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Original Paper

Site Selection of Fig Orchard

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Abstract

It is necessary to pay attention to site selection in the construction of fig orchard. It is better to choose the fig orchard sites which have warm weather, long frost free period, fertile soil loose, traffic developed, and no pollution of the surrounding land. Only with the suitable site conditions can be achieved the high yield and high efficiency.

Keywords

fig, fig planting, fig orchard site selection

1. Introduction

Selection of location is very important for figs orchard. Only suitable weather condition, land, traffic developed, and others surrounding environment conditions to achieve high yield and quality figs productions.

2. Climatic Conditions and Suitable Planting Area

The figs are native to the south of the Arabian Peninsula, which is a subtropical tree. But its prefer warmth, drought and cold resistance, resistance to barren, resistant to salt and alkali, high ability to adapt to the environment, suitable grow in wide area, either temperate zone to the vast areas of tropical distribution. In China, it planted from south to Hainan, north to Heilongjiang, east of Shandong Weihai, west Xinjiang Kashi.

Corresponding, figs prefer warm but not resistant to cold, they not affected by high temperature, but in temperature below -10^{o}C the young shoot will be frozen. When below -20℃, the whole ground part will be frozen until death.

Fig roots are developed, help it more drought, but because of large leaves, they easily happen evaporation, especially when rapid growth of new shoots and fruit formation. In this stage, need high demand on water, if the soil is too dry, will affect the plant development, the fruit skin will thick, small and fruit quality dropped. Sometimes even lead to premature young fruit shrinkage and physiological fruit drop. Figs plants are not resisting to waterlogging, if waterlogging a week, it can cause fruits, leaves, dropped and even death. In the fruit ripening season if facing rainy season, it will cause high temperature and humidity which easily to cause disease-prone, decreased fruit sugar content, quality deterioration, cracking and rotten fruit.

Figs are preference to sunlight, plants will be strong under full sunlight, full on fruiting and fruiting on low node, high sugar content, shiny fruit skin, the quality is excellent. On the contrary, the light conditions are poor or improper pruning, the branches are thin, the fruit set in high node, the fruit is small, less and low gloss with poor quality high.

Temperature, moisture and light conditions complement each other, only with a comprehensive conditions can produce high-quality fruits, but the temperature as the most critical conditions.

In fig planting suitable area needs annual temperature average of 10℃ above, frost-free period more than 190 days, the annual rainfall 500-1500mm. China's temperate region which south of the Great Wall to most of the subtropical zone of Hainan can be planted as open-air cultivation. The south of the Huaihe River, especially in the south of the Yangtze River, either on hills or flat area, the general year winter temperature minimum at minus 5-10℃. Most of the figs can growth properly in winter, or only do some protective to plants (such as irrigation winter water, windbreak forest, wind barrier, tree wrapped and base soil, etc.), so that fig trees can be safely pass winter season, with open field planting. In between Huaihe to Beijing, normally winter temperature is minimum lower than minus 10℃, most of the fig varieties cannot be over winter, for open plantation, need to do precaution when winter season (such as blankets covered or covered with soil, etc.), it will be safe winter. In north of the Great Wall and the northern Xinjiang region of Xinjiang cultivation, due to winter temperatures are too low, conventional cold precaution can't solve the figs tree needs in winter season, it need to take facilities to protect cultivation. Although the temperature is appropriate in Guangdong, Fujian, Jiangzhe and Hainan regions, but more precipitation, need to choose hot and humid, avoid problems of fruits cracking like Stella and other varieties of cultivation, for northern region need to choose Brunkswick, Stella and other cold varieties. Yunnan-Guizhou region is located in the plateau, full sunshine, summer cool winter warm, suitable precipitation, day and night temperature difference, especially suitable for the high-quality figs production. Besides that, in southern Xinjiang is the earliest areas of figs in China, its warm and dry, large temperature difference between day and night, is the best quality of China's fig planting area. Shandong Weihai part of the region, due to special climatic conditions, figs can naturally through winter, it also become China's most important "qingpi" green skin fig planting area.

3. Soil Conditions

The fruit is resistant to drought, barren, salt and alkali, there is no strict requirements on soil conditions, whether in the river beach, alluvial plain, humid subtropical acid red soil, or sticky slope of the land can be normal growth. Sandy soil with better water retention is the most suitable for fig growing and fruit development. But its roots are strong breathe, aerobic, not resistance to waterlogging. Therefore, in fig planting, the main choice is sunny, deep soil layer (at least 50cm), loose fertile, rich in organic matter, pH neutral or low alkali, not waterlogging, good irrigation and drainage conditions good sand or soil cultivation achieved high yield; sandy soil, clay and light saline soil can be cultivated by appropriate transformation.

Sandy land, especially the beach, the general deep soil, breathable and good water porosity, can produce high quality figs. But the sand soil water retention and fertilizer ability is poor; grower should increase the organic matter, and have effective irrigation system which drip irrigation is the best choice. Planting figs in compact soil which poor permeability, high groundwater level, poor drainage of waterlogged example rice fields or low-lying land will high in disease, easy to crack fruit, poor growth, need to prow the soil, trenching ridge, build irrigation and drainage system. Not suggest plant figs in poor drainage, easy to waterlogged and unmodified land.

In mountain slopes has good ventilation, full sunlight, drainage is convenient, but easy to soil erosion. In land selection should select the slope is less than 20 degrees, the soil is greater than 50cm facing to sunlight, and possible build into the terraced or horizontal order for build the orchard. Hillside with shade have low temperature, easily cause frost damage, in warm areas or deep soil layer covered with cold only can be planted. High slope soil not suggest be planted.

Fig have high resistance to salinity, which can with stand 0.5% of the soil salt content, the sulfate and chloride salts are resistance. When the salt content more than 0.3% fig plants survival rate is low, slow growth. After modification or transformation to land this in high salinity only can plant figs.

For gravel soil with gravel content of more than 30%, it will affect the growth of fig roots; need to sort out the planting around the gravel after planting.

Before planting in south area which has strong acid soil need apply lime to improve the soil, in order to achieve high yield.

4. Traffic Conditions

Figs fruits are intolerant storage and transportation, shelf life is short, generally fruits storage not more than a week. After the fresh fruit picking, it need as soon as possible entering the market. Normally fruits will be harvest in morning time on afternoon send to market sales. Figs fruit ripening are not concentrated, where the mature period is several months. Therefore, the orchard selection need near to good traffic conditions, near to the city, easy to transport and sales place. In general, the distance between the orchards from the city or the processing plant is within 300km and the more nearest the more convenient it is. If it is picking garden, it have to be located near side to the city to get more

citizens. Combination on Suburban areas and village, have more citizens with geographical advantages, especially for the development of leisure and tourism industry.

5. Peripheral Environmental Conditions

Pest and diseases in figs are minor, basically do not use chemical controling, is a natural green food. To set up an orchard should choose the soil types, irrigation water, free air pollution place, from heavy metals, fluoride, air dust and other indicators should be consistent with the provisions of the national pollution-free production quality requirements. The site should be as far away as the heavy pollution of the factory, mining, garbage and so on.

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