

2012 CMDC

No Plant Left Behind: The impact of phosphorous placement on early season growth and yield of corn

HAEGELE

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Nutrition Needed for 230 Bushel Corn

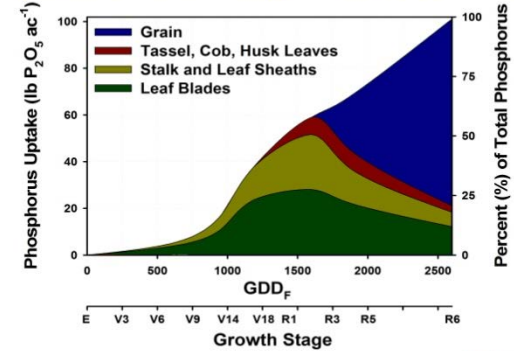
Nutrient	Required to Produce	Removed with Grain	Harvest Index
	lbs/acre		%
N	256	148	58
P ₂ O ₅	101	80	79
K ₂ O	180	58	32
S	23	13	57
Zn (oz)	7.1	4.4	62
B (oz)	1.2	0.3	23

Average of 6 hybrids grown at Champaign and DeKalb, IL in 2010.



2012CMDC-7-17Haegele (1)

P Uptake & Partitioning for 230 Bushel Corn



Average of 6 hybrids grown at Champaign and DeKalb, IL in 2010.



2012CMDC-7-17Haegele (2)

Omission Plot Experimental Design

TREATMENT	FACTORS					
	Fertility	Nitrogen	Genetics	Population	Fungicide	
HIGH TECH	MESZ	Base + Slow release	Racehorse	45,000	Strobilurin	
Remove Technology	Fertility	No P & K	Base + Slow release	Racehorse	45,000	Strobilurin
	Nitrogen	MESZ	Base	Racehorse	45,000	Strobilurin
	Genetics	MESZ	Base + Slow release	Workhorse	45,000	Strobilurin
	Population	MESZ	Base + Slow release	Racehorse	32,000	Strobilurin
	Fungicide	MESZ	Base + Slow release	Racehorse	45,000	none
STANDARD	No P & K	Base	Workhorse	32,000	none	
Add Technology	Fertility	MESZ	Base	Workhorse	32,000	none
	Nitrogen	No P & K	Base + Slow release	Workhorse	32,000	none
	Genetics	No P & K	Base	Racehorse	32,000	none
	Population	No P & K	Base	Workhorse	45,000	none
	Fungicide	No P & K	Base	Workhorse	32,000	Strobilurin



2012CMDC-7-17Haegele (3)

Improved Growth with Spring-Banded MESZ

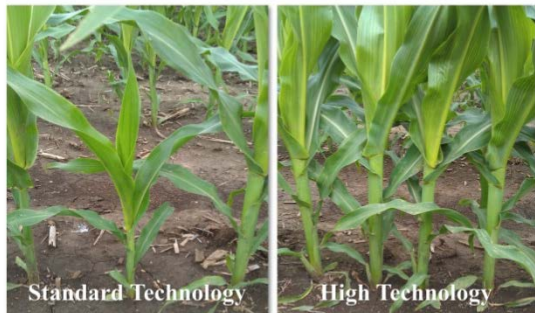


Champaign, 2011



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No Corn Plant Left Behind



Champaign, 2011



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Standard vs High Tech Yields, 2011

Factor	Standard		High Tech	
	Yield	Δ	Yield	Δ
	bushels acre ⁻¹			
None or All	169		195	
Fertility	183	+14	178	-17
Nitrogen	177	+ 8	184	-11
Genetics	173	+ 4	186	- 9
Population	159	-10	194	- 1
Fungicide	172	+ 3	184	- 8

LSD ($P \leq 0.10$) = 6

Averages of 12 omission plot trials in Illinois, 2011.



2012CMDC-7-17Haegele (6)