



MISSISSIPPI STATE UNIVERSITY™

EXTENSION

Interpreting Your Soil Test Report — For Farmers

Targeted to *farmers or producers of crops grown over a large area – units in pounds per acre*

Step 1: Do you need lime?

The most important information the soil test provides is based on the pH of the soil. If your pH is too low for the crop you are growing, we will make a lime recommendation. The sample soil test report recommends 2.5 tons of lime per acre. This application should come before any fertilizer is added (preferably about 2 months) to allow the liming material to raise the pH to an optimal level for your crop. If your sample does not have a lime recommendation, move on to the next step.

Step 2: Calculate the amount of fertilizer required

The nitrogen recommendation in the sample soil test report calls for 80 pounds per acre. Suppose you want to use urea (46 percent nitrogen). First, convert the percentage

of the nitrogen source (urea) to a decimal (46 percent = 0.46). Now, divide into the recommended amount listed on the report: $80 \div 0.46 = 174$ pounds of urea per acre.

The same approach for calculating nitrogen can be used for phosphorous and potassium. If you are using triple superphosphate (TSP) at 46 percent P_2O_5 , convert to a decimal (46 percent = 0.46) and divide into the recommended amount listed on the report: $40 \div 0.46 = 87$ pounds of TSP per acre. If you are using muriate of potash (60 percent K_2O) to provide potassium, first convert the percentage to a decimal (60 percent = 0.6). Next, divide into the recommended amount: $80 \div 0.6 = 133$ pounds of potash per acre.

Name of your sample

Crop code

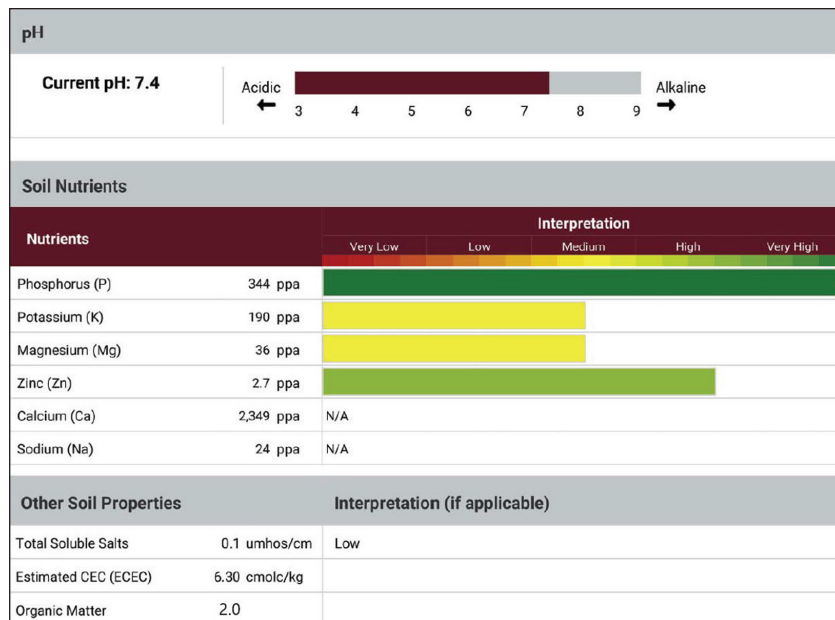
Lime and fertilizer recommendations

Helpful instructions – please read!

Crop		Actual Nitrogen	Phosphorus (P_2O_5)	Potassium (K_2O)	Lime
Field: 1	Date	Sample: 452			
Mixed grass hay	Yr 1	80 lbs/acre	40 lbs/acre	80 lbs/acre	2.5 tons/acre
	Yr 2	80 lbs/acre	40 lbs/acre	90 lbs/acre	
	Yr 3	80 lbs/acre	30 lbs/acre	90 lbs/acre	

Apply recommended N, P and K fertilizer(s) before growth begins. Apply an additional 50 lbs of N for each successive cutting until last cutting. Loss of stand is sometimes due to K deficiency, apply an additional 40 lbs of K2O per acre for each ton of hay harvested.

The lime recommendation for this crop is for establishment and assumes the lime will be incorporated into the soil with tillage. If the lime is to be placed on top of the ground and not incorporated, only use 1 ton per acre per year; for example if the lime recommendation is 2 tons per acre, use one ton now and one ton at the same time next year.



Additional Information

The second page of the soil test report contains additional details about your sample. Units for elements tested are in pounds per acre (ppa). Of particular interest are phosphorous and potassium: green bars indicate additional fertilizer will probably not result in additional plant growth or yield; yellow bars indicate a plant response

may or may not occur; and red bars indicate additional fertilizer will likely result in increased plant growth or yield.

What about nitrogen measurements? Plants require specific forms of nitrogen that are tricky to measure in the lab. Additionally, nitrogen is so mobile in the soil, measurement of current values would not be very helpful for predicting a nitrogen recommendation. Therefore, MSU Extension recommendations are based on research.



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