**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 haemmorhages under mucous membranes.

*Health and Production Problems;*
. Avoid overgrazing pastures.
. Provide adequate roughage, in good times.
. Suplementary 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:**
. McKenzie. Veterinary Clinical Toxicology. 2000
. Shepherd. Pretty but Poisonous. 2004

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