

In 2006, the Cooperative Extension Service implemented new Phosphorus (P) fertilizer recommendations for rice production.

Phosphorus (P₂O₅) and Potassium (K₂O) Fertilizer Recommendations									
Soil pH	P Soil Test Level			Yield Goal	Soil Test K Level				
					Very Low	Low	Medium	Optimum	High
					Soil Test K Concentration (ppm)				
					<61	61-90	91-130	131-175	>175
					Soil Test K Concentration (lbs/acre)				
					<122	122-180	181-260	261-350	>351
	Level	ppm	lbs/A	Bu/A	lbs N – P₂O₅- K₂O/Acre				
> 6.5	Very Low	<16	<32	170	X-90-120	X-90-90	X-90-60	X-90-0	X-90-0
	Low	16 – 25	32 – 50		X-60-120	X-60-90	X-60-60	X-60-0	X-60-0
	Medium	26-35	51-70		X-50-120	X-50-90	X-50-60	X-50-0	X-50-0
	Optimum	36-50	71-100		X-0-120	X-0-90	X-0-60	X-0-0	X-0-0
	High	>50	>100		X-0-120	X-0-90	X-0-60	X-0-0	X-0-0
< 6.5	Very Low	<16	<32	170	X-50-120	X-50-90	X-50-60	X-50-0	X-50-0
	Low	16 – 25	32 – 50		X-30-120	X-30-90	X-30-60	X-30-0	X-30-0
	Medium	26-35	51-70		X-0-120	X-0-90	X-0-60	X-0-0	X-0-0
	Optimum	36-50	71-100		X-0-120	X-0-90	X-0-60	X-0-0	X-0-0
	High	>50	>100		X-0-120	X-0-90	X-0-60	X-0-0	X-0-0

For explanation of soil test levels, see Table X for definitions. Phosphorus Soil Test Concentrations expressed in lbs/A will not be equal to those results obtained in previous years because the soil testing procedure was modified. Current concentrations are likely to be higher than previously observed.

Note: The Cooperative Extension Service recommends 0-40-0 on recently precision-leveled fields unless a higher Phosphorus fertilizer recommendation is called for based on soil test P level.

Soil samples may be submitted for analysis at any local County Extension Office. For more information on P fertilization of rice, contact your local County Extension Agent.

Table X. General definitions of soil-test levels.

Soil-Test Level	Definition
Above Optimum (High)	No yield or growth response to fertilization is expected for soil nutrients with Above Optimum soil-test levels. Nutrients will not be recommended for nutrients with ‘High’ soil-test levels since they are considered to be above the agronomic optimum. Starter fertilizers may still be beneficial for early-season plant vigor.
Optimum	No yield or growth response to fertilization is expected for soil nutrients with Optimum soil-test levels. Application of nutrients may be recommended to maintain the existing soil-test level depending upon soil-test philosophy and or crop needs.
Below Optimum (3 sub-categories)	
Medium	Crop yield potential without fertilization is expected to range from 85 to 95%. Fertilization is usually recommended. Recommended fertilizer rates may reflect only the amount needed to produce maximum yield or include this rate with additional fertilizer to gradually increase the soil test level to the ‘Optimum’ level over a 4- to 8-year period.
Low	Crop yield potential without fertilization is expected to range from 65 to 85%. Fertilization is recommended at greater rates than for the ‘Medium’ soil-test level. The recommended fertilizer rate will reflect the amount of fertilizer needed to maximize crop growth and/or yield, as well as additional fertilizer to, increase the soil-test level to the ‘Medium’ or possibly the ‘Optimum’ soil-test level over a 4- to 8-year period.
Very Low	Crop yield potential without fertilization is expected to be <65%. Fertilization is recommended at greater rates than for the ‘Medium’ and ‘Low’ soil-test levels. The recommended fertilizer rate will reflect the amount of fertilizer needed to maximize crop growth and/or yield, as well as additional fertilizer to increase the soil-test level to the ‘Medium’ or possibly the ‘Optimum’ soil-test level over a 4- to 8-year period.
<p>Note <i>Soil test levels and their associated nutrient concentration ranges are general guidelines for interpreting soil-test results. Some soils and cropping situations may require less or more fertilizer for the production of optimum plant yields.</i></p>	

University of Arkansas, United States Department of Agriculture and County Governments Cooperating.

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