

## Country Paper (Republic of China, Taiwan)

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### **1. An overview of the food industry in Taiwan**

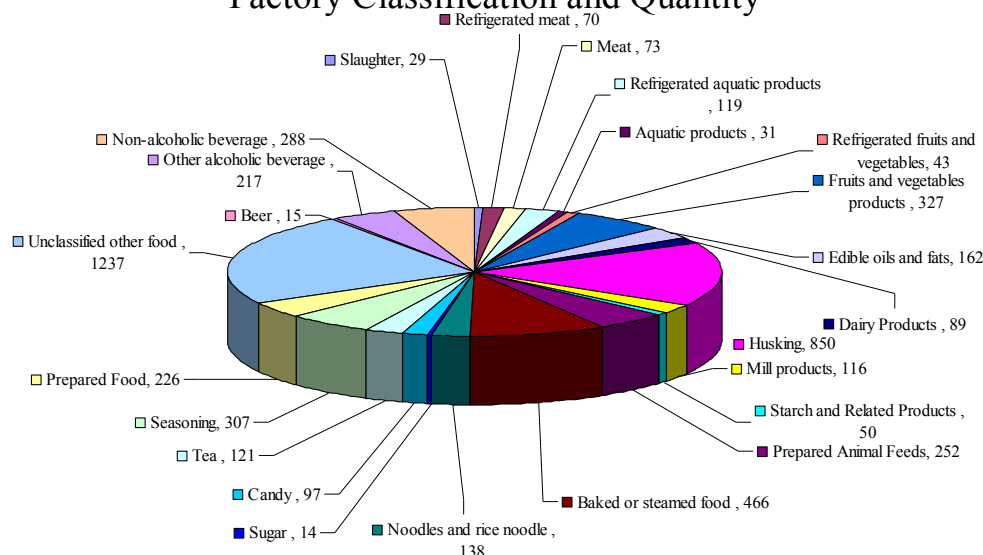
Agriculture played a very important role in Taiwan's early economic development, so much so that the agricultural output was greater than the industrial output until 1963. Taiwan's rapid industrial and economic development was to a large degree financed by its agricultural industry. Taiwan's subtropical location, bold agricultural experimentation and research, efficient agricultural administration, advanced processing industry and adaptive labor force have helped Taiwan continue to enjoy success in the agricultural industry.

The biggest challenge to Taiwan's agricultural sector has been the island's entry into the WTO in 2002, which led to reduced tariffs on agricultural imports, a decrease in subsidies and the abolishment of protectionist measures. The government continues to pass new agricultural policies designed to adjust the structure of the industry for the benefit of the whole country. Most of these policies involve improving environmental protection, modernizing the industry and increasing competition.

Agricultural imports increased after Taiwan's entry into the WTO and exports increased as well. In 2004, the Council of Agriculture (COA) began marketing Taiwan's agricultural products abroad. Taiwan also increased its research on quarantine inspection techniques and improved export quarantine inspection facilities.

According to the data collected from the Food Industry Research & Development Institute and the Ministry of Economic Affairs in Taiwan, there are about 115,000 employees in 5,567 food & beverage factories in 2011. The number of food companies with business registration in Taiwan is 6,399. However, only a certain scale food industry need to register factory or business registration in Taiwan, and most of food industries are small- and medium-sized enterprises (SMEs) or family industries. It is estimated that at least more than 67,000 food industries in Taiwan. The factory classification and quantity in Taiwan in 2011 is summarized in the following pie chart:

## Factory Classification and Quantity



Note: The number of firms (5,567) of this pie chart is only the food & beverage factories with factory registration by the Ministry of Economic Affairs in Taiwan

Taiwan's food & beverage industry had a domestic production value of US\$19.60 billion in 2011. The export value of food and drinks from Taiwan during the first quarter of 2012 is estimated at US\$ 0.66 billion, increase 4.31% year on year. Sub-sectors that have displayed growth include dairy products, frozen foods, dehydrated foods, cocoa preparations, coffee and the substitutes, edible fats and oils, grain husking, sugars and molasses, soft drinks and other foods. The value-added is from US\$ 3,697 million (2007) to US\$ 4,392 million (2011).

### The Important General Indicators of Food Industry in Taiwan

Unit: US\$

| Project          | Unit            | 2007   | 2008   | 2009   | 2010    | 2011    |
|------------------|-----------------|--------|--------|--------|---------|---------|
| Number of firms  | Number          | 5,194  | 5,258  | 5,364  | 5,513   | 5,567   |
| Production value | Hundred Million | 158    | 175    | 176    | 186     | 196     |
| Import value     | Hundred Million | 44     | 49     | 47     | 58      | 64      |
| Export value     | Hundred Million | 19     | 22     | 19     | 23      | 26      |
| Value-added      | Million         | 3,697  | 3,829  | 4,163  | 4,240   | 4,392   |
| Value-added      | %               | 23.3   | 21.77  | 23.59  | 22.79   | 22.29   |
| Contribution     | %               | 0.86   | 0.91   | 1.00   | 0.93    | 0.95    |
| Research         | Thousand        | 49,341 | 55,185 | 55,826 | 57,977  | 59,547  |
| Employment       | People          | 96,031 | 95,729 | 98,509 | 102,476 | 115,020 |

Source: Food Industry Research and Development Institute ITIS Plan (2012/04)

Number of firms: only food & beverage factories with factory registration by the Ministry of Economic Affairs in Taiwan

Note: Secondary Industrial projects Covered by Products industry

Food manufacturing: Frozen foods, Edible oils and fats, Prepared Food, Health food and other 15 class products.

Beverage industry: Non-alcoholic beverages, Beer and other alcoholic products.

## Export value of Taiwan's food and beverage industry

Unit : Million US\$

| Sub sectors                | 2010  | 2011  | Growth rate of 2011(%) | Jan.-Mar. 2011 | Jan.-Mar. 2012 | Year on year growth rate(%) |
|----------------------------|-------|-------|------------------------|----------------|----------------|-----------------------------|
| Slaughtering               | 1     | 0     | -92.26                 | 25             | 24             | -5.56                       |
| Dairy products             | 14    | 25    | 78.71                  | 5              | 5              | 3.62                        |
| Canned foods               | 27    | 30    | 8.16                   | 6              | 5              | -14.84                      |
| Frozen foods               | 12    | 1,344 | 14.7                   | 338            | 369            | 8.96                        |
| Dehydrated foods           | 44    | 42    | -5.02                  | 8              | 9              | 18.92                       |
| Preserved foods            | 51    | 62    | 20.55                  | 14             | 13             | -12.77                      |
| Bakery products            | 45    | 44    | -3.14                  | 12             | 9              | -24.44                      |
| Sugar confectionery        | 27    | 30    | 11.03                  | 7              | 6              | -13.62                      |
| Cocoa preparations         | 1     | 1     | 17.12                  | 0.1            | 0.2            | 20                          |
| Coffee and the Substitutes | 22    | 22    | 7.05                   | 5              | 5              | 6.04                        |
| Edible fats and oils       | 61    | 77    | 26.05                  | 16             | 20             | 20.92                       |
| Grain husking              | 32    | 40    | 24.07                  | 9              | 9              | 5.32                        |
| Sugars and molasses        | 9     | 10    | 17.51                  | 2              | 2              | 9.38                        |
| Seasonings                 | 131   | 125   | -4.61                  | 30             | 29             | -2.26                       |
| Wine and liquor            | 36    | 43    | 18.43                  | 11             | 9              | -18.27                      |
| Soft drinks                | 149   | 160   | 7.75                   | 35             | 36             | 5.49                        |
| Prepared animal feeds      | 97    | 93    | -4.32                  | 22             | 19             | -11.4                       |
| Tea                        | 33    | 36    | 9.52                   | 8              | 7              | -10.48                      |
| Other foods                | 313   | 361   | 15.39                  | 80             | 83             | 3.66                        |
| Residues and waste s       | 9     | 13    | 43.22                  | 2              | 2              | 8.96                        |
| Total                      | 2,273 | 2,556 | 12.48                  | 635            | 662            | 4.31                        |

Note : The values for March 2012 are estimates .

Source : FIRDI Food Industry Knowledge Base. Forecast by the IT IS Project of FIRDI ( 2012/05 )

The output of Taiwan's food industry during the first quarter of 2012 is estimated at US\$ 4.66 billion, increased 1.17% compared to the previous year. Thirteen sectors display positive growth, including large industries such as beer, frozen and chilled seafood, grain husking and processed meats.

### Production value of Taiwan's food industry

Unit: Million US\$

| Sub sectors               | 2011   | Jan.-Mar.<br>2011 | Jan.-Mar<br>2012a | Year on<br>year<br>growth<br>rate(%) | Apr.-Jun.<br>2012 <sup>b</sup> | 2012 <sup>b</sup> | Prospect<br>growth<br>rate of<br>2012 <sup>b</sup> (%) |
|---------------------------|--------|-------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--|
| Slaughtering              | 2,079  | 533               | 537               | 0.9                                  | 507                            | 2,145             | 3.16   |
| Frozen & chilled meats    | 837    | 196               | 209               | 6.92                                 | 241                            | 888               | 6.18   |
| Processed meats           | 190    | 47                | 50                | 7.3                                  | 51                             | 201               | 5.73   |
| Frozen & chilled seafood  | 244    | 48                | 53                | 10.72                                | 54                             | 273               | 11.65  |
| Frozen&chilled vegetables | 90     | 18                | 18                | 4.03                                 | 27                             | 99                | 9.47   |
| Processed vegetables      | 128    | 34                | 30                | -11.77                               | 30                             | 135               | 5.32   |
| Edible fats & oil         | 1,036  | 264               | 239               | -9.49                                | 308                            | 1,101             | 6.3  |
| Dairy products            | 914    | 189               | 197               | 4.34                                 | 236                            | 955               | 4.47   |
| Grain husking             | 1,147  | 248               | 273               | 9.99                                 | 300                            | 1,196             | 4.32   |
| Flour milling             | 1,352  | 328               | 316               | -3.79                                | 325                            | 1,357             | 0.43   |
| Prepared animal feeds     | 2,887  | 681               | 714               | 4.83                                 | 680                            | 2,960             | 2.53   |
| Bakery products           | 811    | 188               | 184               | -2.17                                | 190                            | 825               | 1.64   |
| Noodles                   | 488    | 115               | 115               | -0.44                                | 118                            | 500               | 2.52   |
| Granulated sugar          | 325    | 101               | 102               | 0.37                                 | 84                             | 374               | 15.16  |
| Sugar confectionery       | 137    | 39                | 40                | 2.35                                 | 32                             | 146               | 6.49   |
| Tea manufacturing         | 163    | 42                | 42                | -0.41                                | 43                             | 166               | 1.79   |
| Seasonings                | 595    | 159               | 141               | -11.03                               | 146                            | 637               | 6.7  |
| Prepared foods            | 866    | 218               | 205               | -6                                   | 198                            | 867               | 0.16   |
| Other foods               | 2,415  | 575               | 569               | -1.11                                | 689                            | 2,615             | 8.27   |
| Beer                      | 810    | 110               | 150               | 36                                   | 235                            | 807               | -0.4   |
| Wine & liquor             | 347    | 106               | 107               | 1.57                                 | 73                             | 356               | 2.75   |
| Soft drink                | 1,736  | 365               | 366               | 0.28                                 | 448                            | 1,809             | 4.2  |
| Total                     | 19,597 | 4,604             | 4,657             | 1.17                                 | 5,015                          | 20,411            | 4.16   |

Note : a. The values for March 2012 are estimates ◦

b. The values for April-December are estimates ◦

Source : MOEA Economic Statistics Database. Forecast by the IT IS Project of FIRDI ( 2012/05 ) ◦

The total value of imports in the Taiwan food industry during the first quarter of 2012 is estimated at US\$ 1.55 billion, increased 4.96% year on year. Food categories with increased import value included: slaughtering, canned foods, frozen foods, dehydrated foods, preserved foods, bakery products, sugar confectionery, wine and liquor, prepared animal feeds and other foods.

### Import value of Taiwan's food and beverage industry

Unit : Million US\$

| Sub sectors                | 2010  | 2011  | Growth rate of 2011(%) | Jan.-Mar. 2011 | Jan.-Mar. 2012 | Year on year growth rate(%) |
|----------------------------|-------|-------|------------------------|----------------|----------------|-----------------------------|
| Slaughtering               | 137   | 157   | 15.04                  | 29             | 36             | 22.44                       |
| Dairy products             | 540   | 624   | 15.51                  | 150            | 145            | -3.19                       |
| Canned foods               | 78    | 72    | -8.54                  | 15             | 15             | 5.83                        |
| Frozen foods               | 1,316 | 1,387 | 5.35                   | 334            | 361            | 8.03                        |
| Dehydrated foods           | 178   | 204   | 14.23                  | 57             | 62             | 8.98                        |
| Preserved foods            | 100   | 105   | 5.17                   | 27             | 28             | 6.49                        |
| Bakery products            | 62    | 64    | 3.28                   | 14             | 15             | 8.65                        |
| Sugar confectionery        | 105   | 117   | 11.03                  | 25             | 27             | 7.08                        |
| Cocoa preparations         | 25    | 26    | 3.42                   | 7              | 6              | -4.52                       |
| Coffee and the Substitutes | 118   | 156   | 32.16                  | 37             | 37             | 0.83                        |
| Edible fats and oils       | 332   | 409   | 23                     | 105            | 102            | -2.85                       |
| Grain husking              | 364   | 374   | 2.75                   | 113            | 94             | -16.29                      |
| Sugars and molasses        | 394   | 457   | 16.1                   | 84             | 58             | -31.53                      |
| Seasonings                 | 109   | 114   | 4.64                   | 27             | 28             | 3.22                        |
| Wine and liquor            | 580   | 691   | 19.19                  | 140            | 159            | 13.35                       |
| Soft drinks                | 91    | 102   | 12.1                   | 22             | 21             | -4.62                       |
| Prepared animal feeds      | 234   | 254   | 8.51                   | 61             | 69             | 12.56                       |
| Tea                        | 63    | 61    | -3.82                  | 12             | 12             | 0.29                        |
| Other foods                | 600   | 585   | -2.54                  | 134            | 162            | 21.02                       |
| Residues and wastes        | 372   | 394   | 5.96                   | 80             | 107            | 34.03                       |
| Total                      | 5,803 | 6,351 | 9.43                   | 1,472          | 1,545          | 4.96                        |

Note : The values for March 2012 are estimates .

Source : FIRDI Food Industry Knowledge Base. Forecast by the IT IS Project of FIRD ( 2012/05 ) .

## 2. Food Labeling regulations & national standards in Taiwan

Under the premise of food safety, to provide consumers with clearly identified information, Taiwan's food industry is governed by the Act Governing Food Sanitation (Promulgated on January 28, 1975, the latest amended and promulgated was on August 8, 2012).

### 2.1 General Labeling-Prepackaged foods (Article 17 of Act Governing Food Sanitation)

Prepackaged foods or food additives shall conspicuously indicate in Chinese and common symbols the following material facts on the container or packaging:

- (1) Product name;
- (2) Name, weight, volume or quantity of the content or, in the case of a mixture of two or more ingredients, each of the ingredients;
- (3) Name of food additive;
- (4) Name, telephone number and address of the company; in the case of imported food, name, telephone number and address of the responsible domestic company;
- (5) Expiry date; if the product is designated by the central competent authority in a public notice, the date of manufacture, shelf life or storage instructions shall also be indicated; and
- (6) Other material facts designated by the central competent authority in a public notice, such as:

| Date of Implementation | Announcement   |
|------------------------|--|
| 2007.06.01             | Label of Content for Packed Fruit Juice and Vegetable Juice  |
| 2008.07.01             | Requirements for Labeling Content of Caffeine on Pre-packaged Beverages under the Act Governing Food Sanitation            |
| 2009.07.01             | Vegetable Food Labeling Regulations of Package Foods   |
| 2010.11.14             | Regulations of Labeling for Vacuum Packed Food   |
| 2011.03.01             | Regulations of Labeling for Blended Oil  |
| 2011.07.01             | Regulations of Labeling for Instant Noodles  |
| 2012.09.20             | Regulations Governing the Label of Country of Origin for Prepackaged Foods (promulgated in 2007 and amended in 2010, 2012) |
| 2012.11.01             | Regulations of Labeling for Reduced Sodium Salt  |
| 2014.02.09             | Regulations of Labeling Requirement for Food Containing Cordyceps Mycelium   |

## **2.2 Enforcement Rules of the Act Governing Food Sanitation**

These Enforcement Rules are prescribed in accordance with the provisions of Article 39 of the Act Governing Food Sanitation. Respectively, the Article 9, 10, 11, 12 and 13 of the Enforcement Rules are the principles of the product names, the labeling for the contents, food additives, the expiry date, and the labeling typeface and languages specifications.

## **2.3 GMO:**

### **Labeling Requirements for Food Containing Ingredient of Genetically Modified Soybean or Genetically Modified Corn (Promulgated on February 22, 2001).**

The specifications of the regulation:

- (1) Food products containing ingredient of genetically modified soybean or corn which is more than five percent (5%) by weight of finished product shall be labeled with the words “Genetically Modified” (GM) or “Containing Genetically Modified”.
- (2) Food products made of non-GM soybean or corn may be labeled with the words “Non-GM” or “Not GM”.
- (3) Soy sauce, soybean oil (salad oil), corn oil, corn syrup, and corn starch etc. made of GM soybean or corn are exempted from the GM labeling requirement.

## **2.4 General Labeling-Bulk Foods and Foods Vending Locations (Article 17-1 of Act Governing Food Sanitation)**

The central competent shall prescribe in a public notice the restrictions on vending location and methods of the specific bulk foods in the preceding paragraph.

The central competent authority may prescribe restrictions on the vending location and methods of specific bulk foods, or may require food labeling showing country of origin in Chinese.

| Date of Implementation | Announcement  |
|------------------------|---|
| 2012.09.12             | Regulations Governing the Labeling of Bulk Foods (promulgated in 2009 and amended in 2010, 2012)                    |
| 2012.09.12             | Regulations Governing the Labeling of Country of Origin of Beef and Edible Cattle Offals for Food Vending Locations |

## **2.5 General Labeling-Food Packaging (Article 18 of Act Governing Food Sanitation)**

Food cleansers and food utensils, food containers and food packaging which are designated by the central competent authority in a public notice shall conspicuously

indicate in Chinese and common symbols the following material facts:

- (1) Name, telephone number and address of the company; in the case of imported products, name, telephone number and address of the responsible domestic company.
- (2) Other material facts designated by the central competent authority in a public notice.

**2.6 Announcement of items and implementation date of plastic food utensils, food containers, food packaging shall be labeled in accordance with the provisions of Article 18 of the Act Governing Food Sanitation. (Article 18 of the Act Governing Food Sanitation.)**

- (1) The specified plastic food utensils, containers and packages means plastic bottles (cups), feeding bottles, and lunch boxes (including crispers) that are used repeatedly.
- (2) Disposable plastic food packaging containers and utensils.
- (3) The implementation date is based on the manufacturing date for:
  - I. Plastic bottles (cups), feeding bottles, and lunch boxes (including crispers) that are used repeatedly: one year after promulgation.
  - II. Disposable plastic food packaging containers and utensils: two years after promulgation.

**2.7 Nutrient Labeling-Prepackaged foods (Article 17 of Act Governing Food Sanitation)**

Food designated by the central competent authority in a public notice shall be conspicuously labeled with its nutrients and the contents thereof in Chinese and common symbols in such format and covering such items as prescribed by the central competent authority.

- (1) Items of labeling:
  - I. Title of the "Nutrition labeling"
  - II. Energy contents
  - III. Amount of protein, fat, saturated fat, trans fat, carbohydrate and sodium contained
  - IV. Contents of other nutrients declared in the nutrition claim
  - V. Contents of other nutrients labeled by the manufacturer voluntarily
- (2) With respect to the amount of energy and nutrients contained, the labeling value for solid (semi-solid) food shall be expressed in units of 100 grams or grams per serving, and for liquid food (drinks), in units of 100 milliliters or milliliters per



servings. If the value is expressed on per serving basis, the number of servings contained in each package of the product shall also be specified.

- (3) Labeling unit for the contents of energy, nutrients and trans fat: The amount of energy contained in a food product shall be expressed in kcal, that of protein, fat, saturated fat, carbohydrate and trans fat in gram, that of sodium in milligram, and that of other nutrients in gram, milligram or microgram whatever being appropriate.
- (4) Examples of labeling items and methods: If the nutrition labeling format requires the additional labeling in percentage of the Daily Value of Nutrient Intake, then none needs to be expressed for trans fat.

|  |        |      |         |         |     |    |               |    |           |               |              |    |           |    |                                   |              |                            |   |  |        |      |                                   |    |     |                            |               |    |  |        |              |    |         |    |                                   |     |                            |   |   |        |      |           |         |    |              |     |    |        |               |    |                                   |           |    |                            |              |    |    |        |    |    |                                   |  |  |                            |  |  |
|--|--------|------|---------|---------|-----|----|---------------|----|-----------|---------------|--------------|----|-----------|----|-----------------------------------|--------------|----------------------------|---|--|--------|------|-----------------------------------|----|-----|----------------------------|---------------|----|--|--------|--------------|----|---------|----|-----------------------------------|-----|----------------------------|---|---|--------|------|-----------|---------|----|--------------|-----|----|--------|---------------|----|-----------------------------------|-----------|----|----------------------------|--------------|----|----|--------|----|----|-----------------------------------|--|--|----------------------------|--|--|
| <p>Nutrition Labeling(一)</p> <p><b>Nutrition Labeling</b></p> <p>Serving size gm (ml)<br/>This package contains servings</p> <p>Per serving</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Energy</td><td>Kcal</td></tr> <tr><td>Protein</td><td>gm</td></tr> <tr><td>Fat</td><td>gm</td></tr> <tr><td>Saturated fat</td><td>gm</td></tr> <tr><td>Trans fat</td><td>gm</td></tr> <tr><td>Carbohydrate</td><td>gm</td></tr> <tr><td>Sodium</td><td>mg</td></tr> <tr><td>Content of other nutrient claimed</td><td></td></tr> <tr><td>Content of other nutrients</td><td></td></tr> </table>   | Energy | Kcal | Protein | gm      | Fat | gm | Saturated fat | gm | Trans fat | gm            | Carbohydrate | gm | Sodium    | mg | Content of other nutrient claimed |              | Content of other nutrients |   | <p>Nutrition Labeling(二)</p> <p><b>Nutrition Labeling</b></p> <p>Per 100 gm(ml)</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Energy</td><td>Kcal</td></tr> <tr><td>Protein</td><td>gm</td></tr> <tr><td>Fat</td><td>gm</td></tr> <tr><td>Saturated fat</td><td>gm</td></tr> <tr><td>Trans fat</td><td>gm</td></tr> <tr><td>Carbohydrate</td><td>gm</td></tr> <tr><td>Sodium</td><td>mg</td></tr> <tr><td>Content of other nutrient claimed</td><td></td></tr> <tr><td>Content of other nutrients</td><td></td></tr> </table> | Energy | Kcal | Protein                           | gm | Fat | gm                         | Saturated fat | gm | Trans fat  | gm     | Carbohydrate | gm | Sodium  | mg | Content of other nutrient claimed |     | Content of other nutrients |   | <p>Nutrition Labeling(三)</p> <p><b>Nutrition Labeling</b></p> <p>Serving size gm (ml)<br/>This package contains servings</p> <p>Per serving      Per 100 gm(ml)</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Energy</td><td>Kcal</td><td>Kcal</td></tr> <tr><td>Protein</td><td>gm</td><td>gm</td></tr> <tr><td>Fat</td><td>gm</td><td>gm</td></tr> <tr><td>Saturated fat</td><td>gm</td><td>gm</td></tr> <tr><td>Trans fat</td><td>gm</td><td>gm</td></tr> <tr><td>Carbohydrate</td><td>gm</td><td>gm</td></tr> <tr><td>Sodium</td><td>mg</td><td>mg</td></tr> <tr><td>Content of other nutrient claimed</td><td></td><td></td></tr> <tr><td>Content of other nutrients</td><td></td><td></td></tr> </table> | Energy | Kcal | Kcal      | Protein | gm | gm           | Fat | gm | gm     | Saturated fat | gm | gm                                | Trans fat | gm | gm                         | Carbohydrate | gm | gm | Sodium | mg | mg | Content of other nutrient claimed |  |  | Content of other nutrients |  |  |
| Energy   | Kcal   |      |         |         |     |    |               |    |           |               |              |    |           |    |                                   |              |                            |   |  |        |      |                                   |    |     |                            |               |    |  |        |              |    |         |    |                                   |     |                            |   |   |        |      |           |         |    |              |     |    |        |               |    |                                   |           |    |                            |              |    |    |        |    |    |                                   |  |  |                            |  |  |
| Protein  | gm     |      |         |         |     |    |               |    |           |               |              |    |           |    |                                   |              |                            |   |  |        |      |                                   |    |     |                            |               |    |  |        |              |    |         |    |                                   |     |                            |   |   |        |      |           |         |    |              |     |    |        |               |    |                                   |           |    |                            |              |    |    |        |    |    |                                   |  |  |                            |  |  |
| Fat  | gm     |      |         |         |     |    |               |    |           |               |              |    |           |    |                                   |              |                            |   |  |        |      |                                   |    |     |                            |               |    |  |        |              |    |         |    |                                   |     |                            |   |   |        |      |           |         |    |              |     |    |        |               |    |                                   |           |    |                            |              |    |    |        |    |    |                                   |  |  |                            |  |  |
| Saturated fat  | gm     |      |         |         |     |    |               |    |           |               |              |    |           |    |                                   |              |                            |   |  |        |      |                                   |    |     |                            |               |    |  |        |              |    |         |    |                                   |     |                            |   |   |        |      |           |         |    |              |     |    |        |               |    |                                   |           |    |                            |              |    |    |        |    |    |                                   |  |  |                            |  |  |
| Trans fat  | gm     |      |         |         |     |    |               |    |           |               |              |    |           |    |                                   |              |                            |   |  |        |      |                                   |    |     |                            |               |    |  |        |              |    |         |    |                                   |     |                            |   |   |        |      |           |         |    |              |     |    |        |               |    |                                   |           |    |                            |              |    |    |        |    |    |                                   |  |  |                            |  |  |
| Carbohydrate   | gm     |      |         |         |     |    |               |    |           |               |              |    |           |    |                                   |              |                            |   |  |        |      |                                   |    |     |                            |               |    |  |        |              |    |         |    |                                   |     |                            |   |   |        |      |           |         |    |              |     |    |        |               |    |                                   |           |    |                            |              |    |    |        |    |    |                                   |  |  |                            |  |  |
| Sodium   | mg     |      |         |         |     |    |               |    |           |               |              |    |           |    |                                   |              |                            |   |  |        |      |                                   |    |     |                            |               |    |  |        |              |    |         |    |                                   |     |                            |   |   |        |      |           |         |    |              |     |    |        |               |    |                                   |           |    |                            |              |    |    |        |    |    |                                   |  |  |                            |  |  |
| Content of other nutrient claimed  |        |      |         |         |     |    |               |    |           |               |              |    |           |    |                                   |              |                            |   |  |        |      |                                   |    |     |                            |               |    |  |        |              |    |         |    |                                   |     |                            |   |   |        |      |           |         |    |              |     |    |        |               |    |                                   |           |    |                            |              |    |    |        |    |    |                                   |  |  |                            |  |  |
| Content of other nutrients   |        |      |         |         |     |    |               |    |           |               |              |    |           |    |                                   |              |                            |   |  |        |      |                                   |    |     |                            |               |    |  |        |              |    |         |    |                                   |     |                            |   |   |        |      |           |         |    |              |     |    |        |               |    |                                   |           |    |                            |              |    |    |        |    |    |                                   |  |  |                            |  |  |
| Energy   | Kcal   |      |         |         |     |    |               |    |           |               |              |    |           |    |                                   |              |                            |   |  |        |      |                                   |    |     |                            |               |    |  |        |              |    |         |    |                                   |     |                            |   |   |        |      |           |         |    |              |     |    |        |               |    |                                   |           |    |                            |              |    |    |        |    |    |                                   |  |  |                            |  |  |
| Protein  | gm     |      |         |         |     |    |               |    |           |               |              |    |           |    |                                   |              |                            |   |  |        |      |                                   |    |     |                            |               |    |  |        |              |    |         |    |                                   |     |                            |   |   |        |      |           |         |    |              |     |    |        |               |    |                                   |           |    |                            |              |    |    |        |    |    |                                   |  |  |                            |  |  |
| Fat  | gm     |      |         |         |     |    |               |    |           |               |              |    |           |    |                                   |              |                            |   |  |        |      |                                   |    |     |                            |               |    |  |        |              |    |         |    |                                   |     |                            |   |   |        |      |           |         |    |              |     |    |        |               |    |                                   |           |    |                            |              |    |    |        |    |    |                                   |  |  |                            |  |  |
| Saturated fat  | gm     |      |         |         |     |    |               |    |           |               |              |    |           |    |                                   |              |                            |   |  |        |      |                                   |    |     |                            |               |    |  |        |              |    |         |    |                                   |     |                            |   |   |        |      |           |         |    |              |     |    |        |               |    |                                   |           |    |                            |              |    |    |        |    |    |                                   |  |  |                            |  |  |
| Trans fat  | gm     |      |         |         |     |    |               |    |           |               |              |    |           |    |                                   |              |                            |   |  |        |      |                                   |    |     |                            |               |    |  |        |              |    |         |    |                                   |     |                            |   |   |        |      |           |         |    |              |     |    |        |               |    |                                   |           |    |                            |              |    |    |        |    |    |                                   |  |  |                            |  |  |
| Carbohydrate   | gm     |      |         |         |     |    |               |    |           |               |              |    |           |    |                                   |              |                            |   |  |        |      |                                   |    |     |                            |               |    |  |        |              |    |         |    |                                   |     |                            |   |   |        |      |           |         |    |              |     |    |        |               |    |                                   |           |    |                            |              |    |    |        |    |    |                                   |  |  |                            |  |  |
| Sodium   | mg     |      |         |         |     |    |               |    |           |               |              |    |           |    |                                   |              |                            |   |  |        |      |                                   |    |     |                            |               |    |  |        |              |    |         |    |                                   |     |                            |   |   |        |      |           |         |    |              |     |    |        |               |    |                                   |           |    |                            |              |    |    |        |    |    |                                   |  |  |                            |  |  |
| Content of other nutrient claimed  |        |      |         |         |     |    |               |    |           |               |              |    |           |    |                                   |              |                            |   |  |        |      |                                   |    |     |                            |               |    |  |        |              |    |         |    |                                   |     |                            |   |   |        |      |           |         |    |              |     |    |        |               |    |                                   |           |    |                            |              |    |    |        |    |    |                                   |  |  |                            |  |  |
| Content of other nutrients   |        |      |         |         |     |    |               |    |           |               |              |    |           |    |                                   |              |                            |   |  |        |      |                                   |    |     |                            |               |    |  |        |              |    |         |    |                                   |     |                            |   |   |        |      |           |         |    |              |     |    |        |               |    |                                   |           |    |                            |              |    |    |        |    |    |                                   |  |  |                            |  |  |
| Energy   | Kcal   | Kcal |         |         |     |    |               |    |           |               |              |    |           |    |                                   |              |                            |   |  |        |      |                                   |    |     |                            |               |    |  |        |              |    |         |    |                                   |     |                            |   |   |        |      |           |         |    |              |     |    |        |               |    |                                   |           |    |                            |              |    |    |        |    |    |                                   |  |  |                            |  |  |
| Protein  | gm     | gm   |         |         |     |    |               |    |           |               |              |    |           |    |                                   |              |                            |   |  |        |      |                                   |    |     |                            |               |    |  |        |              |    |         |    |                                   |     |                            |   |   |        |      |           |         |    |              |     |    |        |               |    |                                   |           |    |                            |              |    |    |        |    |    |                                   |  |  |                            |  |  |
| Fat  | gm     | gm   |         |         |     |    |               |    |           |               |              |    |           |    |                                   |              |                            |   |  |        |      |                                   |    |     |                            |               |    |  |        |              |    |         |    |                                   |     |                            |   |   |        |      |           |         |    |              |     |    |        |               |    |                                   |           |    |                            |              |    |    |        |    |    |                                   |  |  |                            |  |  |
| Saturated fat  | gm     | gm   |         |         |     |    |               |    |           |               |              |    |           |    |                                   |              |                            |   |  |        |      |                                   |    |     |                            |               |    |  |        |              |    |         |    |                                   |     |                            |   |   |        |      |           |         |    |              |     |    |        |               |    |                                   |           |    |                            |              |    |    |        |    |    |                                   |  |  |                            |  |  |
| Trans fat  | gm     | gm   |         |         |     |    |               |    |           |               |              |    |           |    |                                   |              |                            |   |  |        |      |                                   |    |     |                            |               |    |  |        |              |    |         |    |                                   |     |                            |   |   |        |      |           |         |    |              |     |    |        |               |    |                                   |           |    |                            |              |    |    |        |    |    |                                   |  |  |                            |  |  |
| Carbohydrate   | gm     | gm   |         |         |     |    |               |    |           |               |              |    |           |    |                                   |              |                            |   |  |        |      |                                   |    |     |                            |               |    |  |        |              |    |         |    |                                   |     |                            |   |   |        |      |           |         |    |              |     |    |        |               |    |                                   |           |    |                            |              |    |    |        |    |    |                                   |  |  |                            |  |  |
| Sodium   | mg     | mg   |         |         |     |    |               |    |           |               |              |    |           |    |                                   |              |                            |   |  |        |      |                                   |    |     |                            |               |    |  |        |              |    |         |    |                                   |     |                            |   |   |        |      |           |         |    |              |     |    |        |               |    |                                   |           |    |                            |              |    |    |        |    |    |                                   |  |  |                            |  |  |
| Content of other nutrient claimed  |        |      |         |         |     |    |               |    |           |               |              |    |           |    |                                   |              |                            |   |  |        |      |                                   |    |     |                            |               |    |  |        |              |    |         |    |                                   |     |                            |   |   |        |      |           |         |    |              |     |    |        |               |    |                                   |           |    |                            |              |    |    |        |    |    |                                   |  |  |                            |  |  |
| Content of other nutrients   |        |      |         |         |     |    |               |    |           |               |              |    |           |    |                                   |              |                            |   |  |        |      |                                   |    |     |                            |               |    |  |        |              |    |         |    |                                   |     |                            |   |   |        |      |           |         |    |              |     |    |        |               |    |                                   |           |    |                            |              |    |    |        |    |    |                                   |  |  |                            |  |  |
| <p>Nutrition Labeling(四)</p> <p><b>Nutrition Labeling</b></p> <p>Serving size gm (ml)<br/>This package contains servings</p> <p>Per Serving   Percentage of Daily Value of Nutrient Intake* provided by per serving</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Energy</td><td>Kcal</td><td>%</td></tr> <tr><td>Protein</td><td>gm</td><td>%</td></tr> <tr><td>Fat</td><td>gm</td><td>%</td></tr> <tr><td>Saturated fat</td><td>gm</td><td>%</td></tr> <tr><td>Trans fat</td><td>gm</td><td>%</td></tr> <tr><td>Carbohydrate</td><td>gm</td><td>%</td></tr> <tr><td>Sodium</td><td>mg</td><td>%</td></tr> <tr><td>Content of other nutrient claimed</td><td></td><td></td></tr> <tr><td>Content of other nutrients</td><td></td><td></td></tr> </table> <p><small>*Daily Value of Nutrient Intake:2000 Kcal of energy, 60 gram of protein, 5 gram of fat, 18 gram of saturated fat, 320 gram of carbohydrate, and 2400 mg of sodium</small></p> | Energy | Kcal | %       | Protein | gm  | %  | Fat           | gm | %         | Saturated fat | gm           | %  | Trans fat | gm | %                                 | Carbohydrate | gm                         | % | Sodium   | mg     | %    | Content of other nutrient claimed |    |     | Content of other nutrients |               |    | <p>Nutrition Labeling(五)</p> <p><b>Nutrition Labeling</b></p> <p>Per 100 gm(ml)   Percentage of Daily Value of Nutrient Intake* provided by per 100 gm(ml)</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Energy</td><td>Kcal</td><td>%</td></tr> <tr><td>Protein</td><td>gm</td><td>%</td></tr> <tr><td>Fat</td><td>gm</td><td>%</td></tr> <tr><td>Saturated fat</td><td>gm</td><td>%</td></tr> <tr><td>Trans fat</td><td>gm</td><td>%</td></tr> <tr><td>Carbohydrate</td><td>gm</td><td>%</td></tr> <tr><td>Sodium</td><td>mg</td><td>%</td></tr> <tr><td>Content of other nutrient claimed</td><td></td><td></td></tr> <tr><td>Content of other nutrients</td><td></td><td></td></tr> </table> <p><small>Daily Value of Nutrient Intake:2000 Kcal of energy, 60 gram of protein, 55 gram of fat, 18 gram of saturated fat, 320 gram of carbohydrate, and 2400 mg of sodium.</small></p> | Energy | Kcal         | %  | Protein | gm | %                                 | Fat | gm                         | % | Saturated fat   | gm     | %    | Trans fat | gm      | %  | Carbohydrate | gm  | %  | Sodium | mg            | %  | Content of other nutrient claimed |           |    | Content of other nutrients |              |    |    |        |    |    |                                   |  |  |                            |  |  |
| Energy   | Kcal   | %    |         |         |     |    |               |    |           |               |              |    |           |    |                                   |              |                            |   |  |        |      |                                   |    |     |                            |               |    |  |        |              |    |         |    |                                   |     |                            |   |   |        |      |           |         |    |              |     |    |        |               |    |                                   |           |    |                            |              |    |    |        |    |    |                                   |  |  |                            |  |  |
| Protein  | gm     | %    |         |         |     |    |               |    |           |               |              |    |           |    |                                   |              |                            |   |  |        |      |                                   |    |     |                            |               |    |  |        |              |    |         |    |                                   |     |                            |   |   |        |      |           |         |    |              |     |    |        |               |    |                                   |           |    |                            |              |    |    |        |    |    |                                   |  |  |                            |  |  |
| Fat  | gm     | %    |         |         |     |    |               |    |           |               |              |    |           |    |                                   |              |                            |   |  |        |      |                                   |    |     |                            |               |    |  |        |              |    |         |    |                                   |     |                            |   |   |        |      |           |         |    |              |     |    |        |               |    |                                   |           |    |                            |              |    |    |        |    |    |                                   |  |  |                            |  |  |
| Saturated fat  | gm     | %    |         |         |     |    |               |    |           |               |              |    |           |    |                                   |              |                            |   |  |        |      |                                   |    |     |                            |               |    |  |        |              |    |         |    |                                   |     |                            |   |   |        |      |           |         |    |              |     |    |        |               |    |                                   |           |    |                            |              |    |    |        |    |    |                                   |  |  |                            |  |  |
| Trans fat  | gm     | %    |         |         |     |    |               |    |           |               |              |    |           |    |                                   |              |                            |   |  |        |      |                                   |    |     |                            |               |    |  |        |              |    |         |    |                                   |     |                            |   |   |        |      |           |         |    |              |     |    |        |               |    |                                   |           |    |                            |              |    |    |        |    |    |                                   |  |  |                            |  |  |
| Carbohydrate   | gm     | %    |         |         |     |    |               |    |           |               |              |    |           |    |                                   |              |                            |   |  |        |      |                                   |    |     |                            |               |    |  |        |              |    |         |    |                                   |     |                            |   |   |        |      |           |         |    |              |     |    |        |               |    |                                   |           |    |                            |              |    |    |        |    |    |                                   |  |  |                            |  |  |
| Sodium   | mg     | %    |         |         |     |    |               |    |           |               |              |    |           |    |                                   |              |                            |   |  |        |      |                                   |    |     |                            |               |    |  |        |              |    |         |    |                                   |     |                            |   |   |        |      |           |         |    |              |     |    |        |               |    |                                   |           |    |                            |              |    |    |        |    |    |                                   |  |  |                            |  |  |
| Content of other nutrient claimed  |        |      |         |         |     |    |               |    |           |               |              |    |           |    |                                   |              |                            |   |  |        |      |                                   |    |     |                            |               |    |  |        |              |    |         |    |                                   |     |                            |   |   |        |      |           |         |    |              |     |    |        |               |    |                                   |           |    |                            |              |    |    |        |    |    |                                   |  |  |                            |  |  |
| Content of other nutrients   |        |      |         |         |     |    |               |    |           |               |              |    |           |    |                                   |              |                            |   |  |        |      |                                   |    |     |                            |               |    |  |        |              |    |         |    |                                   |     |                            |   |   |        |      |           |         |    |              |     |    |        |               |    |                                   |           |    |                            |              |    |    |        |    |    |                                   |  |  |                            |  |  |
| Energy   | Kcal   | %    |         |         |     |    |               |    |           |               |              |    |           |    |                                   |              |                            |   |  |        |      |                                   |    |     |                            |               |    |  |        |              |    |         |    |                                   |     |                            |   |   |        |      |           |         |    |              |     |    |        |               |    |                                   |           |    |                            |              |    |    |        |    |    |                                   |  |  |                            |  |  |
| Protein  | gm     | %    |         |         |     |    |               |    |           |               |              |    |           |    |                                   |              |                            |   |  |        |      |                                   |    |     |                            |               |    |  |        |              |    |         |    |                                   |     |                            |   |   |        |      |           |         |    |              |     |    |        |               |    |                                   |           |    |                            |              |    |    |        |    |    |                                   |  |  |                            |  |  |
| Fat  | gm     | %    |         |         |     |    |               |    |           |               |              |    |           |    |                                   |              |                            |   |  |        |      |                                   |    |     |                            |               |    |  |        |              |    |         |    |                                   |     |                            |   |   |        |      |           |         |    |              |     |    |        |               |    |                                   |           |    |                            |              |    |    |        |    |    |                                   |  |  |                            |  |  |
| Saturated fat  | gm     | %    |         |         |     |    |               |    |           |               |              |    |           |    |                                   |              |                            |   |  |        |      |                                   |    |     |                            |               |    |  |        |              |    |         |    |                                   |     |                            |   |   |        |      |           |         |    |              |     |    |        |               |    |                                   |           |    |                            |              |    |    |        |    |    |                                   |  |  |                            |  |  |
| Trans fat  | gm     | %    |         |         |     |    |               |    |           |               |              |    |           |    |                                   |              |                            |   |  |        |      |                                   |    |     |                            |               |    |  |        |              |    |         |    |                                   |     |                            |   |   |        |      |           |         |    |              |     |    |        |               |    |                                   |           |    |                            |              |    |    |        |    |    |                                   |  |  |                            |  |  |
| Carbohydrate   | gm     | %    |         |         |     |    |               |    |           |               |              |    |           |    |                                   |              |                            |   |  |        |      |                                   |    |     |                            |               |    |  |        |              |    |         |    |                                   |     |                            |   |   |        |      |           |         |    |              |     |    |        |               |    |                                   |           |    |                            |              |    |    |        |    |    |                                   |  |  |                            |  |  |
| Sodium   | mg     | %    |         |         |     |    |               |    |           |               |              |    |           |    |                                   |              |                            |   |  |        |      |                                   |    |     |                            |               |    |  |        |              |    |         |    |                                   |     |                            |   |   |        |      |           |         |    |              |     |    |        |               |    |                                   |           |    |                            |              |    |    |        |    |    |                                   |  |  |                            |  |  |
| Content of other nutrient claimed  |        |      |         |         |     |    |               |    |           |               |              |    |           |    |                                   |              |                            |   |  |        |      |                                   |    |     |                            |               |    |  |        |              |    |         |    |                                   |     |                            |   |   |        |      |           |         |    |              |     |    |        |               |    |                                   |           |    |                            |              |    |    |        |    |    |                                   |  |  |                            |  |  |
| Content of other nutrients   |        |      |         |         |     |    |               |    |           |               |              |    |           |    |                                   |              |                            |   |  |        |      |                                   |    |     |                            |               |    |  |        |              |    |         |    |                                   |     |                            |   |   |        |      |           |         |    |              |     |    |        |               |    |                                   |           |    |                            |              |    |    |        |    |    |                                   |  |  |                            |  |  |

## 2.8 Nutrient Claim:

### Regulations on Nutrition Claims for Conventional Foods

The regulations are established to define the descriptive wording used to show the amount of nutrients in packaged food. Nutrition claims are divided into two categories "appropriate intake needed" and "supplementary intake needed" subject to the impact of the intake of the particular nutrient on national health.

- (1) Excessive intake of nutrients such as calories, fat, saturated fatty acids,

cholesterol, sodium and sugar will adversely affect national health, therefore such nutrients are listed in the declaration reading "appropriate intake needed."

- (2) Inadequate intake of nutrients such as dietary fiber, Vitamin A, Vitamin B1, Vitamin B2, Vitamin C, Vitamin E, calcium and iron will affect national health, therefore such nutrients are claimed in the nutrition claims for "supplementary intake needed."
- (3) These Regulations shall not apply to "Foods in capsule and tablet forms with limited daily intake labeling", "Healthy Food" and "Special Dietary Food."
- (4) The nutrient contents of energy, protein, fat, carbohydrate, sodium, saturated fat, sugars and trans fat may be labeled as "0" if it meets the criteria in the following chart: trans fat refers to edible oils that become non-conjugated fatty acids after partial hydrogenation.

| <b>Nutrient Criteria for being labeled as "0"</b> |   |
|---|---|
| <b>Nutrient</b>                                   | <b>Criteria for being labeled as "0"</b>  |
| Energy  | Nutrient content is less than 4 Kcal for 100 gram of solid (semi-solid) food or 100 ml of liquid food   |
| Protein   | Nutrient content is less than 0.5 gram for 100 gram of solid (semi-solid) food or 100 ml of liquid food |
| Fat   |   |
| Carbohydrate                                      |   |
| Sodium  | Nutrient content is less than 5 mg for 100 gram of solid (semi-solid) food or 100 ml of liquid food     |
| Saturated fatty acids                             | Nutrient content is less than 0.1 gram for 100 gram of solid (semi-solid) food or 100 ml of liquid food |
| Trans fat   | Nutrient content is less than 0.3 gram for 100 gram of solid (semi-solid) food or 100 ml of liquid food |
| Sugar   | Nutrient content is less than 0.5 gram for 100 gram of solid (semi-solid) food or 100 ml of liquid food |

Note: The sugar is the total amount of monosaccharide and disaccharide.

## **2.9 Consumer Protection Law**

The Consumer Protection Law (hereinafter "this law") is enacted for the purposes of protecting the interests of consumers, facilitating the safety of the consumer life of nationals, and improving the quality of the consumer life of nationals.

The specification of the Article 24 of this law is that business operators shall label on the products or for services in accordance with the Products Labeling Law and other relevant laws and regulations. The label shall be marked at an appropriate place so as to enable consumers to review the contents thereof prior to the transaction and use of the goods.

## 2.10 CAS and GMP Product Certification and Other Quality Guarantee

### (1) CAS:

The Logo of Certified Agricultural Standards (CAS) represents the certification for the Taiwan premium domestic agricultural produce and their processed products. According to the principles of “Quality Agriculture” and “Safety Agriculture”, the Council of Agriculture (COA), Executive Yuan, has started promoting CAS logo since 1989. Presently , there are a total of 14 major CAS certified categories including meat, frozen foods, fruit and vegetable juice, quality rice, preserved fruits and vegetables, ready-to-serve meals, refrigerated foods, fresh edible mushrooms, fermented foods, snack foods, egg products, minimum processed fruits and vegetables, aquaculture and forestry products, etc. Based on the CAS statistics of the Taiwan Premium Agricultural Product Development Institute of Taiwan, as many as 721 frozen food items from 55 manufacturing plants in Taiwan had been awarded CAS certification as of August 31, 2012.



### (2) GMP:

The Logo of Good Manufacturing Practice (GMP) focuses on the self-management system of product quality and hygiene practice during the manufacturing process which should be via a third-party certification. According to the statistics on GMP (issued by Ministry of Economic Affairs, Executive Yuan) in Taiwan, as many as 3,667 food products from 439 manufacturing plants in Taiwan had been awarded GMP certification as of September 10, 2012.



### (3) Health Food:

The Logo of Health Food is according to the “Health Food Control Act”, the Department of Health (DOH), Executive Yuan, has started promoting Health Food logo since 1999. For the purposes of this Act, the term "Health Food" shall denote food with health care effects, having been labeled or advertised with such effects. The term “health care effects” shall mean an effect that has been scientifically proven to



be capable of improving people's health, and decreasing the harms and risks of diseases. However, it is not a medical treatment aimed at treating or remedying human diseases; such "health care effects" shall be announced by the central competent authority. Presently, there are a total 236 products of 13 major certified "health care effects" in Taiwan had been awarded Health Food certification as of September 10, 2012. It shall be conspicuously displayed reference number of the permit, the legend of "health food", standard logo, the approved health care effects, etc., on the containers, packaging or written instruction of health food in Chinese and in commonly used symbols.

#### (4) Fresh Milk Logo

The fresh milk logo is used to protection of consumer rights and to encourage manufacturers to produce pure domestic milk. The government gives approval to carry the logo if the amount of qualified raw milk is sufficient and the amount of fresh milk produced by every dairy plant for that product is sufficient and consistent. Therefore, consumers should purchase fresh milk carrying the symbol of fresh milk in order to protect their rights.



### **2.11 Food Advertisement (Article 19 of Act Governing Food Sanitation)**

The labeling, promotion or advertisement of foods, food additives or food cleansers shall not be false, exaggerated or misleading. Foods shall not be so labeled, promoted or advertised as having medical efficacy. The central competent authority may prescribe restrictions on the scope, method and venue of advertising for special dietary foods.

A media business being commissioned by a principal to publish or broadcast an advertisement shall maintain the particulars of its principal, such as its name (corporate or group name), identify number, business license number, domicile (firm or business office) and telephone number, etc., for six months from the date of such advertisement, and shall not evade, impede or refuse any request by the competent authority for such particulars.

### **3. Opportunities and challenges in the food labeling faced by small and medium enterprises.**

- 3.1 There's no prior preview for food labeling and advertising but the industry must follow the regulations and truthfully label the products base on the spirit of self-management. Some SMEs are prone to misunderstand the food labeling regulations due to different degrees of recognition. Thus lead to the products must be recalled and corrections made within a prescribed time period and pay the penalty.
- 3.2 In order to comply with the consumer's issues, the government takes actions to promote and amend the regulations of food labeling and corporate guidelines which make the industry re-design and re-manufacture the package. The focus concerns of the enterprise are the absorption of the cost of packaging materials, the buffer deadline of the correction of packaging materials, and the timeliness for packaging materials extended.
- 3.3 Regarding the food labeling, the industry is looking forward to the comprehensive policy made by the government. They don't want to constantly specific food events to repeatedly reproduce the package labeling.

### **4. Examples of best practices and initiatives on labeling of food products**

#### 4.1 Example 1: Label of Content for Packed Fruit Juice and Vegetable Juice

In 2006, the media reported that the labeling of commercially available juice beverage products is chaos. It's difficult for consumers to understand the difference among "natural juice", "from concentrate" and "fruit drink" from the product label information. In order to avoid misleading consumers, the DOH has developed the regulation of the % juice declaration, and if the % juice content is less than 10%, it's not allowed to label the "juice" word.

In order to allow businesses and consumers to express opinions, the DOH held public hearings and collected opinions, then promulgated the regulation as following:

- (1) Since June 1, 2007, commercially packaged fruit and vegetable juice drinks shall **conspicuously label the % juice content** in accordance with "CNS2377 (national standard) fruit and vegetable juice drinks (packaged)".
- (2) The % juice declaration shall clearly label on the front label panel (the principal product name display panel). The lettering size and color shall in accordance with the regulation as following table:

|                 | Product Volume (mL)  | Labeling Height(cm) |
|-----------------|--|---------------------|
| Lettering Size  | $\leq 150$   | $\geq 0.3$          |
|                 | 151~300  | $\geq 0.5$          |
|                 | 301~600  | $\geq 0.8$          |
|                 | $\geq 601$   | $\geq 1.2$          |
| Lettering Color | The lettering should contrast sufficiently with the background to be easy to read. |                     |

- (3) In accordance with the definition of CNS2377, if the % juice content is less than 10%, it's not allowed to label the "juice" or "juice drink" word.
- (4) As a general beverages management, no label the % juice declaration if it's less than 10%. However, in order to ensure health and safety, the industry should truthfully list ingredients in descending order of predominance by weight in accordance with the "Sanitation Standard for Beverage" and "Article 17 of Act Governing Food Sanitation".

In July, 2012, consumer protection groups and legislators considered that the beverages containing minor amounts of juice for flavoring are not required to bear a % juice declaration if the % juice content is less than 10%. However, in fact most of commercially available juice beverages are compounds modulation, but with a true picture of fruit on the label or take the fruit implications beverages name. People seem misled because those beverages are not really juice ones. The consumer protection groups used 60 commercially available beverages which were contained less than 10% juice content or exclusive of fruit juice to be testing samples. The survey found that the misunderstanding index among the first 10 easily misunderstood fruit-flavored beverages of testing adults and elementary school students were 30~50% and 60~83%, respectively. The consumer protection groups appealed through the media that the DOH should amend the regulation to require the industries to clearly label "the % juice content" or "exclusive of fruit juice" if the beverages only with fruit flavors on the beverages packaging.

In order to respond to consumers' expectations and to balance the relevant regulations amendments of the beverage manufacturing SMEs, the Taiwan Food and Drug Administration (TFDA) is collecting the relevant provisions of other countries for the labeling of beverages (including or exclusive of fruit juice), and are going to invite legislators, the consumer protection groups, and industries to join a instruction meeting which will be held to understand the feasibility of:

- (1) The % juice declaration for the beverages containing less than 10% juice.
- (2) Labeling "exclusive of fruit juice" (or letters with the same meaning) for the beverages containing fruit flavors by food additives.

- (3) The appropriateness of photo demonstration for the beverages exclusive of fruit juice.

#### 4.2 Example 2: Regulations of Labeling for Vacuum Packed Food

In Taiwan, there were 8 incidents 11 cases of the *Botulism* occurred in 2010, and 1 was death. The suspected of causing poisoning was vacuum packaging dried tofu. The investigation found that the most dried tofu products by SMEs or family industries. Those industries made the products vacuum packed in order to transport easily and help extend shelf life. However, due to poor environmental sanitation or vacuum-packed ready-to-eat food without commercial sterilization, the *Botulinum* was increasing in anaerobic environments, and caused by the poisoning.

In order to avoid recurrence of the *Botulism* and to strengthen the food safety management of the industry for vacuum packaged food, the DOH promulgated “Good Hygiene Practice for Vacuum Packed Food” and “The Registration Requirement for Vacuum-packed Ready to Eat Soybean food” on August 22 and November 7, 2011, respectively. The DOH also held many industry education and training programs to guide the industry how to follow up these practice and regulation.

##### (1) “Good Hygiene Practice for Vacuum Packed Food”

- I. This practice is applicable to related food proprietors of vacuum-packed, RTE (ready-to-eat) foods.
- II. In addition to complying with the related stipulations in this practice, related food proprietors of vacuum-packed, RTE foods shall also comply with the stipulations in the Good Hygiene Practice for foods.
- III. This practice provides the Good Hygiene Practice for vacuum-packed and RTE (ready-to-eat) foods sold and stored at room temperature, cold storage, and stored in refrigeration.
- IV. The registration shall be required for vacuum-packed, RTE foods which are high-risk in *Botulism* as determined by risk assessment.

##### (2) “The Registration Requirement for Vacuum-packed Ready to Eat Soybean food”

- I. On submission for registration of vacuum-packed RTE soybean food, the applicant is required to fill out the application form.
- II. Except the food sold and stored at room temperature which conform to the Good Hygiene Practice for Vacuum Packed Food, the label “Advice to cook before eating” should be marked on vacuum-packed RTE soybean foods. The label should be marked on the easily-seen area of the front side on the outer package of the smallest selling unit. The typeface of the labeled words should not be smaller than 0.5cm both in length and width.



In order to easily identify the qualified vacuum-packed food by the DOH or the DOH commissioned verification agency for the people, the vacuum-packed food logo could be marked on the packaging of registered products. The DOH also advocates preventing the *Botulism* through the mass media (including newspapers, magazines, radio, television, bus ads, etc.)

In addition, the labeling for vacuum packed food is according with “The Regulations of Labeling for Vacuum Packed Food” which contains as the following: Labeling content: If the vacuum packed RTE food is stored in cold storage or refrigeration, the label “stored in cold storage” or “stored in refrigeration” shall be marked on it. The vacuum packed not RTE food (except fresh agricultural, animal and fishery products) shall be marked the label “It is not ready to eat. It shall be heated adequately before eating.”

Since the “Good Hygiene Practice for Vacuum Packed Food”, “The Registration Requirement for Vacuum-packed Ready to Eat Soybean food” and “The Regulations of Labeling for Vacuum Packed Food” were promulgated, the events causing by *Botulism* due to consumption of vacuum-packaged RTE food hasn’t happened again.

## **5. Obstacles and opportunities faced by food regulators and the industry due to eco-labeling based on processes and production methods (ppm).**

The Cabinet-level Environmental Protection Administration (EPA) is working on a system to label the carbon footprints of consumption products as part of efforts to reduce greenhouse gas emissions. Taiwan is the latest nation to float a plan to label the carbon footprint of common consumer packaged goods, following in the footsteps of the UK and Sweden. The new labeling program, from Taiwan’s Environmental Protection Administration, will at first apply to PET-bottled beverages, cookies and other products (such as candles and CDs).

### 5.1 Opportunities:

- (1) It’s global trend for protecting environment.
- (2) The program may help speed the acceptance of carbon labels worldwide, as many Taiwanese products are also exported.
- (3) The central government (Executive Yuan) requires the relevant competent authorities to budget and assist with the program.
- (4) TFDA has been put into the program to assist with the short- medium- and long-term goals.
- (5) Carbon footprints label program can make consumers to understand and priority in purchasing alternatives with lower carbon emissions, thus creating market incentives for manufacturers to develop and supply more environmentally food



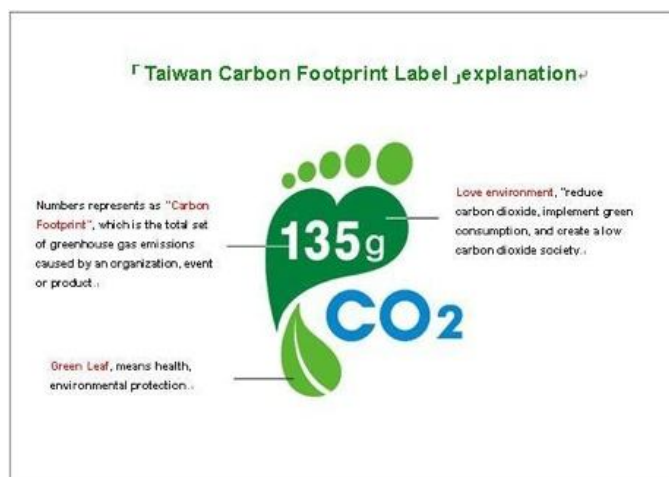
and beverage products and reducing pollution and managing waste.

- (6) The industry can understand the proportion of greenhouse gas during each life cycle stages according to the analysis of the product carbon footprint. Further, the industry also can review the strategies of decreasing greenhouse gas emissions. For example, reduce negative environmental impacts that may occur during the manufacturing, utilization, consumption and disposal of a product.

## 5.2 Obstacles:

- (1) The inter-ministerial coordination is difficult, because the carbon footprint label program was ruled by the EPA, and other relevant competent authorities assist in it.
- (2) The industry need to spend more extra cost to test and verify the carbon footprint.
- (3) The certified carbon footprint foods are few, only 39 beverages and 19 processed foods.
- (4) The consumers have limited recognition for carbon footprint.
- (5) Currently, there is no international standard or carbon footprint labeling system.

Listed below are examples of carbon footprint logo and certified products in Taiwan:



750g  
CO<sub>2</sub>  
Carbon Footprint  
Taiwan EPA

碳標字第 1102202202 號  
1 瓶 2000PET 可口可樂  
<http://www.epa.gov.tw>

本產品碳足跡依據「產品與服務碳足跡計算指引」、「汽水(碳酸水)產品類別規則」、SimaPro 工具，計算結果為 766.45g，生命週期各階段碳足跡比例如下圖所示：

主要排放來自包裝與內容物，其次為廠內製造及運輸配送，將針對包裝設計、供應商能源管理及運輸配送模式優先著手，預計 2012 年減少 5% 之排放量。請於本產品使用完後，將飲料罐資源回收，進一步降低碳排放量。

750g  
CO<sub>2</sub>  
Carbon Footprint  
Taiwan EPA

碳標字第 1102202202 號  
每 2000ml

寬: 1.2cm  
長: 1.4cm

2000ml

牛軋糖博物館  
Taiwan Nougat Museum

大甲松小栢口  
SINCE 1982  
全蛋酥一年製糖 GMV 100%

160g  
CO<sub>2</sub>  
Carbon Footprint  
Taiwan EPA

製糖字號 00000000  
聯合工廠製餅  
台灣名產

土鳳梨酥  
Pineapple Pastry  
ハイツابل パステリー

380g  
CO<sub>2</sub>  
Carbon Footprint  
Taiwan EPA

碳標字第 1102009001 號  
1 瓶 500PET 美粒果柳橙口味  
<http://www.epa.gov.tw>

本產品碳足跡依據「產品與服務碳足跡計算指引」、「果汁飲料產品類別規則」、SimaPro 工具，計算結果為 389.01g，生命週期各階段碳足跡比例如下圖所示：

主要排放來自包裝與內容物，其次為廠內製造及運輸配送，將針對包裝設計、供應商能源管理及運輸配送模式優先著手，預計 2012 年減少 5% 之排放量。請於本產品使用完後，將飲料罐資源回收，進一步降低碳排放量。

380g  
CO<sub>2</sub>  
Carbon Footprint  
Taiwan EPA

碳標字第 1102009001 號  
每 500ml

寬: 0.8cm  
長: 0.7cm

美粒果  
柳橙汁

Minute Maid  
柳橙汁

10% 果汁



280g  
CO<sub>2</sub>  
Carbon Footprint  
Taiwan EPA

碳標字第 0000 號  
每 600 ml