Nitrogen: The N recommendation is the total amount needed for the entire growing season, based on yield goal, (5 year field avg.) plus 20%. Subtract residual N reported in soil test from N rate suggested for the yield goal you have chosen.

Phosphorus and Potassium: Both P and K are based on a sufficiency level. Soil tests report P and K values as soil test index. The P and K tables show the corresponding percent sufficiency and recommend the fertilizer rate in pounds of P_2O_5 and K_2O /ac.

Yield goals are not the most accurate method to determine N rates.

Reference Strips optimize the return on N fertilizer investments by accounting for the temporal and spacial variabilities that exist in all fields.

Brian Arnall: b.arnall@okstate.edu Office: (405) 744.1722

Nitrogen

Grain Only			Forage and Ensilage		
Yld Goal bu/ac		N Need	Yld Goal		N Need
Sorg	Corn	lb/ac	Ensilage	Hay	
44	40	40	tons/ac	tons/ac	lb/ac
54	50	50		1	18
62	60	60	5	1.5	45
76	75	75	10	2.0	90
85	87	90	15	2.5	135
94	100	110	20	3.0	185
118	130	150	25	3.5	240
145	170	200	30	4.0	300
170	200	240			

Phosphorus

Soil Test	Sorghum		Corn		Forage	
	%	P_2O_5	%	P_2O_5	%	P_2O_5
P	Suf	lb/ac	Suf	lb/ac	Suf	lb/ac
0	40	60	40	80	30	100
10	60	50	65	60	60	75
20	80	40	80	40	80	45
40	95	20	95	20	95	25
65+	100	0	100	0	100	0

Potassium

Soil Test	Sorghum		Corn		Forage	
	%	K_2O	%	K_2O	%	K_2O
K	Suf	lb/ac	Suf	lb/ac	Suf	lb/ac
0	40	100	40	120	40	180
75	65	75	60	80	60	130
125	80	50	75	60	75	90
200	95	30	90	40	95	60
250+	100	0	100	0	100	0

Crop	pH Range	Min pH
Sorghum	5.5-7.0	5.4
Corn	6.0-7.0	5.9
Forages	5.5-7.0	5.4

The pH range is the soil pH that crops prefer, the Min pH is the pH at which lime should be applied. (PSS-2229)