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A preliminary survey of genetic diversity in a natural population of shiitake (*Lentinula edodes*) in China

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China is the major producer and exporter of shiitake (*Lentinula edodes*) which is native to the country. China has a history of over a thousand years of shiitake cultivation over an enormous land area, so there is a very real threat that the wild biodiversity of this economically important mushroom might be contaminated by the cultivars. To monitor the situation in the present study we collected wild shiitake strains and examined the genetic heterogeneity of the population in comparison to that of the cultivated strains. Classical genetic markers such as sexual and somatic incompatibility factors, colony morphological features, tolerance/resistance to *Trichoderma*, and molecular markers such as DNA fingerprints were examined. The information obtained provides a baseline description of genotype and phenotype diversity for wild shiitake and also permits assessment of whether the cultivars have already spread their genetic makeup to the wild. Preliminary data indicate high levels of diversity among isolates from two nature reserves in Hubei Province, China.