

Exercise Caution With Reed Canarygrass

Ranchers are advised to be careful when grazing their cattle on reed canarygrass. A U.S. Department of Agriculture study shows that under drought conditions or late in the growing season, reed canarygrass—especially if heavily fertilized—can be dangerous or even lethal to livestock.

Reed canarygrass is one of the highest-producing and most widely-used forages for marshy areas—areas frequently inundated by either pond water or flood water. Cattle like young canarygrass and do quite well on it. However, under certain environmental conditions, reed canarygrass accumulates sufficient nitrate to cause deadly nitrate poisoning in cattle.

Studying the conditions that cause this nitrate buildup was range scientist F. B. Gomm, of the USDA's Science and Education Administration-Agricultural Research, Logan, Utah. He observed that nitrate accumulation in reed canarygrass is a product of soil moisture content, light and temperature, and is also influenced by the amount of nitrate available in the soil. Ranchers can use Gomm's findings to avoid much of the problem.

A chemical reaction within canarygrass that reduces nitrate is stimulated by light. Nitrate levels in leaves and stems fully exposed to sunlight are lower than levels in leaves and stems shaded from the sun. High soil moisture content and cool temperatures further slow nitrate buildup. When grown in saturated soils, reed canarygrass contains little nitrate even if heavily fertilized.

According to Gomm then, the probability of nitrate poisoning occurring early in the canarygrass growing season is small because soil moisture is usually high, lower plant stem and leaf shading is minimal at that time and temperatures are relatively cool. Later in the summer, nitrate accumulation increases because the soil is drier, the foliage on the upper part of canarygrass plants is more dense (cutting the lower part of the plant off from sunlight) and day temperatures are warm.

Excessive nitrogen fertilization further aggravates the problem. Not only does the mere presence of the fertilizer mean more nitrate available in the soil to the canarygrass, but the fertilizer also increases the density of

Continued on page 274

REED CANARYGRASS

Continued from page 270

the upper plant foliage. According to Gomm's observations though, if grown in saturated soils, reed canarygrass accumulates little nitrate despite even heavy fertilization.

Gomm said that ranchers should be aware of the potential problems with reed canarygrass and exercise temperance in fertilizer applications. Cattle should feed only on young plants, especially when the canarygrass is grown under drought conditions. When possible, ranchers might also plant alfalfa or clover with reed canarygrass to dilute the nitrate that the cattle consume. ☐