



Food and Agriculture
Organization of the
United Nations



GLOBAL PROGRAMME ON BANANA FUSARIUM WILT DISEASE

PROTECTING BANANA PRODUCTION FROM THE DISEASE WITH FOCUS ON TROPICAL RACE 4 (TR4)

THE DISEASE

Fusarium wilt disease has been a major constraint to banana production for more than a century. The disease is caused by the soil-borne fungus *Fusarium oxysporum f.sp. cubense* and it is one of the most destructive diseases of banana worldwide. Its new race Tropical Race 4 (TR4) has been causing serious losses in Southeast Asia resulting in abandonment of thousands of hectares of land. It has recently spread to the Middle East, Africa [Mozambique] and South Asia raising concerns that it may spread further.

THE CROP

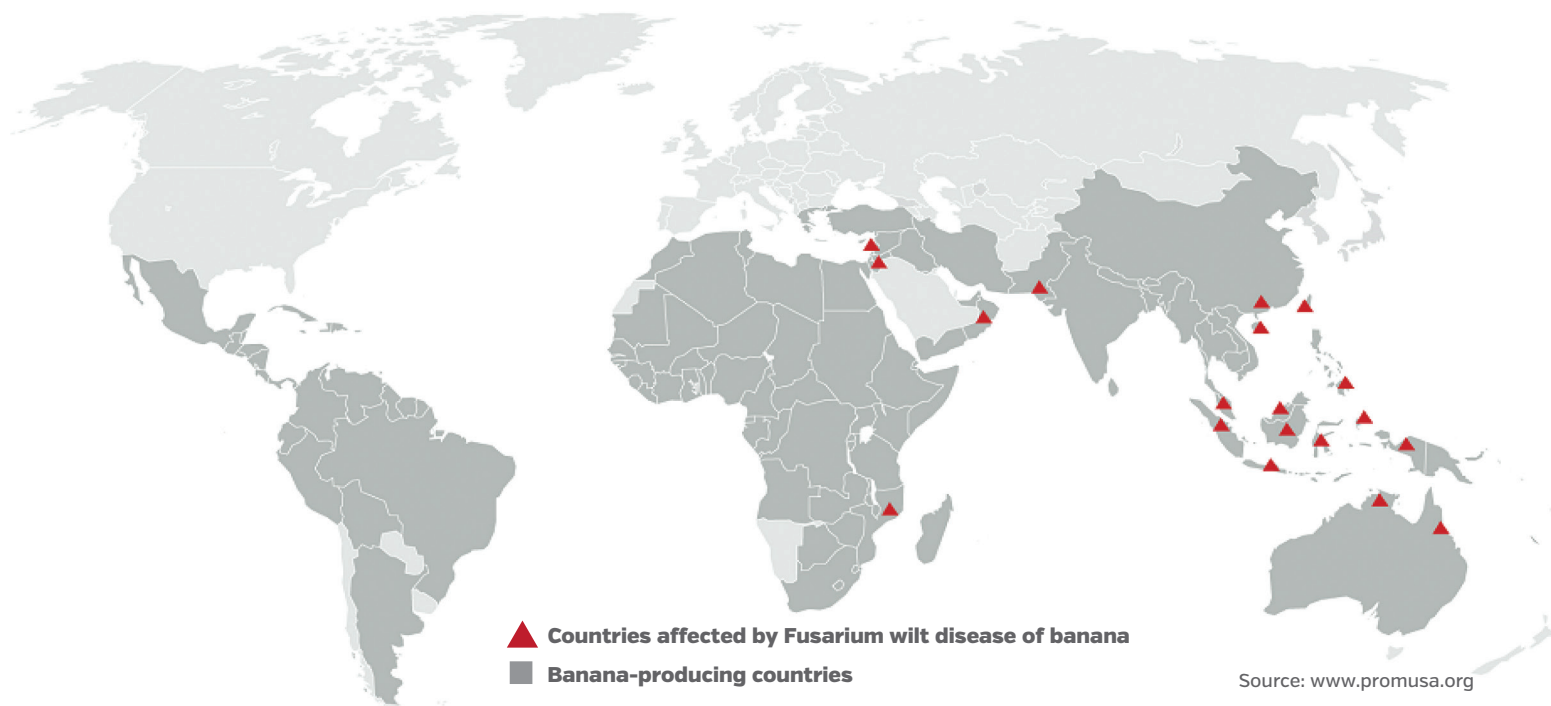
Banana, together with plantains, is the most exported fruit in the world and the fifth most produced food crop in least-developed countries. It is an important staple food or source of income for about 400 million people. TR4 poses a serious threat to production of this popular crop, with serious repercussions on livelihoods of smallholder producers, workers and the banana value chain. Cavendish bananas, representing around half of global banana production, are particularly affected by TR4.

THE SPREAD AND IMPACT

The fungus spreads through infected plant materials and infested soil particles attached to any item such as farm tools, shoes, clothes, animals and vehicles. Irrigation and drainage water play also a critical role in its spread. Chemical control is currently not possible and once established, it remains viable in the soil for decades. Already 19 sites in ten countries are affected in Asia, the Near East and Mozambique. The disease could spread to new areas if no action is taken. Thus, a global programme is needed to prevent and manage this devastating disease.

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BANANA-PRODUCING COUNTRIES AND THOSE AFFECTED ALREADY BY TROPICAL RACE 4 OF THE FUNGUS



135
countries



produce 145 million tonnes of bananas and plantains globally

\$52
billion



represent the economic value generated by bananas

400
million people



rely on banana as their staple food or as a source of income

85%
of bananas



are consumed locally

19
sites



in ten countries are already affected by TR4

100%
yield loss



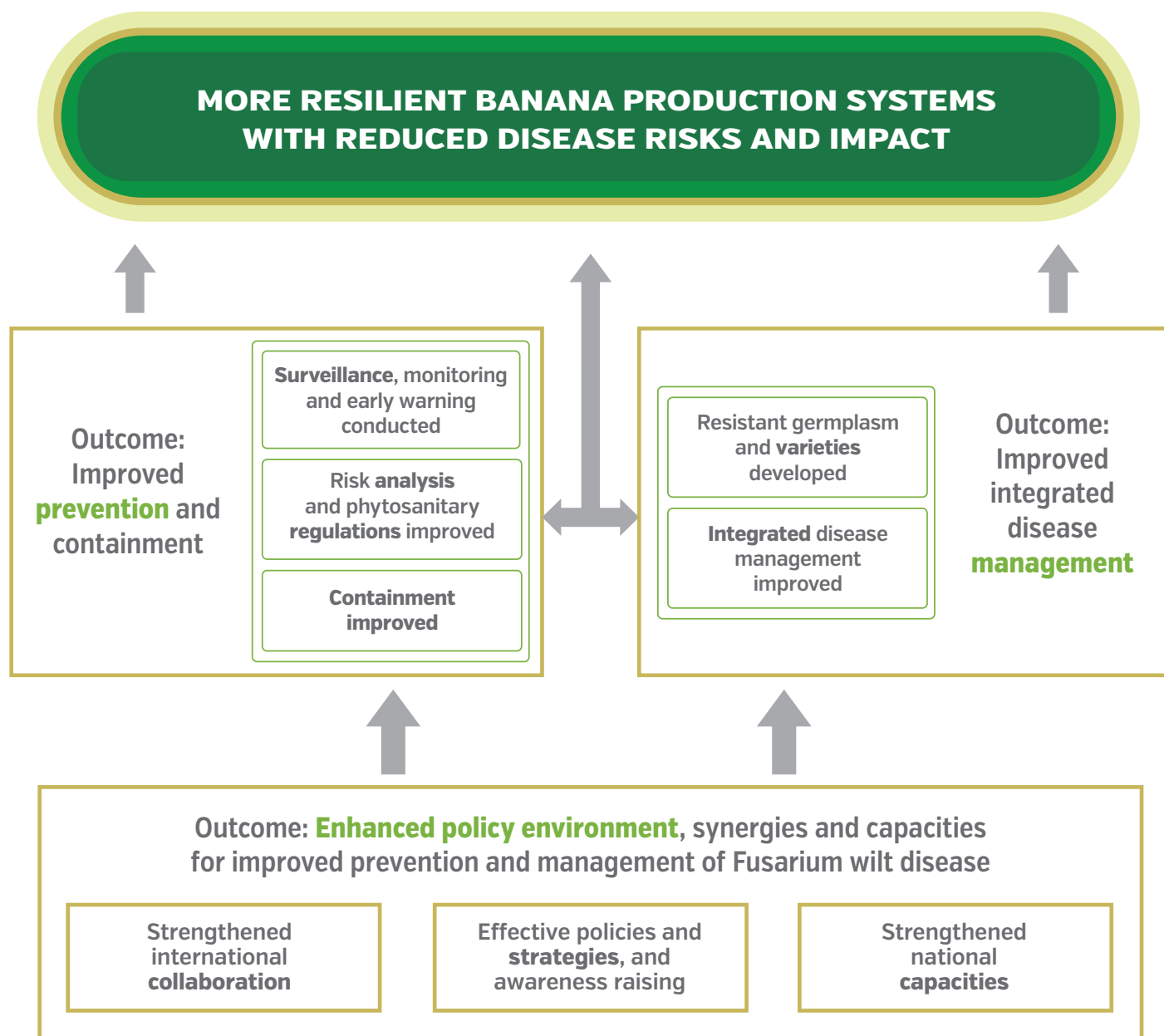
can be caused once established in a field

KEY FACT

Banana is a **major staple food** and commercial crop in many countries in Asia, Africa, Latin America and the Caribbean

GLOBAL PROGRAMME ON BANANA FUSARIUM WILT DISEASE

PROGRAMME FRAMEWORK



The Global Programme on Banana Fusarium wilt (FW) disease is designed on three main fronts of action: preventing future outbreaks, managing existing cases, and strengthening international collaboration and coordination among institutions, researchers, governments and producers.

KEY FACT

Fusarium wilt can cause **100% yield loss** in infested fields and affect the sustainability of its production



The programme aims to enhance international synergy and collaboration among the existing initiatives to assist countries in their efforts to prevent and manage this devastating threat more effectively. It is built on a multidisciplinary and coordinated action plan involving all the concerned stakeholders. It will be implemented through a partnership between FAO, Bioversity International, International Institute of Tropical Agriculture and the World Banana Forum, in collaboration with other international and national institutions. Collaborators will include, among others, national plant protection organisations, universities, regional networks, international institutions, industry and producer associations.

KEY ACTIVITIES:

- ▶ Promoting and facilitating international and regional **collaborations** to develop and implement strategies and tools for disease management and prevention.
- ▶ Strengthening national **capacities** in implementing effective plant health legislation and **phytosanitary** standards.
- ▶ Supporting coordination among stakeholders for development and implementation of contingency plans and rapid **response**.
- ▶ **Awareness** raising and advocacy among decision makers and farmer communities.
- ▶ Assessing TR4 **risks** and impacts to banana production nationally, regionally and internationally based on scientific data.
- ▶ Supporting national and regional **surveillance** and monitoring mechanisms.
- ▶ Developing and deploying TR4 **resistant bananas** through international collaboration.
- ▶ Developing and promoting **integrated disease management** practices to prevent spread and to minimize damage by TR4.

KEY FACT

The most effective way to control the disease is to take **preventive measures**. International **collaboration** and local actions are essential to manage the disease globally.