

## COMMON MISTAKES AND MISUNDERSTANDINGS OF MANAGING GREENHOUSE VEGETABLES

### Step by Step Strategies for Better Outcomes

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At present, there are a high level of mistakes and misunderstandings about fertilising vegetables in greenhouses. This not only wastes fertiliser, but may also bring serious harm to crop growth.



RLF Technical Team providing advice to Greenhouse Growers



## The Mistakes & Misunderstandings

### NO. 1 | Excessive Fertilisation

There are two reasons that cause the excessive use of fertiliser.

- One is insufficient understanding. Usually the vegetable greenhouse is closed, the fertiliser is not washed by rain, and the fertiliser utilisation rate is higher than that of open field cultivation. But at present, the amount of fertiliser applied to greenhouse vegetables is far more than that of open-field cultivation and exceeds the demand of crops.
- The second is that it is unilaterally believed that as long as fertiliser is increased, high yield can be obtained.

### NO. 2 | Unbalanced Fertilisation

In actual production, there will be the misunderstanding of 'the multiple use of nitrogen fertilisers make vegetables grow strong', therefore the excessive application of nitrogen fertiliser occurs. Insufficient consideration is given to the need for potassium fertiliser.

### NO. 3 | Ineffective Fertilisation

When fertiliser is applied only to the soil surface, fertiliser efficiency is slow. This is because of the volatilisation of ammonia in fertiliser, resulting in crop ammonia damage.

### NO. 4 | Too little Organic Fertiliser Input

Long-term use of chemical fertilisers will lead to serious soil salinisation and increased disease in the later stages of the crops.

### NO. 5 | Later Application of Potassium Fertiliser

Vegetables generally require more potassium before and after flowering, and then have it gradually decreased. Late application of potassium fertiliser will cause a significant decrease in the utilisation of potassium and therefore is a waste of fertiliser.



## The Precautions

The improper application of chemical fertilisers in greenhouse vegetables will not only cause soil hardening and fertiliser damage to the crop, but also lead to excessive nitrate and nitrite content in vegetables. Therefore, vegetable fertilisation in the greenhouse must be based on crop science.

Five precautions should be taken when applying fertiliser.

### NO. 1 | Prevent the Overuse of Nitrogen Fertiliser

Excessive application of nitrogen fertiliser will cause ammonia and nitrous acid gas to accumulate in the soil. The nitrogen fertiliser should be applied in an appropriate amount and combined with fertilisers such as phosphorus and potassium.

### NO. 2 | Prevent Surface Fertiliser Application

The application depth of nitrogen fertiliser should be below 10cm-14cm, and it is required to be covered by soil immediately after application. This can reduce the chance of contact with the air, thereby avoiding ammonia gas generation by the volatilisation of the fertiliser. This gas can also harm the shed and reduces the fertiliser efficiency. At the same time, the deep application of nitrogen fertiliser also reduces the accumulation of nitrate in vegetables and increases the utilisation rate of the nitrogen fertiliser.

### NO. 3 | Prevent Root External Application at Noon when Temperature is High

Because the water easily evaporates at this time, the retention time of fertiliser on the leaves is short, which is not conducive to nutrient absorption. So, it is appropriate to spray in the evening.

## RLF Product Recommendation

RLF **Fruits & Veggies Plus** foliar sprayed at 1000 times dilution will prevent crop deficiency, supplement crop nutrition in an overall balanced and broad-spectrum way. This improves resistance to stress and disease, increases yield and improves quality. Better quality vegetables mean better economic returns for greenhouse growers.

### NO. 4 | Prevent the Increased Application of Eco-organic Fertiliser

When using livestock and other manures as a fertiliser, it must be fully decomposed; otherwise it will not only be slow in fertiliser efficiency but will easily burn roots. It will also affect the growth of vegetables due to the production of toxic gases.

### NO. 5 | Prevent the Non-use of Medium and Trace Element

The application of organic fertiliser to supplement the crop reduces the amounts of trace elements in soil as the age of the shed increases. This easily induces various diseases, such as celery stem crack, tomato umbilical rot and so on. Trace elements are often overlooked because of their low dosage, and have become a key issue that restricts the high quality and high yield of vegetables.



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