

THE BETTER CROP PROGRAM DEVELOPED FOR FARMERS AND GROWERS IN CHINA

Part 01 | Protecting Flowers and Fruits

INTRODUCTION

The RLF Nutrition Education Centre has written a series of articles to not only help educate the staff Teams and our distributor partners who go into the field, but in terms that clearly explain the principles of crop nutrition and fertiliser management for farmers and growers all across China. We are replicating some of these programs in this Series of articles because the message is an important one.

Crop production is complex and comprehensive, and this article looks specifically at the issue of **Flowers and Fruits**.

Farmers and growers in China encounter many challenging growing situations and problems, and often do not know who to look to for help. So, the RLF Technical Team embarked upon this project to provide the education needed to better understand the advanced crop management techniques and fertiliser programs required for the widest variety of crop types and plants, and for all types of growing environments.



RLF Technical Manager in field investigation

MAIN REASONS FOR FALLING FLOWERS AND FRUITS



RLF Technical Managers in field

1. Inadequate Nutrition

Nitrogen, phosphorus and potassium fertilisers, together with medium and trace element fertilisers are the main nutritional supplements required. Local farmers are quite used to the NPK solid fertilisers, but often ignore, or are not aware of the importance of the medium and trace elements needed by all fruit crops.

2. High Temperature

In high temperatures and/or dry weather, the water evaporation in fruit trees increases. During this stressful period the leaves and roots cannot get sufficient nutrient, which may cause the young and/or weak fruits to fall.

3. Poor Fertilisation

After the blooming stage, the temperature (whether high or low, or even some severe weather events) affects the fertilisation or fertilisation-quality of the fruit trees. This is also an important factor leading to the loss of flowers and fruits.

4. Single Variety or Lack of Pollination Trees

Many fruit trees, such as apples and pears, have very low self-pollination rates. Although they may have a lot of flowers, they do not bear fruit, or the quality of the fruit is very poor. This is known as the phenomenon of flowers but not fruit! This is mostly related to the singularity of tree species, and the quantity and quality of mutual pollination between different varieties. When planning and planting orchards it is more beneficial to plant corresponding pollination trees. This will improve the quality of pollination and reduce the probability of falling flowers and fruits.

5. Timely Summer-cutting

Fruit trees grow very exuberantly in summer, and the fruit and succulent shoots grow rapidly. When this happens, they consume more nutrients. There is no timely, scientific control of summer shoots, and the fruits compete for more nutrients which eventually leads to falling flowers and falling fruits. Therefore, the timely summer-cutting of fruit trees is very important to reduce this specific problem.

6. Diseases and Insect Pests

When the diseases and insect pests are serious, they can cause damage to the fruit trees and consume a lot of nutrients, which is the main reason for nutrition deficiency being the cause of falling flowers and fruits.

7. Inappropriate Agro-chemical Application

Many fruit trees are more sensitive to certain elements, such as some chlorine-free fruit trees using fertilisers that contain chlorine. Or, the use of some pesticide agents that a particular crop type may be sensitive to. These events will often cause damage and increase the number and occurrence of falling flowers and fruit.

In addition, during the period of fruit tree growth, the improper use of pesticides could also contribute to this problem. For instance, farmers who use a combination of management techniques such as pesticides, foliar fertilisers and crop growth regulators all being applied together in order to save labour costs, may inadvertently cause this problem if the blend is mixed with wrong mixing ratios and sequence. This would cause damage and abnormal development of flowers, resulting in both falling flowers and fruit.

KEY METHODS

1. Ensure the Effective Supply of Nutrition

The development of flowers and young fruits on fruit trees requires a large amount of organic nutrients such as carbohydrates, as well as inorganic nutrients such as the mineral elements. At the same time, it is a critical period of fertiliser demand, after flower loss. The reasonable topdressing and leaf preservation are the key to ensuring effective nutrition supply, so it needs to be adjusted to the proportion of leaf and fruit appropriately.



2. Pay Attention to the Supplementary Application of Foliar Nutrition

- When the flowers appear white colour, foliar spray with **Fruits & Veggies Plus** and **Boron Plus** can reduce falling flowers. *(For more information on the ratio and usage method if unsure, please contact the RLF Technical team).*
- When flowers wither by 70%-80%, foliar spray with **Fruits & Veggies Plus** and **Boron Plus** to promote fruit enlargement and thicker stalk. Spray again after 15-days.
- After anthesis, it is better to control the application of nitrogen fertiliser, so as to not stimulate the summer shoot growth.
- If leaves are yellow, small and weak, spray again with **Fruits & Veggies Plus** to assist the leaf promote photosynthesis.

3. Regulation of Nutrient Balance

For weak trees with massive flowers, farmers should strengthen the nutrition supplement, by a foliar spray with **Power PK**. At the same time, thin weak and deformed flowers, moderate shoots, balanced growth, pressure summer shoot.

For the flourishing trees with few flowers, wipe the shoot and hit the top to control the flourishing to alleviate the conflict between shoot and flower, and control the early summer shoots.



RLF Technical Manager showing the effect results of an RLF Crop Nutrition Program

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