



STOLLER ENTERPRISES, INC.

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Purple or Reddish-Purple Colors in Plants - Page 1 of 2

PURPLE OR REDDISH-PURPLE COLORS IN PLANTS

Purple colors are caused by sugar accumulation in the plant parts ... when they have nowhere else to go.

EXAMPLE: When plants are young, a purple color can accumulate at the base of the stem. Why? Because roots are not growing fast enough to allow the sugars to move into them. When the roots start to grow, the purple color disappears. This is often diagnosed as a phosphate deficiency. There are, however, other factors that inhibit root growth of young plants ... cold soil, herbicide damage, or flooded soil.

EXAMPLE: When brace roots form on corn stalks, they have a purple color ... until the put out root hairs. Then the purple color disappears.

When purple leaves appear on the top of a cotton plant, it is because the leaves are not discharging sugars. When this happens, fruit does not size properly. The seeds form but the lint does not grow and form properly.

In order for lint to grow, the growing point wants two hormones ... Auxins (produced at the tip of the plant) and Cytokinin (produced in the roots). One of them are not present in sufficient amounts.

Which one is absent?

Since seeds grow inside of the boll, it cannot be Auxins.

Therefore, the problem of purple cotton and death is due to the lack of Cytokinin production in the roots. The roots are dysfunctional.

Why?

There can be many reasons. The primary reason is probably due to early fruiting has taken sugar away from the roots. The sugars flow to the bolls ... not the root. The roots will die early.

This situation normally happens on early varieties that are heavily fruited or during drought conditions. All plants will not be equally affected.

Why does potash help this problem? Potash helps the plant make more cytokinins. Leaves do not prematurely die.

Small, frequent applications of Stimulate (hormone product) will usually solve the purple color and early dying problems. This should be more effective than potash addition.



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TECHNICAL INFORMATION



This plant shows common progression of bronze wilt symptoms: upper leaf turning bronze, progressive reddening of lower leaves, then full desiccation of wilted leaves.

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