

**Optimization of Mycelial Growth of of an Entomogenous Fungus**  
***Cordyceps logissima* Kobayashi**

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*Cordyceps*, "Winter-Worm-Summer-Grass" called "DongChungHaCao" in Korea and "DongChongXiaCao" in Chinese has been used as a traditional folk medicine for hundreds of years in Asia countries. Various bioactive components were found in the genus *Cordyceps*. Cordycepin identified from *C. militaris* has several biological activities such as inhibition of RNA and DNA synthesis. The nucleoside derivative N<sup>6</sup>- (2-hydroxyethyl) adenosine (HEA) isolated from *C. pruinosa* showed a Ca<sup>2+</sup> antagonistic effect and negative inotropic response. This study was carried out to obtain basic data on morphological and physiological characteristics for an artificial cultivation of *Cordyceps longissima*. Among four different culture media that have been used for culture of mushrooms, the mycelial growth of *C. longissima* was good on MCM or YMA medium and recorded colony diameter of 72.7 mm and 70.0 mm, respectively in 4 weeks incubation. The initial pH of solid medium for mycelial growth of *C. longissima* was good in the range of pH 5.0 ~ 7.0 lower than 8.0. The mycelial growth of *C. longissima* was most favorable on culture media supplemented with glucose, one of monosaccharides, and recorded colony diameter of 46.6 mm in 4 weeks incubation, whereas there was no mycelial growth on culture media that were supplemented with carbon sources such as arabinose and xylose. Six nitrogen sources were favorable to the mycelial growth of *C. longissima* as compared with control among 9 carbon sources; namely, the mycelial growth of *C. longissima* was most favorable on culture media supplemented with potassium nitrate and recorded colony diameter of 72.0 mm, and followed in order by ammonium citrate and sodium nitrate in 4 weeks incubation.