



STOLLER ENTERPRISES, INC.

...World leader in crop nutrition...

PLANT STRESS (MODE OF ACTION)

- Drought
- High temperatures
- Flooded soil
- Fungi infection
- Bacterial infection
- Virus infection
- Salty soils.

These problems concern growers more than fertilizer. They can be more devastating to crop yields than a fertilizer imbalance.

All of the above negative growth factors (NGF) have a common activity in any plant ...

- Ethylene levels greatly increase
- ABA levels greatly increase
- Ammonium levels greatly increase.

THE CAUSE OF NGF: Proteins degrade to form ammonia and this is accompanied by an increase in ethylene and ABA. The problems are more severe when high amounts of nitrogen are used.

The key to plant protection from these NGF is to limit the degrading of proteins and/or recycling the ammonia back to protein before it becomes toxic.

There are several stages necessary to protect the plant from NGF. Please follow them closely.

Step No. 1.	Proteins degrade into ammonia only when cell membranes become weak. KEEP THE PLANT FULL OF SOLUBLE CALCIUM AND MAGNESIUM.
Step No. 2	Ethylene is produced as a response to the stress. We must, however, limit the amount of ethylene that is produced. The same is true for ABA. They can be controlled by calcium. They can be controlled by reversing the SAM cycle in the plant. KEEP THE PLANT FULL OF SOLUBLE CALCIUM AND FOLIAR SPRAY ReZIST.
Step No. 3:	If some protein is degraded into ammonia, it can be recycled by forming the amine argenine and then polyamines. CHANGE THE SAM CYCLE SO THAT LESS ETHYLENE IS PRODUCED AND MORE POLYAMINES ARE PRODUCED. FOLIAR SPAY WITH ReZIST.



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If you are interested in protecting your plants against these devastating NGF, please try the following:

1. Band apply (6" to the side of the seed) or side dress ...

30 to 100 gallons per acre of Nitro Plus 9 ... the more the better. Each gallon contains 1 pound of nitrogen. Reduce your regular nitrogen ratio by as much.

2. Foliar spray (row directed)

1 quart/acre ReZist

+

1 quart/acre Set

Repeat the above application 14 days after the first one.

The above program is for the protection of crops.

If NGF problems are seen during a growing season, this program will be worth a lot of profits.

If the plants are not subjected to stress, the above program may not give large yield increases. It will, however, always give quality increases and limit post-harvest problems.