Call for action to all partners of the World Banana Forum / Public announcement
Fusarium wilt TR4 Task Force founded in December 2013

February 2014

World Banana Forum (WBF) Task Force on Fusarium wilt Tropical Race 4 (TR4)
The World Banana Forum is open to all stakeholders and includes the participation of banana farmers, shippers and traders, retailers, scientists, civil society organizations, trade unions and government representatives. Many WBF partners are aware of the threat of the Tropical Race 4 strain of Fusarium oxysporum f. sp. cubense (TR4) that causes Fusarium wilt (also known as Panama disease) in Cavendish bananas. Also several other banana cultivars are susceptible to TR4. Fusarium wilt TR4 is a threat to livelihoods of millions of producers and workers and for the banana industry. Given the importance of TR4 for all stakeholders the WBF decided to include this as one of our tasks and started the TR4 Task Force headed by an ad-hoc committee of Steering Committee members and WBF partners, in December 2013.

Fusarium wilt TR4

TR4 has infested banana plantations in Asia, and was recently reported from Jordan and Mozambique. TR4 is a growing concern for the industry as it infects and destroys Cavendish banana plants. Once present the disease cannot be controlled by common chemical or cultural management practices. Available methods for disease containment are not a guarantee; and alternative options are still in a stage of evaluation. The social consequences of Fusarium wilt can be severe: bananas are an important source of food, income, employment and government revenues in many tropical countries.

Bananas (Musa spp.), including dessert banana, plantain, and cooking banana, are the eighth most important food crop in the world, and the fourth most important in the least developed countries (FAOSTAT, 2013). They are produced in 135 countries and territories across the tropics and subtropics. The vast majority of producers are smallholder farmers who grow the crop for either home consumption or for local markets (less than 15% of the global production of more than 130 million metric tonnes is exported). Today, the international banana export trade (17 million metric tonnes approximately) is worth over US$ 5 billion per year. Virtually all export bananas, and also a considerable part of the bananas cultivated for own consumption or local markets are Cavendish bananas or other cultivars susceptible to Fusarium wilt TR4.

In brief, Fusarium wilt TR4 has the following profile:

- There is no viable fully effective treatment of soil or plants to control or cure Fusarium wilt in the field
- The fungus’ resting spores remain viable in the soil for decades
- Research is going on; however, the biology and genetics of the fungus are still not fully understood
- There are no resistant varieties yet that can replace the favored export Cavendish banana
- The only currently available preventive measure is quarantine: preventing the transfer of infected soil or plant material from infected areas to TR4-free areas.

Note: Below this text we provide some informative TR4 references.

Elements for a sector-wide action plan

In view of these facts, it is evident that a concerted effort of stakeholders of the industry, research institutions, governments and international organizations is required to cope with the spread of Fusarium wilt TR4.
A sector-wide action plan should include:

1. Awareness raising campaigns on the inherent risks of TR4 and dissemination of prevention / quarantine measures wherever Cavendish bananas or other susceptible cultivars are cultivated;
2. Adoption of appropriate early warning systems based on rapid diagnostic techniques of the disease and risk assessments;
3. Training programs aiming at improved understanding of the epidemiology of the disease;
4. The development of control and management practices under field conditions through capacity development; and
5. The development of alternative banana cultivars that eventually can replace the current Cavendish types.

In the face of this action plan, the TR4 Task Force of the WBF is in the process of defining its role and priorities, but presently we propose the following provisional objectives:

- To encourage / ensure a series of prevention strategies to delay or avoid the long distance spread of the disease is agreed on a global basis and properly executed;
- To ensure the availability and dissemination of relevant information to WBF partners and where possible to other parties concerned with and affected by TR4;
- To support existing initiatives, and to avoid duplication of existing initiatives;
- To encourage global collaboration among interested parties, including access to funding opportunities.

We cordially invite WBF partners and other interested parties to contact the ad-hoc TR4 Task Force for any comments and suggestions that further support the aims of the Task Force, via the following e-mail address:

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Also with the support of:
- Gianluca Gondolini, Secretariat of the World Banana Forum
- Fazil Dusunceli, FAO, Plant Production and Protection Department
- Miguel Dita, Latin American and Caribbean Network of Banana Researchers (MUSALAC) / EMBRAPA

More information on:

Website World Banana Forum:
www.fao.org/wbf

TR4 project site Wageningen University and Research Centre WUR:
www.panamadisease.org

Article in Nature:
http://www.nature.com/news/fungus-threatens-top-banana-1.14336

Lot of info and many pages on the PROMUSA website, for example:
http://www.promusa.org/tiki-view_blog_post.php?postId=334 and on the Forum of PROMUSA:
http://www.promusa.org/tiki-view_forum.php?forumId=1