

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 % P ₂ O ₅	Corn % P ₂ O ₅	Forage % P ₂ O ₅	
P	Suf lb/ac	Suf lb/ac	Suf lb/ac	lb/ac
0	40	60	40	80
10	60	50	65	60
20	80	40	80	40
40	95	20	95	20
65+	100	0	100	0

Potassium

Soil Test	Sorghum % K ₂ O	Corn % K ₂ O	Forage % K ₂ O	
K	Suf lb/ac	Suf lb/ac	Suf lb/ac	lb/ac
0	40	100	40	120
75	65	75	60	80
125	80	50	75	60
200	95	30	90	40
250+	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)

Nutrient Needs of: Corn, Grain-Forage Sorghums

Pete's Sheets

Oklahoma State University, Department of Plant and Soil Sciences
Oklahoma Cooperative Extension Service

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 P₂O₅ and K₂O /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 spatial variabilities that exist in all fields.

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