

Controlled-Environment Greenhouse



Agriculture, Fisheries and
Conservation Department

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Cultivation of Dragon Fruit



From the Editor

Dragon fruit is a kind of low-calorie fruit containing rich soluble dietary fibres. Its benefits include achieving slimming effects, reducing cholesterol level, preventing constipation, etc. The anthocyanin content of dragon fruit is rather high, especially that of those with red flesh. Growing in a greenhouse may help reduce threat from pests, and thus can assure the quality of fruits. We are going to share with you the experience of cultivating dragon fruits in greenhouse in this newsletter.



Varieties

Dragon fruits can be categorised into three types based on the colours of their skin and flesh, namely red skin with white flesh, red skin with red flesh and yellow skin with white flesh. Those with red flesh are relatively more expensive.



Growth Conditions

Dragon fruit is a tropical and subtropical fruit that prefers sunlight and fertile soil, but is tolerant of cloudy, dry and hot weather, and also infertile soil. Dragon fruits are suitable to be grown on sandy loam with rich organic matter. Dragon fruits' roots cannot stand immersion in water and most of them will be damaged if they are immersed in water for more than 24 hours. The optimal growing temperature is between 25°C and 32°C. Temperature of below 5°C causes serious damages to dragon fruits but cultivating dragon fruits indoors can protect them from damage caused by low temperature..



Cultivation and Management

Cutting and Propagation : Cutting is a major method of propagating dragon fruits. It can be carried out all year round but is more suitable to be carried out in warm spring and summer. Thick and strong mature cuttings with the length of about 30 cm are picked to be placed at a cool place for two days and then inserted into soil in pots. When new roots have sprouted, the cuttings can be transplanted and posts will be erected for them to climb.



Irrigation and Fertilisation : At the initial stage of cultivation (cutting), the soil should be kept moisturised in order to facilitate root-sprouting. When new branches have sprouted, flowers have bloomed and fruits have been born, the dragon fruit trees have to be irrigated about one to two times per week. Drip irrigation can be adopted to save irrigation water. The roots of dragon fruit plants are shallow and spread widely in the topsoil (5~15 cm deep in the topsoil), so they only have to be irrigated to the extent that the topsoil has become moisturised. They have to be fertilised every 10~15 days after transplantation. Nitrogenous fertiliser is mainly used for growth of branches. In flowering and fruiting periods, phosphoric fertiliser and potassium fertiliser should be also applied.



Training : Dragon fruits are generally cultivated by post-climbing. The main stem should be pinched when the plant grows up to the top of the post. Then, three to four branches pointing to different directions will be kept as the fruiting branches, which will be guided to grow downwards. Their tips may be pruned when they grow to about 90~120 cm long. When the blossoms grow to about 2~3 cm large, thinning should be conducted.



Harvesting : 25~28 day after the flowers have withered or 5~7 days after the skin of the fruits turns red are good reference date for harvest. One may also conduct harvest when the bright-red and succulent scales become soft and there are wrinkles or small cracks at the tip of the fruits,

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