Food and Agriculture Organization of the United Nations

International Plant Protection Convention

Department for Environment Food & Rural Affairs

The Plant Clinic Network in the Plantwise Programme in Africa

Frontline diagnostic support through agro-advisors

Washington Otieno

CAB International

London, 21 – 23 September 2022

International Plant Health Conference

PROTECTING PLANTS PROTECTING LIFE

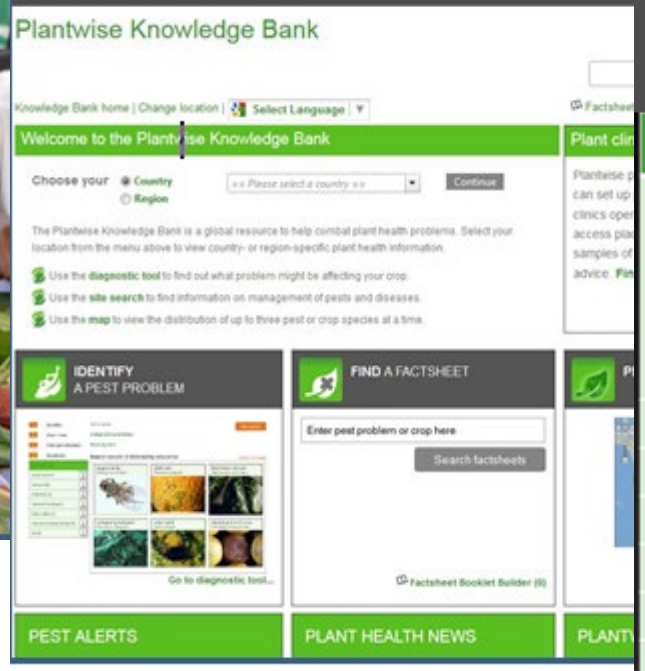
Overview of Plantwise

- A global programme led by CABI
  - Focus on reduction of crop losses due to plant health problems
- Operates through
  - networks of plant clinics manned by plant doctors
  - knowledge bank - interactive information management built on, *inter alia*, resources to aid diagnosis.
  - In-built M&E system for continual improvement
- Referral system - support to diagnosis beyond plant clinic interactions
  - DAS – referral to CABI labs at Egham
  - linkage with national labs & experts

Plantwise components

Plant Clinics

Knowledge Bank



Monitoring & Evaluation

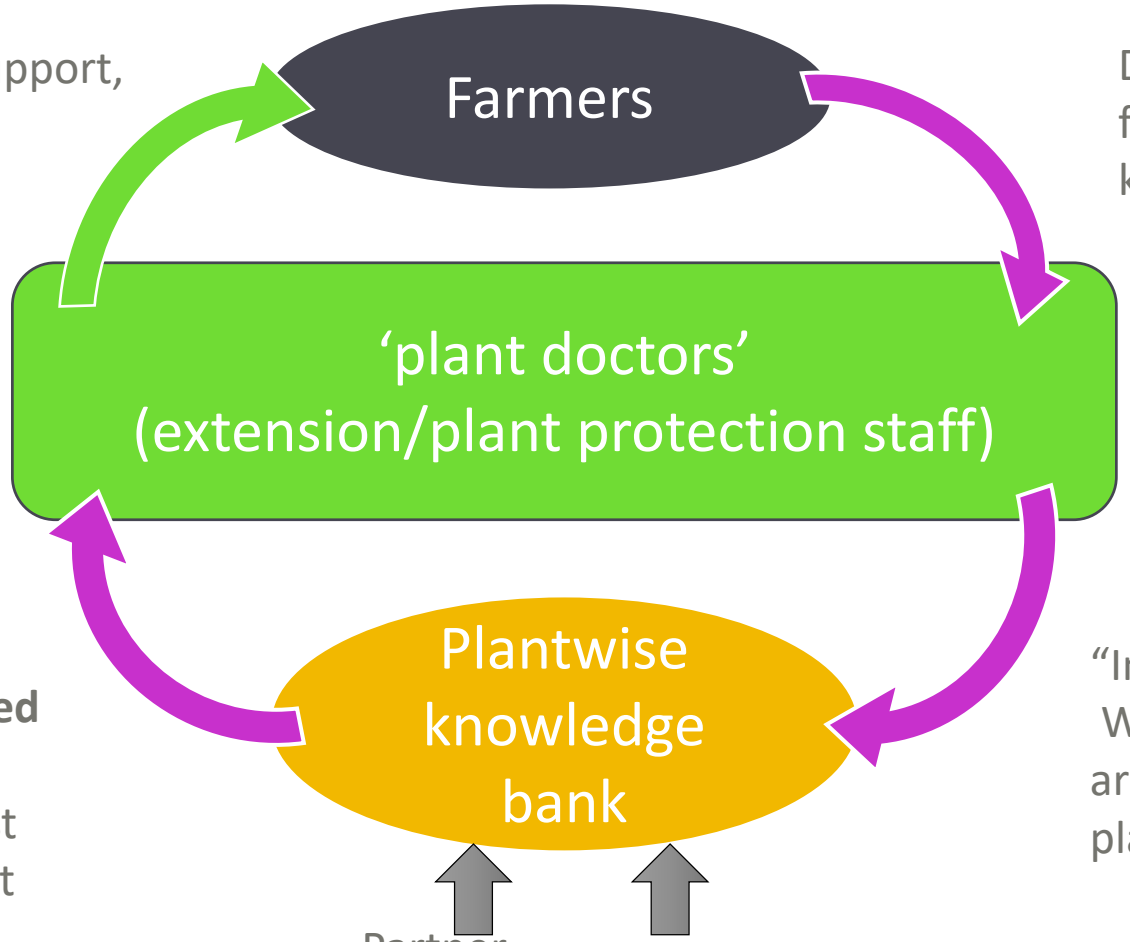
Performance criterion	Monitoring method
1. Quality of diagnosis	1. Monitoring visits to plant clinics 2. Analyses of plant clinic records 3. Follow-up meetings 4. Feedback from farmers 5. Visits to farmers' fields
2. Quality of advice	1; 2; 3; 4; 5.
3. Staff attitude, communication	1; 4.
4. Organization	1; 2; 3; 4.
5. Material, equipment	1; 3; 4.
6. Backstopping, networking	1; 3.
7. Timeliness, regularity	1; 2; 4.
8. Coverage, access	1; 2; 4 (e.g. causes of non-attendance)

PROTECTING PLANTS PROTECTING LIFE

Key Features of plant clinics

- Situated at locations easily accessed by farmers
  - regular time & place
- Run by '*plant doctors*'
  - extension workers trained in visual diagnosis & giving good advice to farmers.
- Farmers bring 'sick' plants; causative factors diagnosed based on symptoms, supported by open access PWKB
  - Referral arrangement, when diagnosis difficult
  - Diagnosed problem, the basis of advice to farmers, documented in a prescription form – data uploaded to restricted access POMS

Information flow



Plantwise Knowledge Bank

Clinic data collection

Content/data from CABI and partners

Clinic records

Plantwise Online Management System

KB open access

Improved diagnostic and management tools

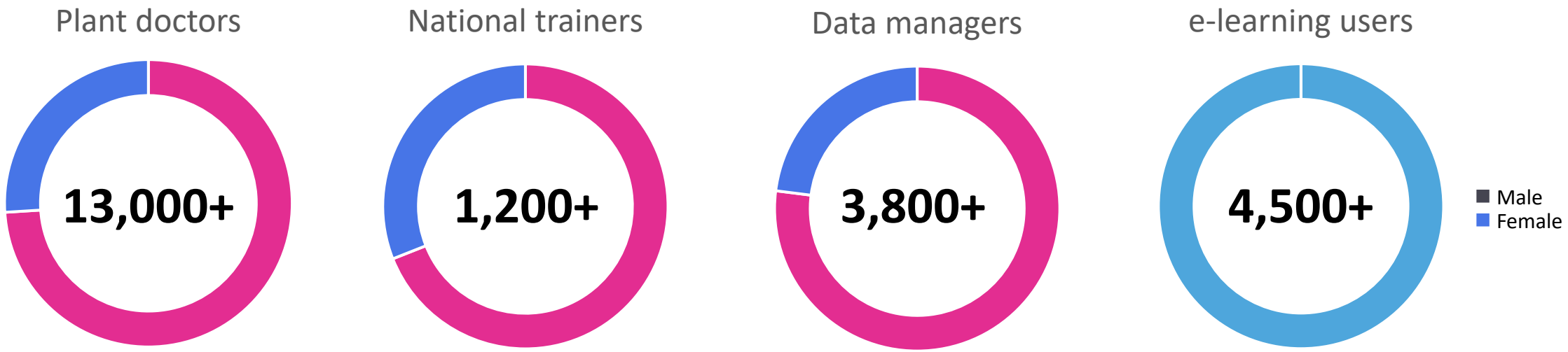
Reports, metrics, impact

Access control

data mapping, analysis, reporting

Lessons from Plantwise

- Systems for pest early detection lacking, leads to many pest introductions detected too late
  - Examples - since mid-2000s in Africa alone
    - ➢ *Bactrocera dorsalis*, *Tuta absoluta, Spodoptera frugiperda,* BXW, MLND, etc.
- Networked [satellite] diagnostic labs with functional links to reference plant health labs needed
- Plant protection measures at farm level remain largely curative rather than preventive
    - ➢ missed opportunities for **early interventions** & lack of demonstrable benefits from investments in preventive pest management to avert new introductions
- **Response systems** to deal with endemics/new introductions that are still not widely distributed generally lacking
    - ➢ *Fusarium oxysporum* fsp. *cubense* TR4, CBSV, etc



As a result:

- Increased reach of farmers to plant health advice

Quality content

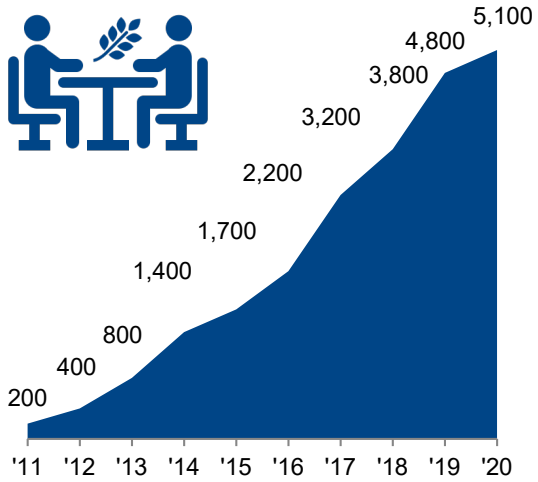
Major transformative change in delivery of plant health advice: - use of ICTs, including social media platforms

Knowledge bank:

- 1,723 Factsheets for Farmers
- 2,028 Pest Management Decision Guides
- 6,703 external factsheets
- 4,039 technical factsheets on individual pests

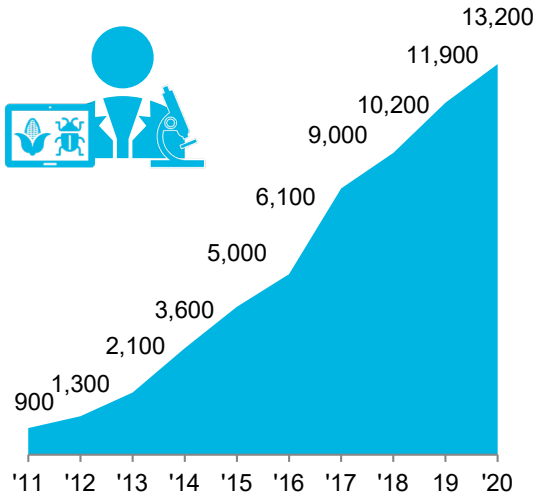
Decision-support tools:

- Apps for accessing advisory materials
- App for data collection and management
- Interactive diagnostic tool
- Social media to support pest diagnosis and identification



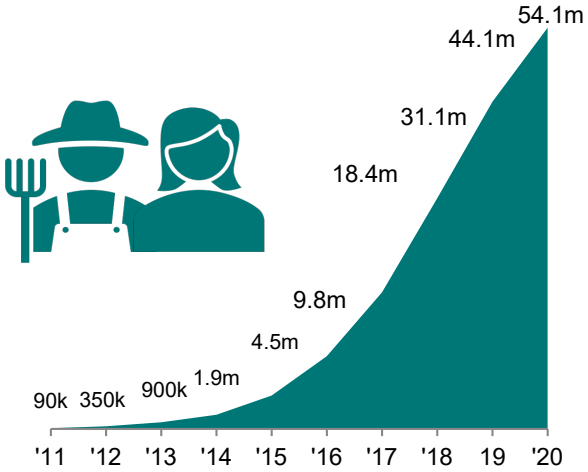
5,000+

plant clinics established



13,000+

plant doctors trained



54 million+

farmers reached 9directly & indirectly)

Achievements/2

>1.5 million queries brought to plant clinics

- on >500 different crops
- Diverse problems diagnosed per crop

Plantwise services have led to:

- >20% increase in yield due to improved management of plant health
- >30% increase in crop-based household income

➔ Stronger capacity for diagnosis, better plant health management, reduced crop damage & loss, improved productivity

Conclusion

- The value of diagnosis, regardless of the method, is its contribution to building **pest records**
- Pest records are beneficial only if they sit in **regularly updated** databases
- Databases useful if they support **decisions on phytosanitary controls**
    - Possible only if data policies do not unnecessarily restrict **data sharing** and **reporting obligations** e.g. of the IPPC on **changing status of pests**

International Plant Protection Convention

Department for Environment Food & Rural Affairs

Thank you

We wish to acknowledge the support of our donors, as well as our national and international partners, who made Plantwise possible

London, 21 – 23 September 2022

International Plant Health Conference

UKaid from the British people

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Agency for Development and Cooperation SDC

Ministry of Foreign Affairs of the Netherlands

Irish Aid
Rialtas na hÉireann
Government of Ireland

IFAD
Investing in rural people

Australian Government
Australian Centre for International Agricultural Research

Ministry of Agriculture and Rural Affairs, People's Republic of China

PROTECTING PLANTS
PROTECTING LIFE