

## **Black Nightshade and cattle**

### **Extracts from NIBBLERS online discussion group**

One of our graziers has asked me to identify a plant which he has growing in one of his fields which he is just about to turn his cattle out on. The plant is black nightshade and although my flora books says the berries are poisonous i wondered if anyone knew any more about it in relation to cattle grazing and if he should be concerned about it.

Thanks, Helen

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Helen

Black nightshade has a very similar effect to deadly nightshade or other poisonous plants of the Solanum genus - woody nightshade. Black nightshade contains solanine and other alkaloids.

The 'bible' on this subject is the HMSO Bulletin 161 British Poisonous Plants. This notes that the quantity of the poisons varies with the soil, climate and season. "Conflicting reports of its toxicity and of its harmless nature are inclined to mislead the unwary". The booklet reports instances of death in cattle and in children.

Symptoms are said to be "great prostration, drowsiness, and total indifference to environment." Cattle become dull and lie more or less continuously, they refuse to get up, rumination ceases, the mussels dry and the extremities cold. Cases of poisoning have also been reported in horses.

The 'Colour Atlas of Poisonous Plants' notes that "Since this weed is a typical weed of cultivated land, cases of animal poisoning are regularly observed. Cattle, horses and pigs, in particular, can become ill when fed a high proportion of black nightshade."

The booklet Poisoning in Veterinary Practice published by NOAH notes that "All parts of black nightshade are dangerous, but the alkaloid is concentrated particularly in the berries. Again it notes that toxicity varies with the season. This booklet notes that "There are usually little pathological effects other than a slight gastroenteritis. "There may be congestion of the cerebral membranes and of the kidneys and the bladder may contain blood stained urine.

So it doesn't seem as dangerous as deadly nightshade but would not advise turning cattle out on to it unless there was very little in the field. Better to err on the side of caution and cut it, remove and compost the grass this year. However, have seen no comments on its effects on sheep, which perhaps may more easily avoid eating it?

Andrew

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It is actually cultivated as a food plant in some parts of the world (fruit and leaves) though some people do say it is poisonous. Also see this:

"Black nightshade berries are considered toxic due to the presence of the alkaloid solanine and have caused varying degrees of poisoning in humans, cattle, pigs, goats, ducks and chickens. The evidence is conflicting though and consumption of the ripe berries does not always result in ill effects. The leaves and unripe fruit are richest in the alkaloids. The plants also contain high levels of nitrate that may induce nitrate toxicity in livestock."

[http://www.gardenorganic.org.uk/organicweeds/weed\\_information/weed.php?id=27](http://www.gardenorganic.org.uk/organicweeds/weed_information/weed.php?id=27)

Henry Campbell Ricketts

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Hi,

I've asked our cattle people and they reckon that although they won't select to eat it, if there is plenty of food, the cattle may try it if they are short of food. Clearly it's best to get rid of it where possible.

Jason Ball

UK Coordinator - Barn Owl Conservation Network <http://www.bocn.org/>

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Hi

I can't be certain whether our animals have encountered black nightshade (*Solanum nigrum*), but we have plenty of bittersweet (*Solanum dulcamara*) which is supposed to be similarly poisonous.

I think the point (as with all poisonous plants) is not so much whether or how much it is poisonous, but whether in practice the stock actually eat enough of it to be poisoned.

There is plenty of bittersweet in several of our fields, and our cattle regularly eat it -- as they do many other poisonous plants, such as hemlock (*Conium*), "water hemlock" (*Oenanthe crocata*), giant hogweed, cherry laurel, yew etc. They've never shown any illness when grazing these fields, and like many of those other plants it tends to decline with grazing, ending up mainly where they can't reach it (in the river...). I think one site we grazed had black nightshade, and if so it was grazed (along with the hemlock).

We do not worry about bittersweet, or try to remove it. Perhaps they might be poisoned if it was dominant over much of the site and there was little other palatable green vegetation available -- presumably this is how cases of poisoning do arise.

The only plants we do worry about are the roots of water hemlock, and acorns (especially if the animals are growing, milking or suckling). Both of these plants manage to avoid the anti-poisoning behaviour which herbivores have, because a small amount does not make them feel ill. Ragwort in hay or silage would be another one, if we were buying it from a field we hadn't seen.

Richard

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It grows well with maize and that is why there seems to be an increase. As Andrew says it is poisonous but not so dangerous. I suspect it will die out after one year if the field is now p.p.

Simon

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Hi -

Noticed some black nightshade yesterday in one of our fields.

The cattle in this field are running low on grass, and so are a bit on the hungry side -- however, they'd carefully eaten around the *S nigrum*. This suggests that they consider it more toxic than *S dulcamara*, as I've seen them eat that.

Incidentally, our horses readily eat potato leaves (they steal them over the fence), which are also supposed to be toxic (*Solanum tuberosum*). I suspect the amount of toxin in the various *Solanums* varies a good deal.

Richard C

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