

# Conservation Agriculture: an Alternative for Soil Erosion Control in Steep-slope Regions Cultivated by Small-scale Farmers

KU LEUVEN

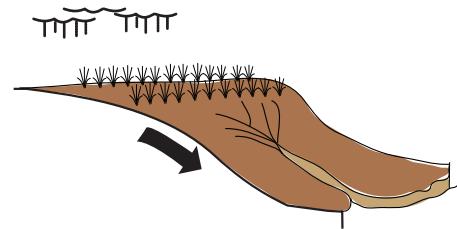
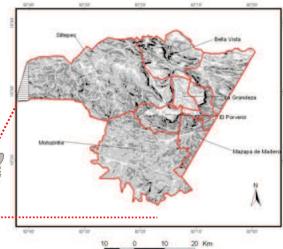
CIMMYT<sup>MR</sup>  
International Maize and Wheat Improvement Center

R. Romero-Perezgrovas<sup>1,2\*</sup> and M. Maertens<sup>2</sup>

<sup>1</sup> International Maize and Wheat Improvement Center (CIMMYT), Apdo. Postal 6-641, 06600 Mexico, D.F., Mexico,

<sup>2</sup> Katholieke Universiteit Leuven, Department of Earth and Environmental Sciences; Celestijnenlaan 200 E, 3001 Leuven, Belgium, \*rromerop@gmail.com

## Introduction



Steep - slopes

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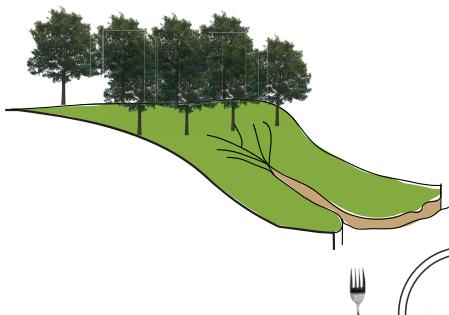
Annual crops

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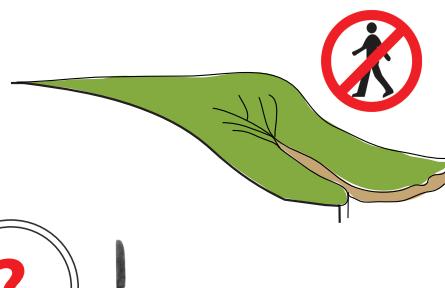
Soil erosion

## Solutions

1 Reforestation (Plantations)

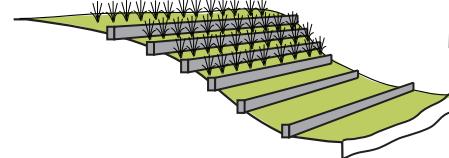


/ Exclosure



Where is my food?

2 Physical barriers

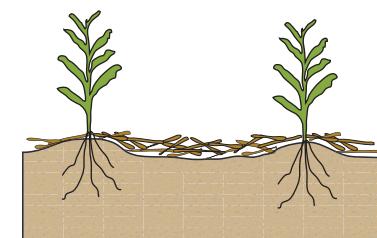


\$ \$ \$  
Expensive

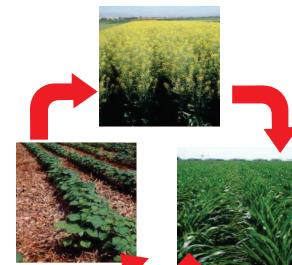
3 Conservation Agriculture



1. Minimal soil movement



2. Surface crop residue retention



3. Crop rotation / association

## Methods

Survey data (Longitudinal)

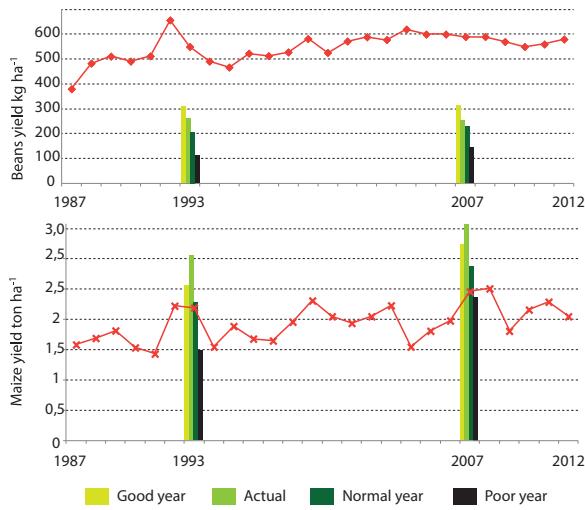


1993

2007



## Results



## Conclusions

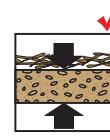
CA an option?

This is a case of success. Why?

Food

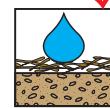
Soil erosion

## Perceptions



1993 2007

Decreases soil compaction 93% 96%



92% 93%

Increases soil moisture



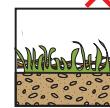
84% 90%

Increases soil fertility



100% 99%

Reduces soil erosion



7% 57%

Increases weed problems