



County	Contact	Premium Hay (\$/ton)	Top Quality Hay (\$/ton)	Other Hay (\$/ton)	Cut Complete/ Condition
Chaves	Sandra Barraza, County Agent	\$175+ large (Del); Up to \$240 small bales	\$165+ large	\$150+ large	1 <sup>st</sup> cut 75%; Hot and dry
Dona Ana	Rafa Realivasquez, County Agent	\$170 large; \$6.00/bale small	\$150 large; \$5.00/bale small	\$130 large; \$3.75/bale small	2 <sup>nd</sup> cut well under way; Milk prices affecting hay sales; cut conditions ideal
Eddy	Woods Houghton, County Agent	\$240+ large bales; \$260-280 small	\$240 large; \$260 small	\$200 large & small low qual.	2 <sup>nd</sup> cut 50%
Lea	Wayne Cox, County Agent	\$180 large; \$195-200 small	\$165-170 large; \$180 small	\$150 and up	2 <sup>nd</sup> cut 50%
Quay	Tom Dominguez, County Agent	\$185 large; \$240 small, \$8 per bale	\$180+	\$100-150	Dry conditions, limited water
Roosevelt	Patrick Kircher, County Agent	\$165-180 large; \$200 and up small bales	\$165-180	\$150-170 on short supply wheat hay	1 <sup>st</sup> cut 50%; Very dry conditions
SE & SW Colorado	USDA-CO, Dept. of Ag Market News	\$185-190 large; \$8.00/bale small; \$200-260 (grass) small squares	\$160-185 large \$5.50 to 7.00 per bale small	\$140-165 large fair; \$120-130 large utility	Trade is slow. 1 <sup>st</sup> cuts in SE 7 days out

### Managing Alfalfa during Drought

Leonard Lauriault, Forage Agronomist, NMSU Agricultural Science Center at Tucumcari

When prolonged dry conditions occur in New Mexico and water for irrigation is in short supply, alfalfa growers should consider several strategies to protect their alfalfa stands for future years and to maximize profits. Alfalfa is one of the few legumes that can withstand long-term drought because it can go dormant during extended dry periods. Alfalfa plants can survive as long as their crowns and roots remain viable. If enough plants survive for the stand to remain productive (5 plants per square foot or 40 stem per square foot), the field should become fully productive again when it recovers from the drought. Even when producers have less than optimum irrigation capabilities or no water for irrigation, alfalfa often can produce harvestable forage, whether as stored feed or grazed, if locally significant precipitation occurs (Figure 1). Some key strategies to consider during drought conditions in alfalfa include: harvest management, irrigation management (if water is available), insect control, and fertilization.

The goal in drought harvest management is maintenance of leaf area for photosynthesis to provide continuous energy to sustain plant functions without depleting root reserves so that the alfalfa can survive. If harvesting top growth above 6 inches is economically feasible, the alfalfa should be allowed to reach at least 10% bloom and cuttings or grazing should be scheduled for when they will be the least stressful to the plants. Delayed cutting may decrease forage quality and the number of harvests; however, it will promote stand

persistence through plant survival during the drought and save on harvest costs. If areas of the field vary in maturity, base harvest timing on the least mature plants in the field. Continuous light grazing that maintains sufficient leaf area also is feasible; but the pasture should be monitored closely.

Alfalfa is more water-use-efficient during the spring when temperatures are more moderate. Consequently, if water is available but limited in supply for season long irrigation, yields will be maximized by concentrating the water on the early cuttings and then terminating irrigation to allow the alfalfa to enter drought-induced dormancy. Maximizing yield at the early harvests will allow producers to take advantage of higher hay prices, whether they remain high due to shortages after winter or they increase later in spring or summer, as they often do, based on historic data from the New Mexico Agricultural Statistics Service. If water becomes available later in the season, producers should consider harvesting the standing crop and irrigating as soon as possible because irrigation termination for more than one cutting will reduce total annual yield and recovery is delayed to the second or later regrowth after drought-induced dormancy is broken.

Another issue during drought is insect control. During dry periods, rangeland insects may migrate into alfalfa fields adding additional stress to the crop. With hot and dry conditions, insect populations also increase rapidly; hence, more frequent scouting is necessary, especially when regrowth is initiated after harvest or by flowering. Blister beetles, which are toxic to livestock, are attracted by young grasshoppers in addition to flowers. Consequently, because the alfalfa should be allowed to bloom before harvest, fields should be monitored for these insects just prior to harvest.

Drought stress induces survival strategy over biomass production resulting in lower forage production; however, nutrient availability remains critical during drought. Soil testing every 3 years is sufficient to determine particular nutrient needs of alfalfa. Fertilizer should be applied prior to the initiation of growth in spring to minimize traffic on actively growing alfalfa so that stems are not damaged. Always apply fertilizer based on soil test recommendations for alfalfa at a lower level of production. Over-fertilization should always be avoided.

These key management practices should be considered for alfalfa to persist during drought years. For further information about alfalfa management contact your County Cooperative Extension office or visit the NMSU Cooperative Extension Service publications website (<http://aces.nmsu.edu/pubs/>).



Figure 1. Rainfed alfalfa in June 2003 near Tucumcari, NM. A major portion of the ungrazed alfalfa on the left was approximately 12 inches tall.

*Mark Marsalis*, Mark Marsalis, Extension Agronomist—New Mexico State University is an equal opportunity employer. All programs are available to everyone regardless of race, color, religion, sex, age, handicap or national origin, New Mexico State University and the U.S. Department of Agriculture cooperating.

\*\*\*\*\* UPCOMING EVENTS \*\*\*\*\*

- Dairy Producers of New Mexico Convention, Ruidoso, NM, June 12-13, 2009. [www.nmdairy.org](http://www.nmdairy.org)
- American Forage & Grassland Council Annual Conference, Grand Rapids, MI, June 21-23, 2009. [info@afgc.org](mailto:info@afgc.org).