Small fruit$ / Petits fruits

Crop / Culture: Blueberry

Location / Emplacement: British Columbia

Title / Titre: BLUEBERRY DISEASES SUBMITTED TO THE DIAGNOSTIC LAB IN 1988

Name and Agency / Nom et Organisation:

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RESULTS AND COMMENTS

Galls: Galls on stems, crowns and one root were observed on cuttings purchased by three growers fron one source. Forty to 50% of Bluejay and 10% of Bluecrop planting stock purchased by one grower had severe galls. Ten percent of Bluecrop and Rancoccas cuttings planted by another grower were galled; galls on Rancoccas were smaller than Bluecrop galls on plants of similar age. The third grower lost 2,000 of 10,000 Bluecrop planting stock from girdling by galls and unthriftiness. Most galls were found in two year old cuttings although some one year old cuttings had galls. The cause is under investigation.

Godronia Canker: There were no submissions of canker which is representative of the low incidence of the disease in B.C. during 1988.

Mummyberry: There were three cases of shoot blight caused by Monilinia vacinii-corymbosi, although the problem was widespread in B.C.

Bacterial Blight: Pseudomonas syringae caused minimal damage at two sites which were marginal for blueberry production due to late frosts.

Crop / Culture: Fruit Crops

Location / Emplacement: Manitoba

Title / Titre: INCIDENCE OF PLANT DISEASES IN FRUIT CROPS IN MANITOBA IN 1988

Name and Agency / Nom et Organisation:

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METHODS: Results based on samples of fruit crops submitted to the Plant Pathology Laboratory and field examinations.

RESULTS AND COMMENTS:

Apples: The main problem encountered on commercial apples in 1988 was a winter injury problem at a large nursery in the Carman area. Close to forty thousand apple rootstock seedlings, mainly variety Antanovka of open pollinated origin, from Montana, that had been planted in the spring of 1987 and budded in August of 1987 were lost. Examination of the rootstock revealed a root rot. The area above ground was initially not affected but leaves wilted during the month of June because of lack of viable roots. Isolations from the roots indicated an infection of Fusarium acuminatum and Fusarium oxysporum. The consensus was that the variety Antanovka was not sufficiently hardy for Manitoba. The seedlings were in a large open field with poor snow cover. Other problems encountered based on 58 apple samples, mainly from home gardens, submitted to the Plant Pathology Laboratory, were fireblight (Erwinia amylovora) 21 %, Cytospora canker (Cytospora spp.) 9%, iron chlorosis 16%, physiological problems including winter injury and sunscald 27%. Problems encountered in a few samples only were silver leaf (Stereum purpureum), crown gall (Agrobacterium tumefaciens), Black rot (Physalospora obtusa), water core apple storage disorder, and herbicide injury.

Manitoba Apple Problems[1] in 1988

Disease	Percentage of Samples
Fireblight	21
Cytospora canker	9
Black rot	2
Crown gall	2
Silver leaf	3
Verticillium	2
Physiological problems	27
Herbicide injury	3
Fruit breakdown	7
Iron chlorosis	16
Insect injury	7
Miscellaneous	2

[1]Based on 58 samples received by Manitoba Agriculture, Plant Pathology Laboratory.

Strawberries: Fifteen samples of strawberries were analysed. In 30% of samples winter injury and associated crown and root invasion by Fusarium sp. was the cause of plant death. Multiplier disease caused by an unidentified mycoplasma like organism (MLO) was detected in a commercial field in Southeastern Manitoba near Sprague. There are numerous wild strawberries in the area around this field which may have been the source of the MLO infection. Verticillium wilt (Verticillium sp.) was found to be a severe problem causing up to 70% plant loss in one commercial field near Winnipeg necessitating destruction of the field. The previous crop in this field was potatoes. Fruit rot was found in several fields but was not generally a problem in 1988 in most fields.

Raspberries: Twenty-four samples of raspberries were analysed. In 54% of samples either cane blight (Leptosphaeria coniothyrium) or spur blight (Didymella applanata) was found to be the cause of injury. Fruit rot was not a significant problem in 1988.

Plums: A mid May frost caused loss of fruit set in many plum trees in the Winnipeg area. Plum pocket (Taphrina communis) was submitted from Brandon.

Crop/Culture: Saskatoon, Amelanchier alnifolia

Location/Emplacement: Alberta

Title/Titre: SURVEY FOR DIEBACK AND CANKER DISEASE OF SASKATOON CAUSED BY CYTOSPORA SP.

Name and Agency/ Nom et Organisation:

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METHODS: Twelve saskatoon orchards in the south central, north central and Peace River regions of Alberta were surveyed in the summer of 1988. A systematic sampling technique was used in which every tenth bush was examined and rated as having the disease based on symptoms of dieback, exfoliation, canker, shrivelled bark, flagging and/or the presence of pycnidia. Disease severity was rated numerically according to the number of main branches affected: 0 = no disease; 1 = 1% to 25%; 2 = 26% to 50%; 3 = 51% to 75%; 4 = 76% to 100%. Random samples from each site were collected and returned to the laboratory for isolation and identification of the pathogen.

RESULTS AND COMMENTS: In 1988 there were approximately 142 ha. of saskatoons under cultivation in Alberta with another 120 ha. projected in the near future (1). Dieback and canker disease was found in all orchards surveyed. Disease incidence was higher in central Alberta than in the Peace River region, occurring most frequently in the north central area (Figure 1). The most severe infections were observed in north central Alberta where 23% of diseased bushes had 25% to 50% of the main branches affected. In the south central and Peace River regions infection was less severe, generally involving 25% or less of the main branches (Table 1). The most common symptoms observed were branch tip dieback and cankers with pycnidia. Cytospora sp. was isolated from all samples collected and microscopic examination revealed hyaline, allantoid spores 4.5 to 7.5 um. x 1.5 um. in size.

Table 1. Incidence and severity of dieback and canker disease in Alberta in 1988.

Area Surveyed in	Incidence (%)	Severity (% bushes per category)				
		0	1	2	3	4
S. Central	30	72	21	4	1	2
N. Central	37	63	9	23	1	4
Peace River	14	86	11	1.4	.5	1.1

REFERENCES:

1. Hausher, L. 1988. Personnal Communication. Alberta Special Crops and Horticulture Research Station. Edmonton, Alberta.