UPDATING COMPONENTS OF ILLINOIS PHORPHORUS AND POTASSIUM FERTILIZER RECOMMENDATION

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ABSTRACT

Most North Central region phosphorus (P) and potassium (K) soil-test interpretations and fertilizer guidelines include components of (1) designation of an optimum range or critical soil-test level, (2) soil P and K buffering capacities to predict soil-test build-up and drawdown rates (pounds of P_2O_5 or K_2O per ppm), and (3) harvest nutrient removal estimates. Illinois Agronomy Handbook guidelines rely on these components, however changes in soil test methods, cropping systems, and challenges of economic returns and balancing land tenure require updated and flexible options for farmers and agronomists. A series of experiments were established across Illinois to evaluate individual elements of P and K management, and results to be aggregated to update state recommendations for corn, soybeans, and winter wheat.