

# *An overview of current status of Kenyan fish feed industry, challenges and opportunities*

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**SUSTAINABLE USE OF  
COASTAL AND  
MARINE RESOURCES  
IN KENYA:  
FROM RESEARCH TO  
SOCIETAL BENEFIT<sup>27</sup>  
– 29 OCTOBER, 2014**



# Outline of Presentation

- 1. Background
- 2. Current status of the feed industry in Kenya
- 3. Challenges in the feed industry
- 4. Opportunities for collaboration



# *Background – Fish feed Industry*

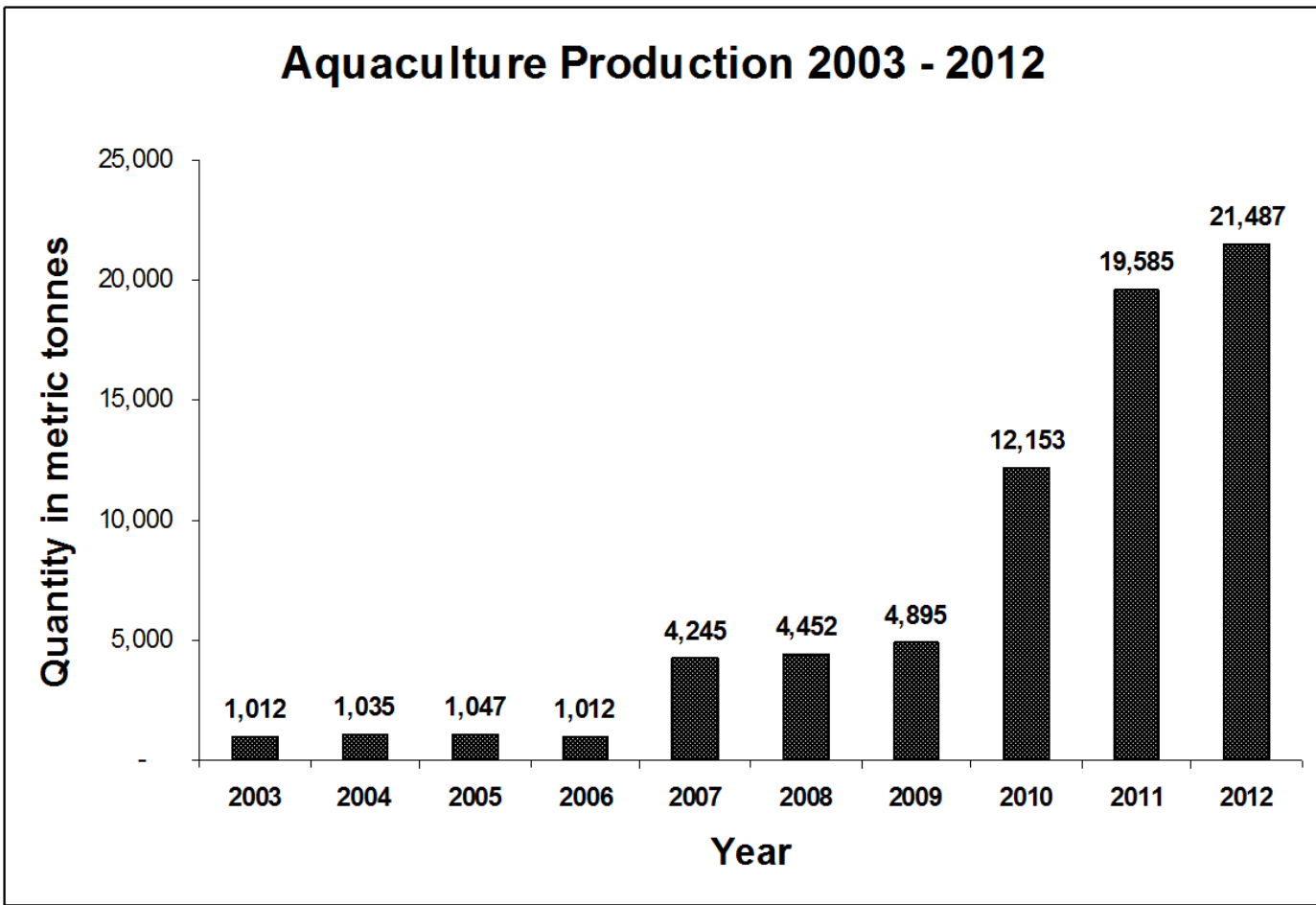
- Up to 2008 Fish farming in Kenya was mainly conducted at small-scale (subsistence) level
- Feed used was mainly agricultural by-products (cereal brans) as supplements & There were no commercial fish feed millers – New industry
- 2009 saw a transformation in the approach and funding levels (ESP Gov. supported)
- 2009-2012 the Gov funded 4.2b kshs has been invested in (pond, seed, feed, cold storage, suitability mapping, training & extension) to support farmers
- The Gov. supported program resulted to increased demand for seed, extension services, processed fish feeds



# *Current status of aquaculture in Kenya*

- Area under aquaculture 10,000 Ha, Farmers 2014- Over 38,000*
  - Active commercial feed millers 2014 – 7, Cottage feed industries - 12*
  - Aquaculture production; 2013 – 48,790mt (25%)*
  - Available commercial feeds have FCR 2.5 on average translates to over 120,000 mt demand for feeds*
- Tilapia and catfish feed standard is developed and published*





*Figure 1: Trends in aquaculture production in Kenya*



# Commercial feed millers – New Sigma Feed Factory, Nairobi County

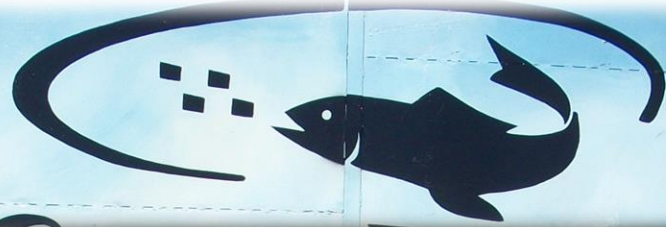


# Crompton Feed Millers Kisumu- County

This JewletCrom Manufacturing Plant was Officially Opened by Prof. Micheni Japheth Ntiba, CBS Principal Secretary State Department of Fisheries, Ministry of Agriculture Livestock and Fisheries On 20th November 2013



# Thoyu Feed Millers- Nakuru County



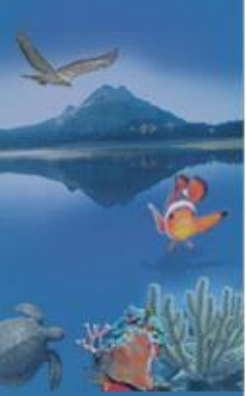


# Cottage – Fish feed Industries (farmer clusters)



NASA Blue Marble

# Success story – Bidii fish farmers Western Kenya

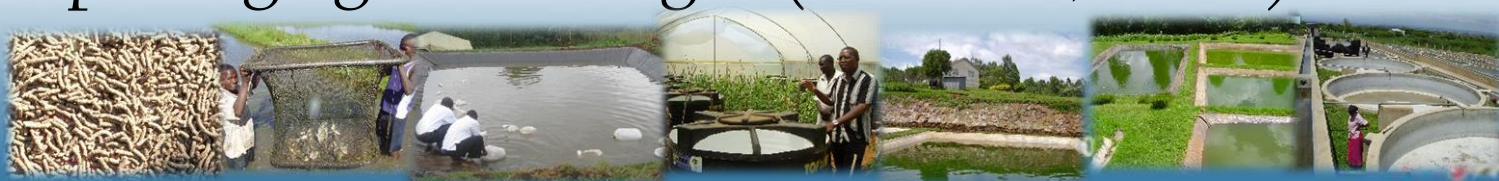


# Challenges facing the feed Industry

## ▶ *Feed quality*

*Nutrient uniformity; pellet quality issues, Low Feed Conversion Ratio (FCR)*

- ▶ *Over reliance on fishmeal Omena (Rastrineobola argentea) creates direct competition with human food*
- ▶ *Few trained aquatic feed experts (researchers, technicians, millers)*
- ▶ *Frequent price fluctuations of raw material for the feed industry- Compromised quality*
- ▶ *Poor packaging and storage- (moisture, molds)*



# Challenges - Continued

- ▶ High cost of fish feeds- Commercial fish feeds are expensive in the region in Kenya 1 US \$, Uganda 0.9 US, Tanzania 1.3 and 1.5 US \$ Rwanda
- ▶ Imported feeds for grow-out is 2.5 US \$ ( 26% CP)
- ▶ lack of starter diets- for larval and fry stages
- ▶ Lack of feeds formulated specifically for marine fish species





# Opportunities for Joint Research KMFRI – Belgium & other Dev Partners

## ▶ Capacity building

- Training on feed processing and production technologies
- Development of adaptable technology and equipment for fish feed processing & production suitable for the local conditions
- Exchange program between Belgium and KMFRI Researchers for exposure and practical experience in feed production

## ▶ Infrastructure

- ▶ Development of a state of art nutrition laboratory for feed analysis, formulation and quality control





# Opportunities for Joint Research

- ▶ *Improvement of Feed quality & reduction of cost*
  - ▶ *Development of live feeds - artemia, rotifers*
  - ▶ *Research on alternative feed resources- plant based, non-conventional*
  - ▶ *Improvement of the feed conversion ratio (FCR)*
  - ▶ *Feed development for different stages of development*
    - ▶ *starter diets specifically formulated for the marine*
    - ▶ *Development of Ornamental feeds (Koi carp) High potential*
- ▶ *Development of efficient marketing linkages and communication platform*



- *Research on nutrition related conditions, deformities, diseases and the quality of the flesh-Farmed.*

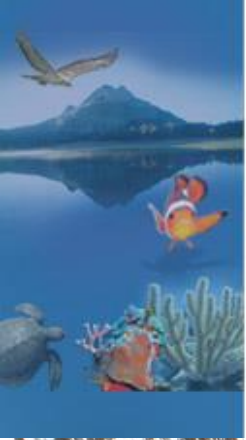
- *Research on anti-Nutritional factors, toxins in fish feed ingredients and safe removal mechanisms*

- *Nutrient loading from fish feeds in culture systems, effects on water quality, treatment and safe disposal*

- *Develop certification system for accrediting for feed manufacturers*

- *There are opportunities for development partners to invest in the feed industry in Kenya*





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**Thank You...**