

Inorganic minerals in complete industrial feeds

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Introduction

- limits of the scope
- there's more to it than nutrition
- complete feed is less relevant in animal rations,
(balancers, nutritional supplements, mash, ingredient mixtures...)
- mineral availability is species specific, mineral nutrition had limited scientific innovation

Introduction(2)

- feed formulation:
from total macroelements minis
and excesses of microelements
to species specific availability, feed
unavailable mineral limits , phase
requirements and balance
- Industry concerns moving from
nutrition to environnement,safety,
technology and marketing

Nutrition and environment constraints

- RBV tables are relevant for substitution of ingredients,
- address the multiple and complex animal requirements
- management of mineral supply over animal requirement ; litter control, manipulation of ingredients interactions, ration net energy value, mineral feed intake effects

Nutrition and environment constr.(2)

- mineral content and water intake/excretion
- mineral and products quality (egg shell, milk microelements)
- sustainable agriculture constraints, integration of animal production to farm management, fertilizer policy, eco-conditionnality of EU subsidies, water conservation

Technology concerns

- specific mineral ingredients for feeds or mineral feeds inclusion;
- mixing ability in feed and premix
- animal responses to particle size, rate of solubilization, slow release
- mineral sources diversification,
- new interactions from feed; ligands, acids, enzymes ...

Technology concerns(2)

- liquid premix technology, emulsions etc...
- processing agent minerals vs 1831/2003 guidelines
- two steps manufacture for carry over control (coating, vacuum mixers...),
- coarse feeds and mineral incorporations

From feed security to feed safety

- Undesirable substances legislation; ALARA, dilution, control and insurance (Feed Hygiene...)
- orphan mineral additive notification (reg 1831/EC2003)
- new products/allégations; clays as detoxicants, chelate forms etc...
- future of meat and bone , organic dicalP?

From feed security to feed safety(2)

- Feed ingredient/additive traceability;
trade and destination for feed, food and chemical industry
- from product provider specs to audited insurance scheme;
gmp, gtp, IFIS initiative

Feed marketing

- more requirements from feed buyers; breeders, animal product certifications quality schemes etc...
- mineral interactions; additives (acids, probiotics), special ingredients (FOS/MOS)...
- gut microbes req., gut milieu control, precision mineral delivery

Feed marketing (2)

- customers interest for simple and time saving feed offers
- assesment of feed/forage mineral supply in ration is questionable
- animals benefit of fine tuning of mineral supply for health, immune system modulation, stress and specific requirements
- phase supply, offspring transfer

Conclusions

- although nutrition innovation, environnement, technology and marketing are concerns for complete feed manufacturers, sophisticated macro or micro minerals forms are of marginal use
- competitive supply of safe ingredients and additives is still essential to feed industry

Conclusions(2)

- we expect EMFEMA help to demonstrate to european public that EU feeds are better complying with their requirements for animal food than any other
- discussions with Codex Alimentarius and EU legislators, combined with industry self regulation, are highly requested

That's all folks!

- THANKS FOR YOUR ATTENTION
- A HAPPY 10th BIRTHDAY TO EMFEMA
- WISHES FOR ANOTHER 10 YEAR COOPERATION WITH STAKEHOLDERS; FEFAC, IFIS...
- HAND TO CHAIRMAN FOR QUESTIONS FROM THE FLOOR