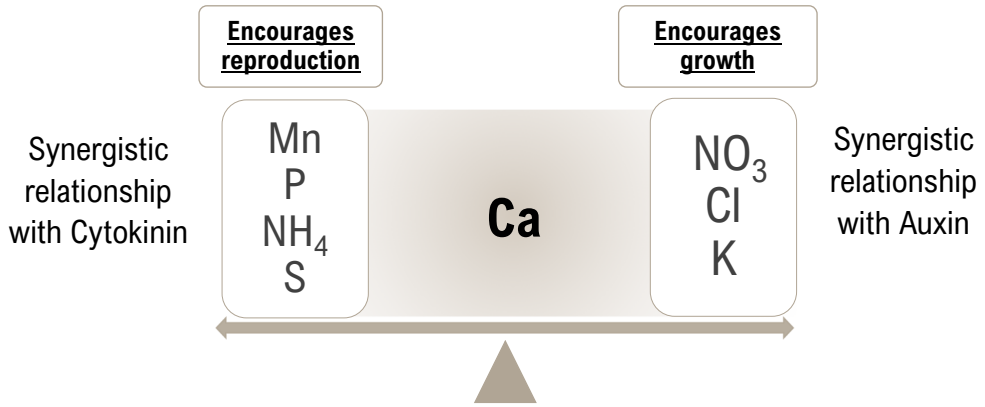
Stages of Plant Nutrient Importance – Part 2 of 4

Bud & Flower Optimisation

Reproductive vs. Growth



As the plant switches between reproductive and vegetative growth, it becomes increasingly stressed and susceptible to disease and pests. Calcium can both provide energy for vegetative growth and encourage cytokinin production.

Pollination and Calcium

After pollen grains land on the stigma of compatible flowers, calcium is crucial in ensuring pollen germination. Once pollen tubes begin to form, they require a constant supply of calcium. If it is not present, the pollen will not reach the base of the flower and fruit will not set.

Most calcium is taken up before the small fruit stage, meaning that disorders caused by calcium deficiency are not easily fixed by late calcium applications.

Cell Division

Cell division occurs after bloom and lasts for 10-14 days. Every cell that comprises the final piece of fruit will be created in this time.

Calcium is critical to cell wall function, and therefore it is needed to create strong cell walls that in turn lead to the growth of large, firm and dense fruit.

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Key Elements

Mn
Potassium regulation
Water hydrolysis

Zn
Cell wall membrane
Pathogen resistance

B
Flower strength
Calcium uptake

P
Protein synthesis
ATP production

Co
Root tip growth

Cu
Pollen tube strength
Cell wall elasticity

Seaweed
Amino acids
Secondary metabolites

Grower Take Homes

- Calcium should be applied earlier in the season.
- When applying any nutrient via fertigation or foliar they should be cytokinin inducing or reproductive.
- Trace Elements have a strong role to play during these stages.
- Avoid applying growth promoting nutrients until cell division has finished.

About Us

Hybrid-Ag is passionate about educating people about the importance of nutrient density and the significant beneficial impact this can have on our health and then environment. We help people to apply this knowledge, with a view to transform food quality as we know it today.

This paper corresponds with part 2 of a 4-part series explaining the role of nutrition management within a growing season.

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WEBINAR NOTES

Bud & Flower Optimisation

4-Part Series