The African Feed Environment with Special Reference to Kenya and Tanzania

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Overall challenge

- Governments and industry stakeholders must develop a common vision
  - Numerous systemic issues that constrain the growth of the animal feed value chain
  - Put policies and standards in place
    - Will drive the process of integration and consolidation
    - Based on a level playing field
  - Guarantees fair competition and credible standards
Introduction

- Formal private sector must organise itself in effective industry associations and alliances
  - For self-regulation and lobbying for government regulation and surveillance
Introduction

• Major challenges that African Feed Industries currently face

1. An inadequate regulatory environment and policies
2. The role of insufficiently funded and mandated sector institutions and a representative industry association
3. Feed ingredient supply chain and procurement constraints
4. Control on feed quality and food safety practices in manufactured feeds and livestock production
5. Insufficient level of education, training and knowledge
The regulatory framework and bodies in many African feed industries are fragmented, segmented, ineffective and not comprehensive.

Limited financial resources in both public and private sector organisations appear to prohibit an integrated approach for effective legislation and enforcement.
Stakeholders are unable to effectively align and interact in one and the same system.

- Operating at different stages of development and maturity.
Regulatory Environment and Policies

• Governments should take a leading role in creating or improve the necessary structure and legislation
  – Improve functioning of the feed sector in terms of its competitiveness, regulatory environment, policies and growth path
    • Feed and fodder sub-sectors largely depend on that
  – Chain management
    • Play more prominent role in sector governance and development
    • Effectively align regulating entities to interact in one and the same system
  – Must develop an appropriate institutional framework
    • Promote interaction between private and public initiatives
Regulatory Environment and Policies

- A solid Animal Feed Regulation should be put in place
  - Revise and properly enforce

  - Policies
  - Regulations
  - Feed standards
Regulatory Environment and Policies

• Set (and enforce) minimum standards for raw material importers/traders and feed manufacturers
  – License feed manufacturers
    • Buildings and infrastructure
      – Raw material imports and quality
      – Product and processing specifications
• Scope for self-regulation
  – Even in the absence of effective government regulation and enforcement
Role of Sector Institutions and Industry Associations

• Liberalisation of the African animal feed sector
  – Created an institutional gap

• Fill gap by a properly funded and mandated Animal Feed Association
  – Can tackle many obstacles that are plaguing the animal feed sector in Africa
  – Managed by the private sector with support and supervision from government
  – Must contract skills and acquire resources
    • Full time self-financed, well-equipped and highly skilled Secretariat & staff
Role of Sector Institutions and Industry Associations

– Obtain membership with binding conditions for members
– Impose and collect levies and fees from members
  • Financing of the Association’s operations
– Has representation from all major stakeholders in the feed sector
  • Raw material and pre-mix suppliers, and feed manufacturers
– Play a key role in feed industry self-regulation, enforcement and policing
  • Must be mandated
Role of Sector Institutions and Industry Associations

• Such an organisation can further be delegated to:
  – Bring together all policy, regulatory and sector development issues in one institution
  • Strengthen those segments and stakeholders in the sector
  – Have the highest ability to transition the industry into a growth model
  – Phase out the non-compliance informal sector in the feed supply chains
Role of Sector Institutions and Industry Associations

• Such an organisation can further be delegated to:
  – Provide expert support to Government in drafting legislation, regulations, feed guidelines and standards
    • Audit and enforce standards and regulations
  – Collaborate with Government
    • Assist in licensing and accreditation of feed manufacturers
  – Create the necessary structure and legislation
    • For further development of the country’s feed sector
  – Align and collaborate with other stakeholders
  – Introduce sector-wide HACCP systems
Role of Sector Institutions and Industry Associations

• A strong feed industry association cannot be expected to govern the sector
  – Will be more able to lobby the government

• Once it is seen as a seriously driven organisation that officially represents the entire industry
Role of Sector Institutions and Industry Associations

• Currently the role of feed industry organisations marginalized
  – Completely under-funded with little or no resources
  – Skills constraints and understaffed
  – Lack of focus and divided interest

• Leading animal feed manufacturers should co-operate
  – Willing to take the lead in bringing strong leadership in their animal feed association
Role of Sector Institutions and Industry Associations

• AFMA in South Africa
  – Membership voluntary
    • Majority of the Feed industry stakeholders are members
      – Afma creates huge value for it’s members
    • Binding conditions for the members
  – Board of Directors & CEO mandated to introduce self-regulation and apply self-policing
  – Focus on safe feed for safe food – Code of Conduct
  – Assists with drafting legislation, regulations, feed guidelines and standards
    • Gets approved by Government
Role of Sector Institutions and Industry Associations

• AFMA in South Africa
  – Audits manufacturing facilities and enforces standards and regulations on its members
    • Afma Certification
  – Mandate to impose and collect levies and fees from their members
    • Finances Afma’s operations
  – Industry Committees responsible for Afma’s activities
    • Technical, Liaison, Trade, etc
Role of Sector Institutions and Industry Associations

• AFMA in South Africa
  – Full collaboration with other stakeholders in the Animal Production chain
  – Full collaboration with Government
  • Assists in licensing and accreditation of feed manufacturers and registration of feeds
  • Assists Government with own-funded staff where skills are lacking
Raw Material Supply Chains and Procurement Constraints

- African feed industries need a proper strategy for its overall procurement process
  - Ensure a more cost effective model for sourcing raw ingredients

- Constraints on the supply chain of feed ingredients is a major problem
  - Limited access to competitively priced (world market) and consistently available quality raw materials
    - Both locally and globally
Raw Material Supply Chains and Procurement Constraints

- >70% of feed ingredients used in for example Kenya are raw materials imported from neighbouring countries

  – Not sustainable in view of:

    - Development of the livestock and feed manufacturing sector in such countries
    - Inconsistency and seasonality in supply
    - Quality and composition of the raw materials
      – Nutritional value and contaminants
Raw Material Supply Chains and Procurement Constraints

• Major constraints for globally sourced ingredients exist that act as a disincentive to trade and invest
  – High taxes
  – Import duties
  – Port costs
  – Distance and transport costs of ingredients
  – Bulk buying (vessels rather than containers)

• Procurement co-ordination between millers to reduce costs
  – Storage facilities
Raw Material Supply Chains and Procurement Constraints

• Quality variability of raw materials
  – Protein rich materials low in protein levels
    • Makes transport cost/unit of protein high
  – Local and neighbouring ingredients variable in quality
    • Quality standard framework for raw materials is inadequate
      – No official quality regulations and standards
      – Makes it difficult to enforce controls on the quality of local by-products
Raw Material Supply Chains and Procurement Constraints

• Price variability of raw materials throughout the year
  – Lack of working capital to purchase sufficient quantities
    • During periods of sufficient volumes
  – Millers have constraints to purchase elsewhere in the world
    • When prices in neighbouring countries become high
Raw Material Supply Chains and Procurement Constraints

• Access of feed manufacturers to year round quality raw materials essential
  – Ensures a growing and competitive feed industry and livestock sector
  – Can be improved by:
    • Reforms in import regulations and duties
      – Zero or low rated import duties
      • Protein-rich products and yellow maize
      – GMO varieties
Raw Material Supply Chains and Procurement Constraints

• Big need for storage facilities
  – Alleviation required

• Stimulate local ingredient production
  – Will make African feed industries less dependent
    • On raw materials from varying quality and availability
    • Having to source its raw ingredients from other countries

• Processing of raw materials and introduction of alternative raw materials
• Quality controlled reserve supply of raw materials needs to be set up for the country’s feed industry
  – Enhance quality and reduce large seasonal fluctuations in availability and price
• Feed product standards have been defined, however:
  – Quality standard framework for raw materials remains inadequate
    • Makes it difficult to enforce controls on the quality of raw materials imported into the country
In many African countries food safety is a growing concern
- For products from animal origin that are consumed by humans
  - Starting point is animal feed

No comprehensive HACCP or GMP system in place for the feed sector
- Quality assurance of supply chains
- Processing operations
- Feed formulation
- Marketing/distribution
  - Exception is in-house systems of a few large feed manufacturers
Control on Feed Quality and Food Safety Practises

• External auditing is almost absent
  – No standards for raw materials and no labelling of products

• The adoption of minimum standards based on GMP/HACCP principles will work two ways:
  – It will enhance quality control within the existing businesses
  – It will crowd out “back-door feed producers”

• Legislation should not only be present but also enforced
Control on Feed Quality and Food Safety Practises

• Bureau of Standards follows a reasonable protocol for end-products on paper
  – Feed product standards have been defined
    • Minimum standards criteria not sufficient
      – Need continuous revision
    • Period of revision too long
    • Conform with nutrient requirements of existing improved livestock breeds
  – Are standards and guidelines properly executed, enforced and maintained in practise?
Control on Feed Quality and Food Safety Practises

- Level and skills of people involved in auditing and setting standards is questioned
  - Nutritional expertise level of Technical Committees
  - Bureau of Standards understaffed and underfunded
  - Appears that only larger mills are audited
    - Those that already make efforts to comply
  - Informal sector is not targeted or ignore conformance with standards
Control on Feed Quality and Food Safety Practises

- Learn from systems, regulation, legislation, etc. from countries where it is successfully implemented
  - South Africa is a good example

- African countries should consider to customise and implement those regulatory guidelines and systems to fit its expectations
Ministries must get involved

- Insist on minimum quality management and product standards and enforce it
  - Make it law (if it’s not)
  - Feed purchase agreements should demand certificates of conformity to standards
  - Accreditation and licensing of feed mills

- GMP, HACCP, etc
Control on Feed Quality and Food Safety Practises

South Africa

• Act36/1947 – Regulates industry – Sets minimum industry standards and provides legal guidelines to produce quality and safe feed in SA
  – Ministry and stakeholders must buy in
  – Revise auditing authorities, systems, procedures, control and implementation
    • Overseen at Ministry level
  – Minimum standards need to be re-evaluated
    • External expertise could help with this
• Expertise of the Technical Committee should be evaluated
  • Ensure that the right expertise is on such a Committee
Control on Feed Quality and Food Safety Practises

• Lack of credible feed laboratories
  – To ensure the quality of animal feed
• Regular, reliable and fast feed testing
  – Scope of parameters that can be analysed by the local laboratories and service offerings is too narrow
Control on Feed Quality and Food Safety Practises

- Inadequate laboratory services
  - Potential exists amongst current African laboratories, however:
    - Absence of effectively operated accredited feed laboratories
      - Ability to analyse for a wide scope of parameters
      - Fast turn-around time for sampling, analysis and results
    - Limited expertise of analytical programmes and services for the feed industry
    - Advice to feed industry clients on the use of results is lacking
Control on Feed Quality and Food Safety Practises

• The NIR programmes followed and calibrations are inaccurate
  – Rely too much on NIR results that are inaccurate
  – Calibrations are not African specific
  – Introduce NIR accreditation and certification programmes
    • Based on specific nutrient analysis accuracy
  – Co-operate with external NIR analytical and calibration programmes
    • Similar to African raw material’s composition
Control on Feed Quality and Food Safety Practises

• Analytical service
  – Expertise required to advise on:
    • Overall analytical programmes
    • Proper use of results
    • Collaboration with other laboratories
    • Full implementation thereof
  – Co-operation with global laboratories
  – Benchmarking between laboratories
  – Auditing required
    • Leading to accreditation and certification
  – Potential lies within current soil and plant laboratories
Knowledge, Education and Technology Levels

• Investment in innovation, knowledge and skills for commercial feed production
  – Recommended as one of the most strategic and important intervention choices for the African feed sector

• Lack of an effective institutional environment for training of staff across the feed industry
  – Major bottleneck
Knowledge, Education and Technology Levels

• Serious gap in the demand and need of the sector in terms of skilled labour
  – What is available in the market
    • Training courses and modules
• Underdeveloped information network
Knowledge, Education and Technology Levels

• Low profitability of smallholder farmers

• General lack of trust between farmers and feed millers
  – Create perceptions that millers abuse farmers by supplying substandard feeds
  – Affects the growth potential of the animal feed industry
Knowledge, Education and Technology Levels

• Major challenges related to the use and adoption of available technology to formulate diets that will perform optimally
  – Availability and affordability of a large enough range of raw ingredients
  – Research capacity and inadequate technology adoption
  – Limited expertise within the field
  – Lack of good formulation programs and feed models
Knowledge, Education and Technology Levels

• Results in the use of very basic and underperforming feeds

• Nutritional Advice & Education
  – Almost non existing
  – Farmers lack general knowledge and have low skill level
  – Disability to differentiate between high and poor quality feeds and feed rationing

• Cannot make informed decisions
  – Reduces farming profitability significantly
Knowledge, Education and Technology Levels

• Extension services are lacking
• Farmers are forced to buy what they get
• No advice on best use of feed products
  – Concentrates with on-farm roughage- or other local in-house sourced feed ingredient sources
• Too little interaction between millers and farmers
Knowledge, Education and Technology Levels

• Promote research and utilisation of technologies in livestock feeds
  – Improve and increase local capacity

• Train African nutritionists on the latest feed technologies and feed formulation models
  – Must be specialised nutritionists with official Animal Science degrees as minimum
Knowledge, Education and Technology Levels

- Develop proper formulas and formulation strategies
  - Specific for African circumstances
  - Compliment locally produced feed and roughage sources
  - Base formulations on actual in-time analytical values
- Continuous consideration of varying ingredient nutrient composition
Conclusion

• Recommended option to improve the African feed industries
  – Benchmark it with feed production in countries with a developed feed sector
  – Consider customising and implementing the regulatory guidelines and systems of a country such as South Africa to fit its expectations
Conclusion

• Big need for a strong institution that governs the industry with regard to
  – Policy development
  – Regulatory framework
  – Systems for Good Manufacturing Practice (QA/QC) and auditing

• Feed Quality Assurance/Quality Control
  – Training and investment
Conclusion

- Properly funded and mandated industry association
  - Strongly supported at Ministry level
  - May have ability to engage and play a key role of self-regulation in the feed sector
Thank You