

**PLANTWISE: Complementing diagnostic and advisory services of extension?**



*Self-medication kills!! and worst is if the advice flows from a mind vested with intention of self-interest. For decades, the farmers have no other go but the local input dealer shop to share his concern and take a solution. The local extension with its best effort could not possibly reach millions of advice seekers for whom the burgeoning issues of crop loss due to pest and disease are becoming unmanageable. Plantwise, a programme that works with national plant health systems through establishing sustainable networks of local plant clinics addresses this problem effectively argues Dr. Malvika Choudhary*

**PLANTWISE?**

Plantwise (<http://www.plantwise.org/>) is a global programme, led by CABI (<http://www.cabi.org/>), to increase food security and improve rural livelihoods by reducing crop losses. This is achieved by establishing sustainable networks of local Plant Clinics, run by trained Plant Doctors, where farmers can find practical plant health advice. Plant Clinics are reinforced by the Plantwise Knowledge Bank, a gateway to online and offline actionable plant health information, including diagnostic resources, pest management advice and front-line pest data for effective global vigilance. This programme operational since 2011, is currently in its third year of implementation. It partners with 33 countries globally out of which eleven are in Asia.



**IMPLEMENTATION OF PLANTWISE**

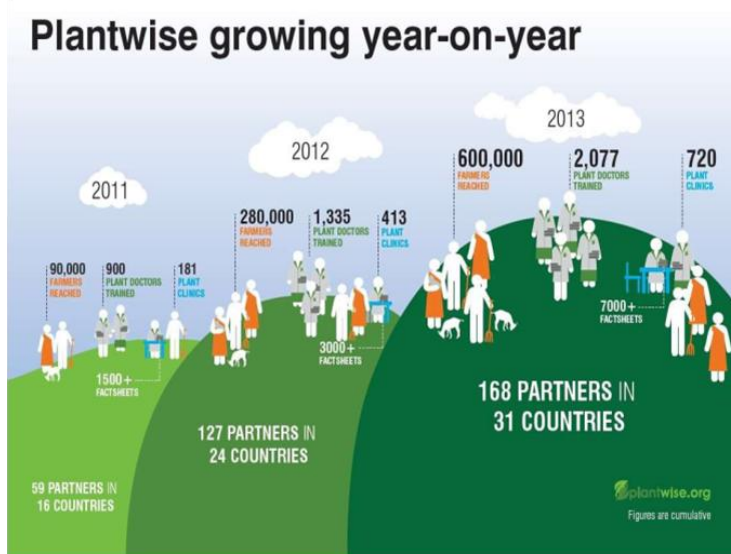
**Partnership with Government:** The program is implemented by CABI Country Coordinators in partnerships with the National Government. Each year the program implementation is reviewed and planned by a National Steering committee which comprises of top officials across the plant health system. CABI implements this program largely in collaboration with national partners from the Department of Extension under the Ministry of Agriculture. The extension officers are trained as Plant Doctors to run the clinics regularly and address the concern of farmers by giving them recommendation for cost effective and sustainable crop protection.

**Establishing Plant Clinics:** Plant clinics work like human health clinics run by doctors. In Plant Clinics, the Plant Doctor (extension staff) record data about the farmer, his current practices, the problems and the advice given. The one to one interaction between the Plant Doctor and farmers make them understand the need for monitoring and taking preventive eco-friendly measure and thereby reduce pesticide use and reduce crop loss due to pests. The extension officers and their support and supervisory staff, according to their respective roles and mandates, are trained in Plantwise modules (Box 1) to strengthen their capabilities. The trainings can pertain to field diagnosis and making recommendations; clinic and data management; and monitoring and quality control of services provided in the clinic.

**Box 1: Plantwise Training Components**

- How to become a Plant Doctor? (field diagnosis, operation of clinics)
- Plant healthcare (managing plant health problems, choosing options)
- Monitoring Plant Health Performance (monitoring and evaluation methods)
- Extension Messages (developing locally relevant extension materials and Pest Management Decision Guides)
- Data Management (using plant clinic data for national purposes)

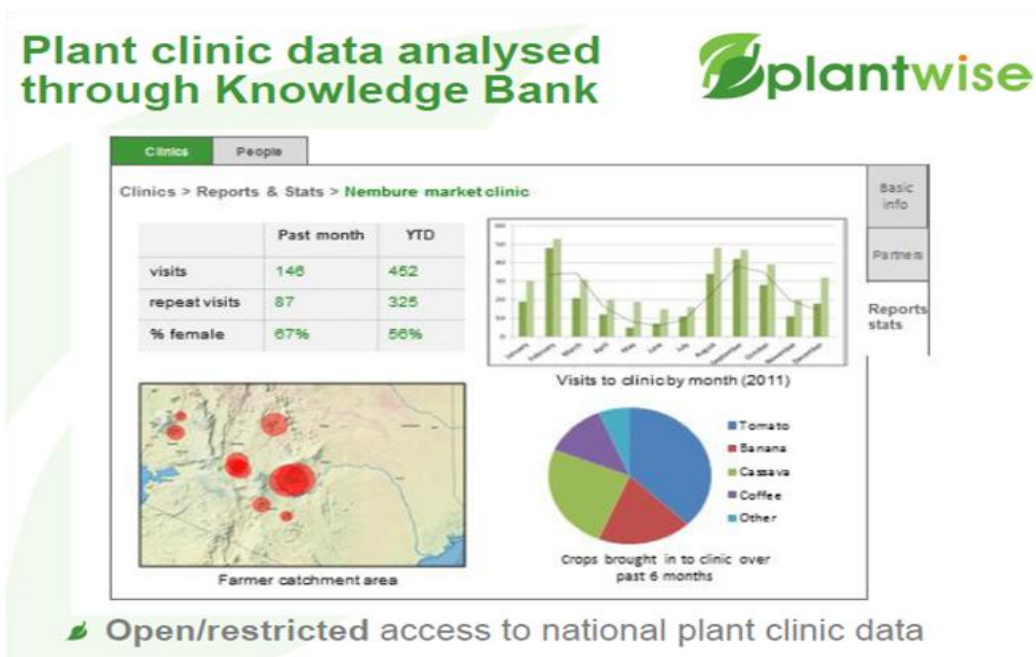
**Pest Management Decision Guides (PMDGs):** Plantwise organises write shop with national subject matter specialist and other knowledgeable people from research and academia leading to development of Pest Management Guides (PMDGs). Clinical recommendations are based on the “Green” and “Yellow” list. The initial green portion of the document advocates on prevention, monitoring and control of pest using cultural and biological methods. Due to persistence of pests, if further intervention is required, then list of chemicals approved by WHO are recommended for use. With the help of technical backstopping materials produced during the facilitated workshop, the practices to be adopted are explained to farmers. These materials are the form of farmer friendly fact sheets which are distributed during the clinic sessions and photo sheets that give a good account of pest and its damage.



**Linking Clinics to Diagnostics Clinics:** Another focal point is linking the clinics with diagnostic clinics where the Plant Doctor can send samples for further analysis in case of their inability to diagnose the problem. These clinics can be at nearby research institutes or universities and colleges where the facilities are available. A directory of such diagnostic institutes is compiled, categorised and made available to Plant Doctors.

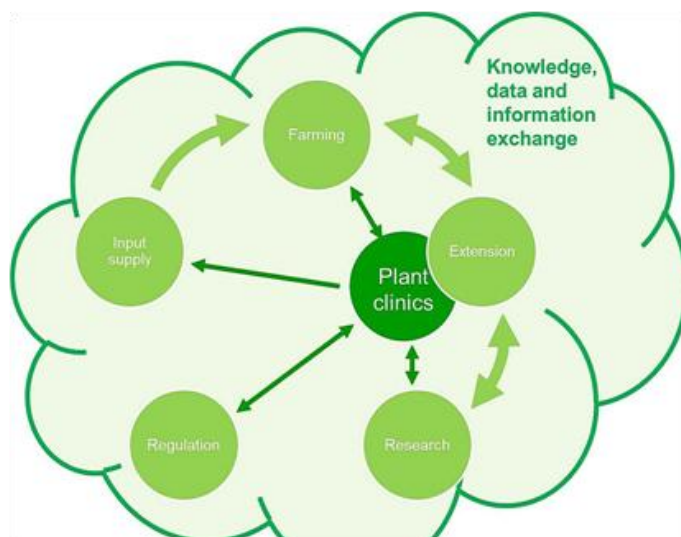
**Knowledge Management:** Plantwise hosts a website/ knowledge bank where the wealth of advisory information (which would otherwise is lost) is captured and is put to national use for various purposes such as identifying research needs, pest surveillance, forecasting and development of new technologies. The information flowing through this system is managed at different levels - local, regional and national. The local information is transformed to knowledge which is analysed by the National Plant protection Organisation (NPPO) which finally authorises to make it available as an open access resource on Plantwise-Knowledge Bank ([www.plantwise.org/knowledge](http://www.plantwise.org/knowledge) bank). This web portal holds information on pests, their distribution, method of diagnosis and control measures.

It has various other interesting sections like interactive blogs and pest distribution maps and is linked to similar national and international knowledge portals.



**Monitoring and Evaluation:** To ensure the quality of performance of these clinics, a module to train the senior extension staff in Monitoring and Evaluation (M&E) has been developed. A monitoring plan which is supportive in nature helps the Plant Doctors to self-evaluate their performance for further improvement. It also guides the officers in supervisory roles to conduct performance analysis of the clinics and present it to their seniors and other stakeholders. An external evaluation focussing on impact of plant clinics on socio-economic conditions and livelihoods of small marginal farmers is also planned.

**Stakeholder assessment:** Another significant focal area of the program is about forging linkages amongst the stakeholders of plant health system. A rapid assessment of stakeholders and their roles and linkages with other actors in the plant health system is undertaken. Plantwise works closely with extension services to strengthen its linkages between regulatory, research, input supply and farming community.



**Ensuring sustainability:** There are various worthwhile programs which have run into oblivion as soon as the funding phases out. To address this issue, Plantwise is working to achieve sustainability during various phases of implementation. This forms a part of Plantwise strategy, wherein countries shift from initial assessment to pilot stages fully supported by CABI. Once the impact is clear and the national partners get interested to contribute and thereby increasing their ownership towards the concept, the programme further progresses to the consolidation stage for up-scaling. The contributions made by the national partner can be in form of manpower, kind, funds or policies.



## PLANTWISE IN SOUTH ASIA

In South Asia Plantwise operates in 4 countries- Sri Lanka, Nepal and Bangladesh and India. The agreements are signed with the Ministry of Agriculture (MoA) in both Sri Lanka and Nepal and the program is being scaled up with contributions from national partners. In Bangladesh, formal signing of agreement is in offing and the planning is tentatively been done for implementation. In India Plantwise is currently implemented through NGOs like MSSRF and SEVA. There has been exceptionally huge scaling up in Sri Lanka where the number of clinics has reached 175 followed by Nepal where the 25% of the clinics are nationally owned.

**Nepal:** As part of consolidation for better functioning, the clinics are being grouped into clusters containing 2-5 clinics. This also helps in making Plant Doctors understand the objectives of Plantwise and creating a feeling of accountability of being part of bigger programme. The data managers are appointed at local level to collate the information coming from the clinics and sending it to the central level for national use. This makes the flow of information regular and smooth.



A supportive monitoring system where the plant doctors evaluate their performance in self assesment mode keeps them motivated and inspired for improvement. Though sometimes the plant doctors find the prescription sheet they use little difficult to complete, they do submit the forms with complete details as they recognise the significance of the information that would come out of this record. Extension material and Pest management Guides do help the plant doctors as reference material, though their validation from local subject matter specialist do take time and needs some streamlining.

For greater publicity a documentary prepared on Plant Clinics was broadcasted on national channel followed by news headlines in primetime channel. This has resulted in deeper percolation and visibility of Plantwise programme in Nepal. Radio jingles were also tried which resulted in more awareness among farmers about Plant Clinics and increased farmer attendance in Plant Clinics. The whole hearted participation and appreciation of the Minister (Agriculture) and the Secretary (Agriculture) as well as the efforts of the Director, Plant Protection who is also the National Coordinator of Plantwise in Nepal have raised the esteem of the program in the country . The recent National Stakeholder meeting held in October 2014 witnessed wholehearted participation of various stakeholders in plant health management.

**Sri Lanka:** In Sri Lanka, the intergeration of National Responsible Organisation (Plant Protection Services) with the Local Implementing Organisation (Extension) at the district level serves as an excellent linkage mechanism between the Reserach and Extension wings. The district coordinators play an important part in scaling up both Plant Clinics and management of data. Plantwise works

efficiently with the existing extension system of Sri Lanka in implementing the Plant Clinics through their network and Plant Doctors meet at monthly intervals to report on the progress of the clinics. Though the clinics are not required to be run on the weekly basis, twice a month provides a good operational model. The national partners contribute both in terms of funds and staff time to support the clinic operations. This makes large number of Plant Clinics as part of the extension network and contribute to the development of a robust plant health system in the country.

In Bangladesh and India though the programme is yet to be implemented with national governments, these countries have displayed an impressive work with NGOs. Though, it is desirable to work with the national extension system to ensure sustainability and wider reach, NGOs are providing opportunities to train their staff as Plant Doctors to provide services in local language and offering technical backstopping to these clinics with the experience they have gained so far.

## CONCLUSIONS

The Plantwise strategy is based on a vision to improve food security and rural livelihoods around the world through reduction in crop loss due to pests. It aims at achieving sustainable impacts at a scale by supporting development of an effective plant health system at the national level which can support farmers in facing current and future agricultural challenges. Thus Plantwise bridges the gap between farmers and the knowledge they need to grow more and lose less to pests.

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