



Scaling of Improved Forages in Eastern Africa: an Activity of the GIZ/BEAF Task Force on Scaling





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Kassel, Germany TropenTag 2019











Advisory Service on Agricultural Research for Development (BEAF)

On behalf of BMZ, BEAF provides funding for Agricultural Research for Development (R4D) to 15 CGIAR Centers + ICIPE & WorldVeg

Funding of research projects at all stages along the R4D continuum







Selected scaling research groups in CG Centers

Authors	Center	Concepts and tools
Sinclair, Coe <i>et al</i> .	ICRAF	Options by context (OxC) Research in Development (RinD)
Woltering <i>et</i> <i>al</i> .	CIMMYT	Scaling Scan From "reaching many" to systems change
Sartas, Schut, <i>et al</i> .	IITA	Scaling Readiness "Science-based and globally tested"



- Scaling via traditional pathways yield heterogeneous results
- Scaling approaches have to be adapted to local contexts
- Scaling should be an integral part of the R4D Continuum

BEAF Task Force on Scaling

Six Integrated CIM-Experts CIAT Kenya; CIAT Vietnam World Fish Zambia CIMMYT Mexico IWMI Sri Lanka Africa Rice Côte d'Ivoire Up to five additional positions in 2020 (www.cimonline.de)

Identification of scalable innovations and products from

the centers and bring them to > 70.000 smallholder households Identify adoption barriers

Increase of the capacities of centers for scaling

Scouting for windows of opportunity for the implementation of scaling activitie Brokers of ideas, contacts and knowledge











Alliance





Scaling Feeds and Forages Technologies in East Africa

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TropenTag 2019

Bioversity International and the International Center for Tropical Agriculture (CIAT) are CGIAR Research Centers. CGIAR is a global research partnership for a food-secure future

Background

- In East Africa (EA) the **demand for animal sourced products is growing**, due to population growth, increasing urbanisation and a growing middle class.
- Most cows are underfed in quantity and quality, one reason for low productivity (besides genetics and animal health).
- High seasonality in feed availability (due to rainfall patterns).
- Feeding accounts for 60–70 % of production costs in dairy.



Biovers

More than 30 years in forage breeding research

- In the 1980's CIAT, ILRI and partners collected germplasm of *Brachiaria* and *Panicum* in EA, and started **selection** and -for CIAT- **breeding**.
- This work concentrated on the improvement of e.g.: Higher nutritional value, **abiotic** and **biotic** stress tolerance.

 ABIOTIC
 BIOTIC

 Soil acidity
 -Ö- Water scarcity
 Water excess

 Spittlebug pest
 Water foliar blight

• Together with our private sector (PS) partners **improved materials have been brought to the market**, first in Latin America where materials based on CIAT's work are **established on millions of hectares** and changed livestock production dramatically.







Better feed can mitigate that problem and increase productivity

- As feed scarcity was identified as one of the main bottlenecks in the livestock sector in sub-Saharan Africa, the Livestock CRP and its partners decided to introduce improved forages to face that challenge.
- In 2016 the first *Brachiaria* hybrids have been registered in Kenya.
 Actually one more hybrid is in the registration process, as well as one *Panicum* selection.





Benefits of planting improved forages

Improved forages like *Brachiaria* (hybrids and cultivars) and *Panicum* cultivars provide clients with:



Use of Brachiaria and Panicum in Sub Saharan Africa

CIAT and partners like ILRI, SNV, ICIPE, SaC and others promote Brachiaria and Panicum in several projects

CIAT: Coop with SNV in Central KE; Climate Smart Dairy project, TZ, RW (IFAD); Grass2Cash project, KE, ETH F&F seed business models..., KE, UG (NL, KIT)

ILRI: BECA-ILRI with KALRO, KE; AVCD, KE (USAID)

ICIPE: Push pull technology, several SSA countries

Scaling: Why and how





Up to now the uptake of improved forages by farmers is not at a satisfying level. We register an increasing demand by farmers, but **farmers have difficulties** to access the materials.

Why?

- Despite efforts by different actors, **work is not yet fully coordinated** and seldom do reach out beyond project areas.
- Despite that a lot of people talk about e.g. *Brachiaria*, there is only **little detailed knowledge** on farmers' level.
- Access to planting material in most areas is still limited and difficult due to **poor seed (distribution) systems**.
- Seed registration **up to now, is only done in Kenya** (for three hybrids).





How? Scaling approach

There are many ways to do scaling. As we have **suitable products** demanded by the market, we have chosen a **down to ground** scaling approach.



- Farmers have to know about a new technology before they are willing to adopt it.
- Interest has to be raised.
- Farmers have to be familiarized with the technology.
- Learn how to use it and experience the additional value it brings to their farming systems.

- Trainings
- Field days
- Partnerships

Policy dialogue, lobbying and agricultural literacy for financial institutions



Lessons learnt

- **Traditional approaches** do work to increase outreach of a new technology, but to reach out in scale, **a system change has to be initiated**, through raising awareness, policy advocacy etc.
- Traditional approaches have to be supported by **modern media campaigns**.
- **Strong partnerships** especially with the PS create a sustainable change and outreach in scale.
- Scaling activities should become an integrative part in more project proposals and research programs from the very beginning of conceptualization.



Way forward

- More and more **effective partnerships** have to be initiated, as with the Private sector:
- Seed companies, to improve the supply, availability and accessibility of forage seeds
 - Dairy cooperatives to reach out to their members
- Focus of the **establishment of demo plots** on Dairy cooperatives to better reach out to their members.
- NGOs, Development Agencies and NARS to use their partner **networks and to create synergies**.
- Advocating for accelerated and easier registration processes for new varieties in the countries
- Scaling of the activities to other EA countries.











Thank you!

and please welcome our private sector partner from Papalotla, **Mr Eduardo Stern**



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Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung







PAPALOTLA GRUPO

Grupo Papalotla

A company with global reach, and the leading tropical pasture seed genetics



Grupo Papalotla (GP)

- Headquartered in Mexico City
- Tropical Pasture Seed: Brachiaria sp. + Panicum
- Modern seed facilities in Mexico & Brazil
- Field seed supply from multiple countries
- Collaborations with CIAT
- Currently preparing a comprehensive new market strategy for Brazil
- Tropical Seeds based in Florida (USA) currently exploring and consolidating non traditional marke



CIAT – Grupo Papalotla Relationship



Why it is important?

CIAT breeding program. First improved tropical forage variet

First improved tropical forage varieties.

Commercial Varieties do not respond to the conditions required by the market.

New technology needed to give a solution to concrete problems.

R&D can be made accessible to end users.

Breeding program with the objective of having varieties for better adaptation to margina and poor soils, acid soils, disease and pest resistant, low tech handling and erosion control. Climate change.

Papalotla Hybrid Development Program CIAT 1000's to 100's to 10



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Brachiaria Hybrids develop for particular environmental situation.







AFRIC A

- Generate sustainable production systems
- Decrease rural migration
- Particular conditions of Africa
- Return to Africa what Africa has given to the World
- New technology to alleviate extreme poverty
- Alleviate land pressure problems
- Inability to feed increasing population
- Huge potential market

Main actions to perform in AFRICA

- Validate new varieties
- Legal and phytosanitary processes
- Commercial registration
- Selection of distribution channelsLogistics





Private Sector Participation in Tropical Forage Seeds

Advantages

- Agility in decision making
- Agility in the execution of decisions
- Aim to make investments in R &D profitable
- Allow R &D results to be utilized by large number of people
- Find partners to join efforts in new developments
- Expansion to new markets and consolidation of the existing ones
- Commercial innovation for market openings

Private Sector Participation in Tropical Forage



Challenge

- Industry derived by price rather than quality of cultivar
- Consumption of traditional Brachiaria varieties
- Cost of research validation, promotion and introduction of new varieties
- Risk analysis and registration in each individual country with different set of rules and regulations
- How to allow this new technology to be available to all producers regardless of their socioeconomic and means of production
- **Summary**: how to be competitive and convince the market of varieties that are in general more expensive than the traditional ones.

One way is through agreements and association with research institutions, international, local and government agencies. This interaction has been and will continue to be the key for meeting our soci and economical objectives.

THANK

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Centrum für in Migration und l eine Arbeitsger

CGIAR RESEARCH PROGRAM ON Livestock

JLIFAD Investing in rural people Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

GRUPO PAPALOTLA



- Grupo Papalotla, initiated in Mexico City as Semillas Papalotla in September 1992, is dedicated to the production and commercialization of high yielding forage grasses,
- has to this date 27 years of experience,
- has exclusive rights of *Brachiaria* hybrids bred by CIAT, specifically for tropical and subtropical existing conditions worldwide,
- offers technical assistance that allows the end user to select the best variety for its needs according to environmental conditions and type of animal husbandry required.

Activities within the value added chain

Who is part of Grupo Papalotla?



SEMILLAS PAPALOTLA Mother Company Strategic Planning Research Production Sales: Mexico, Latin America

Including Cuba Based in Mexico TROPICAL SEEDS DO BRASIL

Research

- Research
- Production
- Sales: Brazil
- Based in Brazil

TROPICAL SEEDS

- Research
- Production
- Sales: Africa, Asia, Caribbean,
 - South Pacific, USA, Europe
- Based in USA

Semillas Papalotla en el mundo

De México al mundo con una propuesta innovadora, exportamos híbridos a más de 50 países

En una superficies de 50,000 ha

	Hibrido Papalotia MULATO II®	Brizantha Marandu	Inci
Más forraje	17,070 kg	Will Will 13,164 kg	1 2
Más carga animal (torete 300 kg)	225,000 r r r r	173,000 cabezas de ganado	1 3
Más ganancia diaria de peso	762 g por cabeza al dia	508 g por cabeza al día	1 1
Más carne (producción en Taño)	Ch Ch Ch 61,981,000 kg	32,071,000 kg	1 1
Más ingreso total	\$2,789,145,000 🗸	\$1,443,195,000	1 1

ercados tradicionales 🔵 consolidados 🔵 emergentes (

Duplicando la producción pecuaria vs. la variedad más común en el trópico

1 1 1 1 1 1 1 1



Vision

- Agricultural activities in tropical and subtropical countries worldwide can be sustainable and profitable.
- Regardless of farm size, technological strength and positive economical conditions for farmers are achievable.
- New technologies based on improved forages can make livestock farming sustainable.





ion



- Offer new tropical forage varieties that can increase animal productivity, while being environmentally friendly, regardless of farm size and economic status of farmers.
- Study experimental varieties to determine their commercial viability for use in animal husbandry.
- Commercialize varieties, after an intensive research process, capable of adapting to different climatic and soil conditions and showing resistance to diseases, pests, drought, and waterlogging.

