Crops need healthy roots, and a ‘Trianum’ boost is the answer

BY WAIKWA MAINA

For a long time now, Fusarium and other soil-borne pathogens such as Pythium, Rhizoctonia and Sclerotinia, have wreaked havoc on farms across the country, defying even the best pesticides, which largely work above the soil surface. This has been the case of failed harvests and heavy losses, as many unhappy farmers have watched their crops yellow, dry up and wither in the fields.

Lying at the foot of Mount Kenya, Kirinyaga County is the leading producer of the open-field tomato, accounting for 44 per cent of the crop’s production in Kenya. However, farmers in the county have been having sleepless nights, thanks to the notorious fungi that have wreaked havoc on farms across the country, defying even the best pesticides.

“Trianum boost is the answer

Fusarium and other soil-borne pathogens are more vicious and destructive when a farm is already infected with nematodes. Wafula, a researcher at Koppert, explains: “Farmers attack and eat plant roots, weakening the plant. Fusarium and other soil-borne pathogens are more vicious and destructive when a farm is already infected with nematodes. Wafula, a researcher at Koppert. ‘Trianum’ boost is the answer

Nematodes

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Fusarium Wilt

- A disease caused by a fungus that lives in the soil.
- The fungus moves up through the plant roots, clogging water-conducting tissue in the stem.
- Affected plants produce very few tomatoes, before dying.
- Symptoms: yellowing and wilting on one side of the plant, a leaf, single shoot, branch, or several branches.
- Rooting moves up the plant as the fungus spreads, leading to drying and dropping of immature leaves. The interior of the main stem when split shows discoloration streams from plugged water-conducting tissue.
- Attacks at any stage in a tomato plant’s growth, but symptoms are most common right after tomato blossoms appear.

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Prevention

- Destroy infected plants once discovered.
- To slow down the disease, farmers must retain a soil pH of between 6.5 and 7.0.
- Practise crop rotation and ensure that tomatoes are not planted more than once every four years in the same spot. Fusarium can survive indefinitely in the soil.
- Do not plant other solanaceous crops such as potato, pepper, and eggplant in the same area, as they are also prone to fusarium attacks.
- Choose disease resistant tomato seed varieties or sources for clean planting materials or seedlings.
- Plant tomatoes in well-drained soils.

Prevention with Trianum, the effective biological weapon

Trianum, a trade name of Koppert’s hybrid strain of ‘Triblotherma Harzianum’, is a bio-friendly fungus that is best suited to control economically important pathogens in tomato fields. When the fungus is applied, its vegetative part grows, creating a protective cover over to keep out soil-borne pathogens such as Fusarium.

“Following the application of Trianum, it develops mycelia, which grow aggressively along with the developing root system,” says Ms Purity Kabura of Koppert.

Trianum staves pathogens by quickly absorbing what attracts them to the roots – any fluids or cells that seep out. The fungus produces enzymes that break down the pathogens’ cell walls. A healthy plant starts with a healthy root system. Once Triblotherma spores in Trianum quickly establish themselves in the root zone, ensuring that harmful fungi have no chance to establish themselves,” says Dr Kaririki.

Best in temperature between 70°–90°F and wet weather, which allow it to spread more easily. Planting in poorly drained soils are more susceptible to wetness. Soil allows the fungus to multiply and move up through the tomato plant’s water-conducting tissue.

According to Dr Kaririki, there is no chemical treatment for the disease.