Land-use/cropping pattern changes in retrospect across Xanthomonas wilt of banana infected landscapes

Introduction

Xanthomonas wilt has triggered diversification in land use across landscapes

We also needed to identify good entry points for intervening in these landscapes

i) trajectories and changes in land-use in response to XW in the XW-affected landscapes

ii) farmers’ perceptions on the sustainability of the new land use options.
Methods

FGDs at least 20 km apart in 13 XW-affected landscapes. A four-cell chart was used to rank land use trajectories.

Farmers’ perceptions on the sustainability & profitability of new land-use options also documented.
Results

Before the XW outbreak: banana ranked first in 92% of study sites, was predominantly in 4-cell 1 (produced on large land areas and by many households)

The likelihood for a crop spp. to fall in a given 4-cell before the outbreak of XW disease across sites in eastern Democratic Republic of Congo
Currently:

- Farmers reported uprooting entire mats and/or fields, expanding land under other crops or introducing new crop spp.

- Only 8% (one village) ranks banana first.

- In 36% of the villages banana is in cell 3, in 64% of the cases it's in 4-cell 4.

- Area under 14 crops increased.

- Spp. richness did not change at landscape level, but increased at farm level.

- Banana is still perceived as the preferred crop for food, income and ES.

The likelihood for a crop spp. to fall in a given 4-cell after the outbreak of XW disease across sites in eastern

1. Cassava
2. Taro
3. Banana
4. Sweet potato
5. Beans
6. Sugar cane
7. Coffee
8. Eucalyptus
Conclusions and way forward

-Land use has significantly changed in XW affected landscapes

-Potential effects of these changes need to be understood in the broad framework of ES

-Strategies to manage XW, restore banana production and protect the unaffected areas needed.

-Ongoing studies to:

• understand trade-offs in selected ES due to current diversification options

• determine the best-fit land use and agroecological intensification options through literature review, on-farm trials and computer-based optimization models
Thank you