

EXTENT OF AFLATOXIN CONTAMINATION IN COCONUT KERNEL PRODUCTS PROCESSED IN COMMERCIAL MILLS

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Coconut kernel products, copra, copra meal and coconut oil collected from 45 oil mills in Sri Lanka were analysed for the presence of aflatoxins B₁ and G₁ over a period of one year.

Of 339 samples, approximately 50 per cent contained medium-high levels (0.05-1.0 mg/kg) of aflatoxin B₁. None of the samples had levels above 1 mg/kg. Among 99 selected copra kernels with heavy fungal growth, the levels ranged from 0.05-4 mg/kg in 50 per cent of the kernels. Two kernels contained higher levels of 10 and 20 mg/kg; 29 per cent of the kernels contained less than 0.05 mg/kg while no aflatoxin was detected in 18 per cent. The aflatoxin levels detected in cured copra and its processed products were less than those reported in other oil seeds. This is probably associated with the inhibitory effect of smoke on fungal colonization in copra.

There were 25 oil mills in continuous production during the survey period. The mills were classified as "regularly high", "occasionally high", "regularly medium low", and "low or nil". These patterns were associated with the rainfall, extent of curing of copra, conditions and duration of storage, mixing of copra of different quality, economic reasons and lack of quality control measures.

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