



## **RIB Advisory - Positive samples linked to plant exposure**

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A small number of adverse analytical findings in New Zealand have been attributed to exposure to naturally occurring plant material, most commonly poppy species and *Barbarea* species. These plants are present in parts of New Zealand and may be encountered either during natural grazing or through plant material entering forage or feed. Although horses do not usually seek them out, accidental ingestion can occur. International guidance also notes that naturally occurring compounds from a wider range of plants may be encountered in the same way. While these plants have not recently been implicated in adverse analytical findings in New Zealand, related species occur here and represent potential exposure risks.

### **Wild/Ornamental Poppies (Morphine/Codeine)**

Several morphine positives in New Zealand have been attributed to horses grazing poppies on or near training properties. Poppies naturally contain opiates including morphine and codeine, particularly in the seed capsules. Ingestion of small amounts can result in a prohibited substance finding. Around 10 grams of seed capsules has been reported overseas as sufficient to produce a urine positive to morphine. Where poppy exposure is known or suspected remove the horse from the affected area, address the source and seek veterinary advice. Allow adequate time before presenting the horse to race as detection periods can vary or contact the RIB to discuss utilising the RIB's elective sampling service.

### **Barbarea Species (Aminorex)**

*Barbarea* plants include species such as *Barbarea vulgaris* and *Barbarea verna*, commonly known as wintercress, yellow rocket or rocketcress. Historically, many aminorex findings in New Zealand were linked to the use of levamisole worm drenches; levamisole products are not registered or permitted for use in racehorses and suitable alternative worming treatments are available. More recently, it has been recognised that aminorex can also occur naturally if horses ingest *Barbarea* plants, as the plant compound barbarin can be converted in the body to aminorex. This pathway has been demonstrated in horses following consumption of flowering *Barbarea*. Where *Barbarea* exposure is known or suspected remove the horse from the affected area or feed source and seek veterinary advice. Allow adequate time before presenting the horse to race as detection periods can vary or contact the RIB to discuss utilising the RIB's elective sampling service.

### **Other Plants Reported Overseas**

Although these plants have not recently been implicated in adverse analytical findings in New Zealand, other racing jurisdictions have noted low-level detections and issued

advisory notices where naturally occurring plant material has been considered a possible source. Examples include Teff grass, some rush species, Mullumbimby couch and citrus tree leaves, which have been associated overseas with synephrine, as well as *Datura* or thornapple and *Brugmansia* or angel's trumpet, which contain atropine and hyoscine. Willow species have also been mentioned in relation to salicylic acid. These plants or closely related species can occur in parts of New Zealand. Trainers should be aware of these potential risks and remain alert to unfamiliar plant material in grazing areas or forage.

### **Feed and Forage Contamination**

Trainers should also be aware that plant material containing naturally occurring prohibited substances can enter hay, baleage, chaff or other feedstuffs during harvesting or processing. Trainers should remain alert to unusual seed heads, pods or plant fragments when handling forage or feed and consider sourcing products from reputable suppliers who grow and prepare feed specifically for competition horses and understand the risks of plant contamination. Herbal supplements and plant-based products can also contain naturally occurring substances of regulatory concern, and trainers should use caution with any non-veterinary herbal preparations. Where suspicious plant material is found do not feed it and seek advice from your veterinarian.

### **Preventative Measures**

Trainers should proactively remove any plants of concern, or any unfamiliar plants, wherever racehorses may graze or have access. Checks should include paddock margins, fence lines, laneways, yards, stable surrounds and areas that are infrequently grazed or ungrazed, which can allow unwanted plants to grow, mature, flower and set seed, increasing the risk of future contamination. Where plants are found remove them or use appropriate agricultural sprays, ensuring any products chosen are safe for horses and do not pose a risk of prohibited substance residues. If unsure, seek advice from your veterinarian or an agricultural specialist and prevent horses grazing affected areas until the risk is eliminated.

### **If Exposure is Suspected**

- Remove the horse from the area or stop feeding the suspected hay or feed.
- Keep a small sample of any suspect plant or forage for identification.
- Take photos of where the plants or contamination were found.
- Seek veterinary advice on assessing the risk and determining an appropriate stand-down/withdrawal period before presenting the horse to race.

### **Further Information**

If you need assistance identifying plants or require further guidance on managing a suspected exposure, contact your veterinarian. They can advise on risk assessment, help determine an appropriate withdrawal period before the horse next races, and recommend steps to reduce the chance of repeat contamination. Specialist agricultural advice may also be helpful where plant identification or paddock management is required.