



## Participatory training approach of sharing knowledge and research results for better adoption of organic cocoa agroforestry systems

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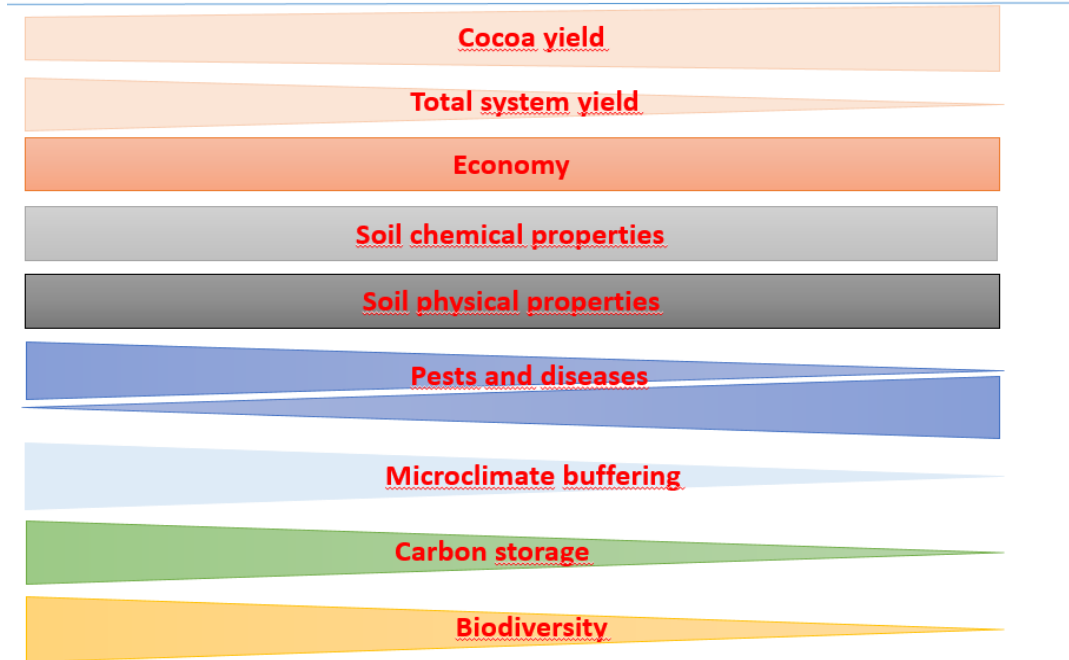
5<sup>th</sup> world congress on agroforestry

Québec, Canada, 18.7.2022

## Agroforestry for cocoa has many benefits, but...

AGROFORESTRY SYSTEM

MONOCULTURE



# Agroforestry systems have many benefits, but... ...planning and managing agroforestry systems is very challenging

- Knowledge
  - Missing local long-term experiences
  - More support for monocrops and conventional production
  - Availability of planting material, market access for by-crops, legislation for timber tree use, long term investment ...
- 
- Agroforestry solution needs to be very situation dependent
  - Knowledge sharing between farmers, technicians/advisors and researchers critical for adapted agroforestry systems
  - Our training for trainers approach is aiming at this exchange



# Long-lasting experiences on organic agroforestry cocoa in Bolivia

In the Alto Beni region:

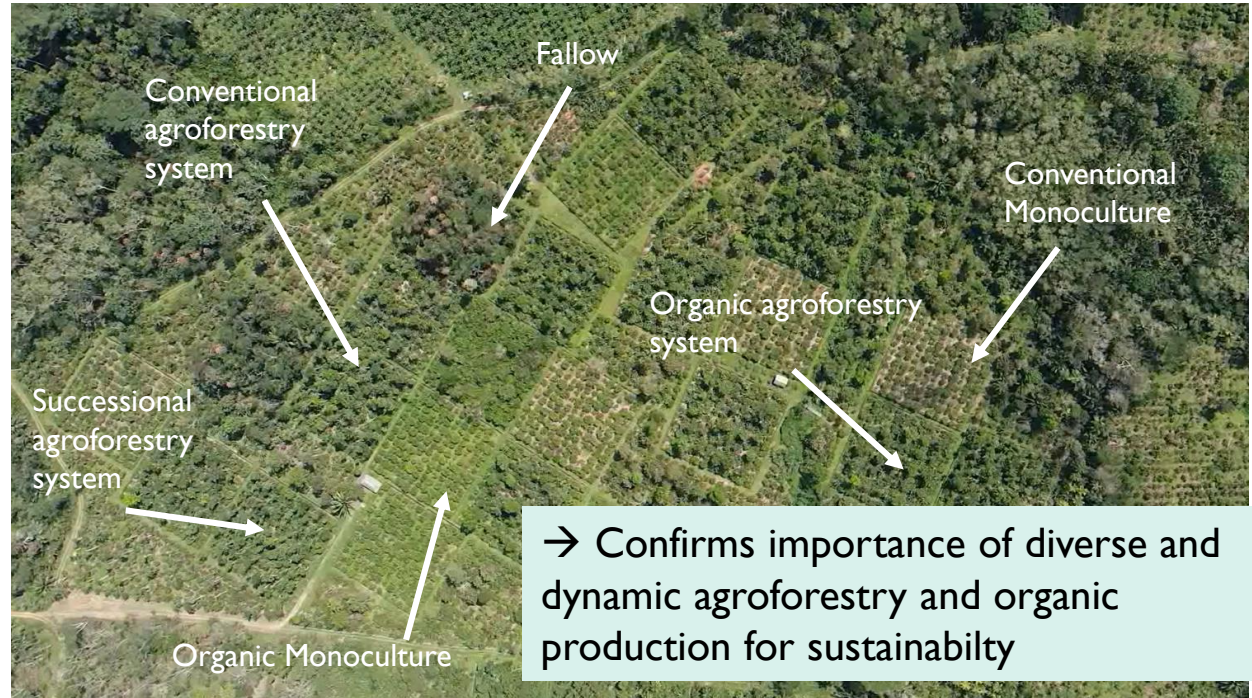
- 45 years of experience with organic cacao production (El Ceibo and PIAF, since 1977)
- 27 years of developing dynamic agroforestry systems (ECOTOP, since 1995)
- 14 years of international research on cacao production systems (SysCom Project, since 2008)



# SysCom Bolivia long-term experiment

- Agronomic, economic and environmental sustainability of 5 cacao production systems
- >30 publications
- 45 students

[www.systems-comparison.fibl.org](http://www.systems-comparison.fibl.org)



# How to make this experience and scientific results available?

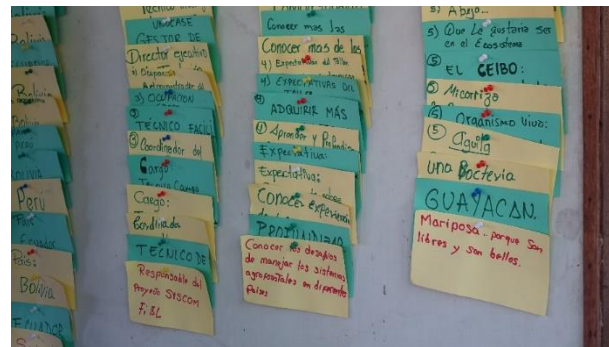
- Training materials and concept on **organic agroforestry** for cocoa production
  - Exercise guidelines
  - Posters
  - Technical texts and slides
  - Videos
- Testing those materials in a train the trainers workshop



# Training materials on organic agroforestry for cocoa production

## Testing the first materials in a training of trainers workshop in Bolivia

- 36 participants (9 women)
- 11 organizations
- 10 days
- Bolivia, Peru, Ecuador, Honduras, Dominican Republic, Ghana, Switzerland
- Technicians that work directly with farmers or
- Project leaders and coordinators of organic or sustainable cocoa in their organizations







# Interactive and participatory exercise units

## Exercises for experience sharing workshops



Sharing of participant's current agroforestry designs



Ethno-botanical exchange of knowledge on spontaneous vegetation

Especies de árboles: Cuales son sus experiencias con las especies presentes en las parcelas ahora!

Fecha y lugar: San José, Costa Rica 12-04-2017

Nombre: Eny Herrera / INICIADORA C.

Especie y nombres alternativos	uso (medicinal, tónico...)	nativo (sí/no)	estrato (medio, alto, emergente)	posibilidades de mercado (1-5)	apto para el cacao (1-5)	efecto fertilidad del suelo (1-5)	manejo (1-5) (C= fácil)	por favor definir sus propios criterios			comentarios	
								Número (1-10) de hojas	Tamaño (cm)	Forma (diferente)		
Azu	N/A	SI	Emergente	2	4	2	5	5	5	5	5	ARBE DE CROCODRILLO
Bolivia	N/A	SI	Plano	5	5	1	5	5	4	3	3	FRONTERA A FUITE PLAZO
Caoba	N/A	SI	Alto	3	5	4	5	5	5	4	4	ARBE DE CROCODRILLO
Capona	N/A	SI	Alto	4	5	4	5	5	5	3	3	FRONTERA A FUITE PLAZO
Cedro	N/A	SI	Alto	4	5	4	5	5	4	3	3	FRONTERA A FUITE PLAZO
Coca	N/A	NO	Medio	5	1	3	5	4	4	4	4	FRONTERA A FUITE PLAZO
Estoraque	N/A	SI	Alto	2	3	1	4	3	3	3	3	FRONTERA A FUITE PLAZO
Huaha	N/A	NO	Medio	1	5	5	4	3	1	3	3	FRONTERA A FUITE PLAZO

Gathering farmers' knowledge on tree species

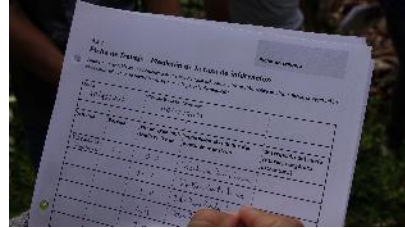
→ Experience sharing formats allow for gathering information from participants and capacitate also the trainer/advisor

# Interactive and participatory exercise units

## Simplified research methods and models for concepts



Measuring infiltration in different environments



Demonstration of principles behind dynamic agroforestry (succession)



Visualization of soil erosion after slash-and-burn vs. slash-and-mulch



Dry run exercise – how the plot develops in the long term

# Interactive and participatory exercise units

## Getting to know experiences in the region with all senses



Crash course in tree climbing for pruning of shade trees



Visiting post-harvest and seedling production of El Ceibo



Visiting 25 years old dynamic agroforestry plots

→ **Visiting mature dynamic agroforestry systems** had a great impact on motivation, also on those technicians that were already working with dynamic agroforestry but in young systems

# Interactive and participatory exercise units

## Visiting trials, presenting and discussing results



Visit to long-term trial plots and discussion on management



Presentation and discussion of research results

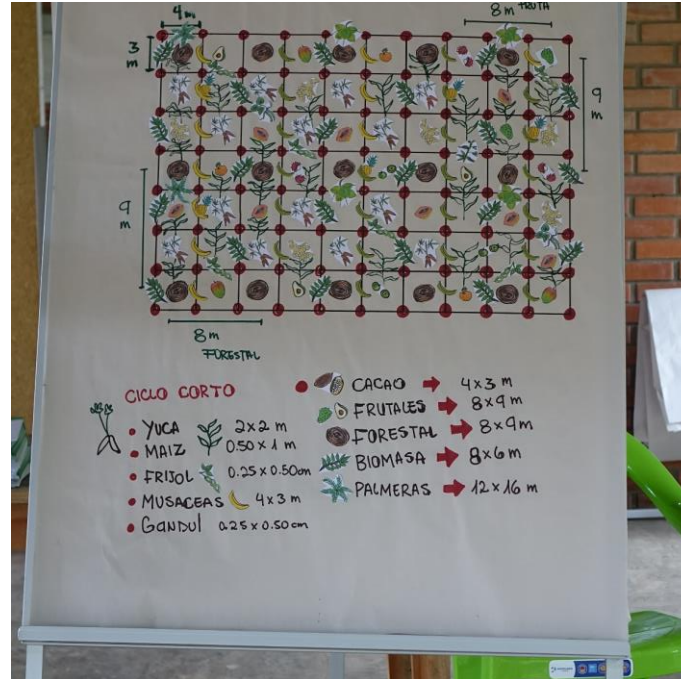
→ Scientific results and sharing of practical experiences e.g. by field staff of long-term trial or demo plot are very valuable for the **motivation of trainers and build trust** and enable the trainers to «sell» the idea better

# Interactive and participatory exercise units

Integrating everything into a new agroforestry design for implementation of a (demo) plot



Design of agroforestry plots to be implemented after the training by participants



# Training materials on organic agroforestry for cocoa production

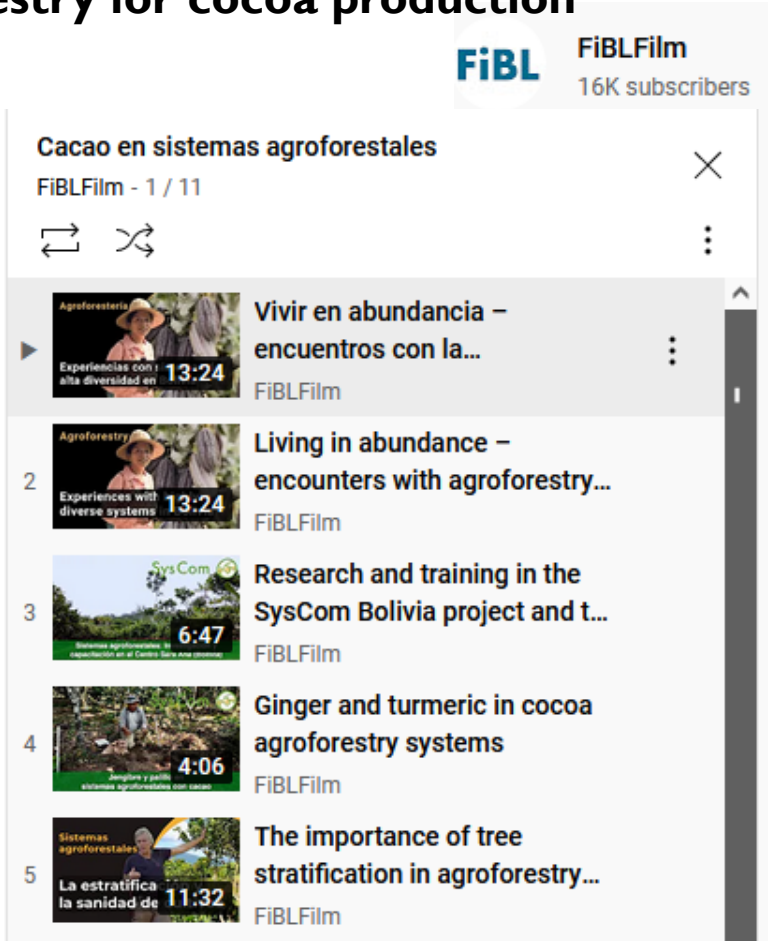
Videos: accessible direct communication

Interviews farmers & other experts,  
peer-learning

Playlist on FiBL YouTube channel:


[https://youtube.com/playlist?list=PLIdOum9RiVPh-gU6NI3krPsof2\\_IPDR4H](https://youtube.com/playlist?list=PLIdOum9RiVPh-gU6NI3krPsof2_IPDR4H)


→ Videos allow farmers from all over the world to «travel» virtually to Bolivia and hear directly from farmers, technical staff, advisors and researchers.





FiBL FiBLFilm  
16K subscribers


Cacao en sistemas agroforestales  
FiBLFilm - 1 / 11

▶  Vivir en abundancia -  
encuentros con la...  
13:24  
FiBLFilm

2  Living in abundance -  
encounters with agroforestry...  
13:24  
FiBLFilm

3  Research and training in the  
SysCom Bolivia project and t...  
6:47  
FiBLFilm

4  Ginger and turmeric in cocoa  
agroforestry systems  
4:06  
FiBLFilm

5  The importance of tree  
stratification in agroforestry...  
11:32  
FiBLFilm

# Learnings for the translation of scientific work to training materials

- Research results from one site and limited designs restricted for generalized messages
- Results on “methods” are very valuable (e.g. amount of compost application, criteria for shade-tree pruning)
- Management of long term trials evolves over time, while learning from the results – these learnings and past errors are most valuable for practitioners
- Yields and labour time from different designs, also demo-plots more relevant than complex scientific data

→ **Very different kind of data compared to publishable results**

## Contact

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## Partners in Bolivia





# Donors



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