Industry experience on HACCP implementation in processed foods a case of Nepal

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Nepal
Outline of Presentation

- Introduction of Country
- Growing concern of safe food and food safety
- Role of government in food safety
- Government efforts in implementing HACCP in food processing industry
- Status of licensed / certified Food Industries in Nepal:
  a) NS (Nepal Standard ISO Guide 65) certified industries
  b) HACCP Certified Food Industries
- The responsibility of the private sector
- Major food and related products exported from Nepal
- Challenges in HACCP implementation in processed foods in Nepal
- The way forward
Introduction of Country

Lumbini the birth place of Lord Buddha

Area: Total 147,181 km² (95th) 56,827 sq mi - Water (%) 2.8
Population - 2011 census 26,494,504 - Density 180/km² (62nd) 518/sq m
Capital and largest city: Kathmandu 27°42′N 85°19′E
GDP (PPP) 2012 estimate - Total $41.22 billion Per capita $1,200
GDP (nominal) 2012 estimate - Total $19.921 billion Per capita $743
Gini (2010) 32.8 medium HDI (2013) 0.463 low • 157th. Currency Nepalese Ruppe (NPR)
Demand for consumption of safe food is the fundamental right of the every individual.

The responsibility of the state is to make sure the availability of safe food to the nation.

Role of private sector including consumer is to demand for the safe food and make sure the production and distribution of the safe food.

The responsibility of the private sector is to maintain the quality of the food during production and supply of safe food.

Private sector is involved in the whole value chain of food from production to consumption.

Food safety is the rising concerns of the present world.

Food safety is measured by mandatory standards set by the government and international conventions and voluntary certificates specific to the produce and market like Halal certificate. e.g. Organic Certificate
Role of Government in Safe foods and Food Safety

Set up National Standard in compliance to the HACCP 7 principles
Standardization and harmonization of food quality.
Monitoring of the food production/process for quality assurance.
Provide permit and quality certificate for the food items.
Inspection and regulate the imports of good items
Certification for export and import of food.
Execution of consumer awareness activities about food safety.
Training on international food standard for the national food producing industries.
Accreditation of the national laboratories for certification.
### Government Efforts in implementing HACCP in food and food processing industry

<table>
<thead>
<tr>
<th>Category</th>
<th>No. of Food Commodity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milk and Milk Products</td>
<td>17</td>
</tr>
<tr>
<td>Fats and Oils</td>
<td>16</td>
</tr>
<tr>
<td>Fruits and Vegetable Products</td>
<td>17</td>
</tr>
<tr>
<td>Spices and Condiments</td>
<td>20</td>
</tr>
<tr>
<td>Tea, Coffee and Their Products</td>
<td>3</td>
</tr>
<tr>
<td>Salt</td>
<td>2</td>
</tr>
<tr>
<td>Cereals, Pulses and their Items</td>
<td>19</td>
</tr>
<tr>
<td>Processes Drinking Water</td>
<td>1</td>
</tr>
<tr>
<td>Sweetening Agent</td>
<td>3</td>
</tr>
<tr>
<td>Sweets and Confectioneries</td>
<td>3</td>
</tr>
</tbody>
</table>

Source: Department of Food Technology and Quality Control, Nepal
Government Efforts in implementing HACCP in food and food processing industry

Nepal Standard and Metrology Department has adopted the following as National Standards:

- QMS (ISO 9001:2000)
- EMS (ISO 14001:2004)
- ISO/IEC 17025:2005
- ISO 22000:2005
Government Efforts in implementing HACCP in food and food processing industry

Enforcement of laws and regulations:

Food Safety Regulation in Nepal

1. Food act 1966 and Food rules 1970
   - Ban in production, sale and distribution of inferior, contaminated or unsafe food items.
   - Prosecution for misbranding of food items by false statement.
   - Provision for the detention of food products under suspicion.
   - Requirement of license for food establishments.
   - Provision of penalties (including sanction) to firms and corporate bodies if found to responsible in the production, sales and distribution of unsafe food.
   - Set out the power and process to formulate food standards and quality.
   - Regulates the packaging requirements, labelling requirements and storage requirements of a food item.
Government Efforts in implementing HACCP in food and food processing

Affiliation with International Organization
Nepal became member of following international organizations which affects the food safety related policy, rules and regulations.

- Codex alimentarius commission
- International Plant Protection Council (IPPC)
- World trade organization (WTO)
- Food and agriculture organization (FAO) of the United Nations (UN)
- South Asian association for regional cooperation (SAARC)/
- World organization for animal health (OIE)
- Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (*BIMSTEC*)
**Government Efforts in Implementing HACCP in Food and Food Processing Industry**

**Enforcement of laws and regulations:**

   Regulate the trade of plants and plant products.

   Regulates import and export of livestock, their products and livestock production material important for food and health purpose.


5. Animal Slaughterhouse & Meat Inspection Act 1999 and Regulations 2001

6. Consumer Protection Act
Status of licensed / certified Food Industries in Nepal

- 139 industries certified in different 60 products (Nepal Certificate)
- 180 license issued
- 15 Small Scale industries- NS Certified out of 180 registered
- Food Product- 25 food industries certified in 20 different products
- Many private sector has developed code of conducts.
- As a CSR many private industries and companies are creating awareness program for farmers

(Source: DFTQC publication)
### Table 1: ISO 22000:2005 (FSMS) certified companies in Nepal

<table>
<thead>
<tr>
<th>S.N.</th>
<th>Type of Food Processing Industries</th>
<th>Number of Industries</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Rice Mills</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>Vegetable, Sunflower and soya oil mills</td>
<td>12</td>
</tr>
<tr>
<td>3</td>
<td>Beer factory</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>Biscuits Factory</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>Chili powder and spices</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>Instant Noodles</td>
<td>3</td>
</tr>
<tr>
<td>7</td>
<td>Jam Jelly and Squash</td>
<td>2</td>
</tr>
<tr>
<td>8</td>
<td>Mineral water bottling</td>
<td>1</td>
</tr>
<tr>
<td>9</td>
<td>Condensed milk</td>
<td>1</td>
</tr>
<tr>
<td>10</td>
<td>Wheat Flour Mill</td>
<td>1</td>
</tr>
<tr>
<td>S.N.</td>
<td>Name of Company</td>
<td>Year of certification</td>
</tr>
<tr>
<td>------</td>
<td>-----------------------------------------------------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>1</td>
<td>Himalayan Distillery, Simra</td>
<td>2009</td>
</tr>
<tr>
<td>2</td>
<td>Highland Distillery, Kathmandu</td>
<td>2009</td>
</tr>
<tr>
<td>3</td>
<td>Himalayan Shangrilla Tea Producers, Ilam</td>
<td>2009</td>
</tr>
<tr>
<td>4</td>
<td>Sujal Dairy, Pokhara</td>
<td>2009</td>
</tr>
<tr>
<td>5</td>
<td>Dairy Development Corporation, Balaju, Kathmandu</td>
<td>2009</td>
</tr>
<tr>
<td>6</td>
<td>Dairy Development Corporation, Lainchaour, Kathmandu</td>
<td>2010</td>
</tr>
<tr>
<td>7</td>
<td>Nepal Small Tea Producer, Fikkal</td>
<td>2010</td>
</tr>
<tr>
<td>8</td>
<td>Nepal Green Tea &amp; Specialty Tea, Fikkal,</td>
<td>2010</td>
</tr>
<tr>
<td>9</td>
<td>Asian Thai Foods, Sonapur, Sunsari</td>
<td>2010</td>
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<th>Name of Company</th>
<th>Year of certification</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Swastic Oil Industries, Sonapur, Sunsari</td>
<td>2010</td>
</tr>
<tr>
<td>11</td>
<td>Unilito, Sarda Group, Sonapur, Sunsari</td>
<td>2010</td>
</tr>
<tr>
<td>12</td>
<td>Bottlers Nepal Pvt. Ltd, Balaju, Kathmandu</td>
<td>2010</td>
</tr>
<tr>
<td>13</td>
<td>Bottlers (Tarai) Nepal Pvt. Ltd, Chitawan</td>
<td>2010</td>
</tr>
<tr>
<td>14</td>
<td>Gorkha Tea Estate, Ilam</td>
<td>2011</td>
</tr>
<tr>
<td>15</td>
<td>Instant Meal, Bhairahawa</td>
<td>2011</td>
</tr>
<tr>
<td>16</td>
<td>Pashupati Biscuit, Duhabi</td>
<td>2011</td>
</tr>
<tr>
<td>17</td>
<td>Hetauda Dairy, Hetauda</td>
<td>2012</td>
</tr>
<tr>
<td>18</td>
<td>Mist Valley Tea Industry, Ilam</td>
<td>2012</td>
</tr>
<tr>
<td>19</td>
<td>June Chiyabari Tea Garden, Dhankuta</td>
<td>2012</td>
</tr>
</tbody>
</table>
Responsibility of Private Sector

Major Role of Private Sector is to maintain its CSR in production and marketing of safe and hygienic food, which includes:

1. Use of hygienic raw materials
2. Maintain GMP and follow HACCP measures in processing of the food items
3. Packaging and labeling as per HACCP principles
4. Distribution of the hygienic food for the long run sustainability of the business including consumer.
5. Respect mother earth for the better living and earning
Major food and related products exported from Nepal

- Large cardamom
- Betel nut
- Tea including green tea
- Capsicum fruit & seed (dried) for consumption
- Cinchona bark (dried) for medicinal use
- Cinnamon
- Coriander seed for consumption
- Roasted Coffee beans
- Saffron (dried) flowers for consumption
- Turmeric rhizome (dried) for consumption
- Ginger
- Noodles
- Biscuits and condiments
- Chyawanprasad
- Pickles
- Hazmola
- Honey
- Vegetable Ghee
Some International Certifying agency certified food products production and Exporting companies

1. Green Land Organic Farms
   Products: Coffee, Tea, Honey, Black Cardamom, Cordyceps Synensis


3. Organic Black Tea

4. Zenith marketing company

5. Himalayan Snax and Noodles Pvt. Ltd.

6. Nepal Meat

7. Best Honey Ltd

8. Giribandhu Tea Estate (Pvt.) Ltd.
Challenges in HACCP implementation in processed foods in Nepal.

**Domestic challenge**

**Production related:**
- Lengthy and hectic procedure for registration.
- Lack of incentives and motivation in producing HACCP certified foods, because of...
- Lack of quality raw materials and ingredients.
- Lack of control over inferior quality food products from neighboring country.
- Misconception and Outdated Beliefs about Quality: generally believed that higher quality products mean more investment and higher cost of production.
- Lack of Quality-related Training Facilities.
- Lack of provision in food act and any other legislation to regulate the traceability of the food items which should be addressed to keep track record of the food.
- Lack of accredited laboratory in country.
- Lack of international standard quality certifying companies in the country.

**Marketing:**
- Lack of awareness among the majority of consumers in quality food consumption.
Export marketing:

- Highly conscious about the quality products among the consumers.
- Higher quality standards requirements.
- Need to screen through different standards e.g. FDA in US market and EURO standards in European market.
- Demand for additional certificates concerns about the environment e.g. Forest Stewardship Certificate, Organic Certificate.
- Social Welfare certificates e.g. Fair Price etc.
- More specific quality certificates e.g. Halal Certificate, which are costlier and very stringent process.

- Mutual Recognition of the quality Certificates issued by Nepalese labs.
- Harmonization of standards, reciprocal recognition of tests and accreditation;
- Elimination of non-tariff barriers (NTBs) be a major trade task in order to enhance intra-regional trade in South Asia.
- Lack of accredited laboratory in country.
Further efforts need to be made on:

Start providing Certificates upon strict monitoring for:
Food safety, animal or plant health, Plant/animal quarantine (plant diseases, quarantine pests and weeds etc).
Raise Consumer awareness about safe food and drinks through health camps, social camps and other means.
Make easy and more private sector friendly certification process, with speeding up the process.

Establish reward and punishment mechanism in the government system for performing staff and industry.

Bring programs for declaring Pests Free Areas or disease free zones and prevention from diseases and pests.

Capacitate quarantine posts and DFTQC laboratory to examine the quality of import and exports of food items.

Accreditation of the government labs with international authorities and labs for certification, including GHP and GMP and HACCP.
Control on imports of food and processed food items and issue permits upon inspection.

Tighten regulations for long-standing concerns; new standards for unknown/unregulated hazards.

Prove India and other importing countries that the Phyto-sanitary Certificates are issued upon thorough procedure.

High level authorities of both India and Nepal should regularly keep in touch to address upcoming problems.

Knowledge on SPS should be transferred to traders, farmers’ groups, cooperatives in public private approach.

Enhance capacity of the government authorities and private sector in implementation of GAP/EUREP GAP, GHP, GMP and HACCP.

Brand promotion of Nepalese products

Formulation and implementation of Code of conduct.
THANK YOU
Any Questions