THE ATTITUDES AND APPROACH TO TRACE ELEMENT DIAGNOSIS AND TREATMENT IN THE UK

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Veterinarians and farmers recognise the importance of mineral balance in cattle, in particular with relation to fertility, yet there is still much debate about the mechanisms, assessment and treatments of these conditions. An online survey was carried out in the UK, of veterinary surgeons, NUTRITIONists and other advisers to ascertain how important they felt various mineral deficiencies and toxicities were in relation to bovine health and fertility, and how well they understood the various interactions. The survey also assessed how they identified, confirmed and treated these mineral imbalances. The survey was notified to relevant individuals via professional organisations, at conferences, on websites, etc. 173 respondents took part in the survey, of which 78\% were vets in practice. The responses were analysed using MS Excel to investigate the various interactions, examples of which will be presented in this paper in a novel way using bubble charts. A scoring system was used to measure the perceived importance of minerals - 1 to 6 was deemed to be low, 7 or 8 medium and 9 or 10 high. Vets were more evenly distributed (low 33\%, medium 37\%, high 30\%) while non-vets were more likely to score medium importance (low 17\%, medium 48\%, high 35\%). The most frequently identified deficiencies across all groups were copper, selenium and iodine, while the most commonly identified toxicity was molybdenum. There is variability in what vets and advisers understand by “copper deficiency” - of the options given, 33.7\% of vets and 46.7\% of advisers chose “Primary copper deficiency is common in the UK, and is exacerbated by the presence of other substances which can antagonise the copper”, while “Primary copper deficiency is extremely rare in the UK - a) it is usually antagonism from other substances that causes a secondary deficiency”; was chosen by 32.5\% of vets and 13.3\% of advisers, and - b) it is usually molybdenum interaction that causes a problem”; was chosen by 22.9\% of vets and 33.3\% of advisers. This suggests a need for the true copper-molybdenum interaction to be elucidated. Of the findings associated with reduced fertility attributed to each mineral deficiency, there was general consensus between the vets and advisers, with the “classic” symptoms predominating; poor pregnancy rates, anoestrus and reduced oestrus expression associated with copper (primary or secondary), retained placenta and endometritis associated with selenium, and stillbirths associated with iodine.