

2009 Late Season CMDC

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WHY DON'T SOYBEANS SET PODS EQUALLY AT EACH NODE?

- *Lack/ too much water*
- *Too much heat*
- *Lack of nutrition*
- *Insects chewing on pods*
- *Several of above factors can cause: **STRESS***

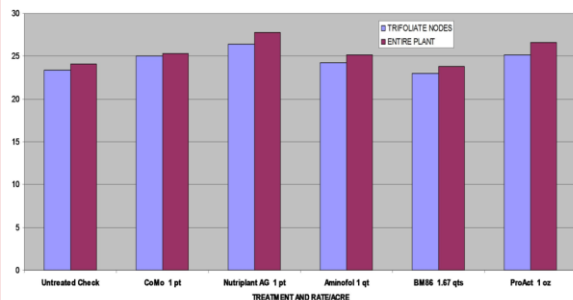
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WHAT DOES STRESS CAUSE IN PLANTS?

- *Production of oxidants (free radicals)*
- *If not contained – free radicals signal for ethylene production*
- *Ethylene signals for abscisic acid production*

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MEAN SOYBEAN PODS/PLANT AT HARVEST, 2008, BELLWOOD, NE



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Plant Growth Enhancement Products (applied summer 2008) Effects on Fall/Spring 2009 Soil Nitrate Nitrogen Levels (0-10") Following 33 Bushell/Acre Rainfed Soybean Yields

PRODUCT	#/A	vs. check
Aminofol Maximize	41.0	12.3
BM86	35.7	7.0
CoMo	43.6	15.0
NutriPlant AG	38.3	9.7
ProAct	40.0	11.3
Untreated	28.7	----

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ETHYLENE IS A PLANT HORMONE AND IS A GAS. IT CAN BE GOOD AND BAD FOR PLANTS

- **Needed for soybean nodulation**
- **Produced during soybean flowering**
- **Too much can interfere with pollination of some crops**

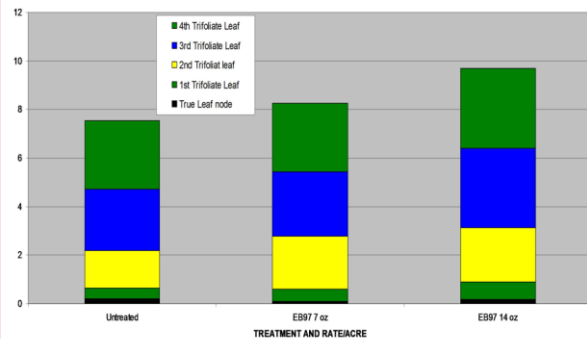
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Table 1. Effects of treatments applied at R-2 stage (July 6) on center pivot irrigated NK S28 G1 soybean mean yields, protein, and oil content in Butler County, 2007.

Treatment	Rate/acre	n	Bushels/acre @ 13% moisture	Percentage at 100% dry matter	
				Protein	Oil
Aminofol	32 oz.	4	63.40	39.24	22.53
BioForge	16 oz.	4	63.99	39.26	22.58
BM86	32 oz.	8	63.63	39.25	22.37
Flower Power	16 oz.	4	63.06	39.15	22.57
Aminofol + BM86	32 oz. 32 oz.	4	63.46	39.28	22.45
Vapor Guard	32 oz.	4	63.22	39.20	22.51
Untreated	-----	12	63.26	39.02	22.59

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MEAN ACCUMULATIVE PODS/SOYBEAN PLANT FOLLOWING APPLICATION OF EB97 AT FIRST TRIFOLIATE LEAF STAGE OF DEVELOPMENT (Applied June 29, David City, NE, 2007)



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