

DEPARTMENTAL NOTES

ANTHRACNOSE OF PLANTAINS

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THE name anthracnose is given to a group of diseases caused by closely allied fungi, the main symptom of which is a severe spotting of the diseased leaf or fruit. Anthracnoses common in Ceylon are those of mango, which causes the familiar spotting of the fruits, of pomegranate and of beans. Anthracnose of plantains is best known on over-ripe fruits where it causes black spots on the skin; the spots enlarge and may eventually cause a soft rot of the edible part of the fruits. This form of the disease is not at present of economic importance in Ceylon, since it can be avoided by careful handling and by the use of fruits before they are over-ripe. It may, however, assume a different character if plantains are exported to other countries from Ceylon.

The form of the disease about which this note is written is, so far as can be gathered from available literature, not found in any countries other than India and Ceylon. The disease is commonest in wet weather and makes its appearance soon after the fruits have set. It is most common on the cooking variety known as the Ash Plantain (*S. Alukehel*) which appears to be considerably more susceptible to the disease than any of the varieties commonly grown in Ceylon.

SYMPTOMS OF THE DISEASE

As stated above, the disease makes its appearance soon after the fruits have set. Infection usually takes place from the distal end of the fruits or 'fingers', *i.e.* the end furthest from the axis, and it is probable that such infection starts through the flowers. The main axis of the bunch sometimes becomes infected and the disease may spread from thence into the immature fruits through the stalk end. The symptoms displayed by infected fruits are the same in both types of infection. The diseased fruit turns black from the point of attack and the whole fruit is involved in a short time. The diseased fruit finally shrivels and dries but remains attached to the central stalk. The whole bunch may be affected but more commonly only one or two 'hands' are involved. The illustration (Plate VI) shows the general appearance of a diseased bunch.

CAUSE OF THE DISEASE

The disease is caused by the fungus *Gloeosporium musarum* and masses of spores or seeds of the fungus can be seen on the small shrivelled fruits. The spore-masses appear as small-incrustations which are moist and bright pink when fresh, becoming a dull-light pink after some time. They contain countless minute spores each one of which is

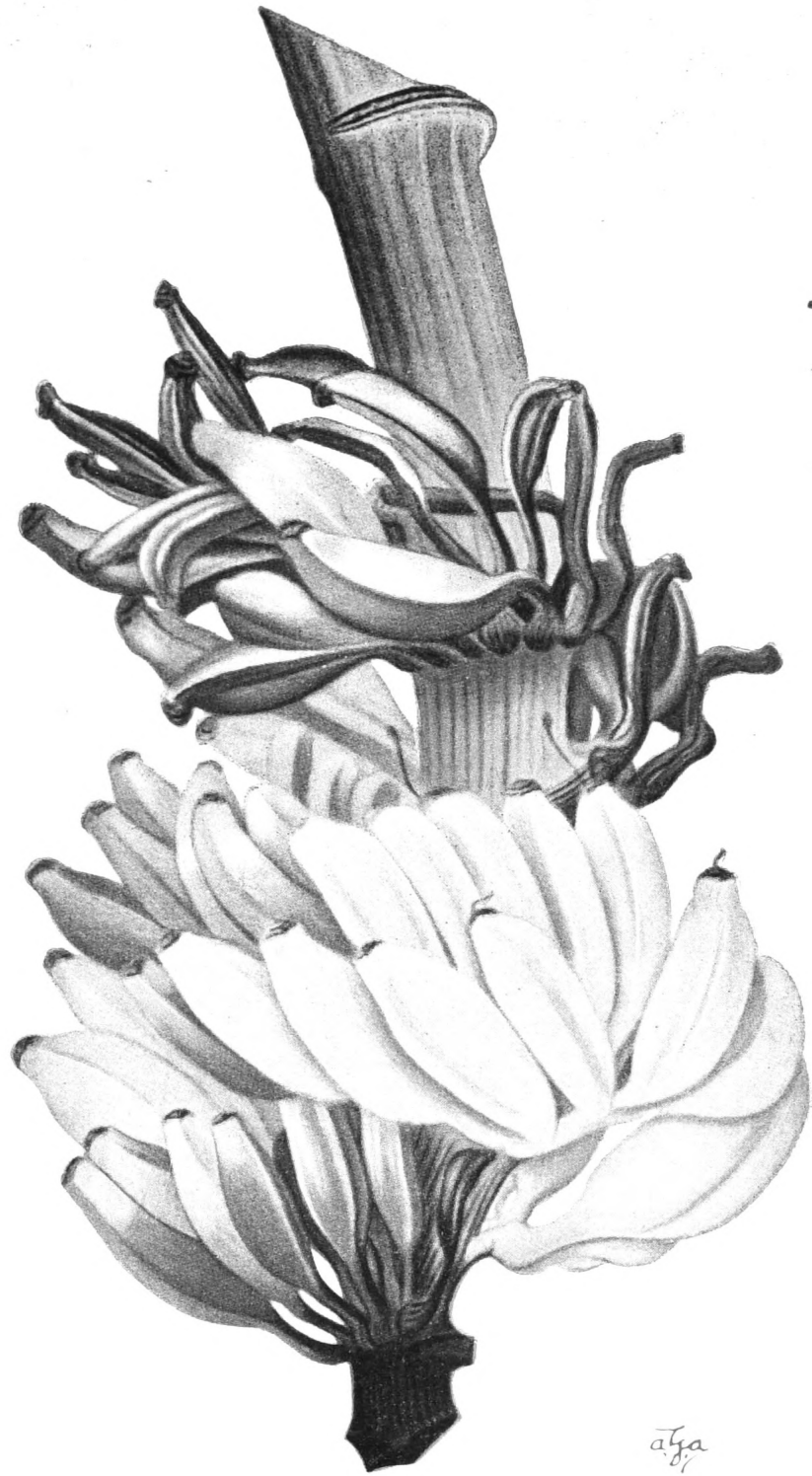


Plate VI. Anthracnose of Plantains

capable, under favourable conditions, of causing a fresh infection. The spores are spread from such diseased fruits in wet weather by rain splashes and in dry weather by wind. The fungus is one which is normally a saprophyte, living on decaying vegetable matter, and it is only under favourable conditions of temperature and humidity that it becomes a parasite. It commonly lives as a saprophyte on dead plantain leaves and trash which can be found in all plantain gardens and it is obvious therefore that a complete eradication of the fungus would be impracticable.

CONTROL OF THE DISEASE

The disease, so far as is known, occurs so rarely as to be negligible on varieties other than the Ash Plantain. In gardens where the Ash Plantain is grown, the fruit bunches should be watched in wet weather for the appearance of the disease. All diseased fruits should be removed as soon as the disease is seen in order to prevent the disease from spreading into the healthy 'hands' of the bunch. It is also suggested that when all the 'hands' are open, the main fruit stalk should be cut off as far back as the last 'hand' in order not to leave that part of the fruit stalk which will subsequently die and on which the fungus may live as a saprophyte.

It has been shown in India that spraying of the young developing fruits at the beginning of the wet season and repeating the spraying once a month until the bunches are picked, will prevent the appearance of the disease. The disease in Ceylon does not appear to be sufficiently common to warrant spraying as a general rule but, if the susceptible variety, the Ash Plantain, were grown on a commercial scale, spraying would not only be practicable but well worth while. Any efficient copper spray would prove to be satisfactory and details of the preparation and method of application of a cheap and reliable spray may be obtained from any Agricultural Instructor or from the writer.

It has been stated above that the fungus is common on dead leaves and decaying plantain trash. It follows therefore that the cleaner the cultivation, the less common the fungus and subsequently the less the likelihood of the occurrence of the disease. The disease is least common on plantains grown in gardens where careful and clean cultivation is practised.