

## Effect hyphal death on FHXW branching type with energy

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### Abstract

In this talk, we will present a phenomenon of fungal growth which describes by mathematical model, that is model illustrate behavior for growth of Dichotomous branching, Lateral branching, Tip-hypha anastomosis, Tip-tip anastomosis, Tip death, Tip death due to overcrowding with hyphal death and we show the consumption energy. In general, we know the growth of fungi need to Cost, effort and money, so we come to a mathematical solution, to shorten the time, cost, and effort to get the right decision even though there is error ratio. In this paper we will take mathematical model using solution of system partial differential equations (PDEs). The results of this solution will be describing a success or failure of the growth of the fungus species studied, and we used some codes in numerical analysis because some difficulty in direct mathematical solution.

**Key Words:** Yphal death, Dichotomous branching, Lateral branching, Tip-hypha anastomosis, Tip-tip anastomosis.

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