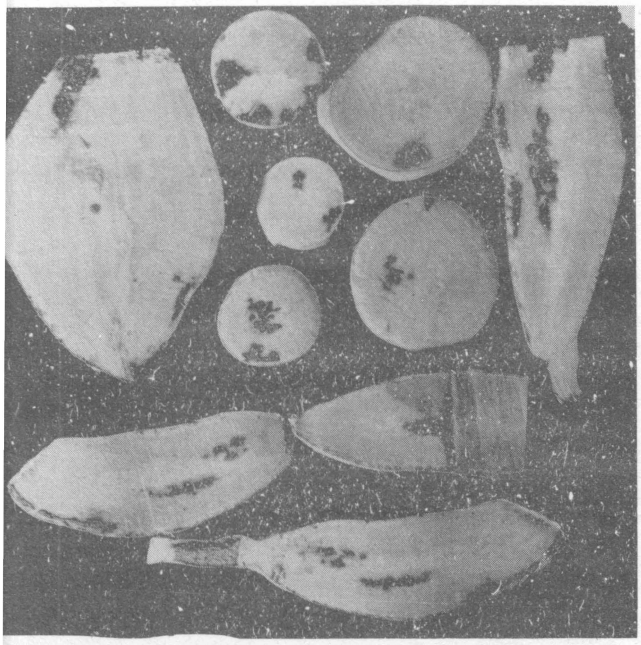
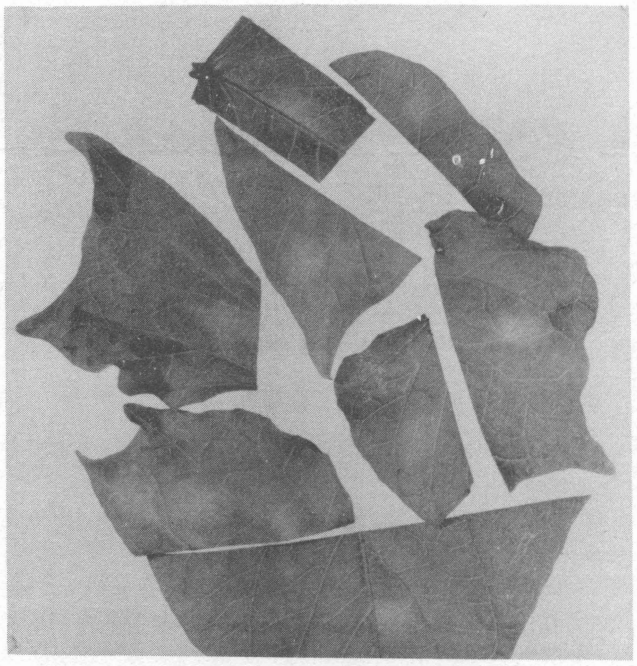
INTERNAL CORK OF SWEET POTATOES

A Virus Disease New to Texas



The disease causes hard, black, corky areas in the sweet potato.

Foliage on plants produced from cork-infected sweet potatoes show light-colored spots in the leaves. These spots later develop dark margins and finally become reddish brown and dead.



Internal cork disease of sweet potatoes appeared in the southeastern states about five years ago. It was soon found as far west as Louisiana but only one occurrence of the disease is positively known in Texas (Morris county). This occurred when sweet potato seed stock was imported from Georgia in 1948. All known infected plants were destroyed.

This is a serious plant disease. It can result in much damage to the Texas sweet potato industry. The following precautions can prevent the internal cork disease from becoming established:

1) Plant only certified sweet potato slips or those grown from healthy Texas-grown bedding stock. Do not bed store potatoes for slips.

2) Watch for signs of the disease.

Cut into thin slices 25 potatoes from each lot to be bedded for slip production. Discard entire lot if the disease is found.

Discard slips showing white or red—margined spots on the leaves.

Report any peculiar leaf signs on growing plants in the field to your county agent.

On March 18, 1949, Dr. A. A. Dunlap, head of the department of plant physiology and pathology, Texas A. & M. College wrote to Dr. C. J. Nusbaum, plant pathologist, department of botany, North Carolina State College, who is doing research on the disease in the southeast. Dr. Dunlap asked four specific questions regarding the internal cork disease. Dr. Nusbaum answered on March 23rd. Questions and answers follow.

Q. Is the identity of the insect or insects, which transmit the disease under field conditions, known?

A. Nothing conclusive on insect carriers—the disease spreads freely from corky to cork-free stocks in the greenhouse.

Q. Is the disease widely spread in the field during the summer or can most of the spread be accounted for through the planting of slips from diseased potatoes?

A. Disease appears to be spreading and building up in some areas and not in others. In field tests at Blackville, South Carolina, cork-free stocks, planted near corky stocks, showed high levels of cork at the end of the first season. The distance the disease will spread is not known.

Q. How old are the plants before leaf symptoms are noticeable and how long do leaf symptoms persist?

A. When corky seed roots are bedded, the sprouts may begin to show leaf symptoms in about 35 days or as soon as the leaves are fully expanded. In the field the first mottling usually appears about five or six weeks after planting. Leaf symptoms: 1) mottling, 2) ring-spotting, 3) fading of ring patterns, 4) bronzing and 5) deterioration and defoliation. The speed with which these symptoms run the full course depends apparently upon environmental conditions, vigor of host plants and variety. Ordinarily the best time to look for leaf symptoms is about two months after planting.

Q. What is the attitude of growers where this disease has been prevalent for two or three seasons?

A. Growers and shippers in some sections are much concerned. More research is being asked for. Three weeks ago a car of North Carolina sweet potatoes was turned down on arrival at a northern market because of cork.

On April 9 Dr. Dunlap reported that sprouts from corky potatoes bedded in sand in the greenhouse at College Station on March 3 showed white or reddish spotting on some oldest leaves.

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