

Bacterial wilt management and improving soil health

Potato is one of the important food and cash crops in Sub Saharan Africa but faces many challenges. Potato bacterial wilt is a major challenge.

Potato yields in Africa are low and are brought about mainly by high disease pressure, lack of clean seed, poor soil fertility and soil health and poor crop management. In Uganda, Kenya and Ethiopia, the attainable yield is around 10 tones per hectare while the potential yield is between 30 to 35 tones per hectare. The disease is spread via the soil and also affected planting seed. In Africa, the situation is aggravated by farmers' lack of knowledge about key issues of soil health and management.

Disease biology

On the farm, the disease is identified by a diagnostic process called the bacterial ooze test where the stem of a wilting plant is cut and suspended in a glass with clear water and if the plant is infected, the bacterial ooze is seen coming out of the stem.

Bacterial wilt is both a seed and soil borne disease and thrives in the field for longer periods in the field for as long as there is a host to sustain it. It is more prevalent in potatoes and crops of the same family.

The disease can also survive in the plant without showing any symptom and this may make the disease easily go unnoticed with the naked eye hence spreading the disease to other areas through seed hence care should be taken.

Wilt management

Research has been carried out to introduce bio control agents that help suppress bacterial wilt. Five bio control agents have been found to suppress the bacterial wilt up to 80%. These are used in combination with other control measures.

In managing wilt, focus should be on three main areas; Developing a crop rotation programme to manage the disease, improve soil fertility and provision of clean planting materials.