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NSW DEPARTMENT OF
PRIMARY INDUSTRIES

Goat health copper deficiency

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Copper deficiency is a common mineral deficiency condition in sheep and cattle in New South Wales. Little is known about the condition in goats, although on some coastal properties the signs of copper deficiency can be quite severe. The condition 'swayback' or 'enzootic ataxia' described in sheep, occurs in goat kids. Limited copper intake over time leads to the appearance of clinical signs in adult goats. Some responses to copper supplementation have been dramatic.

Occurrence

The pasture of coastal New South Wales is generally regarded as being deficient in copper. However, goats are browse-feeders by preference and estimates of copper content of bushes are not readily available.

In the Hunter Valley area, goats with adequate access to bush and scrub are rarely found to be deficient in copper. Goats on grass pasture only, or tethered on kikuyu-predominant coastal pasture often display signs of copper deficiency.

Clinical signs

The non-specific signs are illthrift, scouring, rough dull coat, anaemia and poor reproductive ability. Angoras may have harsh mohair.

Kids show a more dramatic and specific effect—a hindlimb incoordination that leads to an erratic swaying gait, hence the name 'swayback'. Affected kids are usually weak and in poor

condition, due to either an inability to suckle or keep up with their mother. Paralysis develops in the hindlimbs and kids are unable to stand. Kids can be born with a degree of swayback (or 'ataxia') but more commonly develop the condition after 4 to 6 weeks of age.

Diagnosis

A diagnosis can be made by determining the copper levels in blood or liver tissue. Both affected and healthy goats should be tested and the levels compared.

Control

In copper deficient areas, copper sulphate (bluestone) mixed with feed or given as a drench solution at regular intervals is desirable. This may be timed to coincide with routine worm drenching. Goats on grass pasture should be given tree-loppings or branches regularly. Lucerne or clover hay is also a useful supplement. Goats cannot thrive on grass alone!

Salt licks containing copper are commercially available. Variable copper content of the blocks, plus variable intake from nil to excessive amounts between individual animals, makes copper blocks an unreliable method of supplementation.

Capsules containing copper are available for treatment of individual goats. Check with your veterinarian for treatment details.

Topdressing pastures with fertiliser fortified with copper will provide more long-term results.

Caution

Caution should be used with copper supplementation because goats grazing plants that damage the liver, such as heliotrope or fireweed, can suffer toxaemic jaundice from the sudden release of copper from damaged liver cells. The confirmation of copper deficiency should be made by blood sampling a proportion of the herd. Then the most suitable level of supplementation can be estimated.

Further information

For further information, contact your veterinary practitioner, NSW Department of Primary Industries

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