

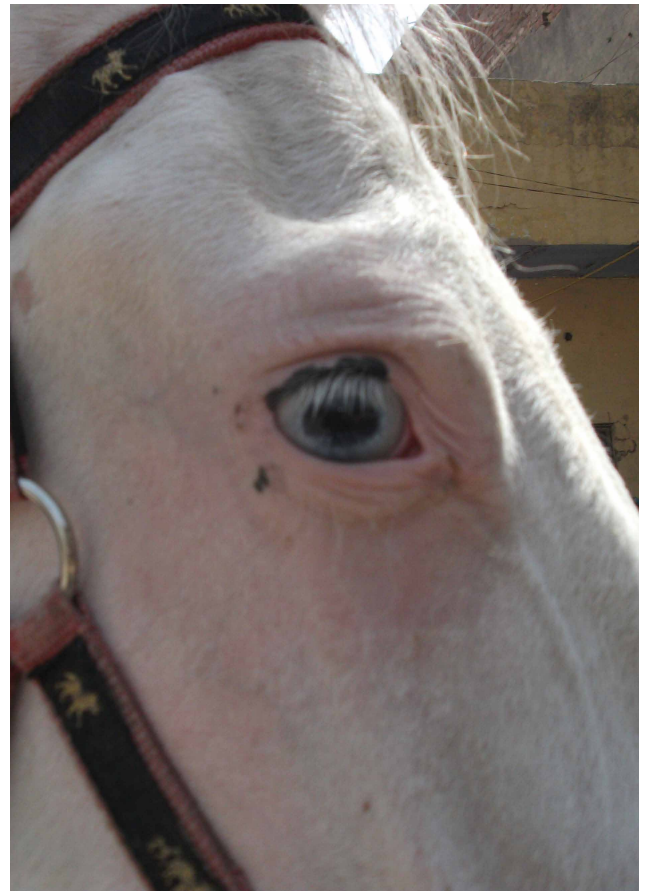
SEBWAT parameter

(Standardised Equine-Based Welfare Assessment Tool)

Eyes

Welfare issue

- The animal has an abnormality in one or both eyes. Problems with the eyes can include discharge and inflammation, lesions around the eye area, damaged or missing eyeballs, blindness.
- Eye problems are common in working equids, and are often preventable¹. The majority of eye problems can be identified at an early stage by a slight discharge caused by irritation from dust, flies or poorly fitted blinkers.
- Note that some equids have a blue coloured iris in one or both eyes, known as “wall eyes”. This is natural pigmentation and not an abnormality.
- Some animals, particularly white/grey horses, may have areas of mottled skin around the eyes with areas of both black and pink skin, which could be confused with lesions. Again, this is natural pigmentation, which often also occurs in the muzzle and genital areas of some horses.



Horse with wall eye.



Eye unable to open normally.

Welfare significance

Pain/discomfort

- Equids, like people, find having a foreign body, dust or an injury to the eye intensely painful.
- Eye problems may lead to swollen eye lids, eye lids being clamped tightly shut, a change in eye colour (this can indicate changes within the eyeball itself), or redness or inflammation of the cornea or conjunctiva.
- Pain/discomfort may lead to reluctance to allow examination, and head-shy behaviour. Head-shyness and avoidance behaviours may in turn cause negative behavioural responses from owners.

^{1,2} Brooke (2013)

Irritation, inflammation, excessive lacrimation

- Equine eyes are extremely sensitive and will develop an intense inflammatory response to damage or irritation, meaning that the initial problem can quickly escalate to scarring and possibly ultimately to blindness². The eye's response to such irritation is to produce large quantities of tears (lacrimation) to try and flush the dust or foreign body out of the eye. If the problem is not addressed, these tears will attract flies and can "scald" the skin of the face causing lesions.
- The amount, colour and consistency of any discharge is important as this can give an indication of the underlying problem.
- Clear, watery, discharge is usually a sign of a foreign body, irritation or an allergic reaction. Equids working in dusty environments will often have watery discharge.
- A thick white or yellow discharge is a sign of a bacterial infection. Dried, crusted, discharge around the eye suggests that the problem has been going on for some time.



Donkey with excessive tears.

Visual disturbance

- Anything which impairs the animal's ability to see clearly is likely to increase the risk of accidents or tripping during work. The animal's ability to predict and avoid collision is reduced, making them more susceptible to injury.
- Visual disturbance may also impair the animal's ability to interact normally with other equids, as they are less able to detect and interpret behaviour shown by other conspecifics.
- As a prey species, the ability to see and avoid potential prey is very significant for equids. It is possible that impaired vision may lead to increased fear for some animals, as they are unable to clearly appraise their environment and identify potential dangers. Fear during work may also be increased, particularly if they have memories of previous accidents.
- Blindness can be a welfare consequence of various conditions, including cataracts (clouding of the lens), ulceration of the cornea, damage to the optic nerve or retina from trauma, and even the complete loss of the eyeball.
- Equids can adapt to blindness if it is gradual in onset and the animal is kept in familiar surroundings, so the owner may not be aware of a problem until there is a change in routine. This means the owner may punish their animal for reluctance to go forwards, tripping/stumbling or for becoming nervous in unfamiliar surroundings. This is likely to cause further suffering for the animal.

Possible causation

Injury

- As equids have their eyes on the side of the head, they are vulnerable to injury through being caught on protruding objects such as nails, barbed wire or thorns. Injuries to the eyes are also commonly caused by owners whipping or beating the animal around the head area.
- Eye injuries should be treated as an emergency and attended to immediately to prevent further problems developing, which could lead to blindness.
- Eyelid lacerations usually heal quite well due to the good blood supply, however, suturing must be done with care to avoid distorting the shape of the eyelid. This could prevent the eye from closing properly which could lead to keratitis (inflammation of the cornea) or ulceration in the future³.
- Serious injury could lead to damage to the optic nerve or retina from trauma, or loss of the eyeball.

Blinkers

- Poorly fitted blinkers are a common cause of eye problems.
- Ill-fitting blinkers will rub the eye and cause irritation, shown by discharge from the eye and rubbed hair around the eye area. This will be worsened in dusty or dirty conditions where tight blinkers will rub the dust and other debris into the eye, which may be very abrasive and damaging.



Poorly-fitting blinkers, pressing on the eye.

Habronemiasis

- This is a parasitic condition which commonly involves the conjunctiva (inner lining of the eyelids), the outer eyelids and the nasolacrimal duct (a connecting duct from the eye exiting within the inner nostril on each side of the face). It is transmitted by house and stable flies feeding on discharge from the eyes.
- The condition is characterised by lesions and granular tissue around the eye and along the skin overlying the nasolacrimal duct as a result of larvae migrating into the conjunctiva and nasolacrimal system. These lesions can be very itchy (pruritus) or painful, and if left untreated the cornea can be damaged leading to blindness.



Habronemiasis lesions.

Equine Recurrent Uveitis

(ERU, moon blindness or periodic ophthalmia)

- Uveitis is common in working equids and is most commonly caused by chronic irritation⁴, and can affect one or both eyes.
- Repeated damage to the eye ball will result in scarring of the lens or cornea. This is irreversible and, depending on the size and location of the scarring, can interfere with the animal's vision.
- Once an animal has developed the condition, it will experience repeated attacks for the rest of its life. Each attack will cause more scarring and eventually total loss of vision⁵.

^{3,4,5} Brooke (2013)

Contamination

- Animals working or living in dusty environments (e.g. brick kilns, dusty dirt tracks, sandy soil) are vulnerable to contamination of the eye with debris from their environment. This will cause irritation, which if not addressed promptly, can proceed to more serious eye problems.
- A lack of regular eye cleaning, and poor hygiene in the animal's environment make eye problems due to contamination more likely.
- Fly fringes and fly masks can cause eye problems by irritating the eyes and contaminating them with dirt and debris, especially if the material is not kept clean.

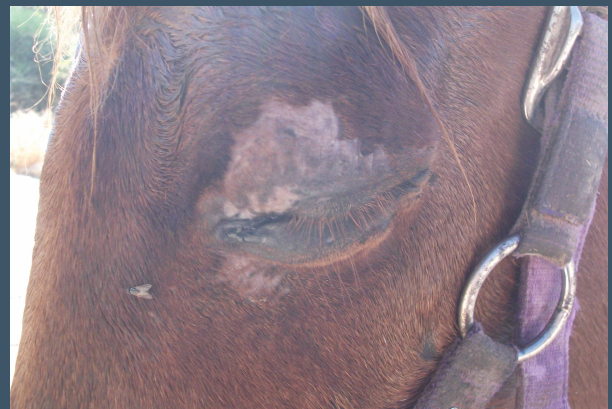
Other

- Disease, e.g. bacterial or parasitic infection in the eye.
- Congenital conditions, e.g. cataracts and entropion (inversion of the eyelids so the eyelashes touch the cornea) are hereditary).

Means of resolution

- Daily cleaning of the eyes should occur to remove discharge and debris, and to check for any abnormalities.
- Blinkers should be avoided if possible. If owners are insistent upon using blinkers, these must have a smooth surface on the inside, be fitted so as not to touch the eyes at all, and be cleaned frequently.
- Fly fringes and fly masks should be used with caution, as they are often a source of abrasion and contamination. If used, these should not rub on the eyes, and must be kept clean.
- Habronemiasis can be prevented by cleaning the eyes daily to remove the discharge and through fly prevention measures such as fitting fly fringes and clearing the manure where flies breed from stables and paddocks⁶. If infection develops, treatment should be sought promptly.
- Housing and rest areas should be checked regularly for sources of injury, such as sharp edges or protruding nails.

Refer to the *Working Equid Veterinary Manual*, *Community Engagement work plans or strategies* and the *Handling Guidelines* before conducting an intervention..



Top: Unsuitable blinkers with sharp protrusions on the inside.
Bottom: Abrasion caused by a badly fitting fly mask.

References

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⁶ Brooke (2013)