Micologia Aplicada International, 22(2), 2010, pp. 63-78

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Review

Ventilation for mushroom cultivation: the importance of the needs of mushrooms and of the gas laws

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Accepted for publication May 28, 2010

ABSTRACT

Ventilation depends on physics, chemistry and especially the biological needs of the organism that is being provided for. The history of ventilation is about as long as the history of man. However, unlike many other things that make us more comfortable and the organisms we husband more productive, its application is often inadequately considered. Often we believe that others have already considered all factors and we need only to follow what they have done. Often we have copied more of their mistakes than of their careful thoughts. Also, most designers of ventilation systems are not sufficiently proficient in all three of the necessary sciences and associated technologies. This review is an attempt to look at all of the areas and discover ways in which design parameters for mushroom growing can be improved. Emphasis is not on how much air is moved, but on the way nature moves it and how nature can be aided to grow mushrooms with a minimum of air movement.

Key words: Gas densities, carbon dioxide, water vapor, HVAC, mushroom metabolism.