Nitrate poisoning

What is it?

Nitrate poisoning is caused by high nitrate levels in feed and usually occurs in late autumn or winter, particularly during a flush of growth after a dry summer. It occurs with short-term ryegrasses, oats, brassicas and occasionally other new pastures, and can cause stock death.

How can nitrate levels be managed?

If in doubt, crops can be nitrate tested. Results are usually available in a few hours. (Nitrate tests are performed at most animal health laboratories. Some vets also sell test kits).

If the nitrate level is elevated, avoid putting hungry stock on the crop. Feed them silage, hay or something else first so they eat less of the problem crop and eat it more slowly. Stock can tolerate higher levels of nitrate, provided they eat the feed slowly.

Where possible graze with older stock, because they are less susceptible than young stock. Also, feed off problem crops later in the day when nitrate levels are lower. Levels are lower in late afternoon, particularly on sunny days.

Nitrogen fertiliser can exacerbate nitrate levels. If concerned about high nitrates, either avoid applying N fertiliser or apply it in small amounts (20-30 kg N/ha) just after the paddock has been grazed.

What is a dangerous level?

No absolute level can be given, but it is generally regarded that levels of nitrate (on a DM basis):

- below 1% are safe
- between 1-2% may cause problems
- over 2% are potentially toxic