

Recent Trends of Mushroom Industry and Mushroom Research in Korea

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Mushroom cultivation in Korea has begun to 1922 by Shiitake, then, common mushroom (*Agaricus bisporus*) was started in 1955. Mushroom cultivation in the 1960s and 1970s was the purpose of export. However, since the 1980s, purpose of mushroom cultivation was converted to domestic consumption. Oyster mushroom, king oyster mushrooms, winter mushroom, common mushroom and shiitake mushrooms are mainly cultivated as edible mushrooms in Korea. In addition, *Ganoderma lucidum*, *Phellinus* spp., *Agaricus brazei* and *Cordyceps* spp. have been cultivated to medicinal mushrooms. Recently, the functional edible mushroom such as *Hypsizygus marmoreus*, *Auricularia auricula*, *Pleurotus cornucopiae*, *Herichium erinaceus* and *Sparassis crispa* are also slightly production. In Korea, mushrooms are produced by mycelial bed-, logs and automatic facilities cultivation. mushrooms are produced in the form of cultivation of germ, cultivation of logs and automation.

Automatic facilities cultivation of mushroom was started in the mid-1980s by the winter mushroom. One of the causes of the King oyster mushroom and Winter mushroom production has increased rapidly, introduction of the liquid spawn which is characterized to cheaper, faster and mass production for spawning compared with sawdust spawn. The emergence of large-scale farms and their improve productivity were show the average annual productivity gains of up to 5% since the 1990s. The cultivation of Shiitake mushrooms has changed from traditional logs cultivation to substrate cultivation using a sawdust medium.

Mushroom researches in the 1980s were conducted for the increase productivity, pest control and the development of substrate materials. In the 1990s, genetical relationships, functional component analysis, processing and production cost reduction were mainly studied. In addition, Golden Seed Project for development of mushroom cultivar was started in 2013. Recently, smart farm systems have been introduced in mushroom cultivation.