

## Specification of Dongshan Bai Lu Sun

### 1-Name of the Product

Dongshan Bai Lu Sun

### 2-Description of the Product

Dongshan Bai Lu Sun is fresh asparagus that is cultivated by traditional production techniques in Dongshan County, Fujian Province, and is processed into canned products in the administrative regions of Zhangzhou City. The features see below:

**Appearance:** The asparagus stem is thick with a round tip and the squama is dense. The length of the green stem tip is no more than 1centimer. It's delicate with a nice flavor. Canned delicate stem is snowy white and can see **no yellow** color. The color of the soup is homogeneous .

**Physical and Chemical Indicators:** Stem diameter of **0.4-2.6** cm, crude fiber content  $\leq$  1.0%, and soluble sugar content  $\geq$  4.70%.

### 3-Definition of the Geographical Area:

The area for geographical indication protection of Dongshan Asparagus is comprised of the seven towns of Dongshan (Island) County, namely Kangmei town, Chencheng town, Qianlou town, Xipu town, Zhangtang town, Xingchen town and Tongling town.

Soil type: Sandy loam, pH5.0-7.0, soil organic matter content  $\geq$  0.8%.

Processing must be done in the administrative regions of Zhangzhou City.

### 4-Proof of origin

The harvesting asparagus comes from the planting base in the protected areas. The enterprises' record for the raw materials can clearly reflect the information such as asparagus planting plots in the protected areas, acquisition time, yields and so on. Processing enterprises must build a standardized record from cultivation to finished system and product traceability system.

A batch number must be printed on each packaging of products, which can accurately reflect the information such as manufacturer, packaging date, planning plot and so on.

### 5-Method of Production

#### The production procedure of Dongshan Bai Lu Sun:

Seed selection—cultivate good seedling—asparagus garden programming—garden construction—planting—field management (keep the parent stem—fertilizer and water management—add soil and sand—comprehensive prevention and control of disease, pest damage)—harvesting—grading and packing—transportation—processing (market sale).

#### Features of the production and agricultural techniques:

1. Variety : Gi jnlm , Thielim

2. Soil Condition: Sandy loam, pH5.0-7.0, soil organic matter content  $\geq$  0.8%.

3. Cultivate good seedling : Sowing time for the May -Jun, number of trees per square meter  $\leq 200$  , Seedling height  $\geq 25$  cm, tree with three or more stems can be planted.

4. Planting: Planting time for August-September, the density per hectare  $\leq 16500$  trees, line spacing  $\geq 1.6$  Meters.

5. Fertilization: High quality organic fertilizer per hectare  $\geq 30000$ kg

6. Add soil and sand: Add clean sea sand and soil 5-10 days before harvest, height of 22 cm -25 cm.

7. Management for harvesting and keeping the mother stalks: Harvest twice yearly, respectively, late April to late July and early September to late October. Each plant with 5-6 parent stems is kept during harvest. The farmers pick the tender stem of the asparagus twice a day, which is in the morning and at night fall. Wrap the delicate stems with a damp cloth and place them in the shade, and then send to processing plants within 12 hours.

## **6-Causal Link between the Geographical Area and the Production Specificity**

Dongshan Bai Lu Sun has a very high quality; it is attractive in appearance with a unique flavor, rich in nutrition and popular among customers both at home and abroad. All of these are closely connected to the geographical environment, natural conditions and human factors of Dongshan County.

1. The relationship between temperature and quality:

Dongshan County is located between a Northern latitude of  $23^{\circ} 34'$  and  $23^{\circ} 47'$  and an Eastern longitude of  $117^{\circ} 18'$  and  $117^{\circ} 35'$  and is surrounded by sea. The climate belongs to the southern Asian tropical marine climate, which is warm in winter and cool in summer. The average annual temperature is  $20.8^{\circ}\text{C}$ . The highest temperatures occur in July and August with an average temperature of  $27^{\circ}\text{C}$ ; and the lowest temperature occurring in February, which has an average temperature of  $12.8^{\circ}\text{C}$ . Growing under this type of climate, the asparagus grows vigorously with a high yield and good quality.

2. The relationship between the soil and the quality:

The soil in Dongshan is mostly sand soil, which is soft with good ventilation and conducive to the growth of the asparagus' roots. Growing in the soil, the roots can grow strong, and the leaves will also form quickly and in plentiful amounts. Therefore, more photosynthetic products which supply the energy for the growth of young stems are accumulated.

3. The relationship between water and the quality:

Dongshan locates at an island with an annual precipitation of 1095mm, which is not evenly distributed among the seasons. The water used in irrigating Bai Lu Sun comes from deep water. The quality of the irrigating water is good, **free from pollution**. The PH value and the heavy metal content both comply with the national Grade I standard. The excellent water resource makes the asparagus fresh in taste.

#### 4. The relationship between sunlight and the quality:

Dongshan County has abundant sunlight, with the annual average daylight hours reaching 2386.8 hours. Sunlight is especially plentiful in autumn and winter. Abundant sunlight is conducive to the photosynthesis of the stem and leaves. The more photosynthesis taking place, the more nutrients provided for the growth of stems, which contributes a lot to high output and good quality Dongshan Bai Lu Sun.

#### 5. The relationship between the atmospheric environment and the quality:

Dongshan County is surrounded by sea and belongs to an oceanic climate with high quantities of fresh air. In addition, there is little industry and almost no heavy industry in the county, the air here is free from pollution. Significantly, the levels of SO<sub>2</sub>, nitrogen oxides and fluorine are all low. An inspection carried out by the Institute of Environmental Sciences of Zhangzhou City shows that, there is no standard excess of any of these pollutant gases. In the meantime, Dongshan County is environmentally green with a 96.2% virescence rate and 34.1% forestry coverage; it is regarded as the “Oasis of the East China Sea”. Dongshan County passed the inspection of the first batch of Island Ecological Agriculture Counties in China in 1998. Such environment and conditions contribute a lot to the premium quality of Dongshan Bai Lu Sun.

#### 6. The relationship between the production techniques and the quality:

##### ① Softening cultivation with sand:

Dongshan County has rich sea sand resource. The sand is silver white and very small, and is used to earth up white asparagus. Therefore, the surface of the asparagus stem here is snowy white, tender and straight, low level of lignification and less deformed shoots. The squama is dense.

##### ② Sea mud organic fertilizer:

Implement scientific application of fertilizers, mainly use the organic fertilizer. Dongshan County has a rich resource of sea mud. This provides ample source of natural organic fertilizer to the asparagus garden, so that the quality of Dongshan White Asparagus becomes more excellent.

##### ③ Harvesting and Mother Stalk Culture :

The method “Mother Stalk Culture” is used to produce white asparagus in Dongshan County. It coordinates the conflicts of asparagus growth and nutrition accumulation by using natural climatic resources. In this way, a high output, high efficiency and good quality are achieved.

### **7- Inspection Body**

Dongshan Division, Fujian Entry-exit Inspection and Quarantine Bureau

Address: Dongshan Port, Fujian Province

Postcode: 363401

TEL: +86-596-5622912

### **8- Labelling**

The packing mark of the same consignment should be completely uniform in form and content.

Besides the company's registered trademark, every packing case should be labeled at eye-striking places outside the box with the name of the Geographical Indication product—Dongshan Bai Lu Sun, and the GI protective product specialized marks (labels). Meanwhile, it should be labeled with product type, grade (specification), net weight, place of origin, and manufacturer. The wording should be clear and correct, and the color should not be easy to drop out. The marks outside the box should be matched with the products inside the box, and every product in the box should be labeled with special marking.

### **9-Local Legislative Requirements**

Measures on the Management of Geographical Indication Product of Dongshan Bai Lu Sun.

Attached Files:

1. Dongshan Bai Lu Sun was honored as Fujian Famous Brand Agricultural Products in 2004.
2. Dongshan Bai Lu Sun was honored as one of the Ten Famous Agricultural Products of Zhangzhou in 2009.
3. Protected Scope Map.