

Insects for animal feed in East Africa

Seed money projects 2018

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Insects for animal feed in East Africa

Objectives:

- Provide an analysis of the current state of affairs of utilization of insects for animal feed in East Africa
- Offer an overview of investment opportunities for Dutch companies and knowledge institutes involved in insect research and production
- Outline potential relevant public and private partners through:

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■ Through:

- listing growth in demand for protein sources in animal feed
- describing the need for alternative protein sources for animal feed
- analysing which areas are most in need of new protein sources in animal feed
- summarizing the current regulations with respect to rearing of insects and the use of insects in animal feed



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Methodology:

- Desk research
- Field visits Kenya, Tanzania (October 2018, Teun Veldkamp, Adriaan Vernooij)



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Visit to Kenya, and Tanzania, Oct 8-12

- Feed industry, consultants, KEFEMA
- Insect producing companies
- Research: ICIPE
- Poultry industry: Kenchic
- NGO Projects, in aquaculture
- Netherlands Embassy, Rabo Bank

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Current use of insects in East Africa:

■ **Uganda:**

- many small scale initiatives, often on food

■ **Tanzania:**

- very little, only waste management Dar es Salaam, some efforts Sokoine University.

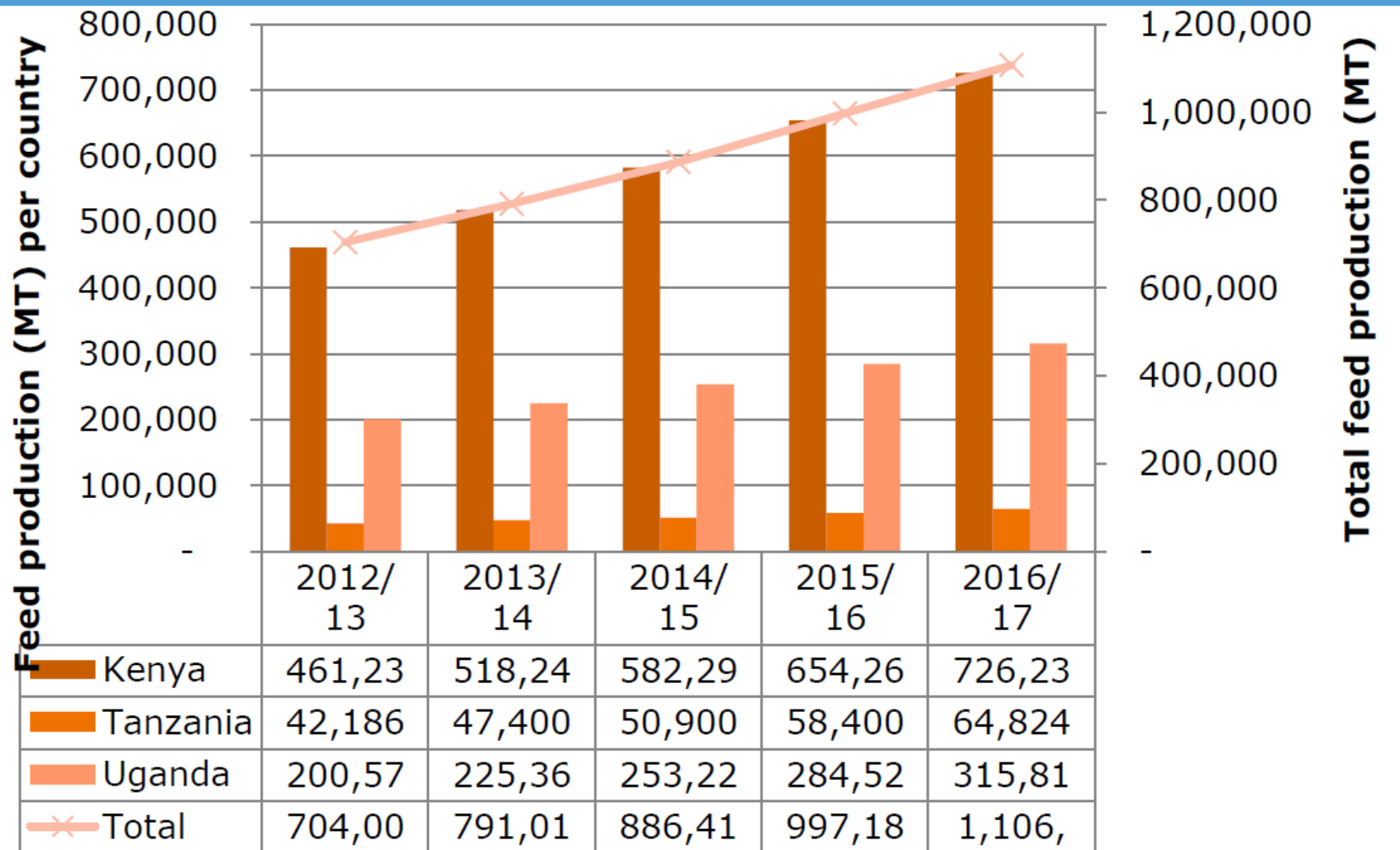
■ **Kenya:**

- both food (western) and feed (central)
- strong role of ICIPE in developing knowledge and small scale initiative
- upcoming number of medium scale initiatives



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Demand for feed:



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- Arable land (M ha) per country:

Rwanda 1.8

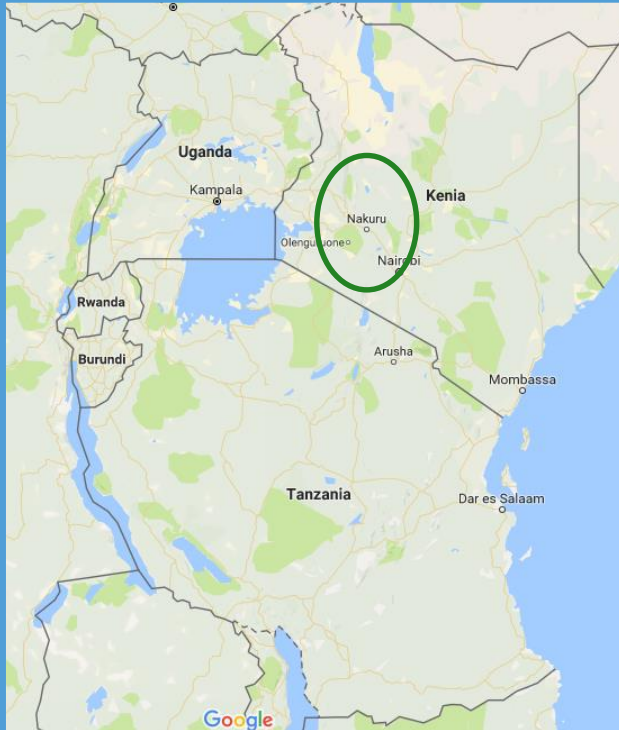
Kenya 6

Uganda 9

Tanzania 10

Production of maize in Kenya stable to – 10 % in volume in past decade, but 1 M ha's more were needed in past decade to produce this

Maize production Ethiopia, Tanzania and Uganda rose by 70 % (2006-16) against population rise of 27 %



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Feed industry in Kenya:

- Unga Farm Care EA Ltd, largest feed producer in Kenya (40-45 % of market): protein supply problematic, great interest in insects
- Isinya feeds: similar interest
- AKEFEMA: general view on developments feed industry, interest in alternatives, role in legislation



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Legislation:

- New rules since 2017 KEBS (Kenya Bureau of Standards)

KENYA STANDARD
KS 2711:2017
ICS 65.120
Dried insect products for
compounding animal feeds

- Specifies the requirements for dried insect products as sources of protein for compounding animal feeds.

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Insect production initiatives in Kenya, some examples (medium scale):

- Sanergy
- Lathylora
- ICIPE/WUR
- Ecodudu

Tanzania:

- The Recycler (follow-ups in Mombassa and Addis Ababa)

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Sanergy:

- Sanitation in slums as base for insect production
- Franchising toilets and using (human) waste for compost and insect production



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Latyhyflora:

- Horticulture and insect production



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Substrate:

- No clear picture in Kenya on good sources
- ICIPE testing
- Flower industry waste
- Kenchic: chicken manure



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Future steps:

- Analysis of available substrates (feed stock for insects) in Kenya
- Team up with other partners in Kenya, interest from:
 - Unga
 - Kenchic (tests with manure)
 - Lathyflora
 - ICIPE
 - feed companies from the Netherlands
 - suppliers of insect producing equipment



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Conclusion:

- Interest in insect production for feed production growing, but far from meeting demand. Large volumes of consistent quality required for commercial sector.
- Experience is limited, lack of information on:
 - management (climate, temperature control)
 - Substrate (Kenchic/ICIPE, chicken manure testing started)
 - type of insects



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Investment opportunities:

- At three levels:
 - small scale, rural market
 - medium scale commercial market
 - large scale commercial market



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Thanks for your
attention

