union line. Similar trees top-worked at the same time with 'LaSalle' scions were free from stem-pitting symptoms. The virus was apparently carried by the 'Spy' scions (W.R.A., T.R.D.).

FRUIT DEFORMITY. Inspection of 2210 apple trees in 7 orchards in the Niagara Peninsula at harvest did not reveal any fruit deformity attributable to virus infection. Malformations caused by the rosey apple aphid were unusually prevalent in 3 orchards (T.R.D.). In N.B. fruit deformity of unknown causes occurred in varied incidence from tr. to 28% in 53/55 orchards examined; the 'McIntosh' variety was most frequently affects (S.R.C.). Note also the following from Quebec orchards.

MALFORMATION DES POMMES (Cause inconue). Une malformation chez la pomme 'McIntosh' s'est avérée presque générale dans les regions pomicoles du Québec. Il s'agit ici de sillons originant à l'oeil du fruit et l'apparition de protuberances entre ces derniers. Une enquête révélé un fort pourcentage de ces pommes dans quelques districts, notamment dans le comtk des Deux-Montagnes. On a noté 80%, 70%, 40%, 75%, 80%, etc. de fruits affectés au cours de nos observafions. La malformation a été remarquee à partir du debut de la saison sur la toute petite pomme. Cette malformation résulte vraisemblablement de l'action des basses temperatures que ont sévi au cours du déroulement très lent cette année des divers stades végétatifs. (R.D.).

BITTER PIT (Physiological) was reported sev. on one tree at Gagetown, N.B. (S.R.C.).

MAGNESIUM DEFICIENCY was observed in tr. amounts in 27/55 orchards examined in N.B., and defoliation occurred in trees in a few scattered orchards (S.R.C.).

RUSSETING (spray damage) caused 30% damage in an orchard at Burton, N.B. (S.R.C.).

TACHE AMERE (Physiogenique). Des pommes 'Cortland' et 'Délicieuse' en provenance de deux vergers de Franklin centre, comté d'Huntingdon, Qud., ont été trouvées gravement affectées par la tache amère (R.D.).

WATER CORE (Physiological) was sev. in overripe fruit of early varieties in 2 orchards at Gagetown, N.B. (S.R.C.).

PEAR

LEAF SPOT (Botryosphaeria obtusa). A scattering of infected leaves were observed in an orchard of 'Clapp' and 'Bartlet' pears at Kentville, N.S. (C.O.G.).

FIRE BLIGHT (Erwinia amylovora). In B.C. light infection occurred in some orchards at Summerland after harvest: elsewhere in the Okanagan Valley fire blight was at a very low level (L.E.L.). In N.S. fire blight was active in 21/24 orchards examined and 13 had current active infections. (C.L.L., R.P.L.). In Essex Co., Ont., no blossom blight was observed on pears, but twig blight appeared in June and continued throughout the summer (R.E.C.L.).

CANKER (Nectria cinnabarina). Trace infections were found on 'Clapp' pears at Canard and Bridgetown, N.S. (C.L.L.).

PHYTOPHTHORA FRUIT ROT (Phytophthora cactorum) affected fruit as high as 10 ft. above the ground in an orchard at Lower Canard, N.S. (C.O.G., R.G.R.).

SCAB (Venturia pirina, stat. conid. Fusicladium pyrorum) caused 3% damage in 3/3 orchards examined in N.B. (S.R.C.). At Vancouver, B.C., scab was reported frequently in home gardens (H.N.W.T.).

ANJOU PIT (Cause unknown). Anjou pit or cork spot of 'Anjou' pear caused mod. losses in a number of orchards in several districts throughout the Okanagan Valley, B.C., where it was the first serious occurrence of the disease since 1962. The condition characteristically appears in hot summers and is considered to be a physiological disorder (M.F.W.).

QUINCE

LEAF SPOT (Fabraea maculata) disfigured the leaves of one tree, and fruit spot was seen on locally grown fruit at Vancouver, B.C. (H.N.W.T.).

B. Stone Fruits

APRICOT

CANKER (Cytospora sp.). Cytospora canker was severe on apricots at the Research Station, Harrow, Ont., orchard in 1966 and 1967. Symptoms included the appearance of gum at cankers in spring, dead branches on which buds failed to expand and also, in early summer, of a severe wilt of long shoots that had cankers at their base. (B.N.D.).

FIRE BLIGHT (Erwinia amylovora). A few infected trees were observed in Essex Co., Ont. (R.E.C.L.).

BROWN ROT (Monilinia fructicola) developed in fruit left unpicked in orchards at Summerland, B.C., but carry-over of mummified fruit to the 1968 season was expected to be very light (L.E.L.).

NECROTIC RING SPOT (necrotic ringspot virus) was detected at St. Catherines, Ontario, in 1/30 trees tested by mechanical inoculation of herbaceous test plants using apricot petals and/or young leaves (T.R.D.).

CHERRY

SHOT HOLE (Coccomyces [Higginsia] hiemalis) caused about 2% damage in an orchard at Moncton, N.B. (S.R.C.), and in Kings Co., N.S., was common on all unsprayed sweet cherry trees (C.O.G.).

BLACK KNOT (Dibotryon morbosun [Apiosporina morbosa]). Trace infect found in commercial orchards at Moncton, N.B. but was widespread in home gardens and among wild species (S.R.C.).

BROWN ROT (Monilinia fructicola) occurred on a few cherry fruits at Summerland, but brown rot was not a problem in any stone fruits in the Okanagan Valley, B.C. (L.E.L.). Trace infection was reported at Gagetown, N.B. (S.R.C.). In the Annapolis Valley, N.S., scattered infections were seen on sweet cherry trees in a few orchards (C.O.G.).

BROWN ROT (Monilinia laxa). At Salmon Arm, B.C., light blossom infection occurred on sweet cherry in one isolated orchard: however captan and ferbam sprays were applied, and brown rot did not develop in the fruit (L.E.L.).

POWDERY MILDEW (Podosphaera clandestina). For the first time in many years infection of sweet cherry fruit was prevalent enough in B.C. to cause substantial losses (D.L.McI.). In N.S. numerous perithecia were found on leaves of sour cherry at Tupperville, Annapolis Co. At Kentville, N.S., powdery mildew was seen for the first time on sour cherry in 1966, and in 1967 it occurred on sweet cherry terminals of trees adjacent to those infected in 1966. Powdery mildew also appeared at another location 75 miles from Kentville in 1967. In P.E.I. powdery mildew was widespread and caused mod. damage at Hazelbrook (G.W.A.).

BACTERIAL CANKER (Pseudomonas mors-prunorum). In N.S. there has been no spread of the disease outside the two originally affected orchards. In one of these orchards; 12 sweet cherry trees wilted and died during July and August, 1967 (C.O.G.). At St. Davids, Ont., an orchard of 6-year-old-sweet cherry trees planted on former asparagus land was severely damaged by bacterial canker. Because of the high nitrogen level of the soil these trees had made very rapid growth and the wood was soft and very susceptible to bacterial infection. Of 327 trees examined in July, 191 had slight infections that could be pruned out: 17 had moderate infections involving larger branches and sectors of the trees: 29 were severely affected with cankers in the main branches and trunk. Many of the severely affected trees were dead by fall (W.R.A., T.R.D.).

VIRUS DISEASES. In an old (at least 30 years) cherry orchard at Stoney Creek, Ont., 30 sweet cherry trees were indexed for viruses: SOUR CHERRY YELLOWS virus was isolated from 19 sweet cherry and 8 sour cherry trees; CHERRY NECROTIC RING SPOT virus, from 15 sweet cherry and 10 sour cherry trees: and TOMATO BUSHY STUNT virus, from 4 sweet cherry trees: the latter virus was detected only in trees that showed symptoms of the disease (T.R.D.). Of 23 old (20-30 years) sweet cherry trees at Vineland, Ont., 5 carried SOUR CHERRY YELLOWS virus and 4, CHERRY NECROTIC RING SPOT virus. Of 17 younger (4-5 years) sweet cherry trees at the same location, 1 carried SOUR CHERRY YELLOWS and 1, CHERRY NECROTIC RING SPOT virus (T.R.D.).

WINTER INJURY to fruit buds resulted in loss of most of the sweet cherry crops in the Annapolis Valley, N.S. in 1967 (C.O.G.).

PEACH

CROWN GALL (Agrobacterium tumefaciens) was prevalent in peach nursery stock imported into B.C. but was less prevaient than usual in locally grown nursery stock (L.E.L.). Incidence of crown gall continues to be sev. in southwestern Ont. nurseries. A random sampling of 530 nursery stocks of five cultivars at the time of digging in November 1967 showed an incidence of 30.4%. In another block, where 633 nursery stocks of eight cultivars were examined, incidence was 25.7%. Most galls were at the crown region where they developed to 2 or more inches in diameter (B.N.D.).

BROWN ROT (Monilinia fructicola) was commonly observed on a white-flowered ornamental peach at Summerland, B.C. (D.L.McI.). A few infections were seen in orchards in the Annapolis Valley, N.S. (C.O.G.).

FRUIT ROT (Rhizopus nigricans) was not reported in fruit that had been adequately treated with dichloran (residue level 10 ppm), but a loss of 25% was reported in storage at Oliver, B.C., where treatment resulted in residue levels of less than 1 ppm (L.E.L.).

BLIGHT (Stigmina carpophila). At Okanagan Falls, B.C., blight was common on fruit in an orchard irrigated by overhead sprinklers (D.L.McI.).

LEAF CURL (Taphrina deformans). Light infections occurred in some orchards at Summerland, B.C., during rainy periods early in the season (D.L.McI.); leaf curl is present every year in home gardens in the Vancouver, B.C., area where control measures are seldom applied (H.N.W.T.). In N.S. tr.

infections were common throughout the Annapolis Valley (C.O.G.).

CANKER (Valsa spp.). Incidence of cytospora canker was very severe in southwestern Ont. in the spring of 1966. Severity of canker was expressed by expansion of old perennial cankers on limbs, scaffolds, and trunks and also by a dieback condition originating in new infections that took place in the fall of 1965 and spring of 1966, which killed considerable parts of affected twigs and shoots. In the spring of 1967 there was the usual incidence of canker. Of 1480 twigs (1966 growth) on 74 'Redhaven' trees examined, 71% were infected. Of 1106 twigs (1966 growth) on 58 'Dixired' trees examined, 53% were infected. A majority of these new infections had taken place at or near leaf scars or small cracks on internodes. Others were at broken twigs and fruit pedicels. The small cracks on internodes were the major site of infection and may have resulted from an ice shell that formed around the twigs in March 1967 and remained continuously for three days, the cracks may thus be a form of winter injury (B.N.D.).

BACTERIAL SPOT (Xanthomonas pruni). Incidence of bacterial spot of peach during the growing season of 1967 was much less than in 1965 and 1966 in commercial orchards in southwestern Ontario. However, susceptible cultivars continued to be severely affected at the Harrow Research Station orchard. Usually this disease spreads and assumes severe proportions during the months of July and August and it is assumed that it is aided by rain and wind. It may be interesting to compare the rainfall data for these months which totalled 6.46, 10.63, 3.86 inches in 1965, 1966, and 1967, respectively. The relatively dry weather during these months in 1967 may have contributed to the lighter incidence of bacterial spot (B.N.D.).

NECROTIC RINGSPOT (necrotic ringspot virus) was detected in 4/22 peach trees being used as breeding stock at St. Catherines, Ont. The virus was isolated from petals or young leaves by mechanical inoculation of herbaceous hosts (T.R.D.).

WINTER INJURY destroyed most peach fruit buds in the Annapolis Valley, N.S. (C.O.G.).

PLUM

BLACK KNOT (Dibotryon morbosum [Apiosporina morbosa]). In N.S. specimens were identified from Cape Breton, Halifax, and Cumberland counties (C.O.G.). It was widespread throughout N.B. in home gardens and wild species (S.R.C.).

BROWN ROT (Monilinia fructicola) severely affected one old tree in a home garden at Vancouver, B. C. (H.N. W. T.).

PLUM POCKETS (Taphrina communis). Damage of about 5% was reported in an orchard at Chatham, N.B. (S.R.C.), and scattered infections occurred in the Annapolis Valley, N.S., mostly in home gardens (C.O.G.).

C. Ribes Fruits

CURRANT

BLISTER RUST (Cronartium ribicola) caused sev. damage to currants at Oak Point, N.B. (S.R.C.).

POWDERY MILDEW (Sphaerotheca mors-uvae) was reported from Swawell and Breton, Alta. (A.W.H.).

D. Rubus Fruits

BLACKBERRY

WILT (Fusarium sp.). All canes examined in early Aug. at Topsoil Pond, Nfld., were dead or dying, and a Fusarium sp. was isolated from the bases of 8/8 stems (O.A.O.).

LEAF AND CANE SPOT (Septoria rubi). Because of the relatively dry season, this disease was of minor importance in the Saanich Peninsula, B.C. (H.S.P.).

LOGANBERRY

CANKER (Didymella applanata). The causal agent of the canker disease that has affected loganberry for several years in the Saanich Peninsula, B.C., has been identified as Didymella applanata (Niessl) Sacc. on the basis of the perfect state found in the spring of 1967. The disease as found was not considered to be of economic importance (H.S.P.). Spur blight of loganberry attributed to applanata was reported to cause sl. damage% Saanichton in 1931 -- Ed.

RASPBERRY

CROWN GALL (Agrobacterium tumefaciens) affected 5% of the canes of 'Trent' and 'Carnival' cultivars grown under a certified program in a nursery at Billtown, N. S. (C.O.G.).

GRAY MOLD (Botrytis cinerea) caused 5% damage in 3/3 plantings examined at Moncton, N.B. (S.R.C.); In the Annapolis Valley,