Proper drainage of cabbage beds

Recognize the problem
When preparing land to plant cabbage, proper drainage is essential for the following reasons to avoid waterlogging which can cause the roots to be starved of oxygen and therefore lead to the death of the plant. Furthermore, pathogens, such as bacteria and fungi, thrive in waterlogged soils and attack crops, causing serious damage or loss. However, care must be taken to ensure that the soil retains sufficient water to prevent wilting and drying of the plant.

Background
Generally, crop production is concentrated on clay soils which tend to hold a lot of water so drainage is an issue. Proper handling of the soil will allow excess water to drain away, leaving the roots with some air around them. Poorly drained cabbage fields are severely affected by diseases such as black rot, peppery leaf spot and Fusarium.

Management
• Form beds approximately 3m (10 ft) wide with a camber along the middle and drains at the side
• The camber is formed by operating the tractor with a disc plough along the centre of the bed in one direction and then in the opposite direction at the other side of the bed, effectively pushing the soil towards the middle to give a turtleback appearance
• Drains at the side are formed using a draining machine. The drains should be about 30 cm (1 ft) wide and 30 cm (1 ft) deep
• Within the bed, till the soil using a 15 cm (6 in) rototiller. Run the rototiller at least twice to loosen the particles. This will create a good balance between the looseness of particles and the firmness of the soil, to avoid it from drying out too much and waterlogging
• Make smaller beds manually across the main bed. These should be about 1 m (3 ft) wide measured by the length of a garden fork separated by drains 30 cm (1 ft) wide and 30 cm (1 ft) deep. Connect these to the drains at the side of the main bed
• If done correctly, this will eliminate problems caused by improper drainage

The recommendations in this factsheet are relevant to: Trinidad and Tobago

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