

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.

Nitrogen

Grain Only				Grazing	
Yield Goal in bu/ac			N Needs	Yield Goal	
Wheat	Barley	Oats	lb/ac	Forage tons/ac	N Needs lb/ac
15	20	25	30	0.5	30
20	25	35	40	1.0	60
30	35	55	60	1.5	90
40	50	70	80	2.0	120
50	60	90	100	2.5	150
60	75	105	125	3.0	180
70	90	125	155	3.5	210
80	100	140	185	4.0	240
100	125	175	240		

Phosphorus

Soil Test Index	Percent Sufficiency	P ₂ O ₅ lb/ac
0	50	80
10	70	60
20	80	40
40	95	20
65+	100	0

Potassium

Soil Test Index	Percent Sufficiency	K ₂ O lb/ac
0	50	60
75	70	50
125	80	40
200	95	20
250+	100	0

Crop	pH Range	Min pH
Wheat	5.5-7.0	5.4
Barley	6.5-7.0	6.1
Oats	5.8-6.5	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: Winter Wheat, Barley and Oats