

Standards, certification in coconut products

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QUALITY standards and certification systems are of great importance in facilitating both national and international trade. They simplify industrial transactions and improve international trade relations, which in turn create a proper environment for trade, thus promoting industrial development.

One of the foremost purposes of standardisation is to facilitate the movement of materials and products through all stages of production in any industrial activity starting from the raw material to the finished products; then to the dealer and finally to the retailers and consumers. Standards make it possible to carry on trade in an economic and efficient manner for they make possible quantitative measurement, physical and chemical analysis, and manufacture of products of constant and uniform quality.

Long-drawn process

The establishment of standards and certification systems is a long and tedious process. It involves proposing, devising, discussing, adopting, announcing and revising, in consultation with the trade organisations, processors, government regulatory agencies and consumer groups. The government authorities should carefully weigh the need for and the effect of the particular proposed standards or regulations.

Questions should be asked - whether it promotes improved safety of food, whether it enhances availability of food products, and whether it is feasible in terms of both industrial production and enforcement. The answers to the questions may vary from country to country due to differences in agricultural, industrial, marketing, economic or regulatory potentials and resources. In general, all countries have the main objective to safeguard the well-being of their people with effective food and health laws & regulations. Most countries have a food administrative authority, which is widely recognised for its responsibilities and authority in establishing and enforcing standards of identity for food products.

Issues in quality

Traditional coconut products such as copra, coconut oil and desiccated coconut rely heavily on international markets for their trade. Similarly new value-added coconut products like canned, frozen and spray-dried coconut milk, coconut juice etc. are also dependent on foreign market. Quality control problems including aflatoxin levels in copra & copra meal and the presence of microorganisms in other coconut products resulted in numerous complaints from buyers. Some of the major quality control issues in coconut products are follows:

Aflatoxin in copra

The aflatoxin problem is one of the serious threats to the coconut industry. Poor quality copra resulting from inadequate drying, improper handling and faulty storage usually favours the growth of aflatoxin by fungi. Based on the characteristics of coconut meat and review of different types of drying methods, the international recommended procedures for producing good quality copra would be as follows:

- The nuts for copra-making should be mature (11-12-month-old).
- Drying should be started within 4 hrs from splitting to avoid start of microbial action.
- To avoid case hardening, the temperature of drying should not exceed 60°Celsius during the first 10 hrs and should be about 55°C during the next 14 hrs.
- Copra should be stored with 6% moisture level in well-ventilated areas to prevent mould growth and reduce storage losses.

Microbial contamination

Coconut milk is an excellent medium for many kinds of microorganisms being rich in moisture, neutral in pH and rich in nutrients. Meanwhile, canning of coconut milk results in coagulation of certain constituents. Due to these technical constraints, coconut milk is favoured to be preserved by freezing which requires strict sanitation practices for the safety of the product.