FEEDTEST
Under license from AVS

Guidelines for use of feeds with known nitrate-nitrogen (NO_3-N) (% DM basis) content

Level of Nitrate-Nitrogen (NO_3-N) in mg/kg of DM or ppm	Recommendations for use in livestock (cattle/sheep)
0 – 1,000	Generally considered safe for livestock
1,000-1,500	Safe for non-pregnant animals. Limit to 50% of ration dry matter for pregnant animals
1,500-2,000	Limit to 50% of ration dry matter for all animals
2,000-3,500	Limit to 30% to 35% of ration dry matter. Do not feed to pregnant animals
3,500 – 4,000	Limit to 25% of ration dry matter. Do not feed to pregnant animals
> 4,000	DANGER: DO NOT FEED. Potentially toxic

Source: Dr Charlie Stoltenow, Dr Greg Lardy, "Nitrate Poisoning of Livestock", North Dakota State University publication, V-839 (Revised Feb 2020)
https://www.ag.ndsu.edu/publications/livestock/nitrate-poisoning-of-livestock#:~:text=Nitrate%20poisoning%20can%20occur%20commonly%20in%20cattle%20raised,with%20high%20nitrate%20content%2C%20causing%20nitrite%20to%20accumulate

- FeedTest report NO_3-N as mg/kg of dry matter (DM)
- Mg/kg is equivalent to part per million (ppm)

CONVERTING NITRATE NITROGEN (NO_3-N) to NITRATE (NO_3)

Conversion factor = 4.43

For example, if a sample has a NO_3-N of 1,500mg/kg DM:

1,500mg/kg DM NO_3-N x 4.43 = 6,645mg/kg DM (NO_3)

Therefore 1,500mg/kg DM of NO_3-N is equivalent to 6,645mg/kg DM of NO_3

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