

Containing the outbreak of Panama Disease on banana farms in Mozambique



A threat to the Banana Industry in Mozambique

Mozambique, with its mild tropical climate and fertile soil, has great conditions for growing bananas. However, with the devastating Panama Disease Tropical Race 4 (TR4) detected in the northern region of the country, the country is facing a major threat to banana production that potentially could spread to the whole continent.

Although 15,000 hectares were lost to the disease on a commercial banana plantation in the north between 2013 and 2018, Mozambique currently still has more than 15+ commercial growers across the country that together utilise around 4,000 hectares of land for banana production [Source: BANANAMOZ, 2018].

To protect these production areas, the Mozambican government, commercial producers, communities and scientists are joining forces to focus on containing and living with this banana disease. Failure to do so could have catastrophic effects on not only commercial banana production and exportation, but also food supplies and employment opportunities across the country.

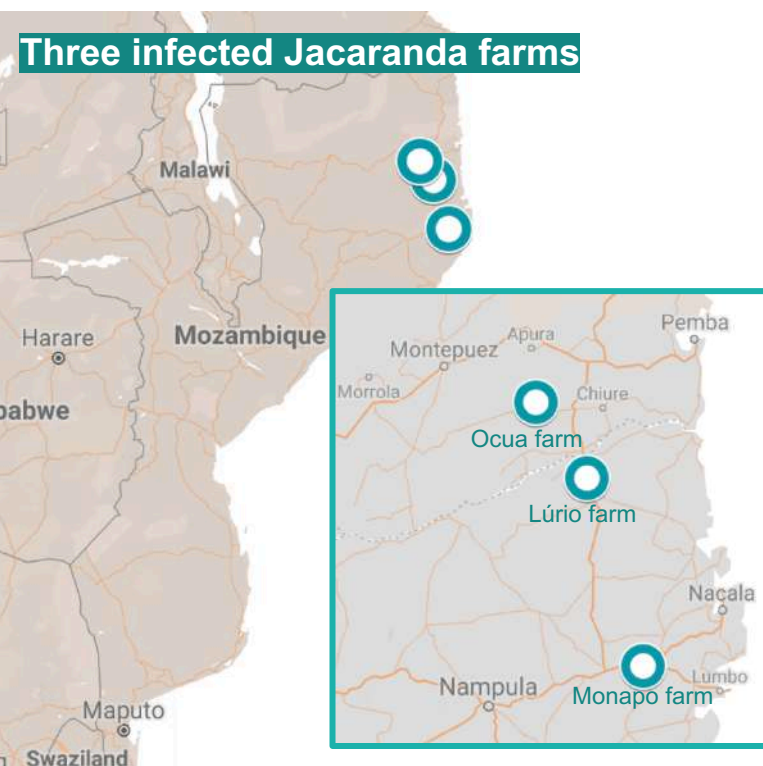
What is Panama Disease TR4?

Banana Fusarium Wilt (also called Panama Disease), has been a known disease affecting banana production over the past decades. The disease is caused by a fungus that prevents the banana plant to receive nutrition and water. Without the required water and nutrition, the plant wilts and eventually dies. The fungus spreads through contaminated soil, which means it is not only carried by plant material, but also by vehicles, clothes, footwear and tools. The Tropical Race 4 (TR4) strain of this disease that is present in Northern Mozambique has a potential destructive impact on banana production across Mozambique.

As the fungus stays active in the soil for decades, the disease is nearly impossible to eradicate. Because of this, prevention measures, early detection and immediate reporting of symptoms are critical in order to contain the disease.



Three infected Jacaranda farms



Outbreak of Panama Disease TR4 in Mozambique

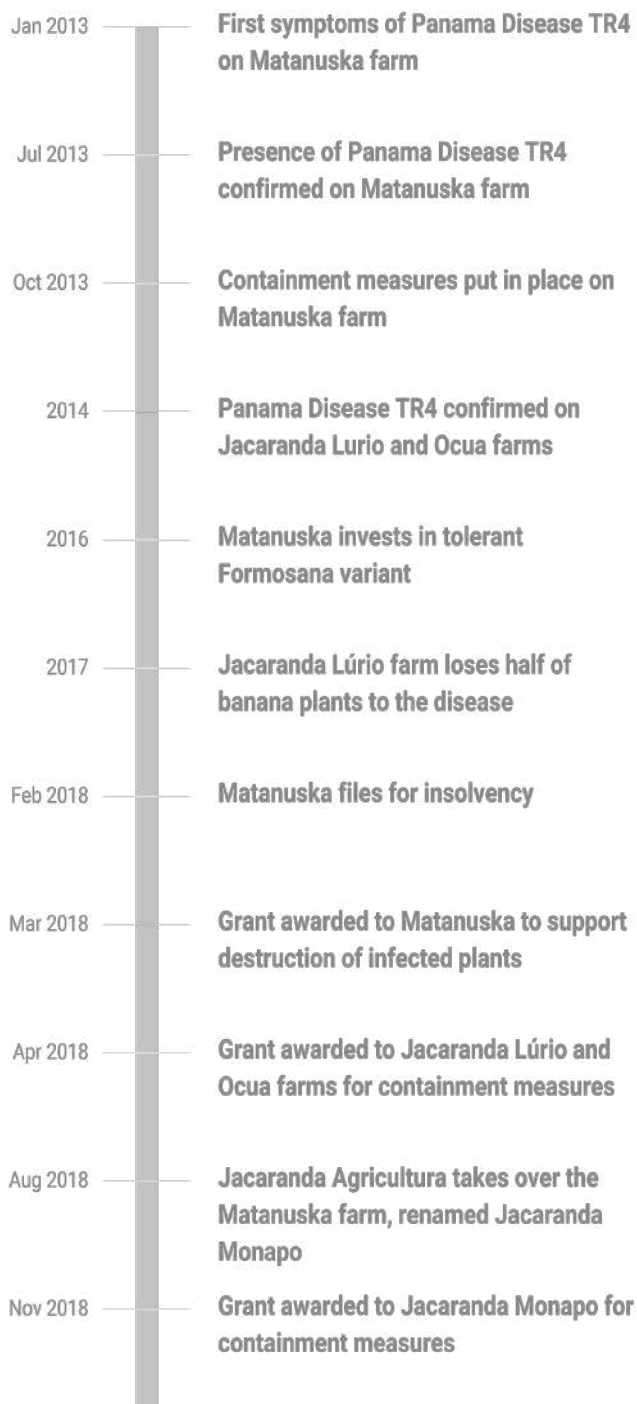
The disease was confirmed to be present in Northern Mozambique in July 2013 on the Matanuska farm in Monapo (which is now called the *Jacaranda Monapo farm*). To prevent the movement of Panama Disease TR4 inside Mozambique, the National Phytosanitary Authority (NPA) has instituted domestic quarantine measures in Northern Mozambique.

Unfortunately the disease spread to the Jacaranda Lúrio and Ocua farms in 2014. Currently these three farms remain the only farms infected in Mozambique.





Infection Challenges



Matanuska Farm

After detection of the Panama Disease TR4, the Matanuska farm quarantined 50 hectares and removed it from production in October 2013. Vehicle and footbaths were immediately constructed at the main entrance as well as at other control points within the farm.

Unfortunately, the disease spread and reduced the production area from 1500 hectares in 2014 to 900 hectares in 2016. In this year, Matanuska started investing in a tolerant banana variety (*Formosana*) and planted around 200 hectares. During this process, the farm lost all other areas producing the in-tolerant Williams variety, reducing the total production area even further to just the 200 hectares of newly planted *Formosana* plants. With the loss of production also came the decrease in workforce; whereas Matanuska employed 2,500 workers in 2014, it only had 750 employees in early 2018.

Although the *Formosana* plants and fruits were showing positive results, Matanuska filed for insolvency in February 2018, after several failed attempts to engage investors to continue production while managing the disease.



Destruction of infected plants at the Matanuska farm

Jacaranda Lúrio and Ocuá farms

By 2014, the disease also infected two Jacaranda farms with a total of 730 hectares of production area. The Lúrio farm in particular felt a significant impact on their production as it lost half of its 210 hectares in 2017.














Response to the outbreak

Banana Industry Grants Facility containment assistance

As a response to the outbreak of Panama Disease TR4, the Banana Industry Grants Facility (BIGF) was created, funded by the United States Department of Agriculture (USDA), monitored by the Mozambican Department of Agriculture (MASA) and implemented by TechnoServe. BIGF started to accept applications from infected farms in January 2018 with the focus on containment of the disease. With the help of technical experts, a series of recommended containment measures were established that should prevent the disease from spreading further. A total of nearly \$2.5 million was awarded to the infected farms, allowing them to implement the required containment measures.

Containment Measures implemented across the farms

-  Car baths
-  Foot baths
-  Perimeter fencing
-  Quarantine signage
-  Boots
-  Car parks
-  Visitor registration
-  Farm road improvements
-  Community awareness

Jacaranda Lúrio and Ocua farms

These two Jacaranda farms implemented containment measures in order to prevent further infection within farm boundaries and to prevent the disease to spread to the nearby Jacaranda Mirrote farm.

Containment measures included the installation of quarantine signs, introductions of visitor registration books and the requirement of all personnel and visitors to wear boots.

Matanuska / Jacaranda Monapo

As the infection of the Matanuska farm was too far spread to continue banana production and the farm had filed for insolvency, a grant was awarded to destroy all plants by herbicides injection and to properly dispose of all waste materials.

After all infected plants at the Matanuska farm were destroyed and the insolvency process was completed, the court accepted an offer in August 2018 from Jacaranda Monapo Lda. to take over the farm with all its assets. The farm was then renamed **Jacaranda Monapo farm**.

After the farm was taken over, the Monapo farm completed a series of recommended containment measures such as the installation of car baths, perimeter fencing, foot baths, purchase of boots and implementation of community awareness campaigns.

“Jacaranda has benefited hugely from the BIGF grant. So far we succeeded in completely keeping the Panama disease out of our Mirrote farm!”

– Lissie Schmidt
(Jacaranda Agricultura)

