

TECHNICAL SPECIFICATIONS FOR REGISTRATION OF GEOGRAPHICAL INDICATION

1. NAME OF THE GEOGRAPHICAL INDICATION

Chinese name: 辽中玫瑰

Transcription in Latin characters: Liaozhong Mei Gui

Translation for information purposes: Liaozhong Rose

2. CATEGORY OF THE PRODUCT FOR WHICH THE NAME IS PROTECTED

Flower

3. APPLICANT

Name of the applicant: People's Government of Liaozhong County

Address of the applicant: Binshui Road No. 26, Binshui New District, Liaozhong County 110200, Liaoning Province, China

4. PROTECTION IN CHINA

Date of protection: Since August 14th, 2012

Proof of protection: Notice No. 118 (2012) , General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China (AQSIQ)

5. DESCRIPTION OF PRODUCT

Liaozhong Rose is composed of red and colorful series cultivars, and characterized by large and plump buds, firm petals, bright-colored flowers, beautiful shape and rich fragrance. The quality grade of the Liaozhong Rose is shown as follows.

Evaluation item	Class I	Class II	Class III
Stem	Above 70 cm in length in red rose series, above 60 cm in length in colorful rose series. No bend in the neck part	Above 60 cm in length in red rose series, above 50 cm in length in colorful rose series. No bend in the neck part	Above 50 cm in length in red rose series, above 40 cm in length in colorful rose series. No bend in the neck part
Flower	Bright, no scorched edge, and no discoloration; intact, graceful and plump, outer petals tidiness, no damage	Bright, no scorched edge, and no discoloration; intact, graceful and plump, outer petals tidiness, no damage	Normal flower color, no dehydration, with light scorched edge; intact and plump, with light damage
Leaf	Bright green and clean	Bright green and clean	Green and clean
Disease and pest	No diseases and pests	No diseases and pests	No diseases and pests
Injury	No injuries of pesticides, cooling and machinery	Almost no injuries of pesticides, cooling and machinery	Infected very few injuries of pesticides, cooling and machinery
Harvest	Flower index 1~3; 20 branch per bundle; removing leaves and thorns at the 15 cm above the cut base	Flower index 1~3; 20 branch per bundle; removing leaves and thorns at the 15 cm above the cut base	Flower index 2~4; 20 branch per bundle; removing leaves and thorns at the 15 cm above the cut base

6. CONCISE DEFINITION OF THE GEOGRAPHICAL AREA

The geographical region includes all areas under administration of Liaozhong County, Liaoning Province, China.

(1)Plant propagation: Cutting

(2)Planting:

① Planting time: From the middle of April to early May

② Planting density: Number of plants per hectare $\leq 72\ 000$

(3) Management:

① Management after planting. Water well enough to fix the roots after planting in time. Put lodged plants upright the next day. Make sure that the soil at roots and the topsoil are moist within one week after planting. Reduce watering quantity gradually after 15 days. When a large number of roots grow 20 days later, restrain the plant growth appropriately for further development of roots by reducing irrigation. And conduct normal management 30 days later.

② Soil moisture management. Rose is afraid of water-logging. Therefore, irrigation should be controlled flexibly based on the soil type, weather conditions and plant growth status. Generally, irrigation is conducted once every 2-3 days in summer and every 4-5 days in spring.

③ Fertilization management. Liquid fertilizer with 10kg of potassium nitrate, 5kg of urea, 1kg of potassium phosphate, 1kg of magnesium sulfate, 100g of EDDHA-Fe and 100g of boric acid of high solubility every month per mu are prepared, which are applied for 4-8 times. Make deep placement of 10-15kg of slow-release NPK compound fertilizer, 100g of boric acid and 1kg of magnesium sulfate every two months per mu. Three tons decomposed organic fertilizer once per mu are applied in autumn.

④ Pruning. Bending branches, layering branches in seedling stage, cultivation of plant type at the beginning of flowering phase, and trim at flowering phase.

(4) Harvest: Harvest in batches when the flower buds are just blooming or partly opened.

7. LINK WITH THE GEOGRAPHICAL AREA

(1) Relationship with the suitable soil in the origin.

The geological structure of Liaozhong is interior fault depression in lower reach of Liao River and belongs to the new alluvial plain generated in the quaternary period, which is flat and fertile with sandy loam soil with physical clay content of 20%-45%.

The loam properties are between sandy soil and clay due to the good proportion of sandy soil and clay in the soil. Such soil is neither sandy nor sticky, which is loose and good for tillage. It is very suitable for germination of the roots of Liaozhong Rose in large quantities. It is also the necessary soil condition for excellent rose quality production. The soil pH value is 6.5-7.3, which is well suitable for growth and development of rose. The underground water level is 1.2-1.5 m. The soil layer is deep with high fertility. The thickness of effective plough layer is 80-100 cm. The relevant analysis shows that the plough layer is very suitable for plantation of rose with organic content of 1.34%-3.42%, total nitrogen content of 0.1%-0.15%, rapidly available phosphorus of $7.5-10.9 \times 10^{-6}$ and rapidly available potassium of 76.5×10^{-6} .

(2) Relationship with the unique microclimate of Liao River in the origin.

Liaozhong County is located in the temperate and semi-humid zone with continental monsoonal climate. And Liao River is the largest river in Liaozhong. It forms a unique microclimate with the river reach length of 78.3 kilometers and drainage area of 416.58 square kilometers within the territory of Liaozhong. The average relative humidity in Liaozhong reaches 70%. And the growth period of crops is 150-160 days, which is 10-15 days longer than that in other cold regions in the Northeast China. The total accumulated temperature with daily average temperature stable above 10 °C all the year round is 3400-3600 °C, which is 200-400 °C higher than that in other cold regions in the Northeast China. The sunshine duration throughout the year is 2774.6 hours, which is 200-300 hours longer than that in other cold regions in the Northeast China. The frost-free period is 163 days, which is 6-8 days longer than that in other cold regions in the Northeast China.

(3) Relationship with the high-quality water resources in the origin.

The mean annual precipitation in Liaozhong County is 620 mm with surface runoff of 138 million cubic meters. The groundwater resources are abundant with gross reserves of 540 million cubic meters. The total amount of water resources in this county is about 680 million cubic meters, which can completely satisfy the growth and development requirements of Liaozhong Rose. Our county has already been a water source of high-quality mineral water for years. The relevant tests show that the PH value of the groundwater in Liaozhong is about 7.04 with strontium ≥ 0.11 mg/L, potassium ≥ 0.44 mg/L, sodium ≥ 9.0 mg/L, calcium ≥ 17.0 mg/L and magnesium ≥ 3.4 mg/L. This supplies good water quality for production of Liaozhong Rose of excellent quality and makes the rose the most popular in all ornamental plants for their beautiful shape and bright color.

(4) Relationship with the humanistic characteristics in the origin.

The word ROSE has already appeared in the *A Miscellany of the Western Capital* written by Liu Xin, a famous scholar of Han Dynasty 2,000 years ago. Wang Shimao, a scholar of Ming Dynasty also described rose in the Flower Section in his work named *Miscellany about Gardening* (in the year of 1587). He thought that rose is extremely beautiful with bright color and rich fragrance. Thus, it can be seen that rose is truly the Queen of Flowers. The flat landscape and fertile soil, especially the unique microclimate, adequate light and moist air formed by the Liao River create excellent natural conditions for growth of rose. According to the county annals, the people in Liaozhong planted rose just like farming in late Ming and early Qing dynasties. The rose bloomed in early summer. The red buds opened month by month successively. The flowers were larger than a plate with delicate and attractive aroma. According to legend, Nurhachi proclaimed the birth of Jin Dynasty in Liaoyang which is separated from Liaozhong by a river in the Emperor Wanli year of 44 (calendar year of 1616). All the roses used in the founding ceremony were produced in Liaozhong. After the

royal court of Qing Dynasty moved to Beijing, the Liaozhong Rose was listed as tribute. There were tens of thousands of rose provided to the royal court. They were extremely popular with the prominent officials, eminent personages and princesses. Certainly, the splendor of Liaozhong Rose also added sparkle to the decorations in the imperial palace. The number of fresh cut flowers of the rose had reached 6,000 by the year of 2000. They are sold in more than 20 cities in China and exported to Russia. The rose planted in Liaozhong is highly popular with the market and consumers due to their bright color, beautiful shape and rich fragrance. They are cherished by the residents of Shenyang particularly and voted the city flower of Shenyang. After years of spread from mouth to mouth among the people, the rose is named as the Liaozhong Rose by the market and consumers naturally.

8. SPECIFIC RULES CONCERNING LABELLING AND USING (IF ANY)

None

9. CONTROL BODY / CONTROL AUTHORITY RESPONSIBLE FOR CHECKING THE RESPECT OF THE PRODUCT SPECIFICATIONS

Liaozhong Bureau Quality and Technology Supervision, Liaoning Province