to put it in a plastic bottle pierced with holes placed in the water trough.

## EXAMPLE OF VERMATE IN A WILDEBEEST EMBRYO TRANSPLANT PROJECT

Vermate was implemented with a Golden Wildebeest embryo transplant project in the Groot Marico area. Prior to starting with Vermate, the success rate with the embryos on the project was 30%. The average parasite count on the farm was 800-1000. Female animals had poor conception and aborted their foetuses after 3 months of pregnancy. After starting with Vermate, the parasite counts came down to between 0 and 50 and the success rate with the embryos went up to 100%.



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