

# Tree fruits and nuts / Arbres fruitiers et noix

**CROP:** Apple

**LOCATION:** Ontario

**NAME AND AGENCY:**

A. Clarke<sup>1</sup> and P. Goodwin<sup>2</sup>

<sup>1</sup> OMAF, Port Perry, Ontario L9L 1G3. Tel: (416) 985-2003 Fax: (416) 985-9599

<sup>2</sup> Ontario Ministry of Agriculture and Food, Simcoe, Ontario N3Y 4H5. Tel: (519) 426-7120 Fax: (519) 428-1142

**TITLE: DISEASE SURVEY OF COMMERCIAL APPLE ORCHARDS IN SOUTHERN ONTARIO - 1992**

**METHODS:** Fruit harvest assessments were carried out in southern Ontario in 90 different commercial orchards and 1 abandoned orchard. At most sites, McIntosh or Red Delicious were checked, but occasionally Empire and Idared were assessed. Fruit were sampled at or just prior to harvest maturity. From standard sized trees, four trees of the same variety per orchard were examined. Thirty-three fruit from the top, skirt inside and skirt outside were checked. One extra apple was checked from each tree to bring the sample total to 100 apples per tree. From dwarf sized trees, 50 fruit of the same variety from each of eight trees were checked. In the abandoned orchard 50 fruit were randomly sampled.

Fruit was checked for apple scab (*Venturia inaequalis* (Cke.) Wint.), fly speck (*Leptothyrium pomi* (Mont. and Fr.) Sacc.), sooty blotch (*Gloeodes pomigena* (Schw.) Colby), quince rust (*Gymnosporangium clavipes* Cke., and Pk.), cedar apple rust (*G. juniperi-virginianae* Schw.), powdery mildew (*Podosphaera leucotricha* (Ell. & Ev.) Salm.), calyx end rot (causal organism

undetermined) and insect injury. These were reported by area as to the presence or absence of disease or insect injury.

**RESULTS AND COMMENTS:** In general, the incidence of disease was higher in 1992 than in the past four years. Calyx end rot was unusually prevalent in Essex-Kent and Georgian Bay. Powdery mildew affected more fruit in 1992 than in the past four years.

Cedar apple rust was prevalent (especially on Idared and Mutsu) on foliage in eastern Ontario. Injury to the fruit from either cedar apple or quince rust was, however, minimal; none was reported from assessed orchards. Fruit injury from insect pests was, in general, higher than damage from diseases.

**ACKNOWLEDGEMENTS:** We thank the Horticultural Crop Advisors, Pest Management Advisors, students and others who collected the data for the apple harvest assessments.

Table 1. Comparison of disease incidence and insect damage in commercial and abandoned orchards, 1992.

AREA	Number of Fruit	PERCENT OF FRUIT AFFECTED						
		S*	F.S.	S.B.	C.E.R.	P.M.	D.	I.D.
Ontario (Commercial)	36,000	1.3	0.8	0.1	0.2	0.2	2.5	4.1
Abandoned: Durham	50	16.0	50.0	42.0	0.0	0.0	36.0	100.0

\*S. = Scab, C.E.R. = Calyx End Rot, I.D. = Insect Damage  
 F.S. = Fly Speck, P.M. = Powdery Mildew,  
 S.B. = Sooty Blotch, D. = Disease

## NUMBER OF FRUIT AFFECTED (RANGE)\*

Area	Number of Orchards Assessed	Number of Apples Assessed ('00)	Scab	Fly Speck	sooty Blotch	Calyx End Rot	PERCENT DAMAGE		
							Powdery Mildew	Insect	Disease
Essex-Kent	9	36	23 (1-8)	0	1	25 (1-6)	0	2.0	1.1
Oxford	3	12	8 (8)	0	0	0	0	3.8**	0.7
Middlesex	9	36	44 (1-32)	24 (3-13)	0	7 (1-5)	2 (1)	3.6	2.1
Norfolk-Brant	23	92	96 (1-30)	226 (1-71)	10 (10)	9 (1-3)	1	4.8	3.9
Niagara	5	20	18 (1-12)	0	0	0	0	3.5	0.9
Georgian Bay	7	28	79 (1-34)	17 (1-10)	1	16 (1-6)	59 (2-20)	8.8	6.1
Durham	4	16	9 (2-5)	32 (32)	2 (2)	7 (1-5)	0	2.2	2.2
Northumberland, -Prince Edward, -Hastings	26	104	156 (1-34)	0	0	6 (1-3)	0	3.3	2.8
Ottawa Valley	4	16	31 (2-20)	4(4)	0	1(1)	0	4.5	2.4

\* Fruit not necessarily out of grade.

\*\* Does not include Mullein bug damage (46%) at one orchard.

## NUMBER OF ORCHARDS AFFECTED

Area	Number of Orchards Assessed	Scab	Fly Speck	sooty Blotch	Calyx End Rot	Powdery Mildew
Essex-Kent	9	7	0	1	8	0
Oxford	3	1	0	0	0	1
Middlesex	9	4	3	3	3	2
Norfolk- Brant	23	13	13	2	6	1
Niagara	5	5	0	0	0	0
Georgian Bay	7	6	5	1	5	6
Durham	4	3	1	1	3	0
Northumberland, -Prince Edward, -Hastings	26	14	0	0	4	0
Ottawa Valley	4	3	1	0	2	3

**CROP:** Sweet Cherry

**LOCATION:** British Columbia

**NAME AND AGENCY:**

G.D. Jespersen<sup>1</sup> and G. Carter<sup>2</sup>

<sup>1</sup> B.C. Ministry of Agriculture, Fisheries and Food, 1690 Powick Road, Kelowna, B.C., V1X 7G5

<sup>2</sup> B.C. Ministry of Agriculture, Fisheries and Food, 4607 - 23 Street, Vernon, B.C., V1T 4K7

**TITLE: LITTLE CHERRY VIRUS SURVEY IN THE OKANAGAN VALLEY OF BRITISH COLUMBIA**

**METHODS:** Cherry trees in the Okanagan Valley of British Columbia were surveyed between June 22 and July 6, 1992 for symptoms of little cherry virus disease. Two employees of the B.C. Ministry of Agriculture, Fisheries and Food examined orchards in districts with a history of the disease, including the areas around Penticton, Naramata, Summerland, Westbank, Kelowna and Oyama. Approximately 40 orchards and 40 residential yards were included in the survey. Diagnosis of little cherry disease was based on symptoms, including small, pointed and angular fruit with poor colour and poor flavour. Following diagnosis, tree owners were issued removal notices under the authority of the B.C. Plant Protection Act. Trees with questionable symptoms were indexed at the Agriculture Canada Research Station virus orchard at Summerland, by grafting buds onto indicator cherry trees, variety Canindex 1.

Indexing results for 1992 samples will be available by September, 1993.

**RESULTS AND COMMENTS:** Thirty-six diseased trees were identified in 1992, with the majority (thirty-four) located in the Penticton area. One diseased tree was found in Naramata, and one in Westbank. Fourteen of these trees were identified visually, while the remainder were identified by indexing results from 1991 samples. Budwood samples for indexing were collected in August from an additional thirty-six trees.

The number of little cherry infected trees has remained steady for the past several years. Penticton remains the most affected area.