



## Miracle Mushroom vs Phyto Pathogen

Reishi mushroom fungus, which is scientifically known as *Ganoderma lucidum* Linn. Is a facultative phyto parasite. It becomes an opportunistic pathogen on perennial plant species. Including Palms, Woody trees, Forest tree species. It can cause significant loss of plant stand in poorly managed and neglected fields.

However, the virulence gene *vir* which is responsible for pathogenecity is strain specific. Similarly, the medicinal values are largely varies among strains. But, for mass production of reishi mushroom on synthetic logs, non-pathogenic strains of *Ganoderma lucidum* are used.

Indian Institute of Mushroom Research, Solan, HP and Indian Institute of Horticultural research, Bengaluru are promoting the production of this speciality mushroom with a caution of sterilising the substrate before disposal. But, as per the original practical manufacturing facts and marketing ground truths, there is no such things like substrate to be discarded in the production process of this mushroom. Each particle is so valuable medicinally. Hence, Reishi manufacturers and processors will not let go waste of even a single cell of the crop at any stage of production.

There are two major categories of Reishi products named RG and GL. Here the GL means nothing but the Substrate. GL has more demand in the world market by the virtue of its range of vitamins and minerals containing in it. It is also cheaper compared to RG. RG is actual mushroom which is scientifically called as fruiting body. Moreover, the process of extraction from crop to extract of RG or GL will take 7-10 continuous days at varied high temperatures in extraction reactors. This cannot allow any life left in the raw material, all active ingredient comes into the extract.

Mushrooms are harvested before sporulation, why because our GL strain *GLsiv11* or any strain used for has its highest content of medicinal parameters like polysaccharides, tri terpenoids, vitamins, minerals, antioxidants etc., during the pre-sporulation stage.

Usually, even the spores of pathogenic strains have no role in phyto pathogenesis. Because, after germinating the spore, it gives rise to mono karyotic mycelium which can never infect a crop. It needs another compatible non homogenic (genetically different) monokaryotic mycelium to undergo karyogamy (fusion of thalli) forms pathogenic dikaryotic mycelium.

Hence, when the tree stands are properly managed, and cultivating the mushroom with complete scientific understanding, as such there is no interference between the Miracle Reishi Mushroom and an Opportunistic Phytophogen.