



USE OF SWEET GUM LOGS IN SHIITAKE CULTIVATION

Many shiitake log growers have been asking me about the use of sweet gum logs versus oak. Generally, I discourage the use of sweet gum for shiitake cultivation in North Carolina. This is not because growers cannot fruit shiitake from sweet gum logs. In fact, I have heard from a few growers who have had success with sweet gum logs, and we are continuing to take a critical look at its usage. White rot fungi (the group to which shiitake belong) easily colonize sweet gum, and it can go into fruiting earlier than oak. However, we have not yet experimented with comparing the differences in total yield in logs of sweet gum versus oak, so it is too early for us to make any recommendations on that basis.

We encourage the use of oak instead of sweet gum because it provides growers the better return on their investment of labor and materials. Both logs of similar size require the same amount of time, energy and resources to inoculate, yet the oak log will last much longer than sweet gum, which degrades much more quickly. Disease is another important consideration. Sweet gum is much more readily contaminated with many wild fungi or competitor molds.

Despite its disadvantages, the sweet gum tree is very abundant in North Carolina. A farmer once asked me a good question: "What would you do if all we had was sweet gum?"

In such instances, I recommend that growers take extra precautions in preparing and inoculating their logs. While this is not a call to growers to switch from oak to sweet gum, it is meant as set of directions for growers who have no other options other than to use sweet gum logs.

If you must use sweet gum:

1. Never cut your logs after the sap starts to flow.
2. To avoid disease and contamination, it is essential that the logs be bruise free. (See "Additional Precautions," below.)
3. Cut your logs only when you have your spawn and inoculation tools and materials already assembled.

4. Inoculate your logs soon after cutting, preferably not more than five days after cutting. For best results, inoculate the logs on the day of cutting.
5. Drill holes no more than 3 inches apart.
6. Your first hole in a row should not be more than 1 inch from the end of the log.
7. To avoid contamination, wax all inoculated holes and the ends of the logs.
8. In areas where the bark is missing or injured, drill and inoculate, and then wax the entire exposed area to seal it from contamination.
9. Observe all rules for appropriate log inoculating and post-inoculation handling and management.

A few goodies about sweet gum logs:

1. It will go into fruiting before oak.
2. It is less likely to be affected by Hypoxylon which causes canker (black mold areas) on shiitake logs
3. They are not as heavy as oak logs, which makes them easier to handle and work with during cutting, inoculation and soaking

Additional Precautions:

1. Because of the region's climate, we do not recommend the use of sweet gum logs for shiitake cultivation east of Raleigh.
2. It is far better to cut logs yourself instead of hiring loggers, who might not exercise the level of care in handling that is required for successful log growing. Never hire loggers to cut sweet gum logs.

Thank you.

Sincerely,



Omon. S. Isikhuemhen, *Ph.D./C.Sc*

Assistant Professor and Director, Edible and Medicinal Mushroom Project

Mushroom Biology & Fungal Biotechnology Laboratory, SAES.

207 Carver Hall, NC A&T State University, Greensboro NC 27411

Tel: (336) 334 -07259; Email: omon@ncat.edu



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