This new information needs to be transferred to plant breeders and crop management specialists. To date, their primary emphasis has been on plants per square foot.

Summary

This research clearly shows that alfalfa properly fertilized with P and K can be maintained economically for long periods of time. The data also show that returns will offset herbicide applications when the alfalfa stands become thin and less competitive. With good P and K fertility, minimal plant density is between 2 and 3 plants per square foot. As farmers look for long-term sustainable programs, well-managed alfalfa can contribute a quality forage to the system. However, the economics of fertilization regimes will be a critical management consideration. Top-dressing is vital to persistence. The plow-down treatments help out early in the life of the stand, but do not sustain productivity.

Future assessments of stand condition are likely to place more emphasis on shoots per square foot than on plants per square foot. Not only does K help plants persist, but it promotes shoot growth of remaining plants if a neighboring plant dies, thus maintaining yield potential.

"Roots of Plant Nutrition" Conference Proceedings Available from PPI

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