

Oregon Psilocybin Advisory Board  
Products Subcommittee  
September 30, 2021

SUBSTRATES FOR MUSHROOM CULTIVATION

According to [expert Paul Stamets](#), there is no single ideal substrate for growing psilocybin mushrooms. Many are interchangeable, and if you ask many people what to use, you will hear many different answers. His [overview of mushroom cultivation techniques](#) uses grain and sawdust, which are two common substrates. At its last meeting, the Board voted to exclude wood chips. However, whether cultivators may use sawdust as a substrate has not yet been determined.

On September 26, 2021, Stamets told the Products Subcommittee that psilocybin mushrooms can be grown easily on substrates consisting of straw or grain. When asked whether limiting allowable substrates in Oregon to straw and grain would have any drawbacks from a technical perspective, Stamets said it would not. Coconut coir, a product derived from the outer layer of coconut husks, is another safe and effective substrate option. Some cultivators also use brown rice or popcorn, though Stamets says popcorn is older method.

Other substrates such as gypsum and vermiculate are mined in Africa and Asia under dangerous and exploitive working conditions that harm miners, villagers, children, and the environment. According to the [U.S. Department of Labor](#), gypsum mines in Africa employ children to break rocks, transport heavy loads, and extract, process, and hoist ore. In Niger, "many child miners and children working around the mines suffer from breathing problems and may be subject to cave-ins and mercury contamination when crossing dangerous terrain." [Gypsum mined in India](#) negatively impacts the health of miners and nearby villagers who develop lung conditions and difficulty breathing. Nearby waterways become contaminated due to gypsum mining, which also contributes to erosion and rockslides. Vermiculite is mined under similarly dangerous conditions and has been found to be contaminated with carcinogenic substances.

Child Labor and Forced Labor Reports

Select Country 

Niger

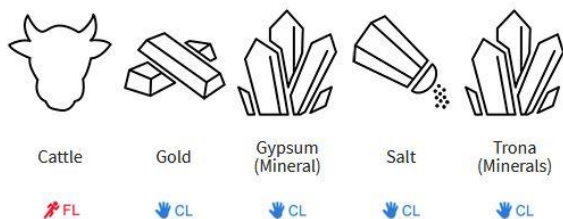


Image from U.S. Department of Labor

To promote the safety of Oregon consumers and employees, and mineworkers and children in non-Western nations, the Oregon Psilocybin Advisory Board should prohibit the use of substrates containing

gypsum and vermiculite. Because the Board is devoted to safety and health equity, it would be counterproductive to support industries that harm children and communities in Africa and India while polluting the environment, especially when there are safe and effective alternatives that can be locally sourced.

Instead of relying on potentially harmful substances that are mined overseas and imported into the state, the Board should require the use of substrates such as straw and grain, which can be [produced safely and responsibly in Oregon](#), increasing economic opportunity for Oregonians. It may also be possible to require the use of [organically grown substrates](#). Our own Oregon State University supports local organic grain producers.

Limiting the scope of allowable substrates will decrease the regulatory burden on OHA and Oregon testing laboratories. It promotes consumer safety by making the identification of contaminants easier, and it protects employees by reducing respiratory hazards. Straw and grain are safe and effective. Coconut coir, brown rice, and popcorn may also be permitted.

Oregon straw and grain producers:

1. <https://www.beaudryfarms.com/>
2. [http://elamfarms.com/?utm\\_source=gmb&utm\\_medium=referral#summary](http://elamfarms.com/?utm_source=gmb&utm_medium=referral#summary)
3. <https://oregonhayproducts.com/index.php/about-us-2/>
4. <https://hummingbirdwholesale.com/collections/grains>