

Food safety problems in coconut processing are huge

Continued from Pg 15

Desiccated coconut, other coconut convenience foods

In the manufacture of desiccated coconut and other coconut convenience foods, the plant workers must receive extensive training in quality control aspects at every stage of processing in order to control microbial contamination. The packaged DC should be stored in well ventilated warehouses and not shipped until microbiological tests are negative for salmonella. In spite of all these provisions, exported DC is sometimes found to be rancid, discoloured and clumped due to lapses in handling, processing and distribution of the product. It is therefore important to observe strict quality control in the raw materials, equipment and storage of finished product in order to produce high quality and safe product. The soapy flavour sometimes found in DC is an important defect and this causes concern among buyers. It is attributable to enzymatic hydrolysis of coconut oil, which results in the release of free fatty acids principally lauric acid which is the source of the soapy flavour. The enzymes responsible for this undesirable reaction are derived from microorganism present in the DC. The soapy flavour is readily apparent at a free fatty acid level of around 0.25%. The occurrence of this problem in the desiccated coconut

can be minimised by ensuring that only good coconuts are preserved and (b) efficient blanching of the kernel to reduce any microbial contamination. Bad odour and a "greasy feel" to the desiccated coconut are usually attributable to insufficient care being observed during transit and storage of desiccated coconut bags. In most of the developing countries, there is a lack of adequate awareness on standards in ensuring good quality and safety. The enforcement agencies are deficient and lack adequate physical and human resources in ensuring the prescribed standards.

Food Safety Management System (ISO 22000)

The extent of food safety problem in India due to microbial contamination, natural toxicants and plethora of adulterants is compounded by the widespread consumption of unsafe street foods, especially in urban areas, unhygienic environment in public catering places, and sometimes improper handling in the household. There have been reports of food contamination from industrial pollutants, non-judicious use of agrochemicals, mainly pesticides, and use of non-permitted food colours.

The problems of food safety in coconut processing industries in India are enormous. The problems posed during transport of raw mate-

rial, handling, processing, packaging, and waste disposal are considerable. There have been considerable efforts in improving food safety/quality scenario in the country by many governmental agencies. These include grading, certification and inspection measures such as those under Agmark, BIS, FPO, MMPO, EIC, as well as the developmental activities of agencies like APEDA, MPEDA, ministry of food processing industries, and commodity boards. While each one of these operates under its own legislative provisions with a clear objective, they do have a positive impact on food safety and quality, which could be further enhanced through better coordination within an integrated system. A detailed presentation on the functioning of the Export Inspection Council indicated that they had already moved from inspection mode to quality assurance including HACCP throughout the food chain coupled with appropriate monitoring. There has been a sea change in consumer awareness about food safety and consumer protection issues. Consumers seek competent and reliable source of information about their concerns in this area. They want protection measures to be scientifically based and determined in consultation with all the stakeholders. Consumer organisations give a high priority to systemic change in governmental approach

through the establishment of a professionally competent and autonomous food control agency. They demand transparency and accountability in the food control system.

Current status

At present there are a number of laws, control orders, legislative and administrative directives at the Central and state level, which relate to food safety. It is recognised by all the stakeholders that the current status of food control system is far from satisfactory and it has not succeeded in achieving the objectives set for it. BIS has recently launched Food Safety Management Systems (FSMS) Certification IS/ISO 22000:2005 scheme which envisages grant of FSMS Certification licence to organisations according to IS/ISO 22000.

Food safety is related to the presence of food-borne hazards in food at the point of consumption. Food reaches to consumers via supply chains that may link many different types of organisations. One weak link can result in unsafe food that is dangerous to health. As food safety hazards can occur the food chain at any stage, adequate control throughout the supply chain is essential. Therefore food safety is a joint responsibility of all organisations with in the food chain including

producers, manufactures, transport & storage operators, sub-contractors, retail and food service outlets and service providers.

Highlights of IS/ISO 22000:2005

- Integrates the principles of Hazards Analysis and Critical Control Point (HACCP) system developed by Codex Alimentarius Commission. It combines the HACCP plan with prerequisite programme (PRPs) and operational PRPs.
- Requires that all hazards that may be reasonably expected to occur in the food chain are identified, assessed and controlled.
- Can be applied independent of other management system standards or can be integrated with existing other management systems.
- Allows even small, tiny scale organisations to implement as externally developed combination of control measures.
- Intended for organisations seeking more focussed, coherent and integrated food safety management systems.
- Emphasis on preventions of food safety hazards of all types.

(The writer is processing engineer, Coconut Development Board (CDB), Kochi. He can be contacted at podun@yahoo.com)