Nutritional Comparisons among Normal and Hypovirulent Isolates of *Endothia parasitica*

HINDAL, Dale F.
Department of Plant Sciences
West Virginia University
Morgantown, West Virginia 26506

Nutritional studies were conducted to compare growth (production of mycelium in liquid media) among two normal, two white hypovirulent, and one pigmented hypovirulent isolate of *Endothia parasitica*. Among 12 nitrogen sources tested, casamino acids, asparagine, arginine, histidine, and ammonium tartrate supported best mycelium production when glucose was used as the carbon source. These nitrogen sources were then tested in combination with four additional carbon sources: fructose, sucrose, cellobiose and soluble starch. Generally, the two white hypovirulent isolates produced the most mycelium, the two normal isolates intermediate amounts, and the pigmented hypovirulent isolate the least mycelium. However, regardless of the nitrogen source, soluble starch did not support as much mycelium production as the other carbon sources, and the mycelium production by the pigmented hypovirulent isolate was more drastically reduced on the soluble starch media than other isolates. The white hypovirulent isolates produced abundant mycelium on all carbon sources with histidine as the nitrogen source, whereas the normal and pigmented hypovirulent isolates produced less mycelium on a fructose or sucrose medium when histidine was the nitrogen source. These studies are continuing, but the data indicate there are striking differences in nutritional requirements for optimum mycelium production among these isolates of *Endothia parasitica*.