

SOME STUDIES ON THE PRODUCTION OF AFLATOXINS
IN RUBBER SEEDS AND ITS PRODUCTS BY
ASPERGILLUS PARASITICUS

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Aflatoxins have been found in nearly every food and feed products which can be infected by two closely related Aspergillus species A. flavus and A. parasiticus¹. Aflatoxin contamination is one of the factors that would seriously hinder the use of rubber seed oil and meal for edible purposes.

Sterilized and nonsterilized rubber seed kernels, meal and oil were infected by A. parasiticus. The fungal growth and toxin accumulation were studied. The aflatoxins B1, B2, G1 and G2 were detected.

Sterilized substrates infected by the fungus contained greater amounts of aflatoxins than those infected without previous sterilization. Fungal growth was accelerated in crushed kernels than in whole kernels. The rubber seed oil was a poor substrate for the fungal growth. It was also observed that the proliferation of A. Parasiticus on rubber seed meal (residual oil content 25%) was only possible at moisture levels greater than 10%. In the preliminary studies carried out, it was observed that when aflatoxin contaminated kernels were expelled by compression in a hydraulic press at 100°C, approximately 80% of the aflatoxin remained in the meal.

References:

1. Paper, K.B. and Fennell, D.I. 1985 in *The Genus Aspergillus*, Williams and Wilkins Co., Baltimore MD., p.41