

CLIFFE EQUINE

KARL HOLLIMAN BVM&S CertEP MRCVS

WORMING

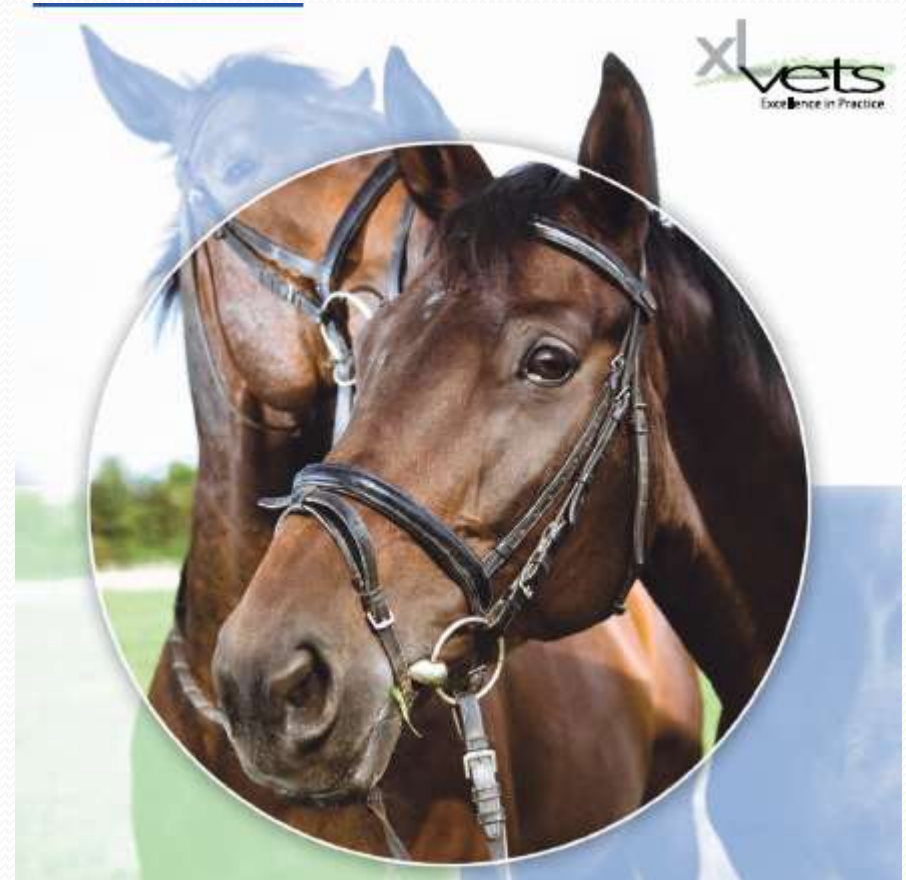


www.cliffequine.co.uk



Effective Worm Control in Horses

- The days of blanket interval worming with anthelmintics as the sole method of worm control in horses are over.
- Resistance is an increasing problem, one which we ignore or dismiss at our peril.



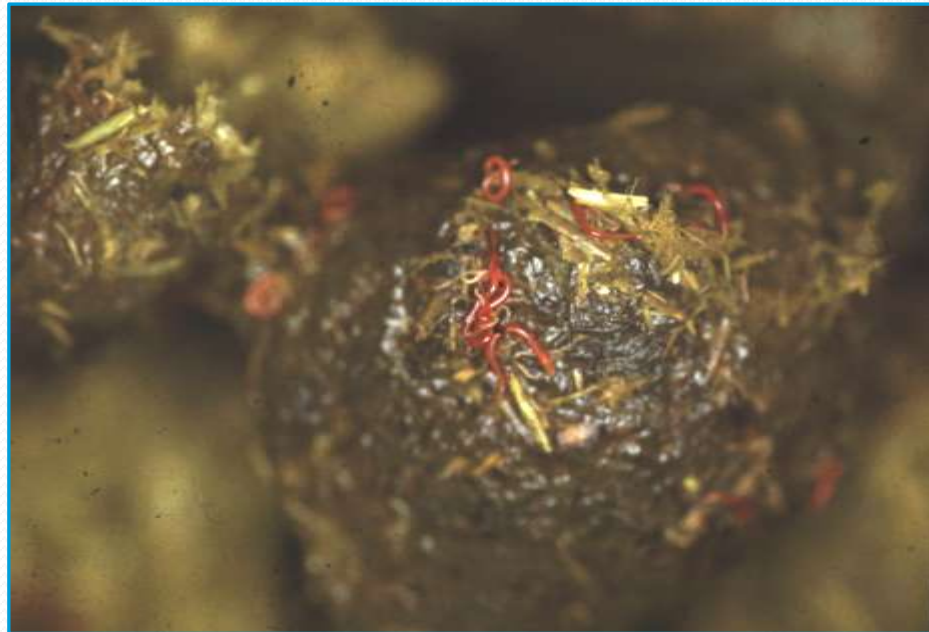
Introduction

Horse owners need to break their reliance on anthelmintics (Wormers) as the treatment of choice for worm control. This will require a substantial change of mind set among the horse owning population (as well as many in the Veterinary Profession).



We need to deal more with acceptable levels of worm burden rather than trying to achieve parasite free horses.

There is some good evidence of the potential beneficial effects of a low level of parasite burden, in humans this may aid in allergic disease management and in the horse it may reduce the risk of Grass Sickness.



Our modern control of parasitic burdens in the horse should encompass three main areas;

1. Effective pasture management.
2. Identifying and monitoring horses with significant parasite burdens.
3. Utilizing our available chemical treatments in the most effective manner.



1. Effective Pasture Management

Removal of droppings from the pasture at least *once a fortnight*, will be effective in minimising pasture contamination with infective worm larvae.

Droppings must be removed completely.

BUT – mammoth task/ will you remove ALL?



1. Effective Pasture Management

only after storage for 6 months in an effective muck heap where the high temperatures will kill the eggs can the droppings be considered safe to spread on the pasture.



1. Effective Pasture Management

Adequate grazing densities will promote the natural formation of grazed 'lawns' and un-grazed 'roughs' where most horses will choose to pass droppings.



2. Identifying and Monitoring horses with significant Parasite burdens

- A. Worm egg counts
- B. Monitoring for Tapeworm



a. Worm egg counts

- the basis of identifying those horses with significant intestinal parasite burdens
- play a role in monitoring the effectiveness of the anthelmintics and identifying resistance.



a. Worm egg counts

should be first performed in the spring (March - May).

A fresh dropping sample should be collected in an airtight container or bag and kept cool . Small sample (Dessert spoon!) and label it!

Delivered the same day to your veterinary practice.



a. Worm egg counts

- Horses with persistent low or zero WEC's can have the interval between testing increased.
- Horses with high or significant WECs should be treated and re-tested in 2 - 3 months time, if they are high again, then interval worming should be used.
- Horses with very high burdens should be retested following worming to check for resistance to the wormer used, this is called a egg count reduction test.



a. Worm egg counts

What represents an acceptable burden may change throughout a horse's life.

'RULE OF THUMB'

Birth – 5 years – 200 epg

5-19 years – 400 epg

>20 years – 200 epg

Below = negative worm egg count

Above = positive worm egg count



b. Monitoring for Tapeworm

ELISA performed on a blood sample for anti-tapeworm antibodies which will identify horses with a significant intestinal Tapeworm burdens.

Testing horses once (In life-time) in the spring and depending on results:

Low result: treat the horse once a year for Tapeworm, in the Autumn.

High result: treat the horse twice a year (Spring and Autumn)



3. Treating horses with High Faecal Worm Egg Counts

Ivermectin (every 8 - 10 weeks)

or *Pyrantel* (every 4 - 6 weeks)



Moxidectin

- Moxidectin is a highly effective wormer and as such may arguably increase the risk of resistance developing to both moxidectin and ivermectin.
- It should ideally be reserved for annual encysted cyathostome (small redworm) treatments, new horses and those with known parasite infestations.



Moxidectin

- Will kill dung beetle
- But not excreted in droppings
- Not on pasture after worming horse
- OK for organic farming



What's brown and
sounds like a bell.....?
... DUNG!

It might be 'dung'
to you, mate, but it's
my bread and butter!



Benzimidazoles

Widespread resistance to at single dose means that Benzimidazoles should only be used as a 5 day course, again for encysted cyathostomes.



Interval worming programmes are no guarantee to effectiveness as horses can slip through the net for a variety of reasons:

1. Under-dosing due to poor weight estimation
2. Under-dosing due to horse spitting wormer out
3. Resistance in the worm population



Protocol for introducing new horses into a stable group of worm controlled horses

To Test or Treat?

TEST

Faecal Worm Egg Counts
and Tapeworm ELISA

TREAT

Equest Pramox (Moxidectin and
Praziquantel) should completely clear
out the intestinal tract of parasites



Worming Schedule for Foals

GRAZING SEASON

Interval Worming with Anthelmintics

From 4 months of age:

Using Pyrantel (at 4 - 6 week intervals)
or Ivermectin (at 8 - 10 week intervals)

AUTUMN

Treat for Tapeworms and Larvicidal dose of wormer

Double Dose Pyrantel and 5 day Panacur

Note: DO NOT use Equest Pramox in foals less than 6 1/2 months old



PREGNANT MARES

treat 2 -3 months prior to foaling, to reduce worm burden and pasture contamination.

NOT EQUUS PRAMOX



Worming horses yearling to adult

PASTURE MANAGEMENT

Droppings collection at least once per fortnight

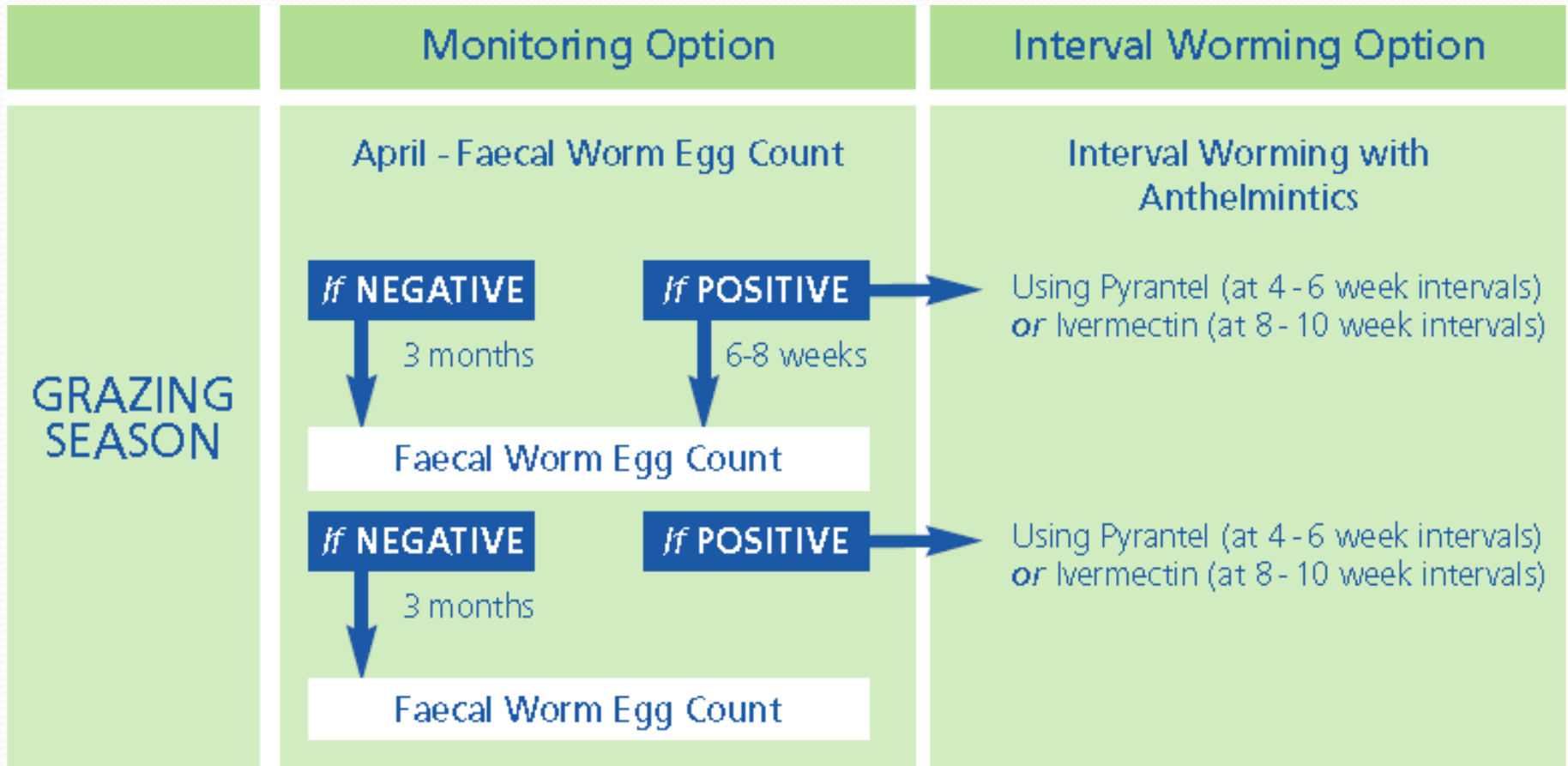
Test for Tapeworm

Negative/low result - treat once per year in Autumn

Positive/high - treat twice a year in Spring and Autumn



Worming horses Yearling to Adult



Worming horses Yearling to Adult

AUTUMN

Treat for Tapeworms and Larvicidal dose of wormer

Equest Pramox (Moxidectin and Praziquantel)
or Double dose Pyrantel and 5 day Panacur



COST OF WORMING

Worm egg count

£10.50 for 1 sample

£7.50 for 5 or more samples

Tapeworm ELISA

Special offer for next 6 months

£30

includes

- *blood sample if already at yard or at vaccination / dental etc*
- *Lab fees*

COST OF WORMING – INTERVAL NOT TARGETED

YEAR 1

SPRING
every 8 weeks

Equimax £20.67

vectin £9.97

vectin £9.97

Vectin £9.97

vectin £9.97

Autumn

Equest Pramox £17.98

Winter

Vectin £9.97

TOTAL £88.50

YEAR 2

SPRING	Pyratape p x2	£21.92
after 6 weeks	Pyratape	£10.96
	Pyratape	£10.96
	Pyratape	£10.96
	Pyratape	£10.96
	Pyratape	£10.96
Autumn	Equest Pramox	£17.98
Winter	Pyratape	£10.96
	TOTAL	£105.66

Targeted – with good pasture management

YEAR 1	Spring	B/s Tapeworm	£30.00
		WEC	£7.50
	<i>if HIGH ELISA</i>	<i>Equimax</i>	<i>£18.95</i>
		WEC	£7.50
	Autumn	Equest Pramox	£20.59
	TOTAL	£84.54	
	<i>Or LOW ELISA</i>	<i>£65.59</i>	

2nd Year – no blood sample

SPRING WEC £7.50

if HIGH ELISA Equimax £18.95

YEAR 2

WEC £7.50

Autumn Equest Pramox £20.59

TOTAL £54.54

Or LOW ELISA £35.59

COMPARATIVE COSTS

interval Worm program

year 1 cost	£88.50
year 2 cost	£105.66
Average yearly cost	£97.08

Targeted Worm program

ELISA blood result	HIGH	LOW
year 1 cost	£84.54	£65.59
year 2 cost	£54.54	£35.59
Average yearly cost	£69.54	£50.59

TARGET IS £27.54 to £46.59 CHEAPER per year!

££ saving – less vet colic



www.cliffequine.co.uk



NON TARGETED WORMING

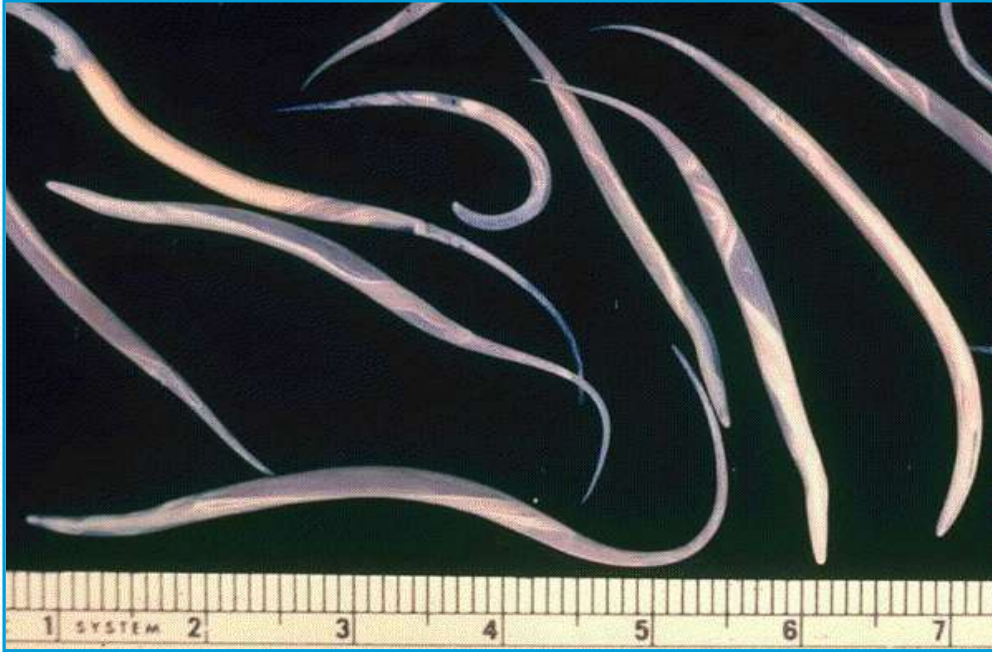
WHY?

- Poor pasture management
- Large group mobile population
- Many owners not doing the same
- Repeated high WEC



	YEAR 1	YEAR 2
Jan		
Feb		
Mar	Equimax	Pyratape P (Double dose)
Apr		
May	Vectin (every 8 weeks)	Pyratape P (every 6 weeks)
Jun		Pyratape P (every 6 weeks)
Jul	Vectin (every 8 weeks)	
Aug		Pyratape P (every 6 weeks)
Sep	Vectin (every 8 weeks)	Pyratape P (every 6 weeks)
Oct		
Nov	Equest Pramox	Equest Pramox
Dec		

PINWORM (*Oxyuris equi*)



Lay eggs around tail hair



Rubbing

Not thought to be very harmful, but can cause an irritation

PINWORMS

Up to 10cm long, white

Irritating not harmful

Live in colon

Lay eggs in rectum

Itchy bottom, tail rubbing



Treatment of Pinworms

- Use Pyrantel (Pyratape P / Strongid P)
- Use ivermectin around anus



- KEY is environmental hygiene – especially water troughs / buckets and pick up droppings.

