

PIRINDHRA KARPILANONDH : DECOMPOSITION OF USED SAWDUST BLOCKS OF LENTINUS EDODES AND PLEUROTUS OSTREATUS FOR COMPOSTING PRODUCTION. THESIS ADVISOR : ASSOC.PROF. SUTHAPHUN TRIRATANA, THESIS CO-ADVISOR : ASSIS.PROF. PATCHRA LIMPANAVECH, 85 PP. ISBN.974-578-836-8.

Study on the comparison of decomposition rate of sawdust blocks of Lentinus edodes and Pleurotus ostreatus during the stage of mycelial growth showed that the rate of sawdust decomposting activities by L. edodes was higher than P. ostreatus. Duration of mycelial growth for to 30, whereas incubation time for mycelial growth in P. ostreatus needed 75 days and C/N ratio was decreased to 47.

Effects of nitrogen compounds and microbial activator (LDD.-1) on the decomposition rate of used sawdust of L. edodes and P. ostreatus were carried out in laboratory scale. In the treatment of 10 % animal manure with microbial activator 150 gm/1000 kg dry wight of used sawdust provided the highest rate of decomposition both in L. edodes and P. ostreatus. Duration sawdust decomposting process of L. edodes and P. ostreatus were 60 and 90 days and C/N ratio were decreased to 16 and 18, respectively.

Effects of animal manure and microbial activator on decomposition rate of used sawdust of L. edodes and P. ostreatus were also carried out in the field condition, and the results of decomposition rate showed the some trend as in laboratory scale. The initial C/N ratio of used sawdust of L. edodes and P. ostreatus were 37 and 47. After 60 and 90 days of decomposting process, C/N ratio of both used sawdust were decreased to 18 and 19, respectively. The physical properties of sawdust after decomposting process became as mature compost, and content of N, P and K in such mature compost were 1.0, 1.0 and 0.5 %, respectively.