

Cordyceps Mushroom Known for Its Medicinal Values

Divya Jagana¹ and Rajasekhar Lella²

¹Assistant Professor, Department of Plant Pathology, College of Horticulture, Dr. Y.S.R Horticultural University, Tadepalligudem

²Agricultural Officer, Department of Agriculture, Pesticides Testing laboratory, Tadepalligudem, West Godavari Dist., A.P

Corresponding Author: rajagrigo724@gmail.com



Cordyceps mushroom in nature, is a parasitic fungus on certain insects found in Himalayan and Tibetan plateau, highly valued for its rarity and medicinal benefits. If we see its history, this is thought to have been discovered 2000 years ago but its use was first documented in the Qing dynasty *Bencao Congxin* (New Compilation of Materia Medica) in 1757. It has been a highly valued traditional Chinese medicine for thousands of years and along with ginseng and deer velvet is considered to be a “treasure of tonics” claimed to “invigorate the lung and nourish the kidney, arrest bleeding and dissolve phlegm”. It appears to have rather remarkable therapeutic effects in treating chronic renal failure, malignant tumors, the habitual common cold, etc. This purported efficacy is backed up by the results of modern pharmacological studies. The most researched species are *Cordyceps sinensis* and *Cordyceps militaris*.

Habitat and Natural Growth

CORDYCEPS is found in high-altitude Himalayas, Tibet, Nepal, Bhutan, and China (above 3,000 meters), prefers cold, humid environments (5-20°C). It infects insect larvae belonging to the Hepialidae family and the larva corpse, spreads inside, and kills the host and forms fruiting bodies and releases

spores for reproduction. *Cordyceps militaris* can be identified by flattened stroma in colors orange-yellow to orange-red. *C. sinensis* produce slender cylindrical stroma.

Nutritional Composition & Health Benefits

CORDYCEPS contains key Bioactive compounds viz. Cordycepin (Antioxidant, anti-inflammatory, anti-cancer) and Adenosine (Enhances ATP production). Polysaccharides (Boosts immunity); Macronutrients (per 100g dried *Cordyceps militaris*); Protein: 25-35 per cent; Carbohydrates: 30-50 per cent; Fiber: 10-15 per cent; Fat: 3-5 per cent; Minerals & Vitamins: Iron, Zinc, Selenium, Magnesium, Potassium, vitamin B complex.

Medicinal & Health Benefits

Cordyceps is a composite of the stroma of *Cordyceps sinensis* with tremendous scope in medicine owing to its therapeutic properties. modern pharmacological studies show it has a broad-spectrum biological activity, including antitumor, antimetastatic, immunomodulatory, antioxidant, anti-inflammatory, insecticidal, antimicrobial, hypolipidemic, hypoglycemic, antiaging, neuroprotective and reno protective activities.



Cultivation of *Cordyceps*

Commonly used growth medium is prepared for laboratory cultivation of *Cordyceps* mushroom with substrates like brown rice, wheat, corn meal, soybean powder and silkworm pupae powder, glucose, yeast extract and peptone for optimal growth. Spores are inoculated into sterilized containers with medium and

incubated at 18-25°C in dark room for two weeks and 70-80 per cent humidity is maintained in growth chambers. Total growth cycle is around 60-70 days. Fruiting body formation requires 12 hours of light per day (500-1,000 lux) and good ventilation in fruiting chambers. Fully grown fruiting bodies are harvested at 60-70 days, stored in airtight containers and used in powder or supplement form.

* * * * *