



# Analysis & Comments

Livestock Marketing Information Center  
State Extension Services in Cooperation with USDA

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[www.lmic.info](http://www.lmic.info)

## National Hay Situation and Outlook

The 2011/2012 crop year was one of extraordinary high hay prices and tight supplies. Sellers enjoyed new record high prices in both the alfalfa and other hay complexes, while buyers struggled to find quality and affordable feed. Supplies were tight across the country and exports particularly of alfalfa made double digit gains adding to domestic supply pressure. By the close of the 2011/12, stocks were anticipated to be at a new record low and set the stage for another possible record high price year. Fortunately for the livestock side, mild winter temperatures and significant price rationing slowed hay use, resulting in stocks just 4% below last year's May 1 level.

Hay prices are expected to remain high this year and could easily remain in the top three record years. However, the current top three record years cover a large range. The current top three prices in alfalfa range from \$195 per ton this year to \$137 per ton in 2007/08. Expectations this year will be below the highest price and be similar to the second highest record of \$165 per ton. In other hay the top three prices are in the same years but had a smaller range: \$125-110 per ton. Other hay prices are also expected to be close to the second highest price of \$118 per ton.

## Disappearance and Winter 2012

### **Disappearance**

Record high prices encouraged livestock producers to find alternatives to feeding hay, especially as the 2011/12 crop year progressed. Alfalfa prices averaged nearly 60% above a year ago nationally, and other hay was nearly 30% above the previous year. On a monthly basis, seasonality played a much smaller role in prices and during parts of the year which normally exhibit a price decline; it did not occur. Alfalfa prices had the lowest divergence from a year ago in last month's preliminary price figure (April), coming in at \$207 per ton, still \$46 per ton above a year ago. The highest monthly divergence was \$85 per ton higher than 2010/11 in September. Other hay experienced less inflated prices but still had significant increases from the year before. The closest figure compared to 2010/11 in other hay was in May at only \$20 per ton higher, while the highest month was March at \$40 per ton.

High prices caused the lowest crop year disappearance in hay since 1977, more than 30 years ago. Calculated disappearance (May stocks + production - ending stocks) is estimated to be 132 million tons, 9% below the previous year. In fact, disappearance has not been below 140 million tons in over 20 years. Regionally, the south had the largest declines in state level data. Figure 1 is a map of calculated total disappearance by state. Percentages indicate the change in disappearance compared to the previous marketing year. Greater than a 10% reduction in disappearance is noted by red states, while a greater than 10% increase in use is indicated in dark green. However, this calculation does not take into account hay moved to

states. The calculation simply exacts how much hay disappeared compared to beginning stocks and production. This could include exports, feed, or shipments to other states.

Disappearance by state appears to have a strong correlation with increases in hay prices by state. All hay prices for the season average have not been released yet. However, a complete set of monthly prices has been published. Figure 2 shows the percent increase in hay price compared to the previous year using a simple average of the monthly all hay prices received. Red indicates the highest increase in prices, where green indicates the lowest increase in prices. Texas was expected to be red in Figure 2. The difference results from using the all hay price, which in Texas, other hay price which increased much less than alfalfa. Note all states do not have prices published monthly for all hay.

Figure 1: 2011/12 Crop Marketing Year Disappearance. Data Source: USDA-NASS May Crop Production Report

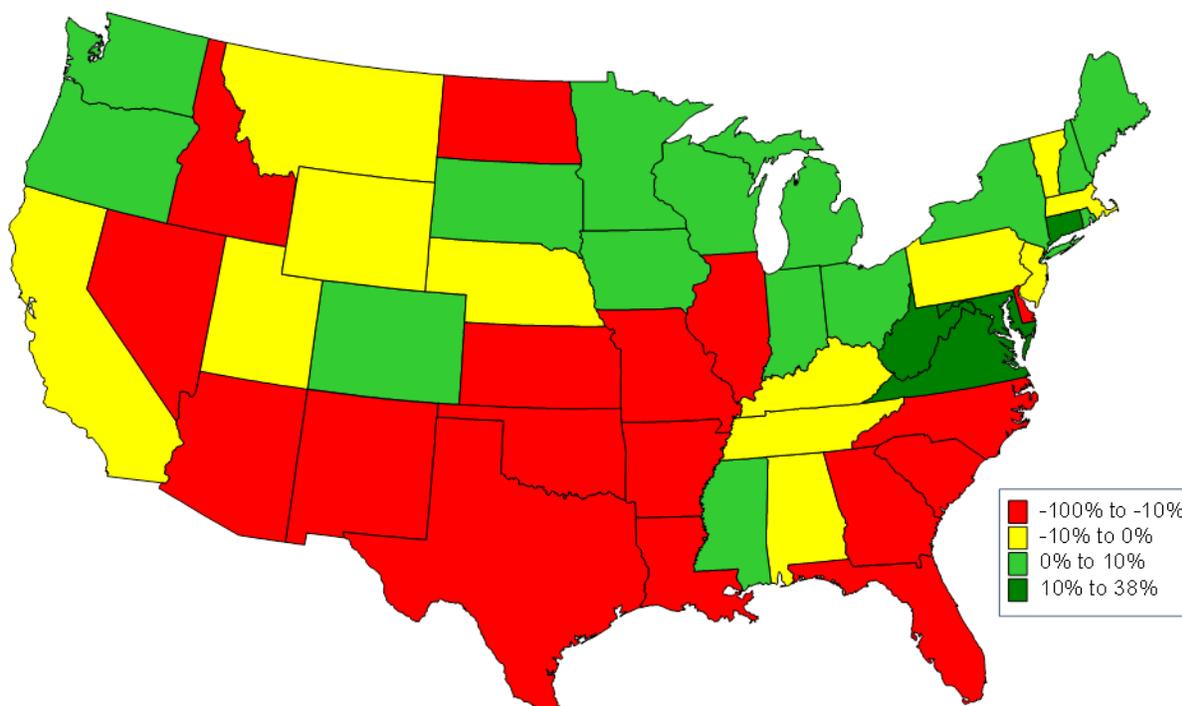
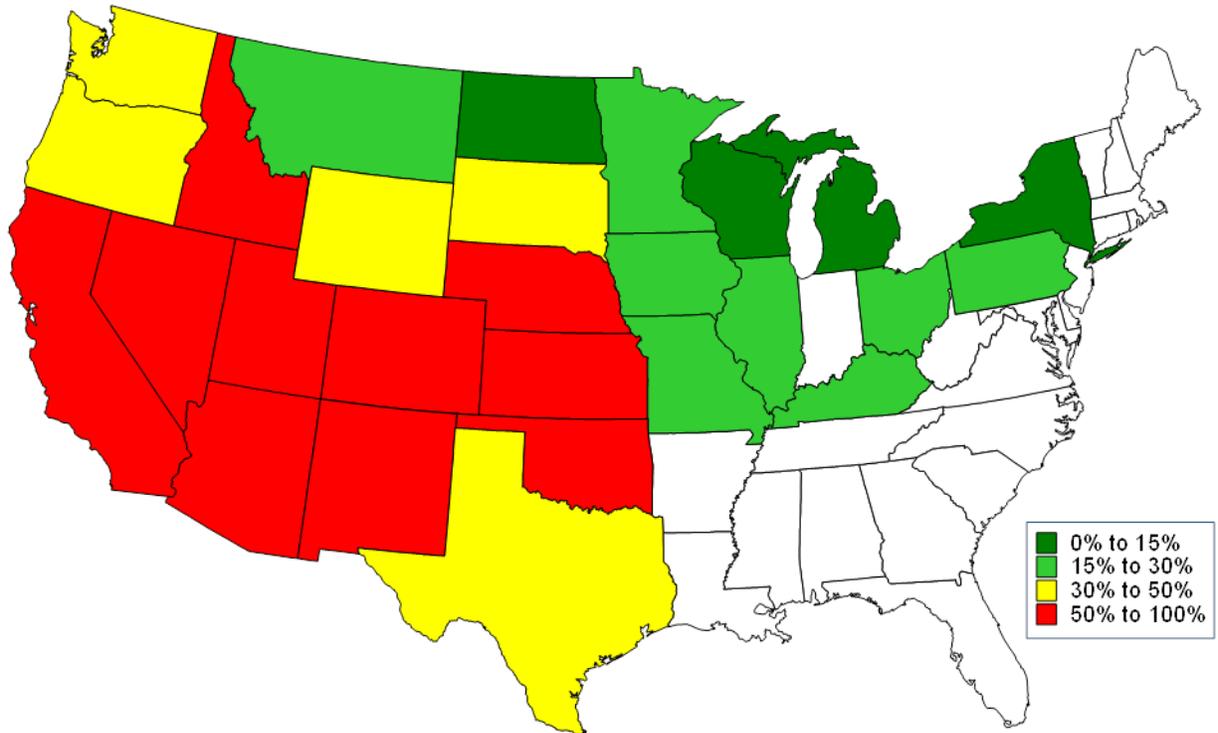


Figure 2: Season Average All Hay Price Percentage Increase Crop Marketing Years 2011/12 Compared to 2010/11. Data Source: USDA-NASS Monthly Agricultural Prices, compiled by LMIC.



### Winter 2012

December stocks were tighter than normal and fell 11% below the 2010 figure. Although anticipated to be tight, it further added evidence that less hay was available for the winter and would likely lead to tighter May stocks and a ballooning hay price. The December stock figure allows total disappearance to be examined in two time frames: the beginning of the crop year (May to December) or the end of the crop year (December-May). Over the last 30 years, about 55% of hay use is in the second part of the crop year, December through May. In 2011/2012 the majority of the hay use was still used in the latter part of the year. However, the reduction in use was quite different. Over the beginning part of the crop year, disappearance was only down 3%, but shifted dramatically thanks to a mild winter and improved pasture conditions in the south. In latter part of the crop year, year over year usage dropped 13%, the lowest since 1980. As a result of much lower disappearance over this time frame, May stocks came in much higher than expected and shifted the platform for the new crop year.

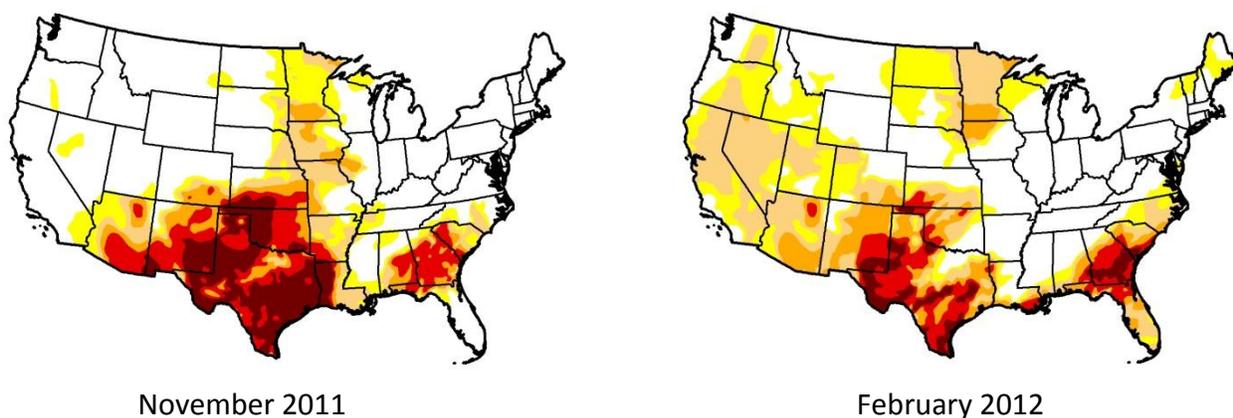
## The New Crop Year

### May Stocks Conclusions

May stocks were 3.8% below a year ago when December stocks were much lower than a year before. As is often the situation for hay, the reason behind the high stock figure is different depending on the area of the country. Only a handful of states experienced the lowest stocks in the last five years, which were largely drought affected states. However, as discussed above most of the disappearance decelerated quickly from December to May. In drought impacted

areas of the Southern Plains, rain returned and feed that previously had not existed became available. Figure 3 is the drought monitor from the beginning of November compared to February. Price also had a large affect and likely encouraged creative ways to feed. The noticeable trend was feeding many more small grains either as baled hays or used to graze cattle. Reports of use of wheat pasture and standing corn stalks extended far north beyond the Southern Plains because most recognizable hay sources were too expensive. In addition, any type of forage that was bale-able was baled. This included corn stocks, oats, rye, wheat, and millet. Using unusual forage sources has left greater availability in this year's hay supply and will likely help soften prices.

Figure 3: Drought Monitor Comparison November 2011 and February 2012. Data Source: NOAA/UNL



### Exports

Export demand for hay has remained stable over the last year despite record high domestic prices. The first quarter of 2012 has been very strong and 2012 calendar year may surpass 2011. The first quarter of 2012 indicated alfalfa was up 9% from 2011's. In 2011 alfalfa exports were up 14% showing strong increases from a variety of countries. The 2012 first quarter, quite differently, has been exclusively driven by Chinese demand. China has bought more than half its total volume of 2011 in this quarter alone, totaling 96 thousand metric tons, up over 200% year over year. A recent Hay and Forage Grower article published May 2012 authored by Rick Mooney, "Why the Chinese Want Our Hay," suggested China's growing dairy industry is the demand driver. While the dairy industry in China is still quite young and growing, feed production hasn't matched its pace, yet. The Chinese are largely looking for good-quality forages to support growth in the dairy industries until domestic feed production can catch up. Alfalfa exports to China are not expected to slow down this year. Converting more acres to feed production and engaging the infrastructure necessary to make these acres accessible will take time. Other U.S. export markets are relatively stable and have been relatively long term with the exception of China and the United Arab Emirates. These two countries generally are the wild cards for export growth and can retract market share from some of the more stable markets. The U.S. hay export market could be headed for some turbulent times if China's domestic

production does come online, but for the next few years the U.S. will likely enjoy strong demand from this relatively new market.

### **Hay Acres**

The high price of hay over the last year did command some acres back into hay after losing quite a few in 2010/2011. Hay acres had the second largest gain in acres, next to corn. Increases are expected in both alfalfa and other hay, however the majority of states showing strong increases are major other hay producing states. Proportionally, other hay will likely have the bigger gain.

Increases are expected to be the largest in Texas and Oklahoma, but several southern states also showed intentions to harvest more hay acres than the year before. Most of the hay production on the southern perimeter is other hay categories, and the northern perimeter is largely alfalfa. Few states in the north are increasing acres year over year. North Dakota intends to increase by the most harvesting 320 thousand acres more than last year.

Western alfalfa states, which tend to export more of their hay production, are planting relatively few more acres. California increased harvesting intentions by 110 thousand acres, while Idaho and Nevada are expecting 20 thousand less acres. Washington and Oregon are expecting an additional 60, and Utah, a mere 10 thousand acres. Overall, total all hay acres will be above 2011, but still over 4% below 2010's.

### **Production and Prices**

As was the case last year, production this year will be highly dependent on weather. Alfalfa yield is again expected to remain close to 2011/12 levels. However, a small boost in acres will increase production by about 1%. Other hay is expected to come back from its drought stricken yield, but dryness is still predicted for much of the south. Other hay is expected to only regain about 2% on yield, leaving production increasing by 7%.

As the marketing year progresses, hay prices will soften much faster than anticipated because stocks were greater than expected. Gains in production on both forage crops will likely aid to keep prices below year ago levels. However, any weather complications will likely cause hay prices to go higher. One looming question remains for the alfalfa market, and that is exports. If China continues to purchase at the level of the first quarter, alfalfa prices may not decline as expected, especially for West Coast dairy producers. It remains a major factor in upside risk, and China's needs are difficult to anticipate, because they have not been in the U.S. market very long. If alfalfa exports experience another year of double digit growth, alfalfa prices could command prices close to the previous year. Other hay is also an export concern; however, more production and more yield potential will limit the affect exports can have on the other hay markets.

## **Crop Year 2013/2014**

Alfalfa hay acres depend on other cash crop prices relative to hay more than other crops. It also tends not to have a perfect substitute. Long term hay price is a function of several competing crops as a feedstuff. High commodity prices robbed acres from hay in 2010/11, which helped support hay prices to a high enough to command acres in 2011/2012. In 2013/2014 corn price will likely be low enough that more acres can go into hay, and soybeans will not attract as many acres as corn has previously taken. In addition normal yields and disappearance rates will likely return by 2013/2014. Prices, however, have remained elevated for quite some time similar to corn and soybeans. "Normal" prices are very likely to continue at the higher prices points than previously as a result of all competing feedstuffs remaining higher.

**ALL HAY SUPPLY AND DEMAND BALANCE SHEET**  
U.S., Annual

05/16/12  
4.110

Year Beginning May 1	Stocks May 1	Production		Total Supply	Disap- pearance	Ending Stocks	Acres Harvested	Yield	Season Average Price	RCAU <sup>a</sup>	Supply per RCAU	Disap. per RCAU
		Alfalfa	Total									
		----- Million Tons -----										
							Mil. Acres	Ton/Acre	\$/Ton	Million		
2010/11	20.9	68.0	145.6	166.6	144.3	22.2	59.87	2.43	114.00	69.2	2.41	2.08
2011/12	22.2	65.3	131.1	153.4	132.0	21.4	55.63	2.36	173.00	67.9	2.26	1.94
2012/12 <sup>b</sup>	21.4	66.0	136.6	158.0	137.0	21.0	57.40	2.40	147.00	68.0	2.32	2.01
2013/14 <sup>c</sup>	21.0	69.0	144.3	165.3	144.0	21.3	59.20	2.45	135.00	68.3	2.42	2.11

<sup>a</sup> Roudhade Consuming Animal Unit  
<sup>b</sup> Projections      <sup>c</sup> Forecasts