Perennial legume forage crops are important components of crop-livestock systems in the temperate, subtropical, and tropical regions. These crops may be part of stored-feed or pasture harvesting schemes for livestock. Potassium is essential for the physiological activity of the crops, and supplementation may contribute significantly to the success of the crops when grown alone or in association with other species. The indigenous soil nutrient supply mechanisms in conjunction with the utilization capability of the plant may ensure adequate K for crop growth until the soils are managed for periods of time at yield levels that deplete the soil reserves. Indicators of $K^+$ availability to the crops include plant analysis and soil testing. Amelioration of deficiencies may be required before establishment of the legumes or by applications to existing stands. Nutrient sources include K fertilizers as well as animal manures. Under periods of management when soil nutrient deficiencies have been eliminated, the task of managing the K on a farm or in a pasture situation may require improved analytical tests of nutrient availability or new ways to manage the K in a crop-livestock system.

I. TEMPERATE LEGUMES

Perennial forage legumes are widely grown in the temperate regions where adequate moisture is available or irrigation is provided (Bolton et al., 1972; Heath et al., 1973; Martin et al., 1976; Smith, 1981). Some regional geographic differences in adaptation that correspond to summer temperature differences exist. Red clover (Trifolium pratense L.) is better adapted to cooler than warmer temperatures. Alfalfa (Medicago sativa L.) and white clover (Trifolium repens L.) may be successfully grown in warm summer regions. However, without irrigation, alfalfa will be dormant during the most intense warm period, and white clover will perform as a winter annual. Within specific geographic regions, differences in success-