

## *Pteridium esculentum*

### **Common name:**

Bracken, Austral fern

### **Palatability to Livestock:**

Low.

### **Toxicity to Goats:**

Moderate risk.

### **Toxicity to Other Species:**

Toxic to cattle, sheep, horses, pigs.

### **Poisonous Principle:**

- . Thiaminases,
- . Ptaquiloside, a carcinogen,
- . Norsequiterpene glucocides, ptaquiloside.

### **Effects:**

#### *Signs and symptoms;*

- . Unknown factor interfering with bone marrow functions, in cattle and sheep.
- . Thiamine deficiency, in horses and pigs.
- . Cancer factor giving rise to bladder tumors, in sheep and cattle, and lowers resistance to disease.
- . Depression, nasal discharge and blood, free blood in faeces haemorrhages under mucous membranes.

#### *Health and Production Problems;*

- . Avoid overgrazing pastures.
- . Provide adequate roughage, in good times.
- . Supplementary feed in autumn and winter.

#### *Treatment;*

- . Try Vitamin B1 (Thiamine)
- . Antibiotics for bacterial complications.
- . Be aware of potential stock problems.

### **Integrated Control Strategy:**

- . Goats eat a little, and trample a lot.
- . Spray mature fronds with Brushoff®.
- . Dieback will take several months, so do not slash.
- . Pasture improve after dieback.

### **Comments:**

- . Perennial plants with a complicated system of underground rhizomes and roots, containing thiaminase. Rhizomes are very toxic, take care when stock graze in freshly ploughed paddocks.
- . Stalks are stiff, erect, unbranched and brown, bearing deeply divided fronds which tend to spread horizontally from the top of the stalk.
- . Leaves are yellow to dark green, leathery, tough, smooth and glossy upper, paler lower.
- . Occurs in all Australian states, reaches maximum development in times of high rainfall on well drained soils.
- . Poisoning develops after protracted feeding, often symptoms do not appear till days or weeks later.
- . Cattle and horses most affected, sheep less so.
- . Green leaves are the most toxic.
- . Post Mortum shows internal haemorrhage and cancerous tissue.
- . Young fronds most toxic, 2-4 weeks intake required.



Picture; *Pteridium spp* Helen Simmonds. Calga NSW.

### **Further Reading:**

- . Dowling and McKenzie Poisonous Plants. 1993.
- . Everist. Poisonous Plants of Australia. 1981
- . Kohnke. Feeding and Nutrition of Horses. 1998
- . McKenzie. Veterinary Clinical Toxicology. 2000
- . Shepherd. Pretty but Poisonous. 2004
- . Simmonds, Holst and Bourke. Palatability and Potential Toxicity of Australian Weeds to Goats. 2000.
- . Wilson. Some Plants are Poisonous. 1997.