

## Disease Management (E57-E60)

**E-57. Overwinter survival of *Colletotrichum gloeosporioides* in soil and plant debris of strawberry.** Myeong Hyeon Nam<sup>1</sup>, Sang Wook Ra<sup>1</sup>, Suck Kee Jung<sup>1</sup>, Jeong Young Song<sup>2</sup>, and Hong Gi Kim<sup>2</sup>. <sup>1</sup>Nonsan Strawberry Experiment Station, Chungnam ARES, Nonsan 320-862, Korea, <sup>2</sup>Dept. of Agr. Biol., Chungnam National University, Daejeon 305-764, Korea

The overwinter survival of *C. gloeosporioides* in strawberry tissue under field conditions was investigated in 2001 and 2002. The rates of overwinter survival in plant petiole, runner and crown were 68.7, 14.3, and 26.7%, respectively. But, under field condition, viable conidia of overwinter were not detected at the surface, 3, 5, and 10cm depths of soil. To investigate the survival ability in soil and plant debris, *C. gloeosporioides* isolates from strawberry was examined in laboratory and field. The viability of conidia was rapidly declined in all the treatments, with a 40% reduction in population within 10 days. In soil, the survival ability of *C. gloeosporioides* conidia was superior to that of *G. cingulata*. The survival rate of conidia was highest under cool and dry soil conditions, and was decreased by increasing both soil temperature and moisture. Similar results were obtained under the condition that infected petioles were buried in soil. Results suggested that conidia as well as plant debris might be a main inoculum source in strawberry anthracnose.

**E-58. Control effects of seedling bed media of Chinese cabbage on development of clubroot disease by *Plasmodiophora brassicae*.** S. S. Hong, J. Y. Kim and K. Y. Park. Kyonggi-do Agricultural Research and Extension Services, Hwasung, 445-972, Korea.

Evaluation of seedling bed media for chinese cabbage was performed to develop a cultural method for the control of clubroot disease at Hwasung and Yeoncheon in 2001 and 2002. Seedlings of Chinese cabbage were grown for 30 days at several bed soil types and grown within a greenhouse plots infested with clubroot disease for additional 30 days. The incidences of diseased plants were 48.3, 54.2, 17.8, and 10.8% at peatmoss soil, Baroco soil, sandy loam soil(saprolite) and clay soil(yellow soil), respectively. Roots and leaves of the plants grown with Baroco soil were heavier than those of other treatments, and more leavers were developed on plants grown with sandy loam soil. Infected rate of roots with clubroot disease in the field were 75.7, 36.6, 21.7 and 14.1% after growing in bed soil with peat moss, Baroco soil, sandy soil and yellow soil, respectively. The chinese cabbage transplanted into fields plots treated with chemical(Flusulfamide DP) showed 11.5% incidence at peatmoss soil, whereas the disease incidences were significantly lower in sandy loam soil and clay soil showing 0.0 0.3%, respectively. These result suggest that the cultivation of chinese cabbage using conventional nursery soil such as sandy loam soil and clay soil can effectively reduce the clubroot disease development.

**E-59. Searching for the melanose stated as a result of control method in citrus**

**orchard.** Seong Chan Lee and Jea Wook Hyun. Agricultural Environment Division, Rural Development Administration(RDA), Jeju 690-850, Korea

In order to elucidate the cause and control method of citrus melanose, the ecology and chemical control of the disease were studied. The pathogen release from dead twigs of citrus trees was *Diaporthe citri*. Development of melanose was observed from the mid June to the late september with peaks in July and August, but this pattern varied with the area and year investigated. Incidence of melanose had a significant correlation with rainfall, especially the amount of precipitation. The better natures of a melanose was the more of dead twigs of citrus tree and it take on a branch of pruning. The shady spot was the more nature of a melanose. The more diseases get a better melanose last year.

**E-60. Effect of mulching and mineral oil spray about decreasing virus infection on production of seed potato in field.** S. S. Cheong<sup>1</sup>, J. H. Kim<sup>1</sup>, J. Ryu<sup>1</sup>, J. S. Choi<sup>1</sup>, I. Y. So<sup>2</sup>, and Y. I. Hahm<sup>3</sup>. <sup>1</sup>Jeollbuk-do Agricultural Research and Extention Services, Iksan 570-704, Korea, <sup>2</sup>College of Agriculture, Chonbuk National University, Jeonju 561-756, Korea, <sup>3</sup>Alpine Experiment Station, Daekwallyeong 232-950, Korea

Potato virus Y and potato leaf roll virus are major pathogen of potato virus disease in a production system of seed potato. A elementary potato, original plant, breeders stock, and foundation stock was cultivated in the isolation chamber of green house and the registering potato was cultivated in a field of seed distributing agency after distribute to the farm. A virus infection ratio of potatoes distributed to a farm was from 10% to 20%. So, this experiment was conducted for investigate of decreasing effect of virus infection by mulching and mineral oil spray. A silver mat using thermal materials, grey polyvinyl and transparent polyvinyl was used as mulching material and mineral oil was sprayed three times at seven day intervals from 30th, April. Aphid density was low in the mulched plot with the silver mat and sprayed with mineral oil, but a yield of seed potato was low. A decreasing effect of virus infection by spraying of mineral oil was from 60% to 80%.