

# **Enhancement of Coffee Quality through Prevention of Mould Formation in Brazil**

**T. B. S. CORRA**

EMBRAPA Food Technology, Av. das Américas 29501, CEP 23020-470,  
Rio de Janeiro-RJ, Brazil. E-mail: [tania@ctaa.embrapa.br](mailto:tania@ctaa.embrapa.br)

## **SUMMARY**

Brazil has the largest coffee production area of the world. Due to new investments, mainly in mechanisation and irrigation, yields are increasing. The number of bags produced per hectare rose from 10.59 in 1993 to 14.59 last year. This represents 19,410,000 benefited bags of arabica type against 7,290,000 bags of robusta type.

Coffee is widely consumed all over the world. In order to guarantee consumer's safety it is necessary to evaluate possible hidden hazards in this product.

Mould formation on coffee beans results in a product of unacceptable quality. Some moulds produce toxins, which can be dangerous for human consumption. The principal is the ochratoxin A (OTA) which is nephrotoxic and possibly carcinogenic to humans.

During the last 5 years the research program of the Brazilian Ministry of Agriculture and Food Supply on coffee quality has invested in some aspects of fungi contamination and in the development of a methodology for OTA detection and increased analytical capabilities. The limit value imposed by the EU and suggestions made by the *Codex Alimentarius* inevitably led the Brazilian government to take some measures towards the monitoring of the coffee production chain.

Because of its large extension and different specific climatic conditions, Brazilian territory has been already being studied nation-wide in order to identify what zones are suitable for coffee production. In this way, a flowchart is necessary for each area in order to avoid hazard and identify control and critical points for mycotoxin formation.

The project "Enhancement of coffee quality through prevention of mould formation" (ICO/FAO Project) will contribute to improve coffee quality. Such a project will properly cause the enrolment of Brazilian universities and research centres with local extension and diffusion services reaching all Brazilian territory.

The possibility of contacting coffee experts from all over the world certainly will reverberate in all phases of the coffee production chain.

The focus of the program established by a conjoint FAO/EMBRAPA project has the objective of applying the concepts of the HACCP system in the identification and control of factors which increase the production of OTA in coffee, verifying possible differences and interactions in all the coffee chain. New strategies will be performed based on the knowledge obtained from the data produced during the project. Coffee sector personal will be trained in Good Agricultural Practices (GAP) and HACCP concepts by manual and videos. The recognition of the control and critical points and the GAP concepts in the coffee production

chain will result in steps for the better understanding of the factors to improve coffee quality by the different sectors with this aim: govern, technicians, producers, co-operatives and industries.