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▶ **Roots, Shoots, and Fruit**

Agronomic Tips from Denny Wildman



Plant Reproduction – Part ONE, the **FLOWERS**

Hello all.

Many crops are now entering the first stages of their reproductive cycle... and, as you know, many variables play a role in effective plant reproduction.

When the plant produces flowers, (or in the case of corn, tassels) it's certain that the plant is beginning to feel a bit frisky. During this time, there's a whole lot going on inside the flowers.



Management of the plant's flower is crucial for the production of quality fruit – and, for some crops, the presence of flowers is not always favorable.



For example, excessive flowering in a **Potato** crop is not good. Flowers require energy that would be more valuable when directed toward the production of quality tubers.

Excessive potato flowering will likely result in a lack of consistent sizing of tubers and split sets may become common.

Consider **Field Corn**. We understand that the flower quality (tasselina and silk timina) is

directly related to seed number. This timing is especially important in corn because the 2 parts of the plant to be synced, (the tassel and silk) are 2-5 feet apart.

With **Soybeans**, flower strength is related to pod quality, number of seeds, and seed size.

The flower quality on **Sweet Corn** is related to tip back of the ear and loss of flavor. And on **Peppers & Tomatoes**, the cause of soft walls and irregular shaped fruits can be tracked back to flower quality.

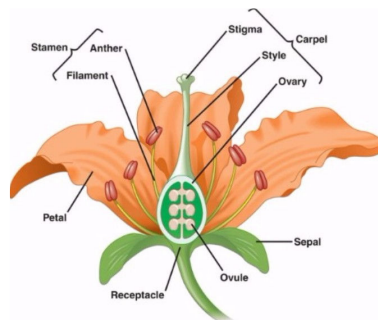
Obviously, flower strength is directly related to quality fruit production. Yet, many of the variables that occur during the reproductive phase are beyond our control. Like weather, for example, when conditions at some point are likely to be too HOT, too DRY, too WET, or too COLD.

So, what can we do to affect the flowering quality?

Fortunately, flower quality is something we can work to effectively impact, as it's directly related to the proper balance of hormones in the plant's roots. So, let's focus on what we can control, the plant hormones, specifically Cytokinin and Auxin, both of which are very active in plant reproduction. Cytokinin's role in reproductive tissue quality is unmatched during the flowering period.

Production of sufficient cytokinin levels is necessary for **sugar movement** to flowers. Low sugar transport to flowers results in less flower strength. Adequate sugar is necessary for fertilization to occur which impacts pod – fruit – seed. The lack of adequate transport results in loss of embryo strength, and flower abortion.

These are only a few physical issues associated with inadequate cytokinin values, however reproduction is not cytokinin driven alone. There needs to be adequate auxin. These two hormones must meet to have reproductive reaction.



NOTE: Part TWO in this discussion about the reproductive phase will be coming soon.



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