

The Cracker



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**Santiago, Chile
Hosts Congress
May 9-11**



**New US Consumer
Survey on Allergy**

**Major Food Companies
Harness Health**

EU Regulatory Measures Harm Brazil Nut Trade

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Based on a controversial evaluation of Aflatoxin toxicity in nuts, EC Commission Regulation reduced maximum residue limits from 20 ug/kg total Aflatoxin to 4ug/kg and added a 2ug/kg limit for Aflatoxin B1. The values, limit of detection at the time, were based on the principle that "Aflatoxins are genotoxic carcinogens and only a zero level of exposure will result in no risk." Mycotoxins, which are produced by moulds, can be found in a multitude of crops such as corn and wheat and in peanuts and other nuts.

This decision was challenged by industry, producing countries, and NGO's alike for the devastating impact it would have on trade. The WTO, which all EU member states adhere to, only permit such sanitary and phytosanitary measures if they are based on scientific principles, and when additional information is needed the measure must be reviewed within a reasonable time.

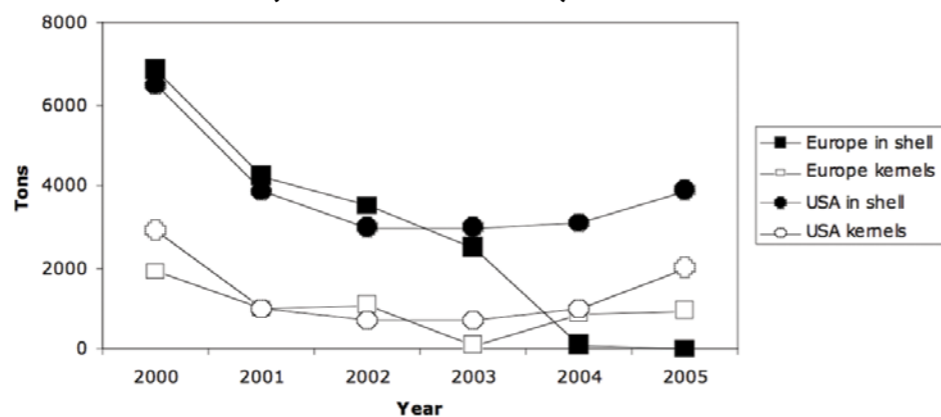
Eight years later, with a European Food Safety Authority assessment and a Joint WHO/FAO Committee on Food Additives risk assessment in progress concluding that increasing limits from 2ug/kg to 10, 15 or 20ug/kg does not result in a significant increase in risk exposure, the Brazil nut trade is still suffering from those measures.

Hardest hit is the in-shell Brazil nut, because a rotten nut can only be identified once it is taken out of the shell. However it has been demonstrated, in a study conducted in Sweden, that the average consumer will discard the rotten nut because of its appearance, black color, and strong smell. In the US, sampling and testing for

Aflatoxin in Brazil nuts takes into account this particularity, and the nuts are first shelled and the obviously rotten kernels are discarded leaving the other kernels for the Aflatoxin analysis. Without consideration for the consumer's ability to avoid obviously rotten foods and the fact that the shell is not edible, EU testing is done on the in-shell nut and therefore may also include rotten kernels, the ones most likely to have Aflatoxin

Currently Codex, the UN standards setting body, is examining establishing for the first time a worldwide maximum Aflatoxin level standard for nuts for approval by member countries. Based on the latest EU and UN scientific risk assessments higher Aflatoxin limits should be adopted. The European Commission must review its current maximum limits and adapt its testing of in-shell Brazil nuts in order to bring back to EU consumers this nutritious nut and relieve the Amazon rain forest economy of the distress the existing EU regulation has created.

Brazil nut exports to Europe from Brazil (In-shell and Kernels)



A dramatic drop of exports to Europe since implementation of the new EU maximum Aflatoxin limits in 1999, contrast with sustained exports to the USA where Aflatoxin limits are higher and where their testing methodology excludes visibly rotten kernel.



Brazil nut trees unfold their branches above the canopy in the area around Oriximinã, state of Parà, Brazil

Commitment to support sustainability

The European commission's bold move on reducing existing maximum residue levels of Aflatoxin in nuts has had damaging consequences in the very economies that it had set itself to support.

European policy on development co-operation finds in the Brazil nut production sector an ideal match to its objective towards poverty reduction, environmental protection, and forest conservation:

"The EC is active in a variety of ways to support sustainable management of natural resources and to ensure that vulnerable population groups capture the benefits of exploiting the natural resources... The rural poor in particular depend heavily on natural resources for their livelihoods, and poor people are most vulnerable to the effects of environmental disasters ... Natural resources are closely connected to wider environmental problems. Forests are the major store of CO² and over the recent past deforestation contributed 20 per cent to global CO² emissions. Sustainable forest management is therefore a key part of limiting climate change. Forests are also essential to maintain the ecological services derived from biodiversity."

When in 1992 the World Bank set up a \$350 million Rain Forest Trust fund, three quarters of the funding came from the EU and EU member states. These efforts are aimed at protecting the largest remaining tropical forest on earth, whose capability to store carbon is vital to help control global warming. The Amazon forest shelters a diversity of plant and animal life that is found nowhere else on earth and is home to millions of people living in traditional communities practicing mixed livelihoods from non-timber forest products: such as gathering Brazil nuts, fishing, tapping rubber trees, and small farming.

This extractive economy gained popular momentum in Brazil with charismatic Chico Mendes, defender of the people living from the forest, leading them in peaceful demonstrations to halt deforestation linked to expanding agricultural and cattle frontiers. The assassination of Chico Mendez by a rancher in 1988 brought world attention to this critical issue and created interest in providing support for the development of new agro-forestry crops and forest products and sustainable production techniques.

The Brazil nut is the most economically important plant product that is harvested sustainably from the Amazonian rain forest. Brazil nut harvesters include the poorest sectors of society. They collect the nuts

venturing deep into the dense canopy and transporting their goods on foot and down river over long distances back to their communities.

While other nuts such as pistachios, almonds and hazelnuts, which are extensively and intensively cultivated, the Brazil nut, the only Amazonian product with a sizeable world market and supplied entirely from the wild, is lacking deserving support. Today, close to 1 million people in Brazil and many more in Bolivia and Peru, live from the Brazil nut trade whose sustainability is essential in preventing rural migration and deforestation from slash and burn agriculture.

Some EU member states such as Sweden have provisions in their laws to challenge any regulation that would have a negative impact on their global development policy, which is committed to contributing to equitable and sustainable development in the world, with priorities to fight poverty and ensure developmental sustainability.

Rebuilding market share will be a long-term effort and necessitate the support of EU member states to raise Aflatoxin limits and modify testing methodologies to suit the unique characteristics of the Brazil nut. ►

The Brazil nut has always been part of our Christmas basket along with other festive exotic dried fruit. This tough nut, once cracked, contains a delicious kernel with multiple nutritional benefits, in addition to protein, fiber, vitamins and unsaturated oils, it is the nut with the richest selenium content which has shown some protective effects from cancer.

The Brazil Nut Story

FAO recommendation for the daily consumption of a handful of nuts, whose multiple benefits on weight control, diabetes and heart health have been amply demonstrated, has supported the growth of nut consumption. Despite these benefits, because of arbitrary EU regulatory measures, the Brazil nut trade has crashed and today in-shell Brazil nuts can no longer be found in the EU.

Typical Christmas nut basket: Brazil nut, chestnut, macadamia, pecan, walnut, peanut, and hazelnut. Photo courtesy of Besana s.p.a., Italy.

Heavy pods weighing 1-2k each are filled with nuts. The pods hang from the branches until nature brings them crashing to the ground when they are ripe. Collectors stack them under the tree until enough are gathered to split them open and extract the nuts for removal back to the camp where they are dried. Photo courtesy of the Safenut project, M. Olsen.



Brazil nut trees in the state of Para stand alone in what once was Amazon rain forest that was cleared for cattle ranching. These trees are protected and cannot be cut down, however they will stop bearing fruit lacking the dense forest growth that supports the orchid bee responsible for pollination of their flowers.

To understand the challenges facing the in-shell Brazil nuts one must go back to the Amazon forest. The Brazil nut is the fruit of a majestic giant tree, up to 50 meter tall, reaching high above the forest canopy to soak up the tropical sunshine. The tree flowers once a year and produces pods containing 10 to 20 of the Brazil nuts, as we know them.

The heavy pods weighing 1kg to 2 kg cannot be harvested but fall naturally and are collected at the foot of the tree. Attempts to cultivate the tree have failed because of the complex ecosystem necessary for such a tree to grow. For example a specific orchid bee is needed for pollination and the subsequent production of the nuts, and a unique rodent, the agouti, is needed to open the pods and scatter and bury the nuts which could then grow into a new tree.



The collected pods are cut with a machete and the nuts extracted and put in sacks and carried out of the forest to the collector's camps where they are dried. They are then transported down the complex watershed of the Amazon River by canoe or raft to ports where different families come to sell their harvest. Processors purchase the nuts and prepare them for export by sorting, cleaning, drying and packing the in-shell nuts.

It is also possible to remove the kernel but this requires a pressure steaming process followed by cracking and drying, a technology not readily available in Brazil. Because of the disappearance of the in-shell nut trade with the EU, collectors sell their crop to be processed in Bolivia and Peru where the kernel is extracted. The added value brought by the more expensive kernel is lost to the collector and to the Brazilian economy.

Scientific projects have been conducted in recent years to address this critical issue of Aflatoxin reduction, which is mainly achieved through improved storage to reduce mold growth and new sorting methodologies such as through the use of UV light. An ongoing Standards and Trade Development Facility initiative sponsored by The United Nations, FAO and the World Bank, called the SAFENUT project was initiated to "validate and transfer to key stakeholders a sustainable and effective Aflatoxin management system in the Brazil nut production chain to recover and consolidate export markets particularly in Europe". Through implementation of good practices some improvements can be obtained to reduce contamination. Efforts to transfer key technology to monitor Aflatoxin levels are meant to strengthen public and private partnerships to meet the challenges of export market sanitary regulations.

Continued efforts supported by the Brazilian government, scientific projects and private industry, will help improve the phytosanitary level of Brazil nut exports. However the 1988 EC reduction in Aflatoxin limits has had the effect of locking out of its most lucrative market an industry based on an ecologically friendly natural crop, benefiting the poorest population of the Amazon forest.

Since the implementation of the low EU regulatory Aflatoxin limits, the whole nut industry sector has had to comply. The most agriculturally advanced and competent producing countries have found adhering to those new norms challenging. Despite rigorous application of GAP and GMP in these mechanized and optimized agro-industries, meeting those un-necessarily rigorous standards is challenging. What can be expected then of a crop that grows wild in the heart of the Amazonian rain forest? For more information, visit:

http://ec.europa.eu/development/Policies/9Interventionareas/Environment_en.cfm

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<http://aliceweb.desenvolvimento.gov.br.asp>

