

Coproscopy

An FEC analysis is an integral part of a well-reasoned deworming schedule. Horses shed parasites eggs in their droppings. An FEC consists in observing and counting these eggs with a microscope. Thus the number of eggs per gram (epg) of droppings can be determined and gives an indication of the adult parasites present in the horse's organism. The FEC gives an indication on whether or not to give the horse a de-wormer. An FEC analysis should be carried out at least two to three months after the previous de-wormer, depending on the molecule used and the duration of its action.

By **Marie DELERUE – Bénédicte FERRY – Cathy MENARD** | 02.05.2016|

Technical level   

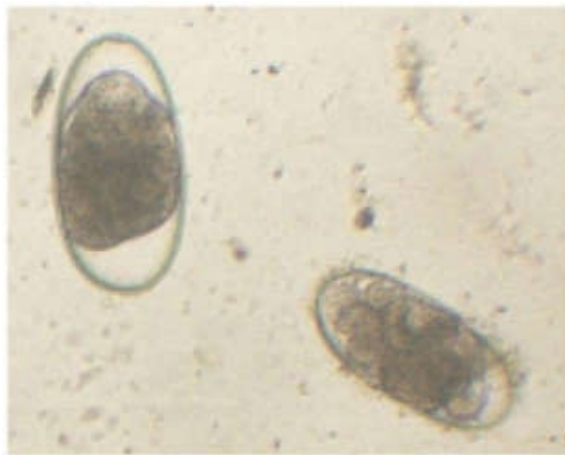


Droppings in a glove for an FEC

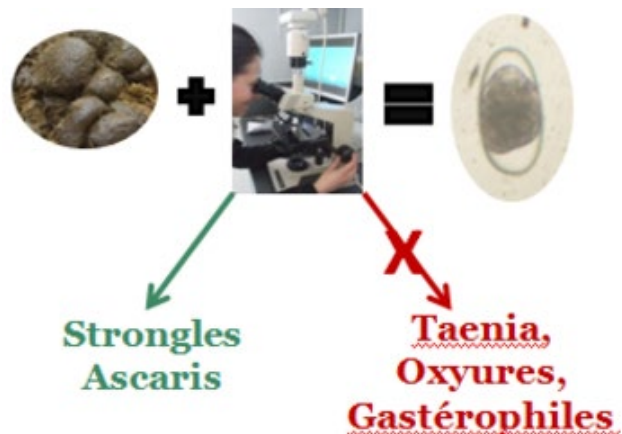
Which parasites can be observed ?

Strongyles and *Parascaris equorum* are the two main species of worm, which can be observed in an **FEC**. Differentiating between the eggs of large and small strongyles cannot be done with an FEC ; this involves the much more complex and more costly **laboratory culture testing**. However, on a farm where the horses are correctly treated against worms, the general consensus is that 99 % of the worms observed are those of **small strongyles (cyathostomins)**.

Oxyuris equi or pinworms, are not generally observed during a FEC, as they are located around the anus, and not in the droppings. Equally, FECs are not an ideal technique for establishing a horse's status regarding its tapeworm burden, as egg excretion of tapeworm is intermittent.



Strongyle eggs observed under a microscope © I. Barrier-Battut



Parasites which are identifiable with a FEC © IFCE

What is the purpose of doing a FEC ?

In adult horse (over the age of 3 years) : Knowing which deworming molecule should be used at a precise moment in time.

Regarding **adult horses**, the **FEC analysis** is used mainly to determine **small strongyle worm- shedding status**. In the healthy horse, the pathogenic status of small strongyles is low. The purpose is not to eliminate all parasites, but to **maintain infestation** at an acceptable level for their good health. Fecal egg counts enable to differentiate between :

- « **High shedders** » (horses excreting **more than 200- 500 EPG** in their droppings)
- « **Low shedders** » (horses excreting **fewer than 200-500 EPG** in their droppings).

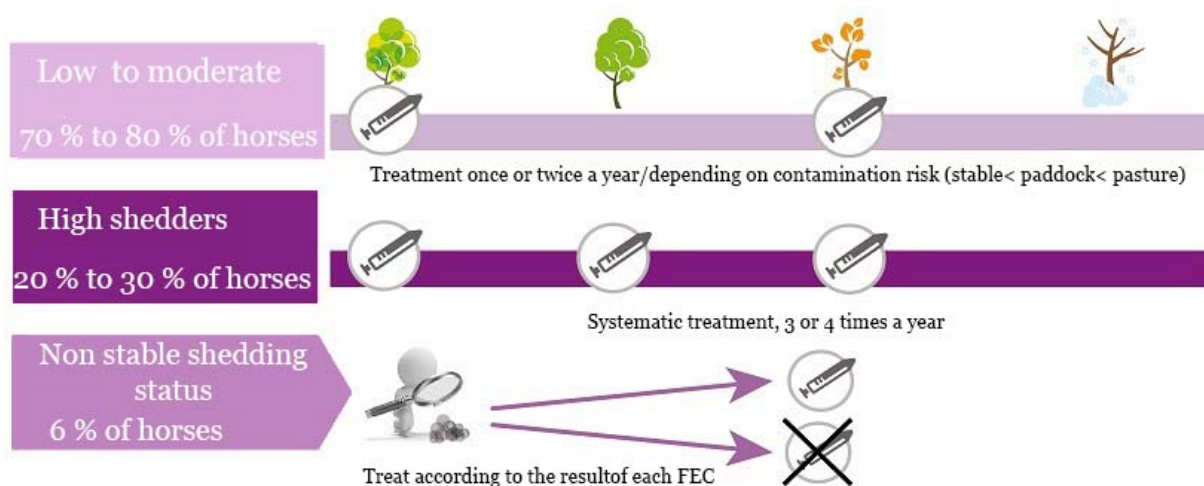
Depending on the characteristics of each farm, a threshold value of 200 or 500 EPG is then determined.

In Spring and summer, only high shedders should be treated systematically. This targeted de-worming, lowers contamination of pastures, since the horses shedding large numbers of parasites are treated. Thus the infestation cycle is broken, given that 80 % of parasitic forms are in the environment (pastures, stables). De-worming high shedders is therefore beneficial for all the horses on the premises : pasture land is less infested, so horses do not get re-infested as rapidly.

In autumn, all horses should be de-wormed (both high and low shedders) **so as to get rid of tapeworm, and small strongyle larvae**, which are difficult to detect in a Fecal Egg Count. There is no need to do FECs during the winter months, since the larvae of small strongyles are « hibernating », and horses do not shed eggs.

In the long term, a horse's worm-shedding status is established

Once several **FECs** have been carried out on the same horse, its « **worm-shedding status** » can be established. In order to get reliable results, it is advisable to carry out **3 FECs the first year (spring, summer and autumn), then 2 the subsequent year**. When kept in similar living conditions (State of health, living environment, partnering or grouping of individuals), rating a horse's shedding status as high or low shedder, will remain relativeley stable. Only a few horse will be alternately high and low shedders. Therefore, over the following years, **the de-worming treatments will be adapted according to the horse's shedding status. A low shedder can be treated once or twice a year, a high shedder 3 times a year**. Statistically only 20 % to 30 % of horses are high shedders.



De-worming schedules according to a horse's shedding status

Targeting deworming treatments in this way, restricts appearance of resistances to de-worming molecules. Moreover, as from the third grazing season, the cost of de-worming decreases.

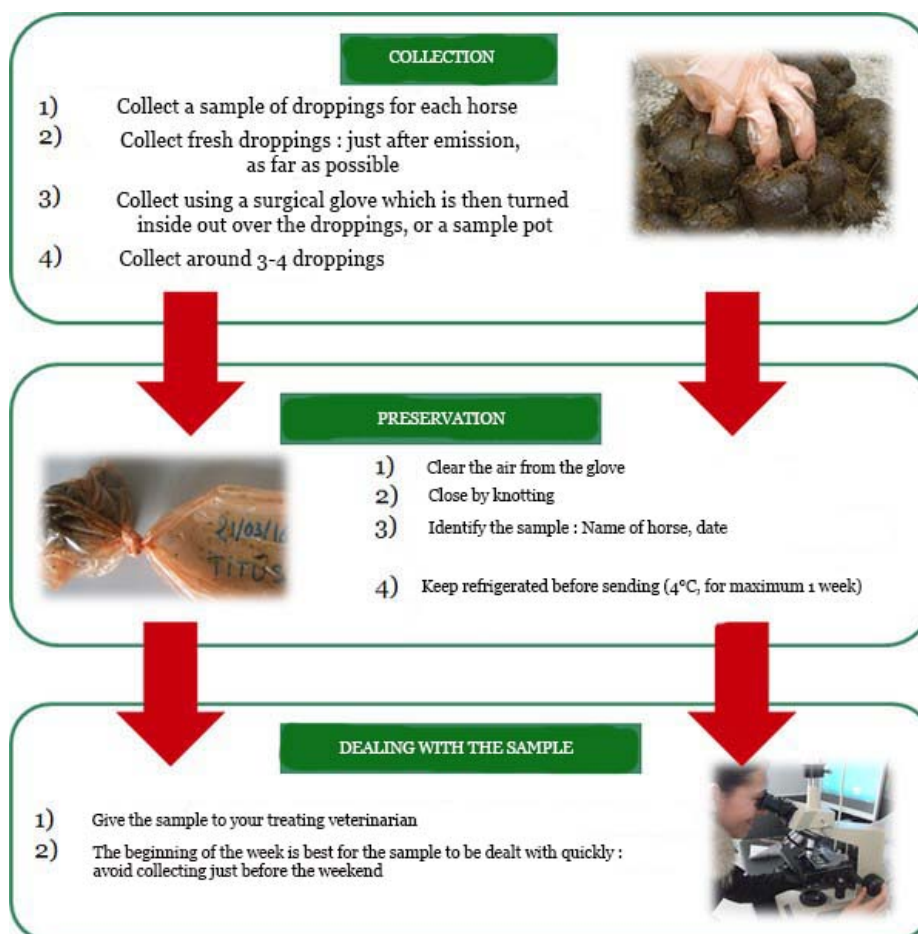
Foals, at 6 months old

Before the age of 6 months, foals are mainly infested by ascarids, but after 6 months, they also become infested with small strongyles. **A FEC analysis at 6 months** establishes the degree of infestation by *Parascaris equorum*, and /or **small strongyles**, so as to choose the adequate molecule with which to treat them. Indeed, due to parasite resistance to de-worming molecules, an effective treatment against ascarids, may not be effective against small strongyles, and vice-versa.

All horses, whatever their age

Carrying out **FECs before and after de-worming treatment** shows **the effectiveness of the de-wormer** regarding small strongyles, and therefore determines their resistance to the anti-parasitic molecule used on the farm.

How to collect droppings for a FEC ?



About our writers

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PATURE

La coproscopie



Une vermifugation raisonnée pour limiter les résistances



La vermifugation

nécessaire mais pas automatique

Fiche équiui ne

Depliant

Poster