

FORAGE PRODUCTION FOR THE HIGH PLAINS BEEF AND DAIRY INDUSTRIES

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SUMMARY

The cattle industry in the High Plains is very diversified ranging from extensive beef cattle ranching operations to intensive grazing and confinement operations in both the beef and dairy industries. Forages are an important part of all of these systems; in some, forages are the main source of nutrients while in others, forages contribute less to the daily nutrient supply but are essential for maintaining health and productivity of the cattle. The forage production systems range from perennial or annual forages fed by precipitation with little if/any other inputs to perennial or annual forages managed with irrigation and soil fertilization.

The diverse cattle production systems create a diversity of needs in terms of the seasonality of forage production, the nutritional value of the forage, and the means by which forage is harvested (grazing, hay, silage). Knowing these needs helps define the forage management practices – forage type, nutrient and water inputs, harvest requirements - required to fulfill the needs of the markets.

In extensive grazing systems based on perennial forages (native or introduced), primary management objectives are to maintain the health of the plant community and capture precipitation to support plant growth. Grazing management and suppression of undesirable plants are the primary management tools used in these systems; soil fertility may be a consideration with some introduced forages. Intensive grazing or hay systems based on perennial forages utilized introduced forages. The management objectives are similar to those mentioned previously but with added emphasis on soil fertility and irrigation inputs to efficiently enhance forage yields and nutritive value. In systems based on annual forages, a primary focus is on stand establishment and hence soil moisture, timing, plant populations become issues in addition to fertility and irrigation inputs. Producing forage for harvest (hay and silage) requires one to balance inputs to produce desired yields but also harvest timing to produce a desired nutritive value for the targeted use of the forage.