

Quick Guide to Tri-State Fertilizer Recommendations Changes

PREVIOUS RECOMMENDATION	WHAT HAS CHANGED?	WHY THE CHANGE?
Soil Sampling		
Sample every 3 to 4 years in a consistent way.	Sample every 3 to 4 years in a consistent way as the foundation for an adaptive nutrient management program.	No changes. Learn more
Soil pH and Lime		
Single liming recommendation across all three states.	Michigan and Indiana liming recommendations are consistent. Ohio recommendations are different.	States label and regulate liming materials differently. Learn more
Nitrogen Fertilizer		
Corn N recommendations based on yield goals.	Corn N recommendations are now based on economic model to maximize profitability.	Fluctuating grain and fertilizer prices necessitate a focus on economics in addition to yield. Learn more
Wheat N recommendations based on yield goals.	Wheat N recommendations have been updated.	Recommendations are calibrated with recent field trials with modern varieties. Learn more
Phosphorus and Potassium		
Established three range framework: build-up, maintenance, draw-down.	Management framework drops drawdown range, makes build-up recommended but not required.	Recommendations are simplified to provide farmers with greater flexibility to manage nutrients profitably. Learn more

Phosphorus and Potassium (continued)

Soil test P based on Bray P; Soil test K based on ammonium acetate extraction.	Default soil test P and K levels now based on Mehlich-3.	Make recommendations consistent with current soil test extracts. Learn more
P critical level 15 ppm for corn and soybean, 25 ppm for wheat and alfalfa (Bray P).	P critical level 20 ppm for corn and soybean, 30 ppm for wheat and alfalfa (Mehlich-3 P).	This update is based on extensive field trials over past decade. Learn more
K critical levels increased continuously with increasing CEC.	K critical levels 100 ppm for sandy soils, 120 ppm silt and clay soils (Mehlich-3 K, all crops).	This update is based on extensive field trials over past decade. Learn more
Grain nutrient removal rates per bushel of yield were established.	Grain nutrient removal rates per bushel of yield have decreased.	Crops are yielding more but grain nutrient concentrations have decreased. Learn more

Calcium, Magnesium, Sulfur

Liming supplies sufficient Ca and Mg; S deficiencies are rare.	Liming supplies sufficient Ca and Mg; S deficiencies remain infrequent but are increasing.	No changes. Learn more
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Micronutrients

Most soils supply sufficient micronutrients; diagnostic tools are limited.	Most soils supply sufficient micronutrients; diagnostic tools are limited.	No changes. Learn more
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This document provides a summarized version of the Tri-State Fertilizer Recommendations, reporting the main points of the document but lacking comprehensive detail. For complete information, please see the full version which is available from [The Ohio State University Extension Publications Store](#).