

**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 problems before it occurs.

• 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.

• 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 for example, (2.3 to 1.8 percent) if alfalfa is allowed to mature from bud to 25 percent flower before harvesting.

• 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.

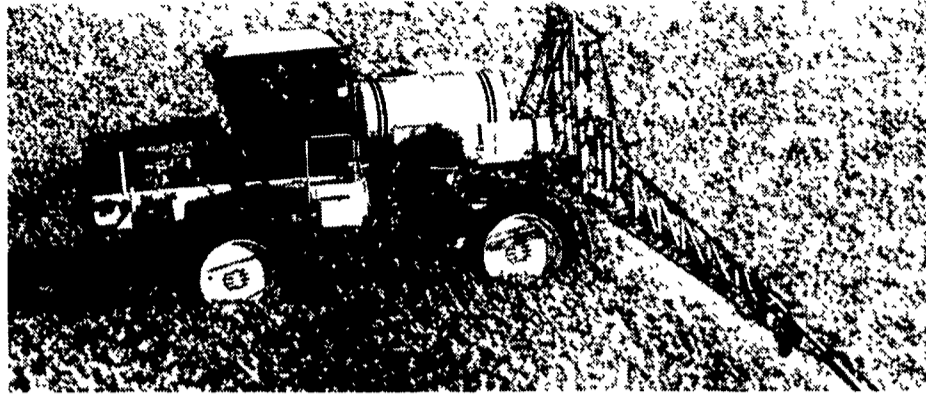
• Practices that keep more leaves in harvested forage will reduce K content because K tends to accumulate in the stem.

• 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 these management practices to be effective a good system of forage monitoring and inventory must be in place. Segregating forage based on K content and matching this with the needs of animal groups is essential.

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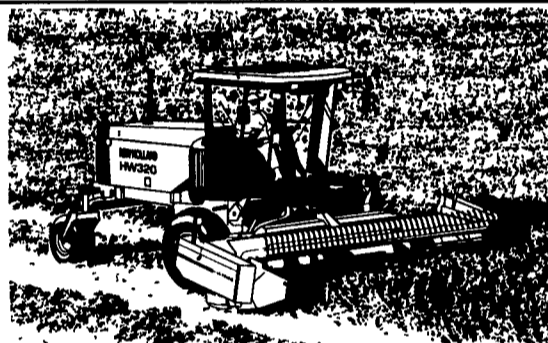
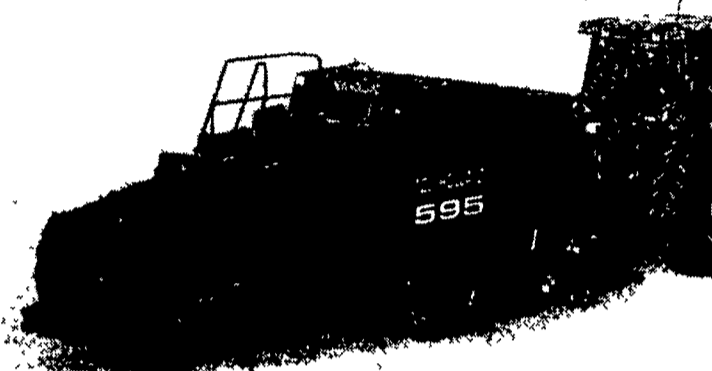
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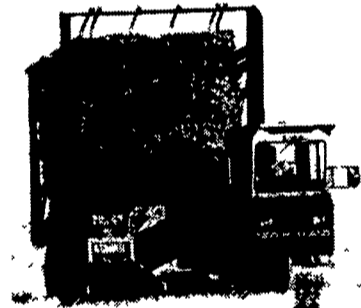
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