{Abstract} PREVENTION AND REDUCTION OF MYCOTOXIN BY ANTAGONISTIC MICROORGANISM

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Mycotoxin is widely known as one cause of foodborne disease, produced by toxigenic fungi. Any country should be aware about this high risk potency by knowing the mycotoxin, affected commodities, fungal sources, and toxicity effect to human or animal. Controlling mycotoxin could be done by physic, chemical, and biological methods. The microbial characteristic used for biological agent should be evaluated including the inability to produce toxic substance, tendency to multiply, colonize, survive, safety, and applicability to the environment. Studies related to mycotoxin biocontrol by using antagonistic microorganism can be focused on (1) the effect to the mycotoxin, (2) the growth of microorganism, or (3) the application to food both raw material and processed products. Consideration to combine more than one species of microorganism instead of a single species also has been taken to achieve more effective result. For example, S. cerevisiae has been used together with LAB to control certain mycotoxin. Further studies are needed to develop the possibility of other biological agents and the effect of their application, which in the next have the potency as manufacturing products.

Keywords: antagonistic microorganism, biological agent, combination, microbial characteristic, mycotoxin biocontrol, potency