

leaf surface of strawberry reduced 200ppm at night and increased 50ppm during the daytime. Temperature around the plant increased 0.5~3.5°C and relative humidity increased 5% at daytime and reduced 10% at night time. Control value of the disease by using the fan was 80.1% in comparison with conventional management during November and December. The fruit yield increased 113% and the fruit quality in content of sugar, citric acid and hardness were also improved. Freshness of the fruit at 20°C lasted for 7 days and its decay rate decreased 13%. The photosynthetic rate of strawberry leaf was promoted about 10% and the content of chlorophyll increased 5%. Consequently, application of the light fan in a plastic greenhouse is highly useful in organic farming of strawberry to reduce powder mildew and increase fruit quality and yield.

**G-79 Effects of temperature and wetness period on infection of hot pepper by *Colletotrichum accutatum*.** J.-P. Paek<sup>1</sup>, S.-C. Yun<sup>1</sup>, E.W. Park<sup>2</sup>. <sup>1</sup>Dept. of Applied Biological Sciences, Sun Moon University, Asan, 336-708, Korea; <sup>2</sup>Dept. of Plant Pathology, Seoul National University, Seoul, 151-742, Korea.

The effects of temperature and wetness period on conidia germination and appressorium formation on hot pepper by were studied using the detached green hot pepper fruits (cultivar 'Dabotab'). The optimum temperature and wetness period were 30°C and 24 hours, respectively. There was linear relationship ( $R^2=0.98$ ) between appressorium formation and conidial germination on fruits of cv. 'Dabotab'. Disease severity was the highest at 25°C, but the infection needs wound. Regression model of appressorium formation on temperature and wetness period required for more than 10% appressorium formation on fruits appeared to be suitable to use for forecasting anthracnose development in the field. The wetness period (W) required for 10% appressorium formation under various temperature (T) regimes was expressed as  $W = -0.659 * T + 25.108$ .

**G-80 Comparison of different types of painting materials on the pruned branches of chestnut tree in preventing from the infection by pathogenic or wood rotting fungi.** Sang-Hyun Lee<sup>1</sup>, Jae-Phil Lee<sup>1</sup>, Kyung-Hee Kim<sup>1</sup>, Byung-Ju Moon<sup>2</sup>, and Jong Lyu Lee<sup>3</sup> <sup>1</sup>Forest and Shade Tree Pathology Laboratory, Division of Forest Environment, Forest Research Institute, Seoul, 130-712; <sup>2</sup>Faculty of Natural Resources and Life Science, Dong-A University, Busan, 604-714; <sup>3</sup>Tree Pathology and Mycology Laboratory, Division of Forest

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Different types of painting materials, i.e., clay, Topsin M paste, O-kong bond, and water-paint, were painted on the cut surface during pruning of chestnut tree branches to prevent from the infection by pathogenic organisms or wood rotting fungi through cut surface. Callus formation rate by O-kong bond painting was 94.2-96.9%. In the case of Topsin M paste, the rate was 76.9% on the trees with DBH above 25 cm, which was higher rate than the rate on the trees with DBH less than 15 cm. In the painting of clay and water-paint, the smaller DBH of the treated trees was, the higher callus formation rate was. In control treatment with no painting, the rate was very low at the range of 7.1-7.6%. Crack was severely occurred on the cut area through bark tissue by the treatment of water-paint, clay, or no treatment, and the infection by a pathogenic fungus, *Chryphonectria parasitica*, or wood rotting fungi, such as *Schizophyllum* sp., *Coriolus* sp., and *Pycnoporous* sp., were very common near cut area of pruned branches.