Terms of Reference for Special Study

Plant clinic data management systems: Identifying factors that influence effective management and use of plant clinic data

The Study Background

Plantwise is a global programme led by CABI, which works to help farmers lose less of what they grow to plant health problems. Working closely with national agricultural advisory services the programme supports the establishment of networks of plant clinics, run by trained plant doctors, where farmers can find practical plant health advice.

Building effective systems for management and use of plant clinic data in-country is a core element of the Plantwise intervention strategy. A fundamental assumption is that good use of the data can help strengthen plant health systems making them more responsive to existing and emerging plant health threats in addition to contributing to improving quality of advisory services and decision making at various levels. Experiences from a number of Plantwise countries show that plant clinic data can be used to strengthen performance monitoring of plant doctors, inform research about demands for new technologies, target extension activities and to support early warning systems and their responses. Yet, for this potential to be fully exploited, a number of basic conditions need to be in place.

Establishing new ways of managing, sharing and using data involve substantial organisational change, within and between organisations. Lessons from human health tell that establishing effective health information system in low-income settings is complex and highly context specific. Among the factors that influence the functioning of data management systems are: Organisational mandates, procedures, resources and capacity, governance and management structures, incentive systems and attitudes towards data use and sharing. In order to design effective systems for data management and use, it is necessary to understand how these factors affect the processes and how country partners perceive Plantwise's intervention.

Plantwise Background

The overall objective of Plantwise is to increase food security, alleviate poverty and improve livelihoods by enabling farmers around the world to lose less, grow more and improve the quality of what they grow. The Plantwise strategy focuses on strengthening systems for providing plant health advice to smallholder farmers through three core and inter-related interventions:

1) **Plant clinic networks at the core**. Working with existing extension providers in target countries to implement networks of quality plant clinics in order to support farmers in solving biotic (pests, diseases and weeds) and abiotic (e.g. nutrient deficiencies, drought) problems where there is the greatest need. Gender equity drives the efforts to support the delivery of services to farmers in an equitable manner: women and men, young and old, as well as different social and ethnic groups.

2) **Systems for management and use of plant clinic data**. Supporting the establishment of appropriate systems and procedures for managing plant clinic data which enable the pro-active use of data for operational and strategic purposes at local and national levels.

3) **A systems approach**. Working with key stakeholders to improve the capacity and responsiveness of national plant health systems by strengthening linkages between agricultural service providers, plant health regulatory bodies, research and training institutes and agro-input suppliers. The plant clinics and the associated data management systems constitute a strategic entry point for capturing and understanding farmer demand and identifying the needs for systems response.

The country interventions are under-pinned by Plantwise's efforts to strengthen global response systems in order to deal with plant health threats:

- Fostering diverse national, regional and international partnerships that underpin and sustain global efforts to remove constraints to agricultural productivity

- Developing a global Knowledge Bank that provides data collection and management tools; and through a crowd sourcing approach that brings together existing and new information on plant health to support and inform stakeholders in national plant health systems, international bodies and the commercial sector, with long term potential for effective global vigilance.

Objectives:

The key objectives of the study is to assess the functioning of the Plantwise data management systems in selected countries and to identify key factors that influence the effective management and use of plant clinic data. Specifically:

- To understand how plant clinic data are managed, perceived and used by partners at different levels (local, district, central). This includes looking at processes for managing, capturing, processing, sharing and using data; roles, perceptions, motivation and incentives along the data management chain; compatibility with existing data/information management systems as well as effects of the context.
- To assess the value for money of data management systems at local, central and programme levels.
- To identify key challenges and opportunities for improving systems for plant clinic data management and use.
- To identify key criteria and variables for future assessments of plant clinic data management systems (e.g. efficiency, feasibility, quality).

Proposed countries: Kenya and Cambodia—we will confirm countries during inception/planning.

Deliverables:

- Individual country reports in English
- Overall synthesis report in English with a 500-1000-word summary
- A draft paper for a suitable peer-reviewed journal
- A short generic guide to assess plant clinic data management systems in other countries