

B60 THE ROLE OF COCONUT OIL AND ITS HYDROLYSIS PRODUCTS ON
GROWTH OF *ASPERGILLUS FLAVUS* AND AFLATOXIN PRODUCTION

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Coconut meal is an excellent medium for the production of aflatoxin B1 under experimental conditions. Although the growth of fungi and aflatoxin accumulation occurs readily in copra, the copra meal (poonac) is an extremely poor medium for aflatoxin production even under high moisture levels. The role of coconut oil on fungal growth and aflatoxin production were examined by incubating toxigenic *Aspergillus flavus/parasiticus* cultures in synthetic liquid and solid media containing coconut oil and its hydrolysis products as sole source of carbon.

All fungus cultures tested grew in media with coconut oil and metabolised free fatty acids. Of the different carbon sources tested glycerol and lauric acid supported the best growth of fungal mycelia and highest accumulation of aflatoxin B1. Capric and Caproic acids were poor sources for the growth of mycelia and aflatoxin production. The higher potential of grated coconut and copra in supporting production of aflatoxin may be due to the higher concentrations of glycerol and lauric acid produced during lipolysis by fungal enzymes.

Reference:

1. Arseculeratne, S.N., Silva, de L.M., Wijesundara, S. and Bandunatha, C.H.S.R. (1969), Coconut as a medium for the production of aflatoxin B1. *Appl. Microbiol.* 18: 88 - 94