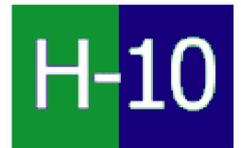




*At last...
Something really new
in horse grooming*



How You And Your Horse Can Help Combat Flies

We all get bothered by flies. Our horses too, although they don't have the luxury of two dexterous arms to slap them, do them damage and generally wave the pesky critters away. Mind you, a tail can be useful!

We're coming into Spring and the weather is warmer. If you live in North Qld or WA you've probably got flies all year round and the wet season just makes it worse.

Man has invented a series of effective (and not so effective) anti-fly remedies. Let's face it, if you haven't a can of something or other in the stable or the tack box guaranteed to get rid of flies, then you are the exception! We're going to add a little common sense to those products so that you can help defend yourself and your best friend from these flying pests

We'll take a trip down 'Fly Lane' to learn about the common varieties, particularly biting flies, learn about their habits, find out what we might do about them and look at some modern and ancient preventative measures.

As someone quoted on ABC radio's 'Country Hour' recently, "If we didn't use so many chemicals of all types in our pasture, then the dung beetles would have done away with most of those pesky flies ages ago." There's more than a grain of truth in that but it's by no means the whole story.

So if you're on the trail how do you combat the hordes of flies that descend on you and your poor horse? In the paddock how do you protect your horse from horse flies, sandflies and, worst of all in that they really carry disease, mosquitoes? In the stable and the yard how do you keep those biting stable flies away?

First of all, let's look at the flies because if we know a little about them, then we can guess at what might keep them at bay.

The major families are:

- ü Horse/March/Deer flies
- ü Stable/Black flies
- ü Biting midges (sandflies)
- ü Mosquitoes
- ü Buffalo Flies (N Aus summer only)
- ü Non-Biting Flies

Horse, March or Deer flies are generally widespread in warmer places in still, open areas. They will attack both humans and animals. They are stoutly built, strong fliers but only the females bite and suck blood leaving a large puncture site. They prefer moist forests, woodlands and are generally summer pests.

Stable flies are vicious biters and both sexes have that bad habit. They have both piercing and sucking mouth parts and are more prevalent in rural areas and beaches where they can breed in seaweed.

Biting Midges also known as sandflies, can be present in huge numbers. They are small and robust with sucking mouthparts and are so small that they can often get through ordinary meshed windows. You can often see them illuminated in sun rays. They are most commonly associated with coastal lagoons, estuaries, mangroves and tidal flats but can occur virtually anywhere if conditions are right. Their biting activity is usually confined to dusk and dawn although they will bite in shady areas too at any time. They don't like windy conditions and they usually only travel a minimum distance from the breeding site. Only females bite and suck blood but they can and do attack in large numbers causing acute discomfort, irritation and severe local reactions such as open and weeping blistered skin which can last for days or even weeks in a susceptible horse. The only thing in their favour is that they don't appear to transmit disease. They are often the source of the dreaded 'Queensland Itch.'

Mosquitoes are quite different and DO transmit diseases to both horses and humans. They have a complex life cycle with over 300 species here in Australia alone. Again, only the females bite and feed on blood and this to nourish the eggs they will lay shortly after mating. The poor old male has to be content with plant juices! As with sandflies, mosquitoes are initially attracted by carbon dioxide present in the exhaled breath of any mammal. They can sense that CO₂ from 40 metres away and follow the trail nearer to the exhaling animal where other senses such as IR vision and the smell of the animal (lactic acid, pheromones etc) decide their choice of victim. Unfortunately, whilst most species don't fly far, some can travel up to 50klms downwind of their hatchery. They are generally more active at dusk and dawn or in shady places away from direct sunlight which they hate. They will bite anything warm blooded and can pass on diseases to humans & horses such as Ross River Fever (over 6000 cases in humans in 2004) and Barmah Forest Virus.

Non Biting Flies are everywhere and even in the middle of Australia, in a space as empty as you can get anywhere on earth, they'll find you!! Whilst invasive to us and to horses they are generally harmless but they can be a real nuisance when they invade in their hordes. In addition they can use their abrasive mouth parts to stimulate tear flow from the horse's eyes so that they can feed.

Prevention

Before we review the more obvious methods, it pays to look at the lifestyle and breeding cycle and habits of these flies to see if we can use them to our, and to our horse's advantage.

Mosquitoes are potentially the most dangerous fly because of their disease carrying capacity. There are precautions that can be taken around the stable such as emptying anything that might collect water for them to breed in. Believe it or not, mosquitoes can breed and hatch in as little as a cupful of water! Riding in shady areas and near water or salt water marshes particularly in low light and still conditions is asking for trouble. Fields that are close to wet areas or salt marsh or wet bushland are

also prime areas to avoid. Mosquitoes are fragile and don't like windy areas so a good breeze is a good preventative weapon. They are most active at dawn and in the early evening. How we all dread the high pitched mosquito whine!!

Sandflies can be a real nuisance too but there are some tips. They don't like windy areas either so a good breeze is good news.

Both mozzies and sandflies can be controlled by the use of advanced trapping and killing machines currently available. These machines generally pump out carbon dioxide mixed with other chemicals to attract these flies to the machine which then traps and kills them. They can be surprisingly effective if positioned and maintained properly. Small inexpensive fly traps are available for stables and if maintained correctly with regular emptying and baiting can get rid of a fair proportion of nuisance flies. A step up from this are UV light traps which are ok for flies and moths but don't buy one if you want to kill females mosquitoes...they don't work.

Other biting flies are generally daytime biters, feeding increasingly during the morning and dropping off as the afternoon warms up but picking up in the cooler evening until dark. They prefer bright, sunny days since many of them hunt by sight and prefer the sharp contrast those conditions provide.

It's often recommended that the planting of various plant species around the house, stable or yard can help. Most often recommended are Basil, Sage, Rosemary, Lemongrass, Thyme, Bay Leaf, Wormwood, Mint, Tansy and Pennyroyal.

Deterrents

Physical protection wear for our horses is available in a range of materials and designs. Horses are like humans in the way that they react to flies and fly bites and what you choose as a deterrent may depend upon the nature of your horse. Some horses don't seem to care that there are hundreds of flies buzzing around their heads but will react violently to a sandfly bite near the tail. Some horses react severely to an insect bite, some hardly at all.

Starting at the front...

- Fly masks - available for turning out and now for riding with thinner mesh and straps for attaching to bridles.
- Ear coverings. Ears can be especially sensitive
- Fly collars – impregnated with a chemical repellent – generally to repel mozzies, gnats and sandflies.
- Leg bands – similarly impregnated.
- Quarter sheets – attach to the rear of the saddle and cover the hindquarters to the tail. Light coloured fabrics can help since many biting flies are attracted to dark colours.
- Body covers – generally mesh sheets covering from the poll to the withers.
- Belly covers – attached to elastic straps. The belly skin is thin and susceptible to fly bites.
- Leg wraps – usually lightweight for riding use.

- Fly whisk – essential for the rider whether a ‘posh’ one or a leafy branch. Both are effective!

Repellents & Repellent Insecticides

This is where we come into a real mix of manufactured chemicals, natural remedies and ‘this is what works for me’. This latter category often fills pages on horse forum sites when flies are ‘in season’! Before we get serious, one particular ‘recipe’ involves the mixing together of clove oil, lavender oil, eucalyptus oil and sage or chamomile tea with 150 mls of vodka. Personally, I’d mix together everything except the vodka and then share that with the horse. At least the fly bites would be painless!

Natural remedies also include biological methods, but they seem to be much more readily available in the US where the introduction of ‘fly predators’ is big business. The fly predator is a natural parasite of many flies targeting the pest fly pupa and killing the fly before it emerges. The predators are sprinkled near to manure areas every 3-4 weeks and are claimed to distribute themselves over 50 metre radius. Not available in Australia though.

Repellents do not kill pests but are designed to stop them landing on and biting your horse. Examples are essential oils such as citronella and catnip and also synthetic DEET or Picaridin, essential ingredients of any anti-mozzie product with DEET being very effective against ticks too.

Selectively these chemicals can be obtained in either short or longer acting formulations with short acting forms applied every few hours creating a ‘barrier’ above the skin repelling flies. Longer acting preparations combine the ‘barrier’ effect with a longer lasting contact repellent for flies that actually land and so have higher concentrations of active substance. When combined with an insecticide, these substances also kill landing flies.

Repellent insecticides include natural pyrethrins (insect killers derived from chrysanthemums but break down easily in direct light) and synthetic pyrethroids which are longer acting and include permethrin which is popular in equine products and the newer deltamethrin and cyfluthrin.

If you are riding, then you’ll probably want to repel and avoid flies for their nuisance factor rather than kill them and so it becomes a matter of targeting your repellent. Most short acting products will work for an hour or two but any longer and you’ll have to re-apply or carry a longer acting repellent. Check this with your supplier. Application methods will also affect your choice. Sprays are universally popular for obvious reasons but roll-on, gels and wipes allow more control. ‘Spot’ products can also be used generally for longer term applications but they don’t stop flies landing so if your horse gets spooked by landing flies then they may only be a second line defence.

If your horse is out to pasture, then both repelling and killing are important in protecting your favourite friend. Long acting products are preferable and the forum pages are full of pros and cons in the use of Brute & Swift and other long acting permethrins, Aeroguard for mozzies (DEET), remedies of essential oils with or without wood tar, other 'natural' remedies and more 'left field' approaches such as salt bush leaves and various skin applications involving vinegar, copper sulphate etc etc.

So, what can we conclude after our trip together down 'Fly Lane'?

Unfortunately, there's no one 'magic bullet' solution and it also depends on the type of fly problem you have. At best a combination of:

- Knowing, appreciating the fly and acting on the source of the fly nuisance – an approach that is often under used. Think outside the 'chemical' square!
- Protecting your horse with some type of material cover
- Protecting and repelling with synthetic or natural substances to minimise fly nuisance and possible damage to your horse.

By the way, if anyone does find a real sandfly deterrent then let me know and we can both make a fortune!!