



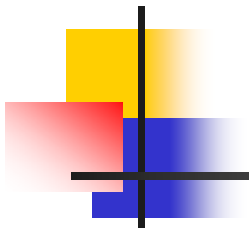
# PLANT DISEASE DIAGNOSIS IN COTE D'IVOIRE

---

Dr. Hortense A. Diallo



Université d'Abobo-Adjamé



MINISTERE D'ETAT,  
MINISTERE DE L'AGRICULTURE

DIRECTION GENERALE DES PRODUCTIONS ET DE LA  
DIVERSIFICATION AGRICOLE

DIRECTION DE LA PROTECTION DES VEGETAUX, DU  
CONTROLE ET DE LA QUALITE

S/D DE LA DEFENSE DES  
CULTURES

S/D DES INSPECTIONS  
PHYTOSANITAIRES

S/D DE LA QUALITE ET DE  
L'ETIQUE

**Sce de la  
protection  
Phytosanitaire**

Bureau de la  
Protection des  
cultures  
Industrielles

Bureau de la  
Protection des  
Produits post-  
récolte

Bureau de la  
Protection des  
cultures vivrières

**Sce des Agréments  
phytosanitaires**

Bureau de  
l'homologation  
et contrôle des  
pesticides

Bureau des  
agréments et  
contrôle des  
Professionnels

Bureau de suivi  
des essais et  
analyse des  
pesticides

**Sce de la  
Quarantaines des  
Plantes**

**Sce des contrôles  
Phytosanitaires**

Inspection Phyto  
du Port d'Abidjan

Inspection Phyto  
Aéroport d'Abidjan

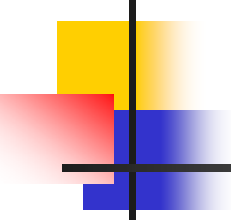
Inspection Phyto  
du Port de San  
Pédro



# Department of plant protection: mission

---

- To implement control measures against insects, diseases and other enemies: as such,
  - Insures phytosanitary coverage of the country by installing a network of phytosanitary warnings;
  - Identifies major pests in order to establish maps of the country's parasites;
  - Gives technical support to producers, farmers groups and follows the control measures used by agricultural enterprises.

- 
- 
- The **Department of Plant Protection** works with research institutions such as the **CNRA** (Centre National de Recherche Agronomique) and the extension services (**ANADER**: Agence Nationale de Développement Rural).



# CNRA

---

- Research is commodity-oriented;
- Several research stations with laboratories;
- The central Biotechnology Laboratory well equipped.
- Services not free.



# ANADER

---

- Extension service located in different regions of the country;
- Diagnosis based on visual observations of symptoms;
- No laboratories;
- Used to work with the CNRA on technical issues (plant protection for ex);
- All services used to be free (with funding from the World Bank);
- Now free for public service (for ex. on food crops).



# Major disease problems

---

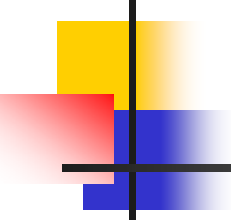
- Papaya virus diseases
- Cocoa swollen shoot virus
- *Cercospora* disease in banana
- *Phytophthora* disease in coconut and latex trees
- *Fusarium* disease in palm (oil) tree



# Insects

---

- Fruit flies;
- Oryctes and Rhynchophore on coconut and palm trees;
- *Pseudoteraptus devastans* on coconut tree;

- 
- 
- No diagnostic laboratories in Côte d'Ivoire:
    - Any major problem is brought to the attention of ANADER first (but they have no laboratories);
    - Problem brought to the CNRA for identification.



# Diagnostic activities, capacities and constraints

---

## ■ Activities

- For virus diseases only based on symptoms for papaya viruses;
  - For papaya viruses samples were taken to Rothamsted Research (UK) for identification;
  - For RYMV: collaboration with the CNRA;
  - For yam viruses (IFS-CORAF), collaboration with the SCSR and CNRA
- For identification of yam fungi (IFAD) collaboration with the SCSR;
- For fungi associated with seeds, plants, tubers: done at the University.



# Diagnostic activities, capacities and constraints

---

- **New activity: mobile plant clinic**
  - First mobile plant clinic in COTE D'IVOIRE held on 2/9/06 in the market of Dabou;
  - Were present as doctors:
    - Colleagues from the CNRA
    - Ph.D. Student
    - Myself
  
  - Were also present:
    - The deputy Director (Department of plant protection, Ministry of Agriculture);
    - Someone from the extension service.



# Diagnostic activities, capacities and constraints

---

- Capacities

- Technical

- Plant pathologist (virologist ) by training (in USA and UK);
    - Expertise on plant virus diagnosis (serology, molecular and microscopy);
    - Expertise on phytoplasma disease diagnosis (molecular);
    - Expertise on fungi isolation and identification (some).
    - Plant pathology laboratory not yet operational (no equipments and consumables);

- Human

- I am the only plant pathologist at the Université d'Abobo-Adjamé;
    - Work with students and colleagues from other research institutions

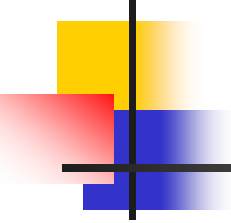


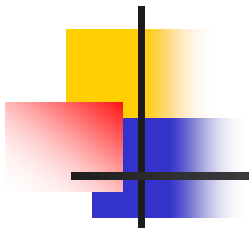
# Diagnostic activities, capacities and constraints

---

## ■ Constraints

- Alone in that field at the my university;
- No supporting staff at the University;
- No equipments, consumables;
- No existing formal plant disease diagnosis network in Côte d'Ivoire;
- No existing diagnosis laboratory.

- 
- 
- Despite all this, we try to work the best way possible;
  - Importance of this type of regional and international network.



---

THANK YOU