

HOW CALCIUM DEFICIENCY EFFECTS APPLE TREES

Understanding the Role of Calcium is the Key

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Apple trees grow in the same place for years on end, and over this period have had a great need to absorb a lot of nutrients from the soil each and every year.



In order to ensure the growth, fruiting and high yield of apples, it is necessary to understand their fertiliser needs at the different growth stages. The root co-efficient and density of apple is generally less than 10, which is lower than that of other fruit trees. Therefore, limited root-soil contact and high nutrient inflow rate are the characteristics of apple roots. According to crop science, the order of annual nutrient uptake of apple trees is calcium, potassium, nitrogen, magnesium and phosphorus.

Calcium is one of the mineral elements that make up the apple tree body. It is an important component element of various organs, and has some important physiological regulation.

Calcium Deficiency Explained

In the Roots

When the apple trees are deficient in calcium, the root system grows poorly, the new root is short, thick and curved, the apex withers gradually, and the new root is divided. The short and thick roots, with many subdivided roots, are typical symptoms of calcium deficiency within the root system. If the above ground part of the trunk is deficient in calcium, the young leaves first appear chlorotic, they are curled, the edges are shrunk, cracks or spots appear and the top buds are dry.

In the Fruits

Calcium deficiency in fruits often results in a series of physiological diseases. For example, watery heart disease, pox spot disease and bitter pox disease. The surface of the fruit is water-immersed, the fruit tissues are sunken or empty, and fruit cracking (particularly severe after rain) occurs.

How to Prevent and Treat Calcium Deficiency in Apple Trees

1. Increase the application of organic fertiliser.

This is the key measure to solve the physiological diseases of calcium deficiency. The organic fertiliser can improve the physical and chemical properties of soil, promote the activities of beneficial micro-organisms, enhance the ability of soil fertiliser supply, improve pH value, reduce the free release of harmful heavy metals and reduce the accumulation of toxic substances in the fruit trees.

2. Scientific and rational pruning.

Whether it is to regulate the contradiction between vegetative growth and reproductive growth, or to ensure the balanced supply of nutrients, appropriate light pruning is very necessary. In addition, during summer pruning, girdling measures should be used as little as possible.

3. Foliar topdressing.

There are two peaks of calcium uptake in apple trees in a year.

One is 3-6 weeks after flowering, when the fruit will accumulate 90% of all calcium during this period, and the other is 30-40 days before fruit picking. During these two periods, a foliar application of RLF **Calcium Plus** at 1000 times dilution can be particularly beneficial.

Calcium Plus contains 180g/L of calcium, which can effectively prevent physiological diseases such as leaf rolling, bitter pox disease and malformed fruit caused by the deficiency. The double channels of the product's technological delivery system and sugar alcohol nutrition transmission can quickly penetrate the fruit surface and leaf cuticle, and enter the fruit and leaf interior. This ensures an absorption utilisation rate as high as 99%. It can improve fruit firmness, smoothness, and sugar content, increase fruit commerciality and prolong fruit quality.



Ca 'plant repair therapy' – targeted, efficient and effective.
Calcium

Calcium Plus 5 is a foliar fertiliser delivering high quality calcium to the plant through the leaf when a calcium plant disorder is recognised and established. Foliar application is the most efficient and effective way to deliver calcium to the plant as it bypasses the soil by delivering the remedy directly to the crop through the leaf.

Calcium Plus 5 fixes plant calcium (Ca) deficiency which is caused by insufficient calcium in the soil, or created by low transpiration reducing calcium transport to the shoot and fruits.

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