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Extension Plant Sciences
Alfalfa Market News
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Hay Prices for New Mexico **Volume 11, Issue 1** **May 9, 2012**

County	Contact	Premium Hay ($/ton)	Top Quality Hay ($/ton)	Other Hay ($/ton)	Condition/ Market Activity/Cut Complete
Chaves	Sandra Barraza, County Agent	$350 large bales-last year's crop; $250-300 large-speculation on 2012 1st cuts		$200+, speculation	1st cuts started; Demand high, speculation only; No contracts yet; Spraying for weevils and aphids.
Dona Ana	Jeff Anderson, County Agent	$260-350 if available, depending on quality; $21.50/3-strand bale			1st cuts 75%; Dry conditions, limited irrigation water leading to lighter yields
Eddy	Woods Houghton, County Agent	$350 large; $15-19/bale, Prime small		N/A	1st cut 100%, North Eddy; 1st cut 15% South Eddy; Selling fast
Lea	Wayne Cox, County Agent	$340+ large; $14.50+ small		$200+ if available	1st 100%; High demand, low supplies
Luna	Jack Blandford, County Agent	$250-300 large; $8-9/bale small		N/A	1st cuts started; High demand on all classes; Warm days, cool nights; Some aphid pressure early
Roosevelt	Patrick Kircher, County Agent	$270-350 large del; $8-12 small squares		Wheat hay, $250/round bale; $300 del; $7.50-12.00/bale	1st 75%; Wheat hay being cut; Market volatile; Hot, dry, and windy; Weevil and aphid pressure in alfalfa; Aphid and mite pressure on wheat
Valencia	Kyle Tator, County Agent	$300-330+; $20/bale – 3-strand; $13-18/bale – 2-strand		N/A	1st cuts 25%; High demand, low supplies; Variable weather – above normal heat, winds, some rain and snow early; Significant weevil pressure

N/A = prices and/or supplies not available at this time

Limited Irrigation Effects on Alfalfa Yield and Water Use Pattern

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During periods of drought or water shortages, producers are forced to alter water management and distribution to crops during the growing season. Sideroll/Wheel move irrigation systems are placed in one location and deliver water with sprinklers for a set amount of time before they are moved again to another place and run again. Center pivot systems deliver total water amounts based on speed of the rotation. Under limited water conditions it may be tempting to keep irrigating the same amount of acreage but with less time per set or with faster speeds on pivots, effectively applying less water per irrigation. It has been the recommendation of Extension that it is better to reduce acreage of alfalfa in order to meet a minimum water input and properly balance the water input with crop demand. That is, reducing acres instead of watering time is the preferred drought management strategy.

The NMSU Agricultural Science Center at Artesia evaluated alfalfa yield response to two different set times at the beginning of the 2011 irrigation season. Soil water content was measured every four inches to nearly 30-inches every-other-day during the week. The relative change in soil moisture status was calculated for each irrigation treatment and harvest weights were collected from the treated area. Limited irrigation set times averaged 9 hours which delivered an average 4.44 acre-inches of water. This was compared against an average 17 hour set which averaged 8.33 acre-inches per irrigation. The total yield over three cuts under full irrigation

was 5.4 ton/acre while the alfalfa under limited water conditions produced 2.4 ton/acre. This indicates that even if the irrigated alfalfa acreage was cut in half, the total yield of the system (i.e., total tons or bales) would be similar, or perhaps more, if the alfalfa was fully irrigated. Producers should keep in mind that with the current high prices for hay, fewer acres can result in a similar amount of income if yields are maximized on those fewer acres (i.e., 50 acres of $300 hay is the same as 100 acres of $150 hay). The current shortage of hay lends itself to scaling back on acres farmed. Plus, input costs are potentially lower when less land is farmed.

Irrigation can be cut off from alfalfa for temporary periods of time without much detriment to the stand's future productivity potential. See excerpt below from previous newsletter (*Managing Alfalfa in Low or No Water Availability Situations*, August, 2011; available at http://aces.nmsu.edu/pubs/haymarketreports/welcome.html):

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. 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. This further demonstrates a minimal, if any, short-term effect due to long-term irrigation termination.

In the Artesia study, nearly 80% of the applied water stayed in the top 12 inches of soil under limited irrigation (Figure 1). Fully irrigated alfalfa put more water to a greater depth with only 54% of the applied water accounted for in the top foot. Under fully irrigated conditions water reached to a greater depth and alfalfa was able to use that water to produce harvestable yield. It took an average of 8.8 inches of water per ton of alfalfa produced under water limiting conditions. Alfalfa under fully irrigated conditions used less (6.0 inches) irrigation water per ton of yield. This shows that non-stressed, fully irrigated alfalfa is better at utilizing the water applied to it and return per drop of water is greater. During hot, dry periods, alfalfa becomes dependent upon deeper soil moisture; and the output becomes negatively impacted if that deep moisture is not present. This fully irrigated capability can be achieved by reducing acres and focusing more water on the better producing fields (or portions of fields) to obtain maximum yields.

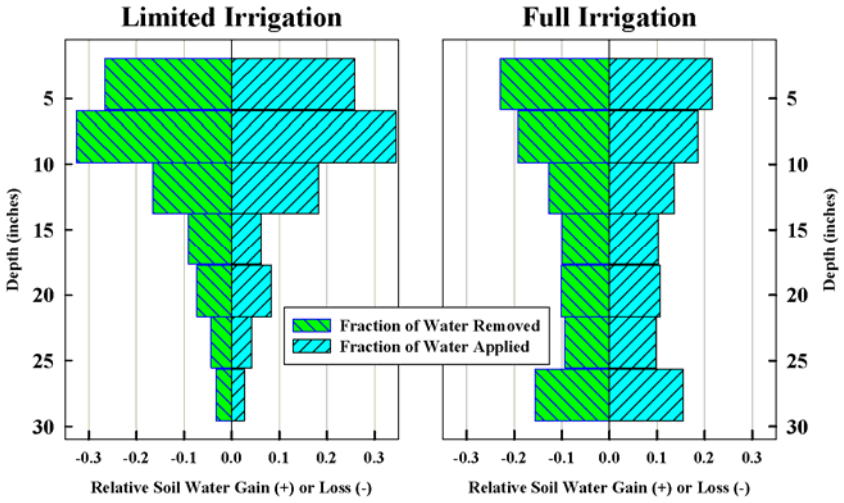

Figure 1. Effect of irrigation amount on distribution of soil water and plant extraction, Artesia, NM, 2011.

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