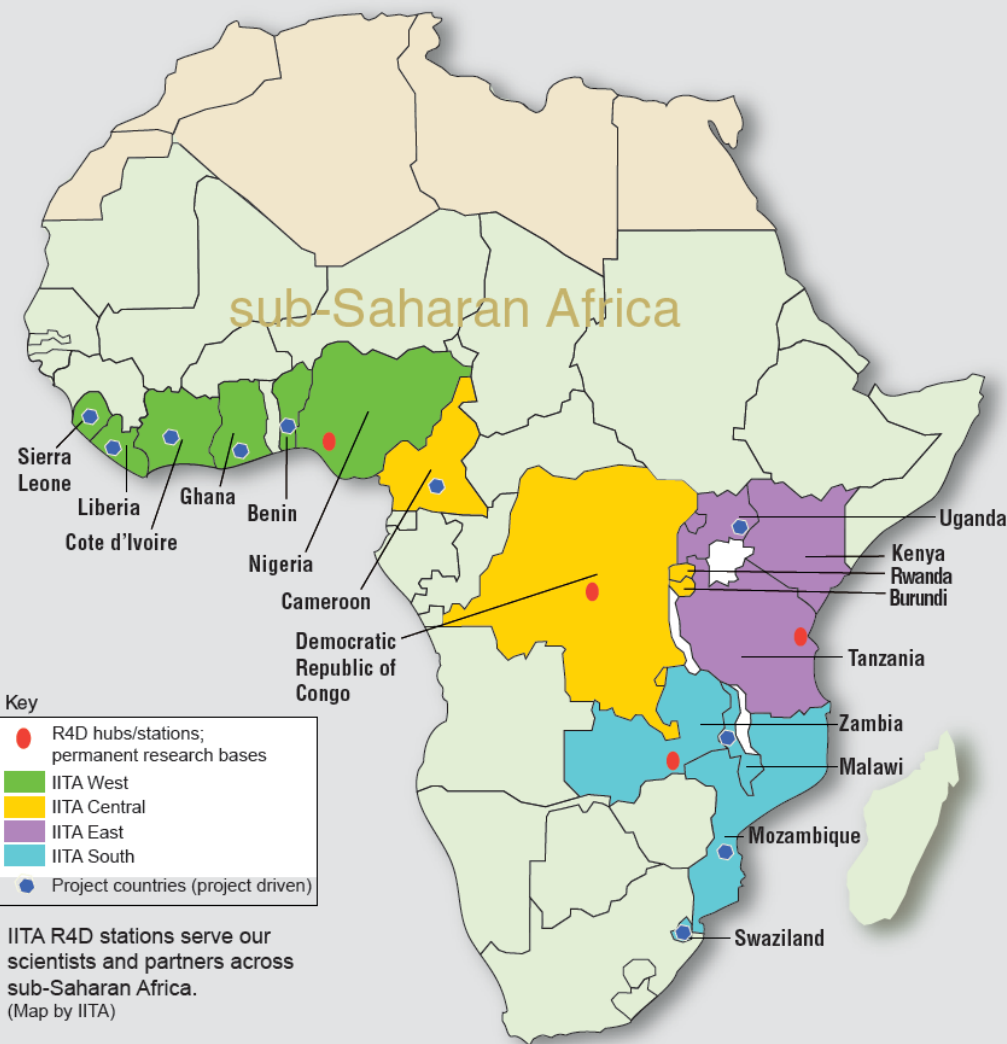


Pre-emptive Control of Crop Disease

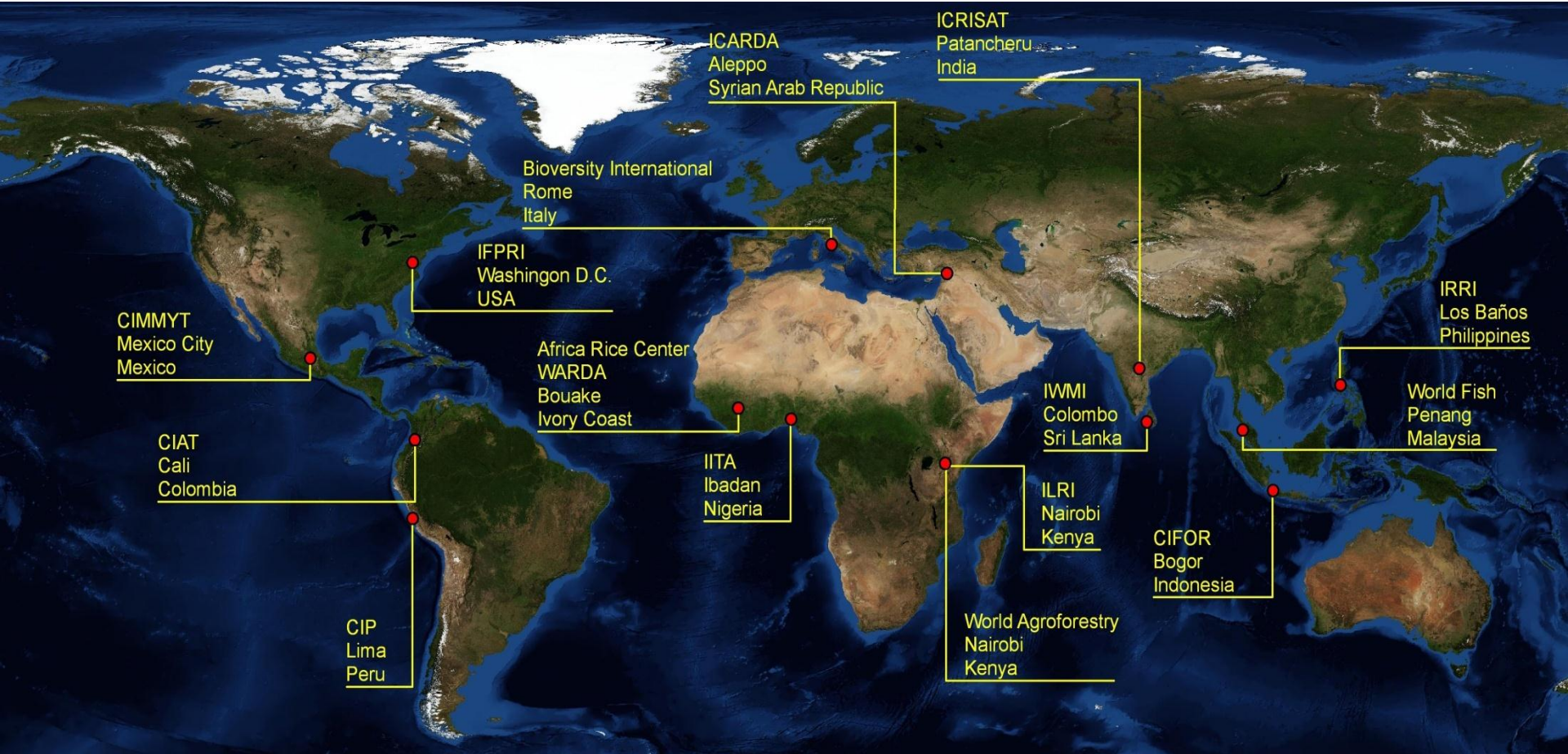
Fen Beed

Plant Pathologist for East and Central Africa
International Institute for Tropical Agriculture (IITA)
May 21, 2013 | FARMD Webinar





IITA and its partners develop agricultural solutions to tackle hunger and poverty. Our research for development (R4D) is anchored on the development needs of sub-Saharan Africa. We reduce producer and consumer risks, enhance crop quality and productivity, and generate wealth from agriculture.



Crop Healthcare System

national responsibility, regional cooperation and global excellence

- risk assessment
- disease surveillance
- disease diagnosis
- control recommendations
- farmer adoption
- impact on value chain
- advocacy
- research interventions



Crop Healthcare System

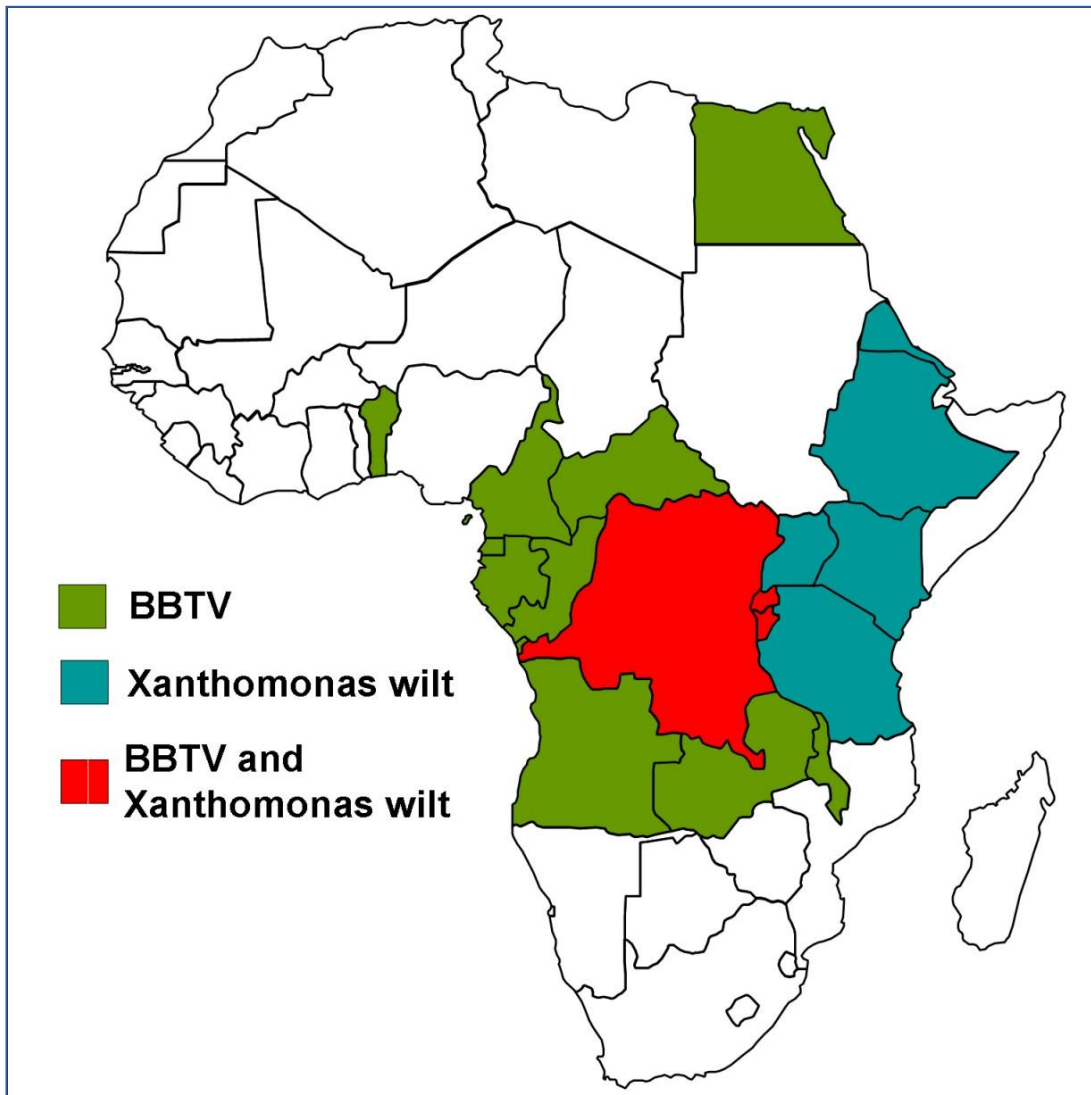
national responsibility, regional cooperation and global excellence

Active Learning & Capacity Building!

- risk assessment
- disease surveillance
- disease diagnosis
- control recommendations
- farmer adoption
- impact on value chain
- advocacy
- research interventions



Some examples – what diseases pose a risk?

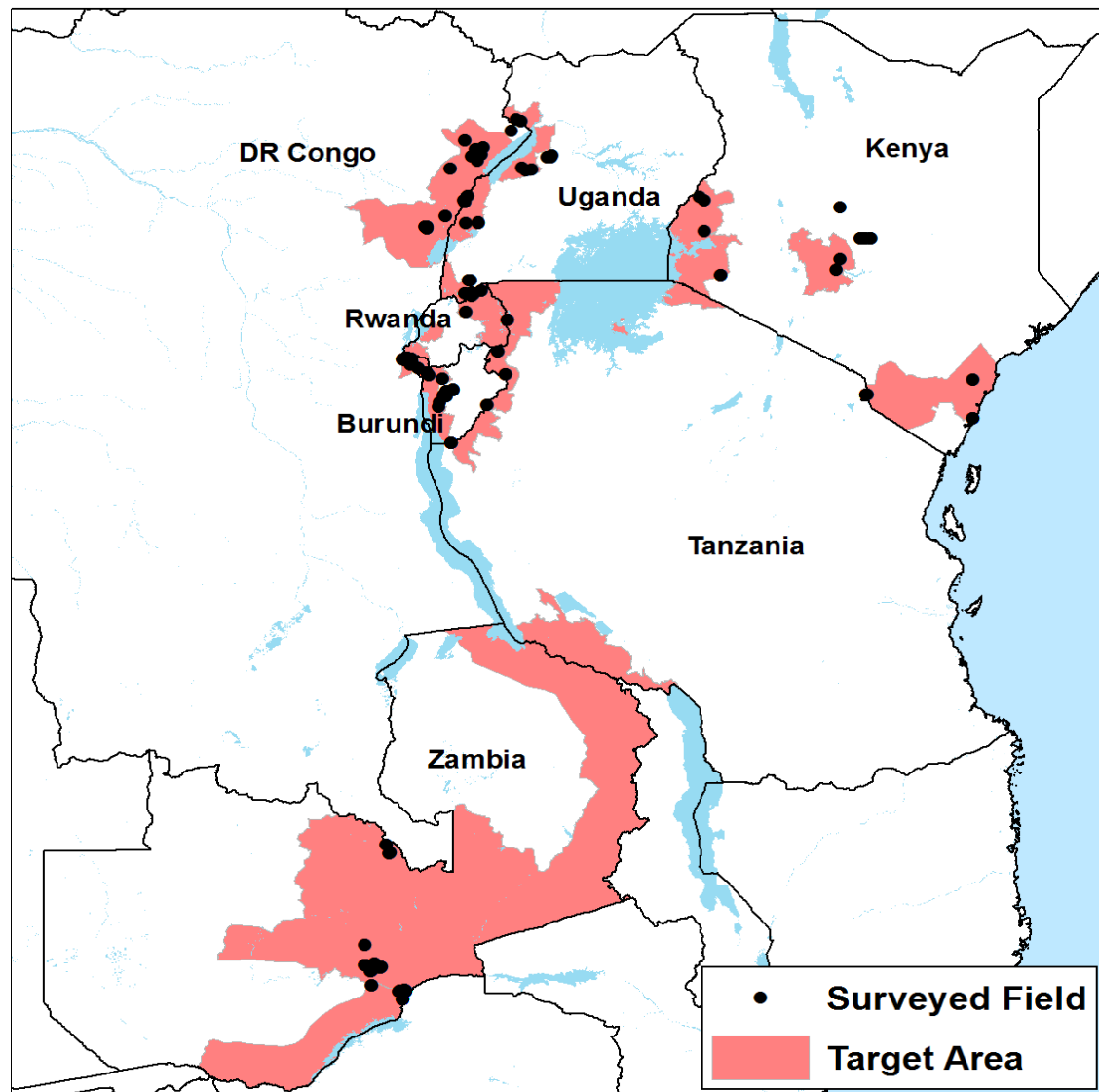


BBTV

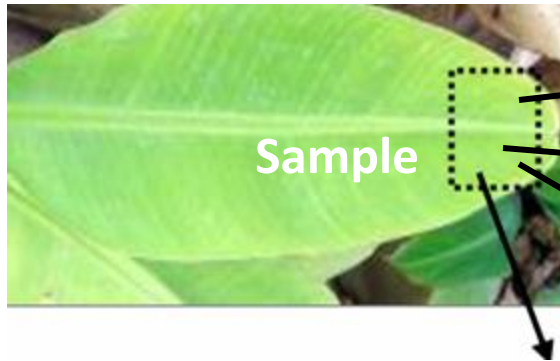


BXW





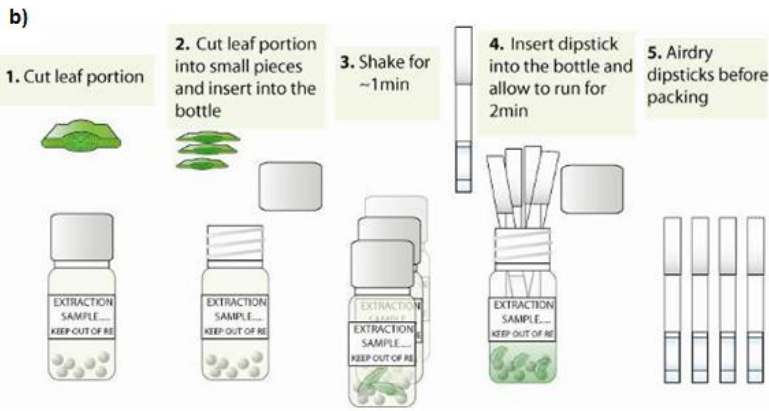
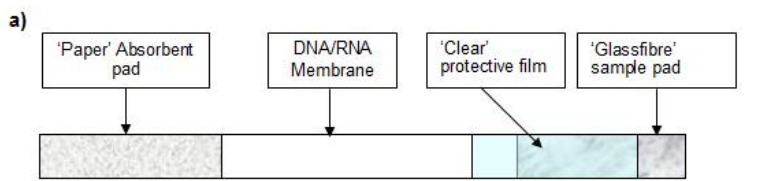
Research and regulatory staff from 7 countries shared experiences, prioritised where to survey and harmonised methods



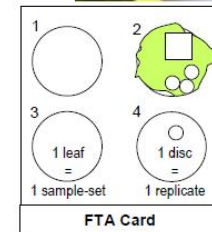
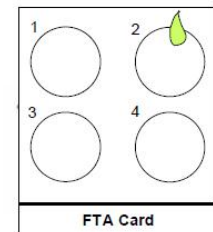
Silica gel



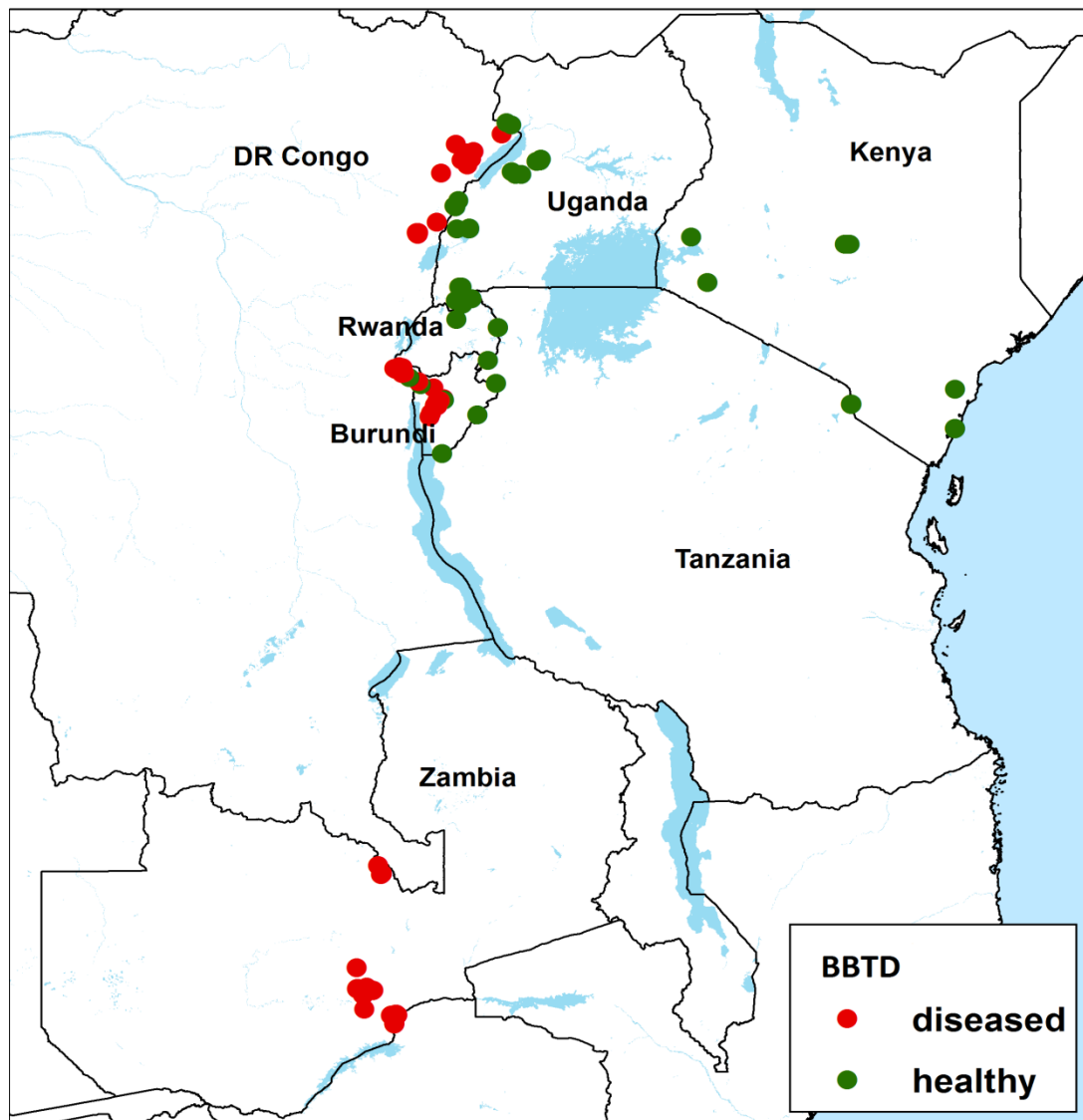
PhytoPASS sticks



2 min. extraction dipsticks



FTA cards

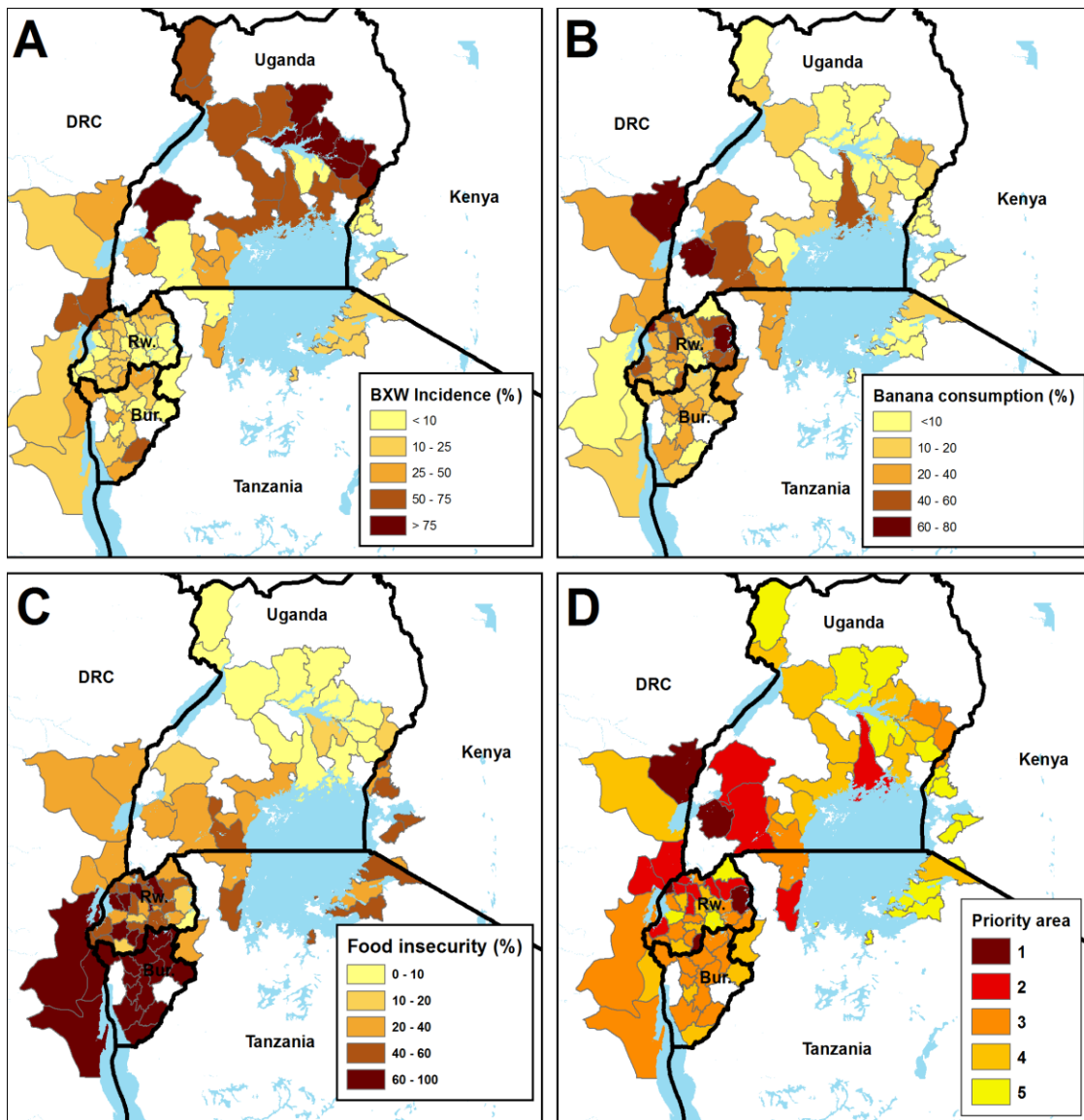


Field symptom recognition supported by lab based diagnostics to provide credible records of disease incidence.

Recommend control practices.
Measure their success through follow up surveys .



Priority areas for surveillance and for control?



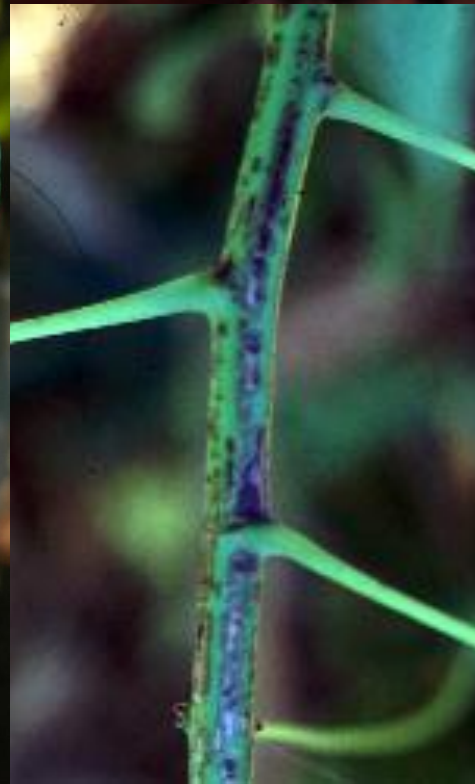
For control of BXW:
based on evaluation
of the weighted
importance of
factors e.g. using
formula:
 $1/5 * A + 3/5 * B$
 $+ 1/5 * C.$

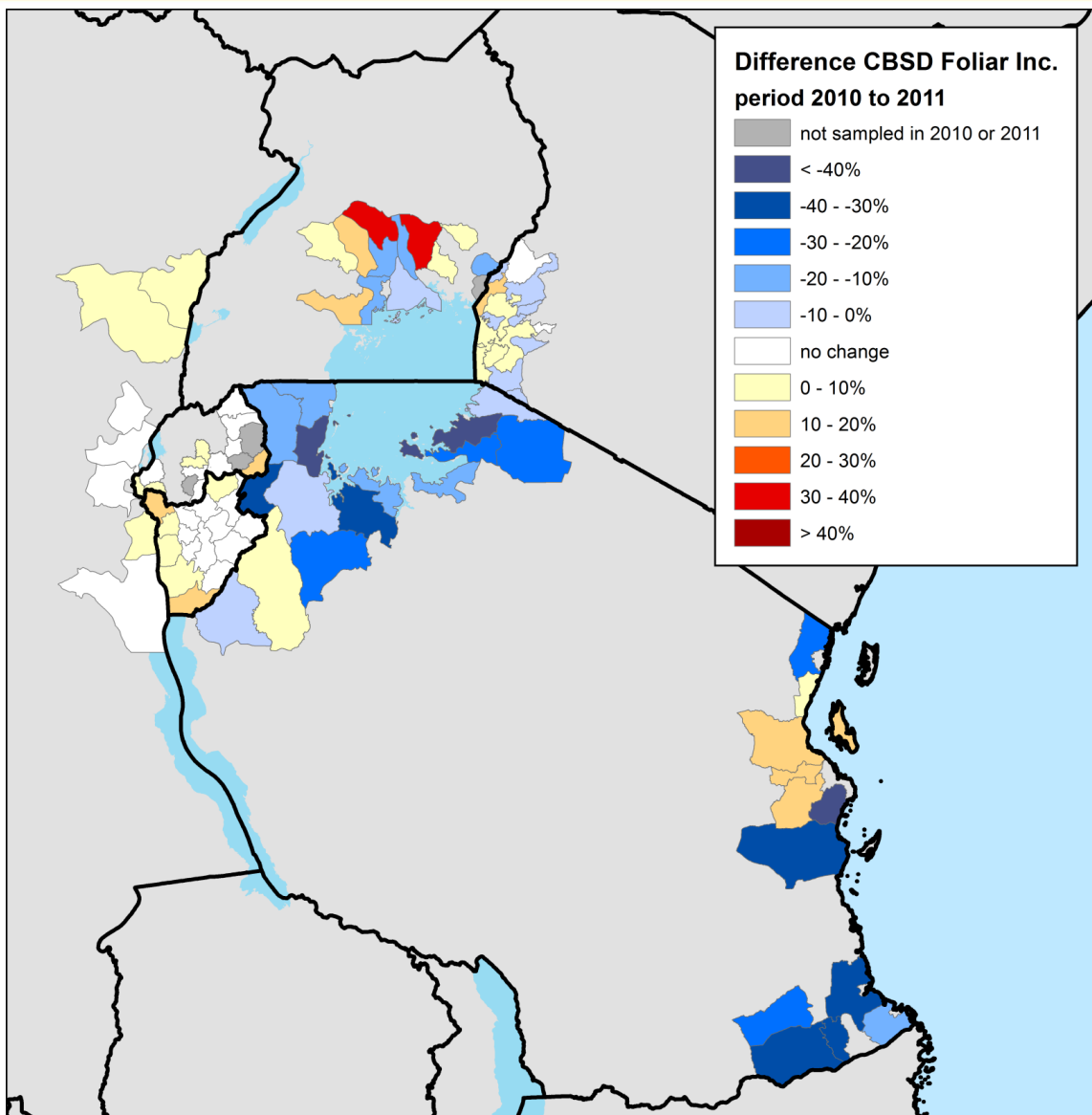
Bouwmeester *et al.*, 2008

Cassava Brown Disease



Streak Virus

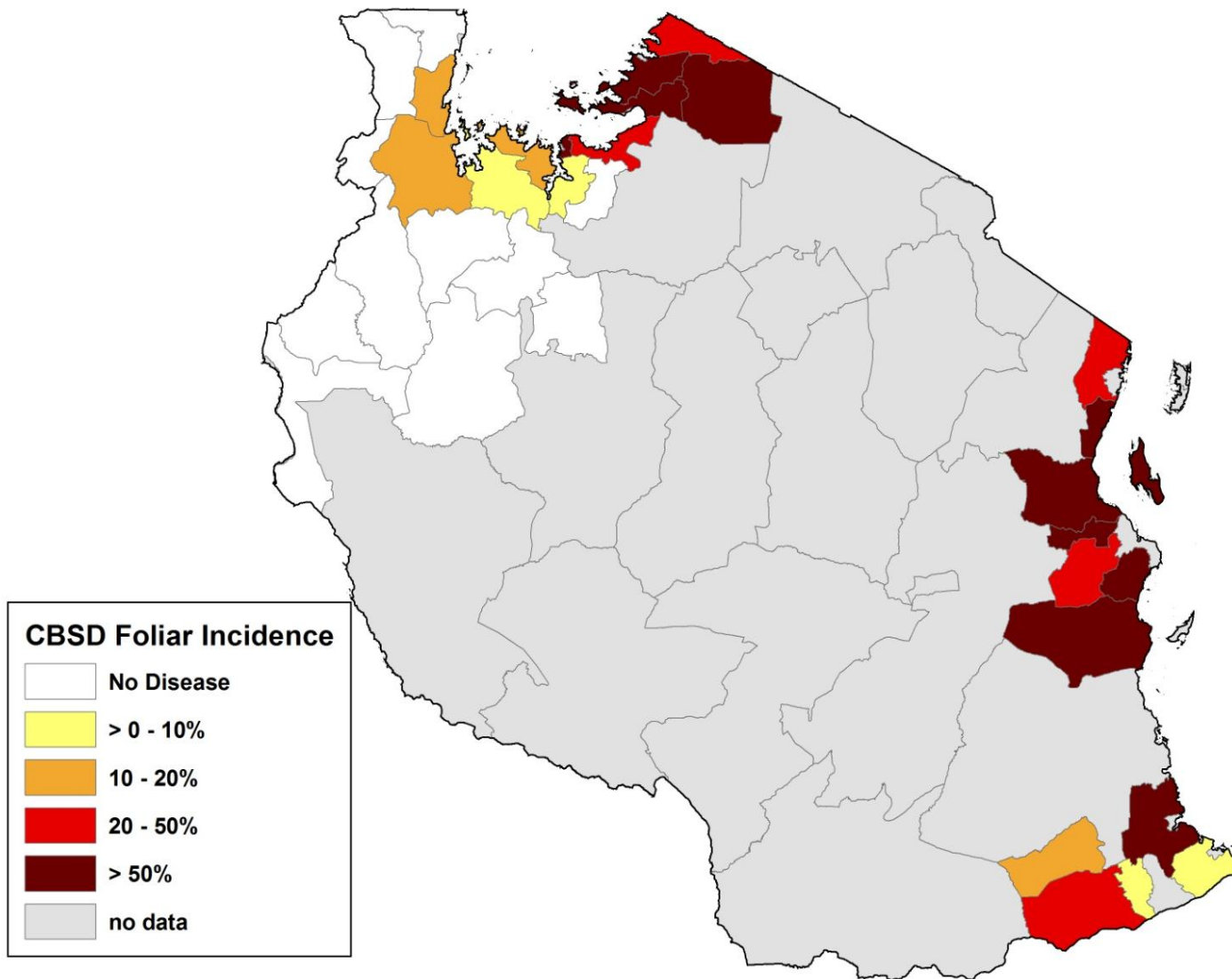




Change in incidence of CBSD leaf symptoms between surveys in 2010 and 2011

New variant evolving?

New cultivars required?



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Crop Healthcare System

national responsibility, regional cooperation and global excellence

**Pre-emptive
disease
control is a
necessity and
not a luxury**

risk assessment
disease surveillance
disease diagnosis
control recommendations
farmer adoption
impact on value chain
advocacy
research interventions



Pre-emptive Control of Crop Disease

Asante!

