National Fertilizer
Solutions Association

FLUID FACTS

NFSA AGRONOMIC NEWSLETTER

Good Fertility Enhances More than Yield

Dealers often overlook the value of their services and products at enhancing the quality of growers' crops, as well as their yields. Before harvest, watch for some of the other benefits that a well-designed fertility program brings at the end of the crop year.

Advanced Maturity. Crops furnished with adequate nutrition throughout their growth cycle will mature sooner than those which experience nutritional stress at one or more times during the growing season.

Researchers in Kansas found grain sorghum matured 8 to 10 days earlier with band applications of P rather than broadcast treatments. The results of a P placement experiment on grain sorghum published in 1990 by Havlin, Lamond and Schlegel of Kansas State University inferred that banded P was more available and allowed the crop to mature sooner by better meeting the nutritional demands and promoting earlier flowering.

Improved Quality. Late-season foliar applications of urea solution are used in England to increase protein concentration content of breadmaking wheat. Often, these sprays will also increase yields; but, it is the enhance-ment of protein content that makes these applications economically attractive.

In corn, proper K nutrition promotes stalk strength, thereby reducing lodging at harvest. In soybeans, adequate K promotes improved seed size, oil and protein content, and better nodule development.

Disease Suppression. According to USDA soil scientist Fred Rhoton, (mean) stem canker incidence in soybeans was reduced 16% to 45% by maintaining soil K at 250 lb/A in a Mississippi study. Potash has also been used to lessen the effects of stripe rust and take-all root rot in winter wheat.

Water Use Efficiency. In many areas of the world, water is the primary limiting production factor. For irrigated crops, it is important to optimize yield for a given amount of applied water. Proper fertilization allows growers to reduce irrigation inputs to achieve comparable yields, thereby improving water use efficiency.

According to the PPI publication titled **Fertilizer Improves Water Use Efficiency**, "In Texas, grain sorghum water use efficiency increased from 173 to 308 pounds of grain per acre inch of water used when the crop received adequate N and P." Proper fertility allows roots to explore a greater soil volume early in the crop's development. Early season stress can be avoided with deeper and better developed roots actively absorbing moisture and nutrients. Good fertility makes the best use of available water.

Remember, it takes many things to get the crop to market profitably. Don't overlook the many benefits that a good fertilizer program provides by looking only at yield. Earlier harvest, faster dry-down, better quality and higher yields all add up!

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