



**REDUCING THE POTASSIUM CONTENT OF FORAGES THROUGH FORAGE MANAGEMENT**

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In recent years, potassium (K) content of forages has become a major concern on dairy farms because it plays a major role in cation balance of the feed ration which is a contributing factor for milk fever.

Increasing K level in the soil, because of current manure management strategies and excessive K fertilization, has resulted in relatively high K

levels in many of our forages.

High K content of forages increases the difficulty in balancing the ration with respect to divalent cations such as magnesium and calcium. However, there are a few management practices that can be implemented to reduce forage K content and minimize the potential problem before it occurs.

1. Apply manure or potassium-containing fertilizers only where they are recommended through soil testing. When soil potassium exceeds recommended levels it accumulates in forage plants without a concurrent increase in forage yield. This situation

results in forages with excessively high K content.

2. Allow forages to mature as much as possible before harvest. There are some obvious forage quality trade-offs associated with this practice. However, K levels can be reduced by about 25 percent (e.g. 2.3 to 1.8 percent) if alfalfa is allowed to mature from bud to 25 percent flower before harvesting.

3. Harvest the forage as low to the ground as possible. The tops of forage plants contain higher concentrations of K than the base of plants. Harvesting close to the ground will result in lower K content forage.

4. Practices that keep more leaves in harvested forage will reduce K content because K tends to accumulate in the stem.

5. Include a grass in the forage mixture. Grasses tend to have lower K content than legumes. However, on soils with excessive K levels grasses can also contain excessive amounts of K.

For all of these management prac-

tices to be effective, a good system of forage monitoring and inventory must be in place. Segregating forages based on K content and matching this with the needs of animal groups is essential. If high forage K levels persist, then substituting some low K forage, such as corn stalks, for the high K forage can help bring the total forage K content to a more manageable level.



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