seriously affected crops were nearly defoliated (R.W. Walsh). Gray mold rot, which caused serious losses to a grower at Berwick, N.S., in 1956, was kept well under control on the same farm in 1957 by the use of Thylate in the spray program. Losses were estimated at 5%. At Kentville, N.S. in replicated plots of the variety Stokesdale, 27% infection was recorded. Results obtained in spraying experiments at Kentville in 1956 and 1957 indicate strongly that Botrytis on field tomatoes is favored by the application of carbamate sprays (K.A.H.).

LEAF MOLD (Cladosporium fulvum) occurred in the greenhouse at Fort Vermillion and in Edmonton, Alta. (W.P. Campbell). The disease appeared in four large greenhouses at Harrow, Ont. in the spring crop and yield was reduced by one-third. Since leaf mold is seldom troublesome at this time completely susceptible varieties are often grown in the spring crop greenhouses. High atmospheric humidities in the spring of 1957 favored leaf mold development (C.D. McK.). A. sl. attack developed in March in a greenhouse at Kingston, N.S. (K.A.H.).

WILT (Colletotrichum atramentarium). The development of a wilt condition in a 10-acre field near Burgessville, Oxford Co., Ont. resulted in the entire field being affected by harvest time. Sev. affected plants showed marked vascular discoloration. Isolations and infection tests indicate that C. atramentarium is involved in this disturbance, which, in the field resembles Fusarium wilt (B.H. MacNeill). (see MacNeill, B.H., P.D.R., 41:12, 1032, 1957). (D.W.C.).

ANTHRACNOSE (Colletotrichum spp.). In general, anthracnose was much less serious in 1957 in canning crops in Essex Co., Ont. than it has been for several years. The cool, wet summer may not have favored the disease (C.D. McK.). Tr. infections were noted in Hastings and Prince Edward Counties (J. Cutcliffe). Commercial fields in N.S. showed very little anthracnose, but some gardens and plots on the Exp. Farm, Kentville where tomatoes are raised year after year were mod. affected (K.A.H.).

Tomato Anthracnose in Ontario

W.I. Illman and R.A. Ludwig

A survey was made of the tomato anthracnose organism as it affects the canning crop in Ontario. For this purpose infected fruits were collected from cannery trim lines by cooperating field-men and sent to the London Laboratory for examination. The affected fruits thus obtained were representative of the entire tomato growing area. A total of 105 isolations were made in 1956 and 169 in 1957. These, with one exception, were

sclerotium forming types, showing only minor cultural variations and agreed in all characteristics with von Arx' s description (1) of Colletotrichum atramentarium (Berk. & Broom) Taubenh. A typical culture was subsequently sent to Dr. J.A. von Arx who confirmed this identification (2). The single exception mentioned was a culture of Colletotrichum dematium isolated from one of several lesions on a fruit sent in from Ridgetown in 1957.

Isolates received during 1957 from affected field-grown fruits in Wisconsin, Ohio, Pennsylvania, New Jersey, Delaware and Nova Scotia, all proved to be C. atramentarium. A conidial strain of Glomerella cingulata (Stonem.) Spauld. & v. Schrenk (Colletotrichum gloeosporioides Penz.) was isolated in Maryland and one producing spores of similar size and shape was recovered from a fruit collected September 5, 1957 on a field excursion to Essex County, Ontario.

Cultures isolated from potato tubers were obtained from Nova Scotia, the Netherlands and Quebec. All were morphologically indistinguishable from the tomato fruit isolates. The Nova Scotia and Netherlands potato isolates produced typical anthracnose lesions on tomato fruits following artificial inoculation with aqueous spore suspensions.

(1) Arx, J.A. von, Die Arten der Gattung Colletotrichum Cda. Phytopath. Zeits. 29 413-468, 1957.

(2) Arx, J.A. von, Personal communication.

Pantidou and Schroeder (Phytopath. 45: 338-345, 1955), found that some fruit rotting isolates of Colletotrichum spp. were able to infect tomato roots and stems, and one isolate from tomato roots was highly pathogenic to tomato fruits. The inference is strong that they may have had a strain of C. atramentarium which has been shown by various authors to be the cause of a root rot, and more recently, (MacNeill, B.H., P.D.R. 41: 12, 1032, 1957), a wilt of tomatoes.

The presence of C. gloeosporioides Penz. (C. phomoides Chester) as well in the anthracnose complex in Ont., as shown by Illman and Ludwig, confirms the earlier findings of Richardson (P.D.S. 36: 92. 1957). Both authors have isolated from rotted fruit the conidial stage of Glomerella cingulata.

The implications of the findings of Illman and Ludwig and those of MacNeill reported above are far reaching. They will necessitate a re-examination of our concepts of the etiology of some of our most important disease problems in field-grown tomatoes (D.W. Creelman).