

Experiment No. 1: Study of leaf spot through sectioning, staining and temporary mounting.

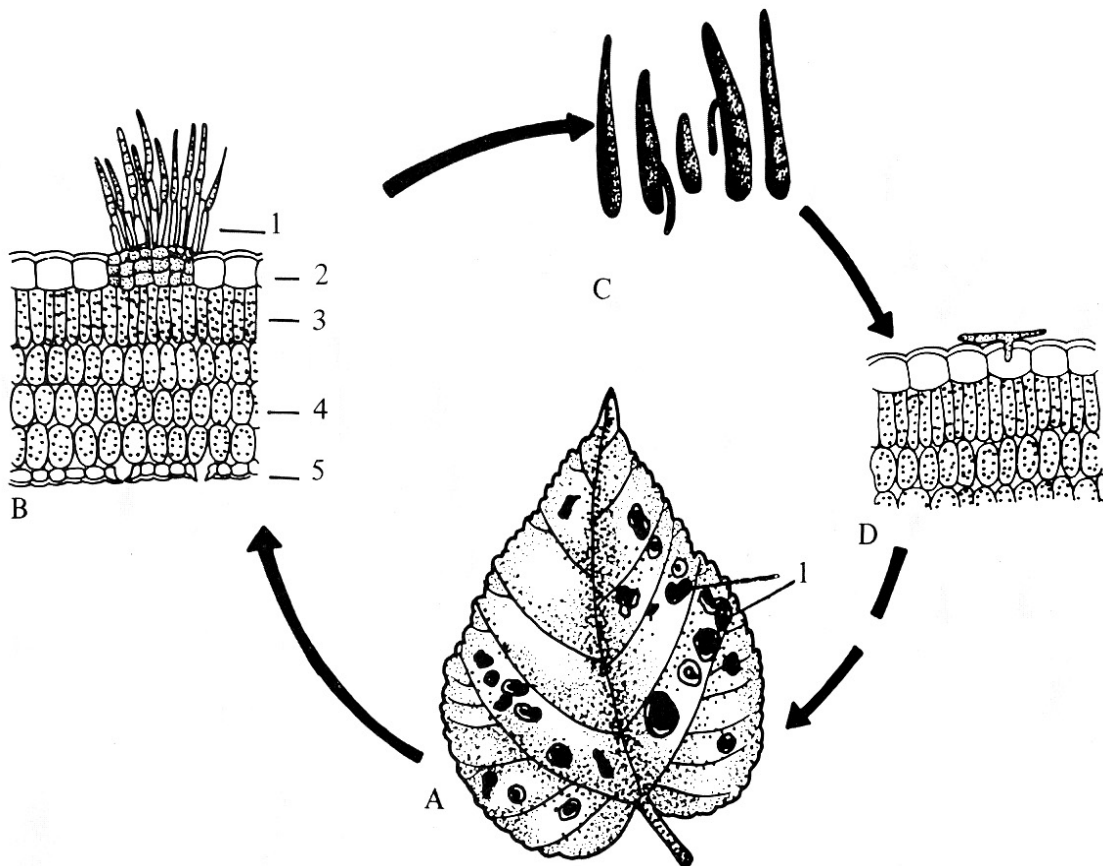
Leaf spot disease is caused by *Cercospora moricola*, belongs to the order Moniliales of class Deuteromycetes.

Symptoms: In the leaves affected by leaf spot, brownish irregular spot appear in the beginning and at later stages, these spots become enlarged, coalesced and lead to the formation of shot holes. Severely affected leaves become yellowish and fall prematurely.



Symptoms

Disease cycle of *Cercospora moricola*



A. Mulberry leaf affected by leaf spot; 1. Brown spots

B. T. S. of infected leaf; 1. Conidiophores with conidia;

2. Upper epidermis; 3. Palisade tissue; 4. Spongy tissue;
5. Lower epidermis

C. Conidia with germ tube

D. Germinating conidia on the leaf surface

Disease cycle: The disease spreads primarily with rain droplets. The fungus produces a compact mass of interwoven cushion-like hyphae, in which conidiophores are produced which in turn produce 3-7 celled conidia. Conidia are hyaline, tapering at one end and $70 \times 3 \mu\text{m}$ in size. The conidia are capable of producing new hyphae from any cell. It takes about 10-12 days after inoculation of conidia to produce a spot and another 3-4 days for the production of conidia.

The disease is very common in rainy and winter seasons (June-December) and it reduces the leaf yield by 10-30 %.

Control: The disease can be controlled by spraying of 0.1% Carbendazim with a safe period of 8 days.

REFERENCES

1. Anonymous, 1990, Hand book on pest and disease control of mulberry and silkworm, United Nations, Thailand.
2. Anonymous, Diseases and Pests of Mulberry and their Control, Central Silk Board, India.
