Plantwise: global alliance for plant health

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Abstract

Plantwise is a global initiative to collect and share knowledge and information about plant health problems. Crop losses are reduced by timely identification of plant health problems and the implementation of appropriate management practices. Plantwise is an alliance of global partners looking to reduce crop losses by getting the right information to the right people as a solid foundation for local plant health services, including Integrated Pest Management (IPM) programmes. It was initiated by CABI in 2010.

The Plantwise approach is based on three inter-linked components:
1. Networks of independent **plant clinics** in developing countries that diagnose plant health problems brought to them by smallholder farmers and deliver practical IPM advice to address these problems.
2. National **plant health systems**, within which plant clinics are linked to other relevant stakeholders (e.g. extension, research, input suppliers and regulators), to provide an integrated system of support for addressing the crop problems that affect smallholder farmers.
3. A global **knowledge bank**, through which plant health information is collected and disseminated, including distribution maps, diagnostic tools and pest management information.

Results: To date, (pilot) plant clinics have been established in 24 countries. Plant clinics show benefits to smallholder farmers who follow the advice of plant doctors. In Uganda, four clinics received more than 2000 queries from around 1100 farmers on 62 crops in five years, representing an estimated 150 different types of plant health problems.

IPM recommendations provided by plant doctors will result in more judicious use of pesticides, which will lead to reduced environmental impact and biodiversity loss. Plant clinics have an important role to play in pest vigilance and have already been

instrumental in the detection of new plant pests, alerting local authorities so that appropriate actions can be taken.

The knowledge bank contains a range of features, all of which can be filtered by country, including:

- Interactive pest and disease distribution maps
- Over 1,000 fact sheets and data sheets on plants and their pests
- Diagnostic tools
- New pest alert service
- The latest news on plant health from around the world

Distribution data are a major component of the knowledge bank, but it also contains pest descriptions, extension materials, and images, for use by all IPM stakeholders, including public and private sectors.

Conclusion: Plant clinics, working within broader plant health systems, will help farmers to overcome plant health problems and reduce crop losses using more appropriate management measures. Plantwise will harness plant health observations recorded at the plant clinics and through other mechanisms, thereby improving the geographic mapping of pest occurrence. These data will help developing countries to better manage pests and offer a level of detail that was previously not available. Combined with text-mining and 'crowd sourcing', this will create a powerful resource for global biosecurity vigilance, policy planning, research and implementation of plant health services.

For more information, please visit: www.plantwise.org