



Commercialising Bio-Pesticides in Bangladesh

a mini case study

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Next to rice, vegetable production plays a key role in smallholders' cultivation patterns in Bangladesh. Therefore, Katalyst has been working in the sector since 2003. One major constraint of vegetable production is pest attacks and diseases. Often, farmers excessively use chemical pesticides with detrimental effects on environmental and human health. Although the government of Bangladesh has piloted integrated pest management (IPM) since the 1980s, the Pesticide Act, 1985 did not contain the wording "bio" and, therefore, did not allow commercial marketing of biological pesticides. In 2010, Katalyst alongside with Ispahani Biotech formulated a policy recommendation on the amendment of the Act to make the proper registration and marketing of "Bio-Pesticides" possible. Today, pesticide companies invest in IPM products and establish marketing and distribution channels.

Addressing the challenges

The Katalyst Vegetable Sector Team identified the high susceptibility of vegetables to pest infestation and diseases as one major constraint in

vegetable production by farmers in Bangladesh. Almost all Bangladeshi farmers depend on chemical pest control in their vegetable production, which is costly and bears many risks for the environment and the health of farming families. A lack of knowledge on the appropriate use and dosage of chemical pesticides makes handling difficult. The quality and taste of products suffer due to extended pesticide use.

As early as 1981, FAO introduced IPM measures in rice crops in Bangladesh. DANIDA and the

The Project

The Agri-business for Trade Competitiveness Project, branded as Katalyst, is one of the largest market development initiatives in Bangladesh. Working together with various market actors, the project generates new income opportunities for small and poor farmers across the country.

Katalyst is co-funded by the UK Government, Swiss Development Cooperation (SDC) and Danida, and implemented by Swisscontact under the umbrella of the Ministry of Commerce, Government of Bangladesh.





Bangladeshi Department of Agricultural Extension developed farmer field schools in the 1990s that trained a broad range of farmers as well as relevant government officials and non-government organisations (NGOs) members on the proper use of bio-pesticides. At the time, more than 440,000 farmers familiarized themselves with IPM operational procedures.

Building on such experiences and knowhow, Katalyst saw the potential for using IPM in vegetable production in Bangladesh. In 2009, Katalyst in close cooperation with GMark Consulting Limited and bio-pesticide company Is-pahani assessed IPM activities in Bangladesh and formulated recommendations to the government. The study highlighted the significance of IPM for Bangladesh but commercialization and marketing of bio-pesticides was not possible then because of the legal constraints mentioned.



Bringing about change

In February 2010, Katalyst triggered the change process by bringing all stakeholders interested in bio-pesticides together during a National Workshop on Prospects of IPM. Remarkably, participants representing different government bodies, private sectors, NGOs, vegetable traders, pesticide retailers, farmers, researchers and the donor community joined the round table to discuss the issue. Journalists from renowned Bangladeshi media covered the event. After a

general presentation of results from the IPM study conducted by Katalyst and GMark Consulting Limited, there was an open round of discussion on IPM methods and their potentials and limits from a research, legal, project, and farmer's perspective.

The overall perception of IPM was very positive while workshop participants clearly pointed out that the main obstacle to use and produce bio-pesticides on a large scale was the uncertain legal environment: Sales were not possible under the Pesticide Act, 1985.



Bio-Pesticides

Bio-pesticides as an integral part of IPM are natural substances derived from plants, animals, bacteria and certain minerals possess qualities similar to pesticides. For example, pheromone traps emit insect sex pheromones that interfere with mating. Traps are allocated in the field attracting male or female insects, which are then trapped in the device so that mating and reproduction of the pest is not possible anymore.



Partner's Voice

"Private companies like us are now able to register their bio-pesticides products and go for mass promotion. Currently, Ispahani Biotech has achieved license for six of its IPM products. When we see the results in the field, and see how much the farmers benefit from these products, it gives us a purpose of being in this business."

Ms. Fawzia Yasmeen
General Manager, Ispahani Agro Ltd

Companies intent on marketing bio-pesticides had to register their product as an ordinary chemical pesticide. At the same time, they complained about difficulties in the licensing process and the latter's indeterminate duration. Workshop participants also discussed that marketing and selling of IPM products would be more interesting to farmers if a certification of IPM products was in place.

As result of the workshop, Katalyst together with Ispahani Biotech formulated a policy paper to the Bangladeshi government. The paper recommended an amendment to the Pesticide Act, 1985 which would allow the registration of bio-pesticides and legalize their commercialisation.

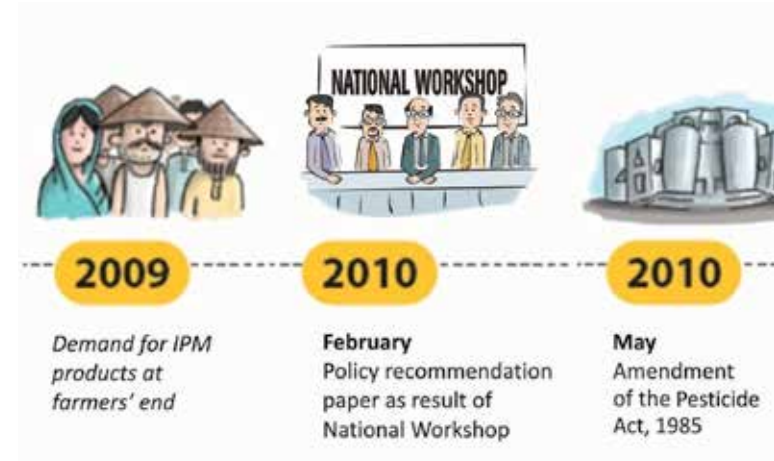
Evidence of impact

The amendment to the Pesticide Act, 1985 and to the Pesticide Ordinance, 1971 was finally published on 13 May, 2010. The government of Bangladesh had made proper registration and market-ing of bio-pesticides possible. This opened the door for IPM-related products and procedures, consulting and agricultural extension services.

- ✓ As a result of the amendment, two companies including Ispahani Biotech were able to

receive a license for the commercialisation of three IPM products in December 2012.

- ✓ Since then, an additional six IPM products for vegetables and four more for tea, mango and rice were registered.



- ✓ At the same time, Katalyst keeps on facilitating the promotion and field-level capacity building of IPM techniques and operational procedures with farmers.
- ✓ By 2012, IPM companies were able to sell their products to more than 17,000 small and marginal farmers.

- ✓ By November 2014, the companies' customer base increased impressively by an additional 46,700 farmers .
- ✓ Ispahani Biotech has been able to establish a laboratory for rearing beneficial insects that can be used for IPM.

Ispahani Biotech and its eco-friendly investments. This will make the market more competitive so that products in the long run will be cheaper and of higher quality, and a wider range of products will be available to farmers.

Companies such as GME Agro, ACI Agrochemicals, Russell IPM and SNS Agro Tech have already entered the market with their own IPM solutions. Before long, further IPM trainings and promotion events are to be expected.

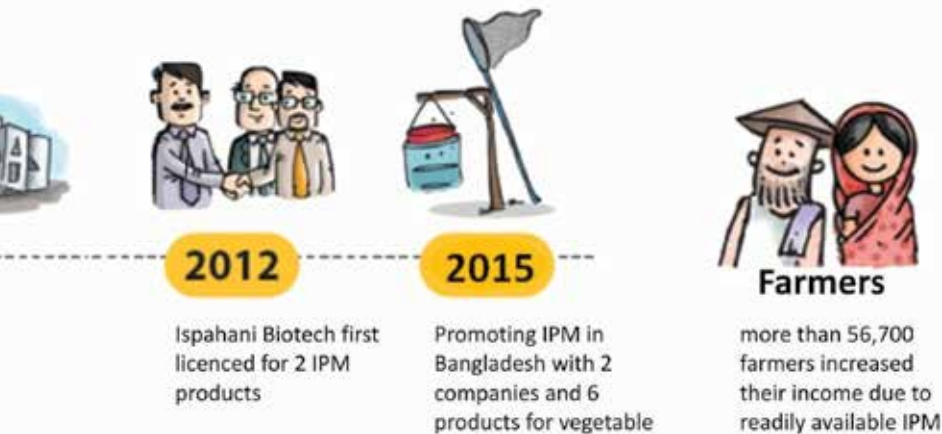
In addition to pheromone traps targeting insect pests, there will soon be measures to tackle plant diseases through a broader and environmentally friendly range of products supported by research. Katalyst will keep assisting companies to scale up production. The

project plans to help smoothen the registration procedure for bio-pesticides.

By 2017, Katalyst envisions to have helped IPM companies increase their sales to 81,000 farmers who consequently will be able to increase their income due to the availability and proper use of IPM measures.

What is Integrated Pest Management?

IPM methods comprise environmentally-friendly measures to control pests and diseases in crops. IPM is an holistic approach that combines cultivation techniques such as intercropping that minimize pest populations, the use of pest-tolerant crop varieties and biological pest control agents such as pheromone traps to obtain an optimal result. IPM significantly reduces crop production costs and environmental pollution while the quality of soils and products rises. Environmentally friendly and healthy products can often achieve higher market prices.



Scaling up

The amendment to the Pesticide Act, 1985 has led to an investment boost in the rural sector. Pesticide companies started investing more on research and development of IPM measures, and developing marketing and distribution channels. New companies will follow the market leader





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Contact

Katalyst, House 20, Road 6
Baridhara, Dhaka 1212, Bangladesh
phone +88 (02) 883 3172-4
fax +88 (02) 883 5452

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