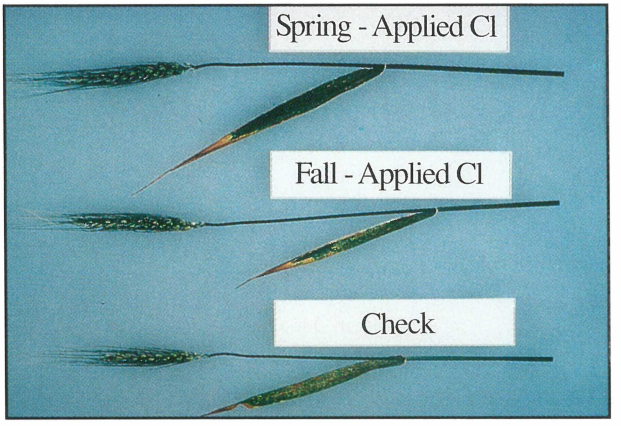

WHEAT plots treated with chloride fertilizer had significantly more green leaf area during grain fill than untreated plots. Spring topdressed treatments were less infected with rust than fall treatments.

from the profile, resulting in significant deficiencies between fall and spring treatments. High rainfall could also have enhanced the environment for disease.

Soil test Cl levels. Sites in 1991 measured 3 to 5 parts per million (ppm) Cl in the surface 2 feet of soil. The 1992 site tested less than 1 ppm Cl.

Conclusions

Chloride fertilizers can suppress leaf rust in winter wheat in Texas. Results are not entirely consistent or predictable, but Cl fertility can provide an economical suppression of leaf rust under some growing conditions. ■

Missouri

RESEARCH NOTES

Potassium May Affect Alfalfa Susceptibility to Insect Damage

RESEARCHERS have studies on an established pure stand of alfalfa to determine the effect of potassium (K) sources on the susceptibility of alfalfa to insects and diseases.

The 1991 data indicate that statistically significant differences in insect numbers do exist among various K fertility treatments when insect numbers reach or exceed economic threshold levels.

Data indicated that recommended rates of potassium-magnesium sulphate ($K_2SO_4 \cdot 2MgSO_4$) reduced numbers of alfalfa weevil larvae by 31 and 49 percent for Julian dates 100 and 114, respectively. Larvae numbers were reduced by 50 and 59 percent, respectively, with recommended potassium chloride (KCl) rates on the same dates. Potassium sulphate (K_2SO_4) at recommended rates reduced alfalfa weevil larvae by 27 and 34 percent, respectively.

While it appears that alfalfa weevil are in some way suppressed by better K nutrition, potato leafhopper did not show the same response. There were no apparent relationships among K sources and foliar disease symptoms at this early stage of experimentation. ■

Source: W. C. Bailey, J. T. English, and J. R. Brown. 1992. The effect of potassium-magnesium sulphate upon the susceptibility of alfalfa to insect, disease, and nutritional problems. Agronomy Misc. Publ. 92-01, Dept. of Agronomy, Univ. of Missouri, Feb. 1992. p. 168-182.