

# Potassium: An Essential Plant Food Nutrient



This publication presents current information on the importance of potassium (K) for agriculture. A forerunner booklet on this subject was published by the Institute in the 1950s. During the more than 40 years since then, several editions have been released. Our knowledge of plant nutrition and crop production has greatly increased. Yields have doubled and tripled. Fertilization practices have improved. There are newer and better hybrids and varieties. However, we still have much to learn about nutrient management as it relates to high yield, high profit crop production that is environmentally friendly.

There are still widespread areas of nutrient depletion. Africa is a well known example, but nutrient mining exists everywhere, even in some of the U.S. Corn Belt states. That is, more phosphorus (P) and K are being removed in harvested crops than are being applied in fertilizers and animal manures. Improving the management of P, K and other nutrients is more important now than it has ever been.

Potassium is basic to plant and animal

life. Except for nitrogen (N), plants require more K than any other nutrient. Potassium is the third most abundant mineral in the human body, and it plays many vital roles in plant nutrition.

Unlike N, P and most of the other essential nutrients, K does not become a part of the chemical structure of the plant. Thus, its mobility in the plant allows it to influence almost all aspects of plant growth. Potassium encourages root growth, strengthens stalks, activates enzymes, controls plant turgidity, transports sugar and starch, helps in protein formation, controls diseases...and is involved in many other plant functions.

Potash & Phosphate Institute (PPI) scientists have updated and summarized material for use in this booklet. We hope this scientific summary helps contribute to a better understanding of the importance of K in food and fiber production. **BC**

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