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Hay Prices for New Mexico **Volume 10, Issue 5** **August 24, 2011**

County	Contact	Premium Hay ($/ton)	Top Quality Hay ($/ton)	Other Hay ($/ton)	Condition/ Market Activity/Cut Complete
Chaves	Sandra Barraza, County Agent	$250-325 large; $330-340 small in barn			5th cut 75%; Market strong, very little hay being stored; Yields reduced; Hot and dry, few scattered showers.
Dona Ana	Jeff Anderson, County Agent	$325-350 large; $9.00-15.00/bale	$300+ large	N/A	Little/No irrigation water; All hay contracted/spoken for; More demand than supply
Lea	Wayne Cox, County Agent	$320+ large; $13.00 small	$300+ large; $11.00 small	$250+	5th cut started; Prices rising quickly as fall approaches
Luna	Jack Blandford, County Agent	$280-310; $8.00-8.50/bale small		$300 grass hay; Sudan hay coming off.	5th cut 75%; High demand in all markets; Isolated showers affecting hay, but not impacting market;
Valencia	Kyle Tator, County Agent	$250-280; $7.00-8.00/bale small	$220-250; $6.00-7.00/bale sm	N/A	4th cut 30%; High demand, supplies moving rapidly; Good yields and quality; Isolated showers.

N/A = prices not available at this time

Managing Alfalfa in Low or No Water Availability Situations

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Dry conditions have been prolonged in New Mexico and water for irrigation is in short supply in many areas. Spotty rain showers have helped relieve some of the parched landscape of the state, but much more is needed to improve the overall situation. Fortunately for alfalfa growers, their crop is very resilient to prolonged dry conditions and long-term effects may not be as bad as one would think. Additionally, even under less than optimum irrigation capabilities or no irrigation, alfalfa often can produce harvestable forage if locally significant precipitation occurs. Some key strategies to consider for alfalfa during drought conditions include: irrigation management (if water is available), fertilization, insect and weed control, and harvest management. This article will concentrate on irrigation or lack thereof. For more information about the other aspects of alfalfa drought management, see NMSU's Circular 646, Managing alfalfa during drought (http://aces.nmsu.edu/pubs/_circulars/CR-646.pdf).

Alfalfa can withstand long-term drought because it can go dormant during extended dry periods and plants can survive as long as their crowns and roots remain viable. If enough plants survive for the stand to remain productive, the field should become fully productive again when it recovers from the drought. The USDA Farm Services Agency considers 60% stand to still be monoculture alfalfa for NAP, which might be about 3 plants per square foot, and there is no limitation for stand age. Consequently, just because the alfalfa cannot be irrigated, doesn't mean it should be plowed out. Rather, when stands are less than 3 or 4 years old, producers using surface water or pumping groundwater near river systems should consider the possibility that it may be more economical and less risky to take advantage of the alfalfa NAP and maintain an intact stand producing lower yields for two years in anticipation that irrigation water may become more plentiful than to risk establishing an annual crop with or without irrigation for at least two years before replanting alfalfa.

Generally, renovation is recommended when the stand drops below 5 plants per square foot or 40 stem per square foot. During periods of non-irrigation, using the five plants per square foot guideline is recommended because stem numbers might be reduced. Once irrigation is applied and the alfalfa has recovered, stems per square foot is the recommended evaluation. Ideally, stand loss is best assessed when temperatures cool in late summer.

Figure 1 shows selected data from a study at Tucumcari in which various cuttings were furrow-irrigated to see where water could possibly be saved in a six-cut system. The test was sown in late summer 2005 and fully irrigated in 2006 to ensure establishment. Yields of the first harvest in 2006 were not measured due to high weed content. Otherwise, there was no difference in yield among treatments that year (Figure 1), which was expected because the irrigation treatments had not been imposed.

When irrigation treatments were imposed from 2007 through 2009 there was a consistent difference among treatments, but there was no difference in spring and early summer yields when those were the only cuttings irrigated compared to the same cuttings when the alfalfa was fully irrigated for all cuttings (Figure 1). Consequently, there was no carryover effect in the spring due to irrigation termination the previous summer and fall.

In 2010, irrigation water did not become available until mid-June, but all treatments were fully-irrigated for the rest of the year and there were no differences among treatments (including the one that had not been irrigated since 2006) for any cutting or for the annual total (Figure 1). This further demonstrates a minimal, if any, short-term effect due to long-term irrigation termination.

Alfalfa is more water-use-efficient during the spring when temperatures are more moderate. Consequently, if the water supply is limited for season long full irrigation, but the rate of delivery is not diminished (e.g., pumping capacity is still at least 7 gallons per minute per acre, but wells are metered with a limit on the total that can be pumped per year or only 1 acre-foot of surface water is available per acre and it can be received as requested), yields will be maximized by concentrating the water on the early cuttings and then terminating irrigation. If water is available throughout the season, but the rate of delivery is diminished (e.g., pumping capacity is less than 7 gallons per minute per acre), irrigated acreage should be reduced so that 7 gallons per minute per acre can be applied to maximize productivity through full irrigation of a smaller area. Any non-irrigated alfalfa also can be harvested as growth permits.

Additionally, if plentiful irrigation becomes available within 3 years after termination (it may actually be longer, but we don't know) and there are still at least 5 plants per square foot, irrigation should resume as soon as possible to maximize yields for that year and help the alfalfa recover prior to the next growing season. Once the alfalfa has recovered stands should be evaluated in late summer/early autumn using 40 stems per square foot to determine whether or not replacement is appropriate. To learn more about making stand replacement decisions see NMSU's Circular 644, Assessing alfalfa stands after winter injury, freeze damage, or any time renovation is considered in New Mexico (http://aces.nmsu.edu/pubs/_circulars/CR644.pdf).

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/).

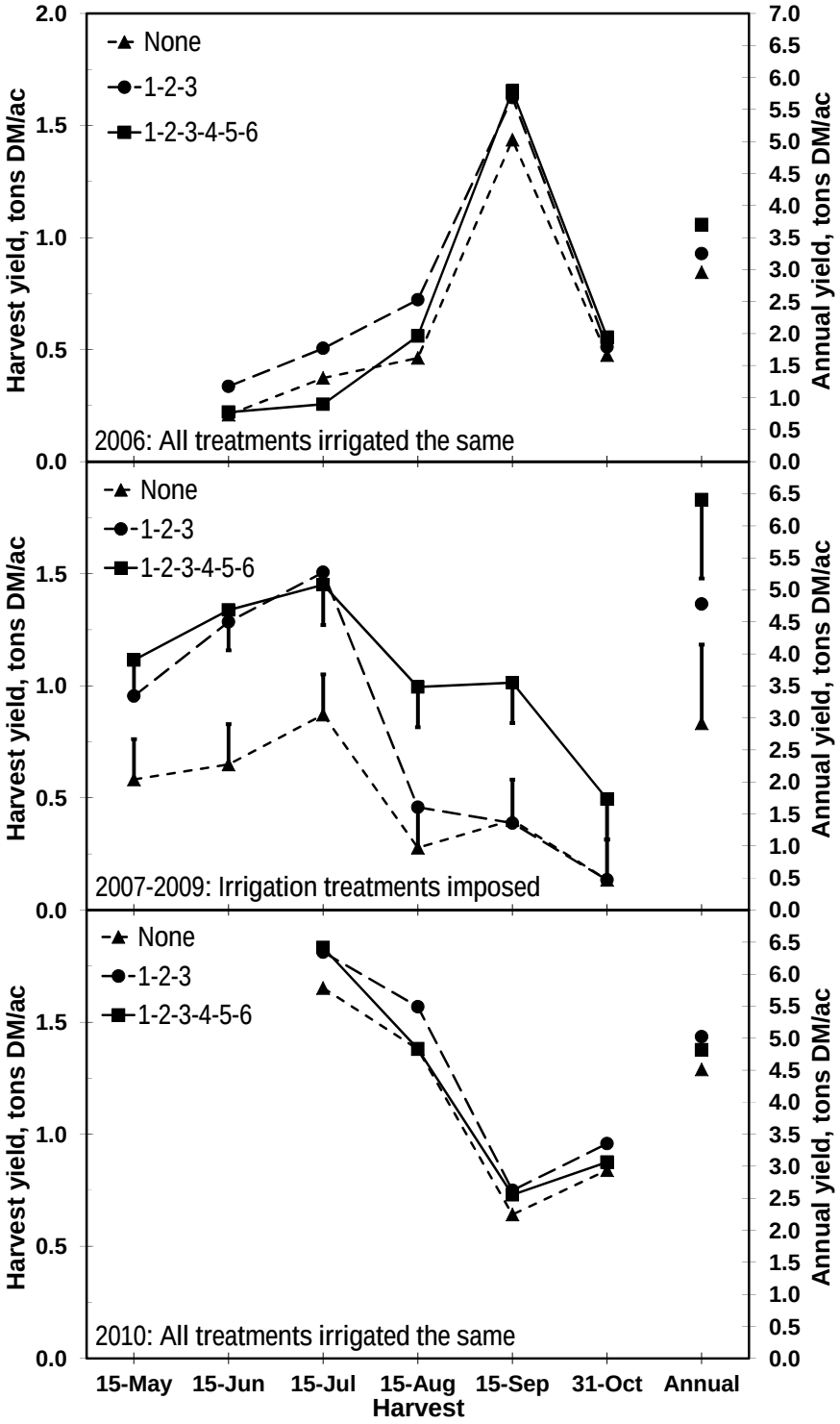

Figure 1. Alfalfa yields when fully irrigated in 2006 and 2010 or irrigated for all six harvests, the first three harvests, or not at all from 2007 to 2009 at Tucumcari. The numbers in the legend represent which of the six cuttings were irrigated from 2007 to 2009, and the vertical bars in the 2007-2009 pane show how much yield it takes to make a difference within a cutting or for the annual yield.

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