

Experiencias internacionales de las asociaciones agroforestales

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The Center for Agroforestry
University of Missouri

A Global Center for Agroforestry, Entrepreneurship and the Environment



Outline

- University of Missouri Center for Agroforestry: Research, Education and outreach
- Association for Temperate Agroforestry
- Regional Agroforestry Working Groups (USA)
- European Agroforestry Association (EURAF)
- Evergreen Agriculture Partnership
- Lessons for the future?

University of Missouri Center for Agroforestry (UMCA)

Research:

- Agroforestry Systems
- Breeding and selection of AF trees and shrubs
- Specialty crops
- Biomass

Education and outreach

- Online master degree and graduate certificate
- Technical guides, training manual, design and planning handbook
- Agroforestry Academy
- Agroforestry in Action Webinar series

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Association for Temperate Agroforestry

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Who We Are

The mission of AFTA is to promote the wider adoption of agroforestry by landowners in temperate regions of North America. Formed in 1991, the Association for Temperate Agroforestry Inc. (AFTA) is a private, non-profit, 501(c)(3) organization based at the University of Missouri Center for Agroforestry at Columbia.

With members in the US, Canada and overseas, AFTA pursues its mission through activities such as networking, information exchange, public education, and policy development. Our intended audience includes university researchers, educators and extensionists, private farm and forestry groups, public policy makers, and private landowners. AFTA has received financial support through dues and contributions from its members and the public, sponsorships from public

<http://www.aftaweb.org/>

Actividades Principales:

- **Conferencia Biennial: “North American Agroforestry Conference”** Desde 1989- Un foro científico para “agroforesteros” involucrada en investigación, extensión y aplicación en los US, Canadá y ultramar
-
- **Newsletters:** Hoja informativa “The Temperate Agroforester,” informes sobre actividades y novedades. En la agroforestería
- **Website:** Sobre todo, un repositorio (de información, documentos técnicos y informes..)
- **Producción de documentos:**
- guías técnicas y informes sobre políticas todos disponibles en línea.

Grupos Regionales en los EUA



➤ CHESAPEAKE
BAY



➤ MID-AMERICAN

➤ NORTHEAST




PACIFIC ISLANDS


➤ PACIFIC
NORTHWEST

➤ GREAT PLAINS
WINDBREAK
INITIATIVE

➤ APPALACHIAN
BEGINNING
FOREST FARMER
COALITION



➤ 1890
AGROFORESTRY
CONSORTIUM





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SARE's Four Regions

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SARE's Four Regions



The Sustainable Agriculture Research and Education (SARE) program is a decentralized competitive grants and education program operating in every state and island protectorate. The

MID-AMERICAN AGROFORESTRY WORKING GROUP

MAAWG

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- Grad student opportunity!
MS Graduate Assist:
forest ecosystems
remote sensing. Dept.
NREM, Iowa State
University contact:
Wolter 6 months ago

- Action in Agroforestry
June newsletter - get it at
centerforagroforestry.org/pubs/action/ar... Thanks
to our friends at Univ Mo



AGROFORESTRY PRACTICES

March 4, 2013

<http://midamericanagroforestry.net/>

Recent articles



AGROFORESTRY PRACTICES

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Our Partners

Green Lands Blue Waters is a consortium of scientists, policy experts, farmers, and community organizers embracing the Green Lands Blue Waters vision and implementing programs that directly advance the consortium's strategies and goals. The strength of Green Lands Blue Waters builds on the programs of the partner organizations and of their individual staff and faculty members.

Consortium Members:

Illinois

- University of Illinois
- Agricultural Watershed Institute
- Illinois Stewardship Alliance

Louisiana

- Louisiana State University

Minnesota

- University of Minnesota
- Minnesota Farmers Union

Iowa



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About Us

The **Northeast/Mid-Atlantic Agroforestry (NEMA) Working Group** is a consortium of researchers, technical service providers, agency staff, practitioners and experts focused on educating, promoting and implementing agroforestry systems in the Northeast and Mid-Atlantic Region of North America.

NEMA states include:

- Virginia
- West Virginia

<http://www.nemaagroforestry.org/>

RECE

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October 20

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Enjoy reading our latest
[Newsletter](#)

EURAF Press Release ["Portugal's
fires are not inevitable "](#)

4th European Agroforestry Conference

Agroforestry as sustainable land use

28-31 May 2018, Nijmegen, The Netherlands



**New abstract submission deadline: 15
December 2017. More info [here](#)**

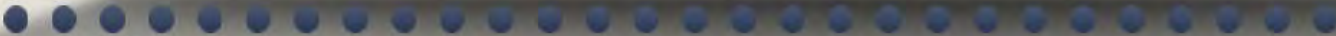
The new European
"Agroforestry: integrating
vegetation into intensive
systems" has been o

President François Hol
agroforestry in C
More info



<http://www.agroforestry.eu>

Wakelyns Agroforestry, Suffolk, UK aerial by Permaculture Association



[About EURAF](#)

[Agroforestry in Europe](#)

[Contact Us](#)

- Fundada desde 2012
- Hasta la fecha, 3 proyectos principales:
AGFORWARD - Investigación (7M Euro)
AGROFE- Educación
AFINET - Red de Innovación (2M Euro)
- Participación en 7 de los 14 Grupos de Dialogo Civil (Plataforma EU para formulación de las políticas) en el sector Agricultura y desarrollo Rural
- Financiamiento

Una Unión Internacional para Agroforesteria??

- International Union for Agroforestry (IUAF)
- Desde 2014, 3er Congreso Mundial de Agroforesteria en Delhi, se formó un grupo de trabajo
- Logro producir el Charter, estructura, reglas de membresia etc.
- Acuerdo para establecer el Secretariado en ICRAF (con apoyo financiero, al inicio)
- Situación actual ???? 😊 ???? ??
- 4to Congreso Internacional, Montpellier France, 2019



Evergreen Agriculture in Africa:
Agroforestry for land restoration and food security



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HOME > EVERGREEN AGRICULTURE PARTNERSHIP

EverGreen Agriculture Partnership

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Who are we?

The EverGreen Agriculture Partnership (EVAP) is a collective of organizations and with a shared vision of agricultural systems that can sustain a productive green cover on the land throughout the year, for the benefit of the land and livelihoods of smallholder farmers around the world.

Our **vision** is to use EverGreen Agriculture systems to increase food and nutritional security and resilience while enabling climate change adaptation and mitigation across Africa.



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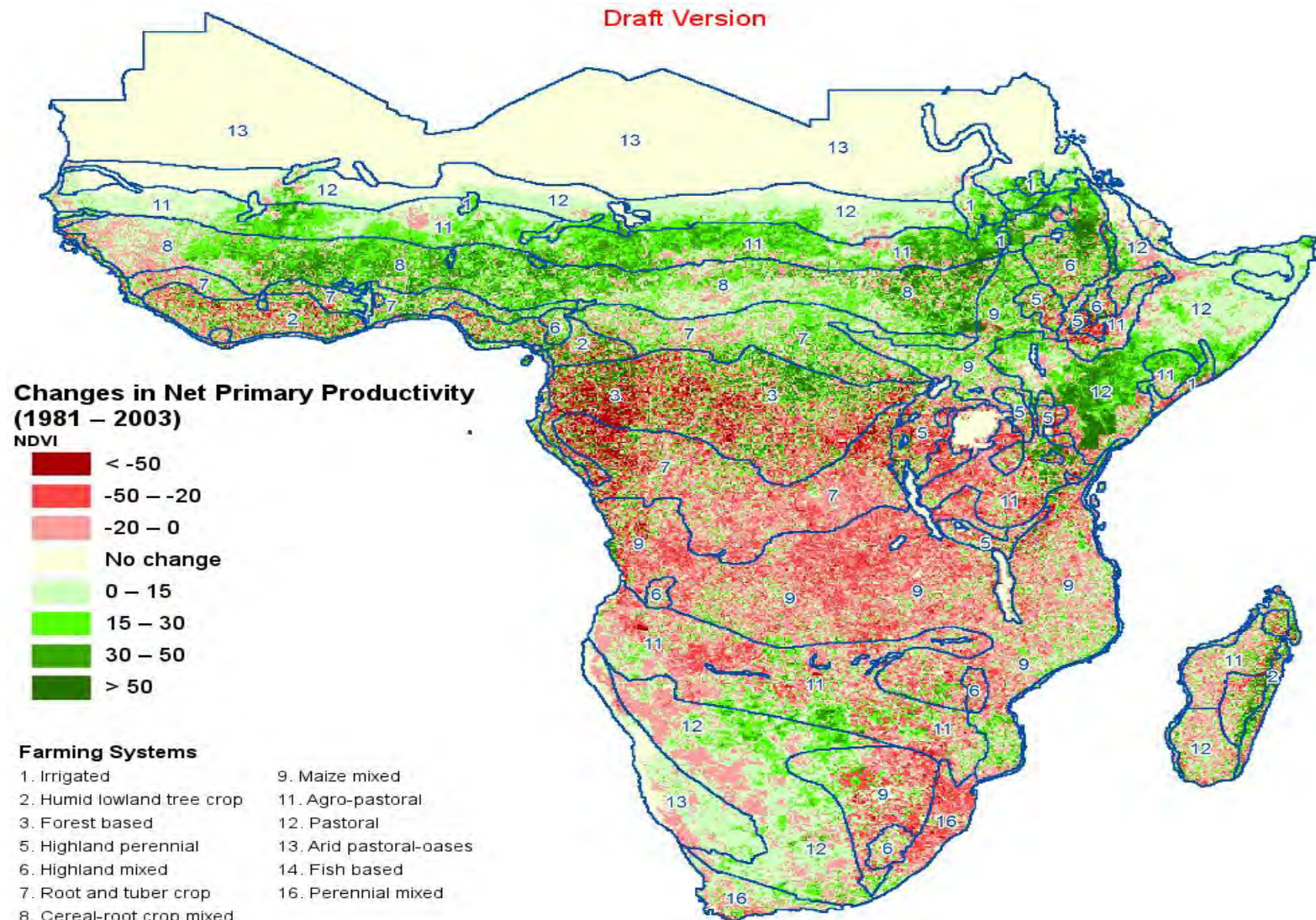
- How do you
- EverGreen.
- Listening to
- Climate Cha
- Chain

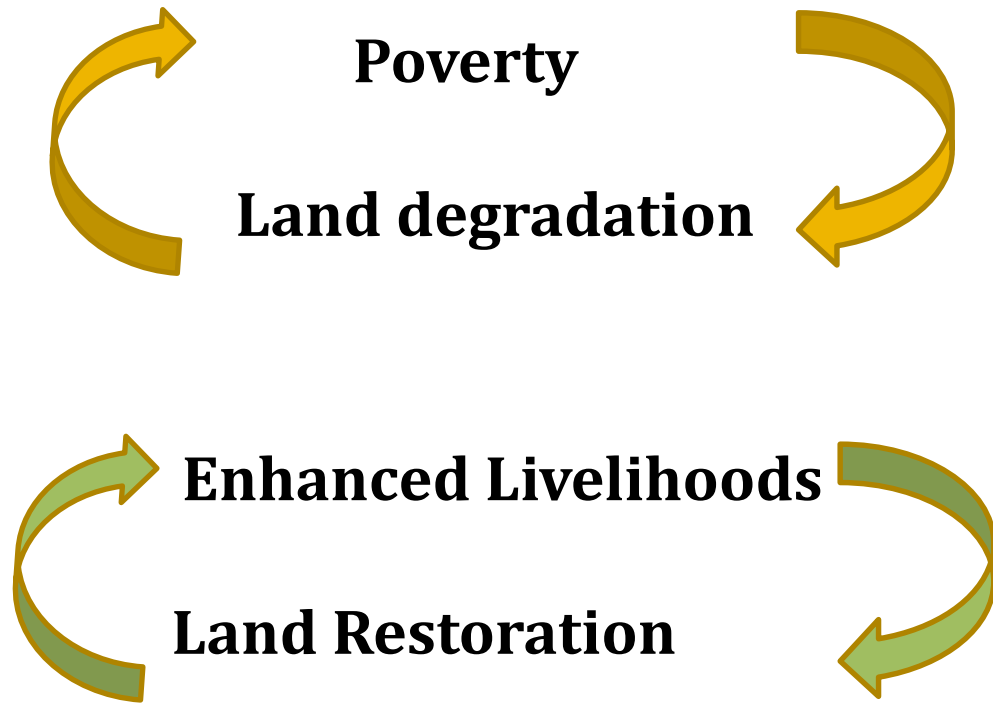
What do we work towards?

Our **objective** is to support information needs, provide capacity building and knowledge generation to assist nations around the globe in scaling up Evergreen Agriculture, to achieve this we:

Alarming Land Degradation in Africa

Trend in biomass productivity by farming system





The Parkland Renaissance on Niger Farmlands





Farmer-Managed Regeneration of trees has been massively upscaled on the croplands in Niger

What is Evergreen Agriculture?

A form of more intensive farming that integrates trees into crop and livestock production systems.

***Evergreen farming systems* are 'double-story' systems** that feature both perennial and annual species (food crops and trees), maintaining a green cover on the land throughout the year.

Types of Evergreen Agriculture

- 1. Farmer-Managed Natural Regeneration (FMNR)
on cropland**
- 2. Conservation agriculture with trees (CAWT)**
- 3. Conventional agriculture interplanted with trees**



Conservation agriculture with reduced tillage and *trees*

Classes of Trees in EverGreen Agriculture



- **Trees providing direct cash or nutritional benefits**

Example:

Timber - Grevillea, Melia

Oil – Shea

Fruits – Mango, etc

- **Trees providing indirect benefits**

Example:

Fertilizer trees – Faidherbia, Gliricidia

Fodder trees -- Caliandra



Fertilizer-Fodder-Fuelwood Trees in Food Crop Production Systems

DRY SEASON



Maize stubble

Gliricidia

Faidherbia

WET SEASON



Maize

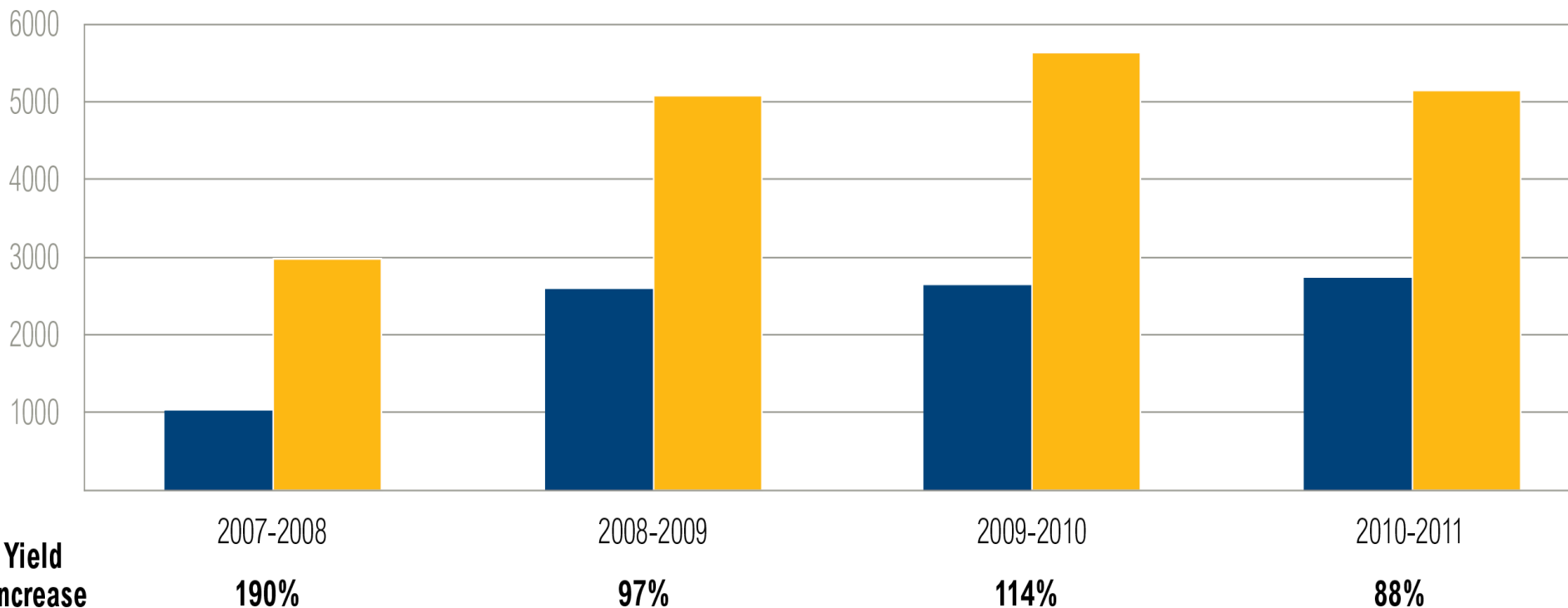
Gliricidia

Faidherbia

Maize yields in Zambia are higher under *Faidherbia* trees

Kilograms per hectare

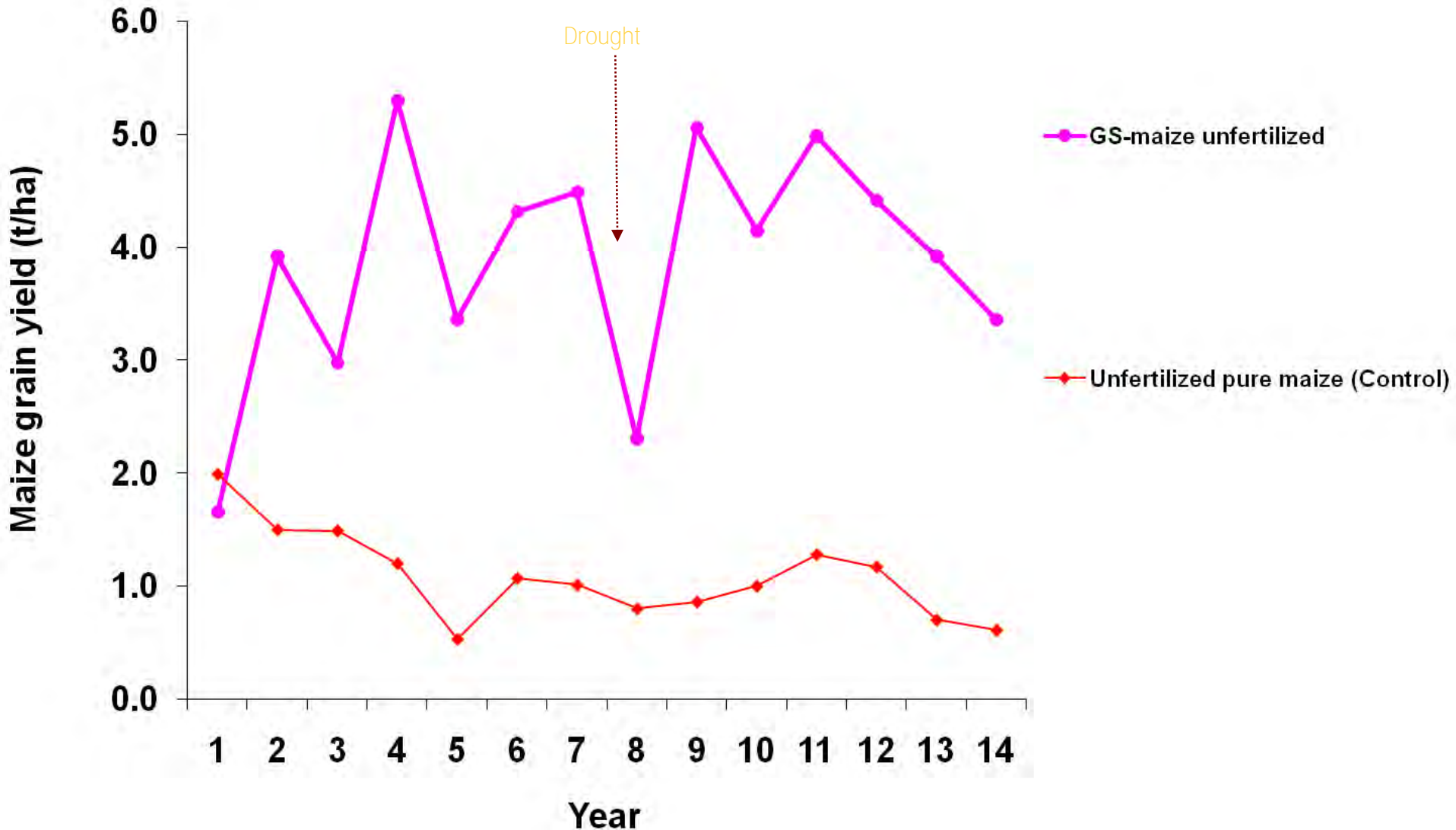
■ Outside of Canopy ■ Under Canopy



Note: Average maize grain yields from trial sites under and outside canopies of mature *Faidherbia albida* trees across regions in Zambia.

Source: Shitumbanuma, 2012.

Long-term maize yield without fertilizer in a *Gliricidia* system



Impact of fertiliser trees on maize yield

Plot management	Yield (t/ha)
Maize only	1.30
Maize+ chemical fertiliser	1.70
Maize + fertilizer trees	3.05
Maize + fertilizer trees + chemical fertiliser	3.07

Survey of farms in six districts (Mzimba, Lilongwe, Mulanje, Salima, Thyolo and Machinga)



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Trees keep Ethiopia's wheat cool and productive (CIMMYT trials Ethiopia)



Tree alone



Tree-Crop



Crop alone

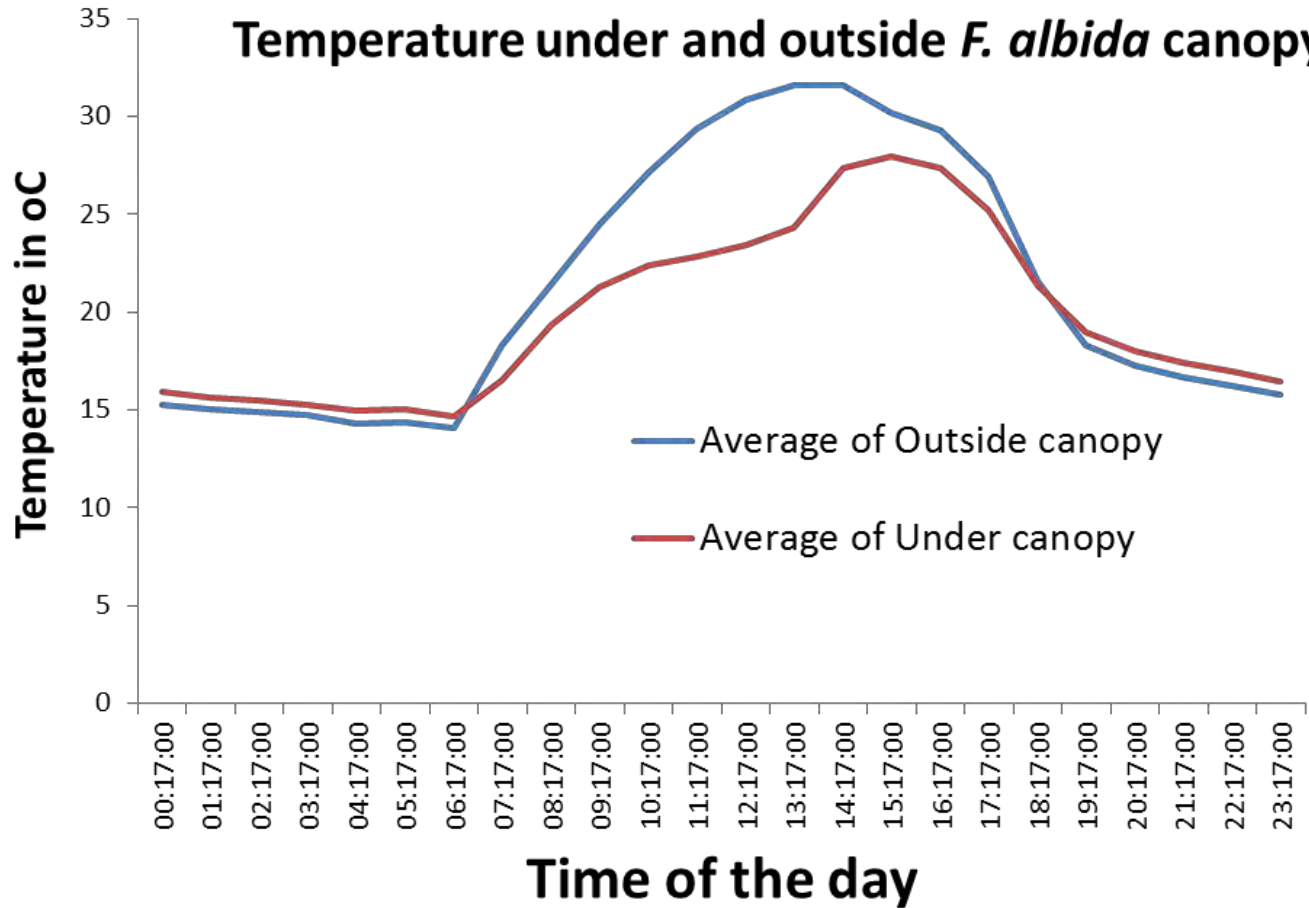
Lower temperatures under the trees

Soil moisture increases greatly under the canopy

,
30-35% greater available N in tree zone

Higher Stover and grain yield under canopy

Microclimatic variation: Temperature

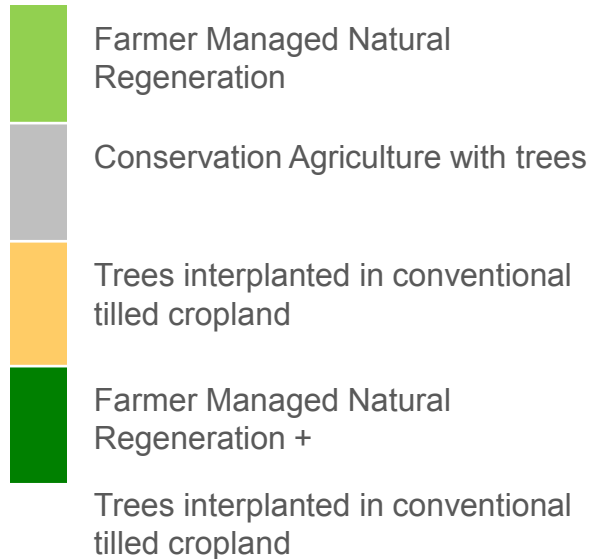


Maximum daily temperature range: 7.42 $^{\circ}\text{C}$

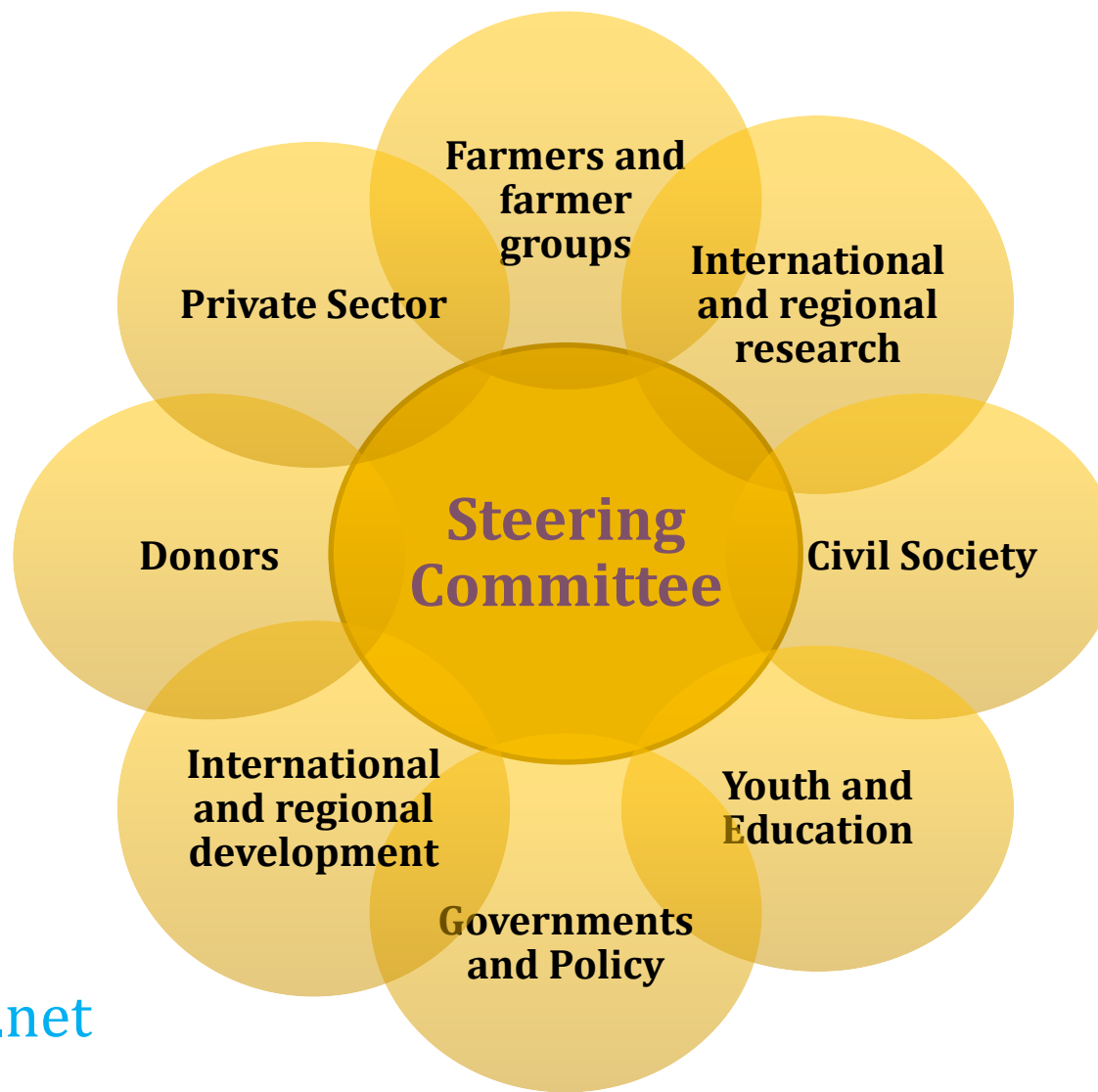
Average Temperature variation during anthesis: 3.6 $^{\circ}\text{C}$

17 African countries are now engaged in EverGreen Agriculture

Total commitments are now over **40 m hectares** by countries in West, Central, East and Southern Africa.



The EverGreen Agriculture Partnership



Lecciones/Puntos Claves

- Metas
- Enfoque/actividades principales (Población meta)
- Membresía
- Base financiera
- Gobernanza/estructuras organizativas



GRACIAS!

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A Global Center for Agroforestry, Entrepreneurship and the Environment