

十一、研究計畫中英文摘要：請就本計畫要點作一概述，並依本計畫性質自訂關鍵詞。

(二) 計畫英文摘要。(五百字以內)

Key Technologies for Mass Production of High Polysaccharide *Tremella fuciformis*

The silver ear mushroom , *Tremella fuciformis*. was discovered in Mainland China . It is an important and popular medicinal and gourmet mushroom in Asia where it is best known by its Chinese name . Silver ear mushroom was cultivated in the artificial log of cotton seed hull . All of silver ear mushrooms sold in Taiwan were imported from Mainland China , some problems were arisen from the imported mushrooms : (1) cotton seed hull contained gossypol which was toxic. (2) mushroom was treated with SO₂ .(3) all of silver ears were polluted with residues of insecticides Therefore, it is worthy to develop the industry of silver ear mushroom, and provide the save and high quality of mushroom to the consumers of Taiwan .

This study try to established the system of mass production of silver ear mushroom within three years , including (1) to breed the suitable varieties for growing in Taiwan. (2) to select the companion fungus, *Hypoxylon acheri* and understand its effect on fruiting of silver ear. (3) to study the favorable environment and best formula of substrate for growth of the mushroom . (4) to establish the automatic cultivation system of silver ear mushroom .

Key word : *Tremella fuciformis* 、 *Hypoxylon acheri* 、 polysaccharide