



New Mexico State University

Extension Plant Sciences

Alfalfa Market News

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Hay Prices for New Mexico

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County	Contact	Premium Hay (\$/ton)	Top Quality Hay (\$/ton)	Other Hay (\$/ton)	Condition/ Market Activity/Cut Complete
Chaves	Sandra Barraza, County Agent	\$165-175 large delivered; \$210-230 small in barn	N/A	\$140-155 striped del.; \$185-195 striped small in barn	2 nd 100%, 3 rd delayed due to rain; Market fair to slow; Heavy rains recently.
De Baca	Leigh Ann Marez, County Agent	\$150-160 large; \$200-220 small bales	\$130-140 large striped	\$100 cow hay	2 nd 100%; Demand high for #1 dairy and small horse hay; 2 nd cut better than 1 st . Rain showers and humidity.
Eddy	Woods Houghton, County Agent	\$180-200 large; \$185-240 small	Not selling yet	N/A	2 nd and 3 rd cuts slow, not moving fast.
Hidalgo	Christy Rubio, County Agent	\$175 large; \$7.00 per 2-string bale	\$140; \$6.00 per 2-string bale	\$100 oat hay; \$5.00 per bale ryegrass	2 nd 100% complete; market strong; some rains.
Lea	Wayne Cox, County Agent	\$195-205 large; \$8.00-9.00 small	\$185-200 large; \$6.00-7.00 small	N/A	3 rd cut underway.
Luna	Jack Blandford, County Agent	\$160 large; \$5.50 small	N/A	N/A	3 rd 25%; Market steady; Warm/dry, ideal conditions.
Otero	Beth Gordon, County Agent	N/A	\$5.50-10.00 2-wire; \$9.50-12.25 3-wire; \$135 4x8x3; \$95 round	\$85 alf/rye; \$75 alf/wheat round; \$9.75/bale #2 cow	2 nd 100%; all hay selling well; hot and dry.
Roosevelt	Patrick Kircher, County Agent	\$165-180 large; \$185-200 small squares	<\$165 large	\$180 wheat small bales	2 nd 100%; good quality/yield; wheat hay still affecting alfalfa market; rains affecting mowing/baling.

Whitefringed Beetle in New Mexico Alfalfa

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Whitefringed beetle (usually identified as *Naupactus* sp., formerly *Graphognathus* sp., Coleoptera, Curculionidae) has been implicated in stand loss in a Quay County alfalfa field. When dead alfalfa plants were noticed, some were dug for further diagnosis. Some of the plants had obvious tunneling in their roots while others were missing portions of their roots. One damaged root produced a plump, legless grub that had cut the taproot about 8" below the surface. According to the producer, similar aboveground symptoms had been observed in this field, although the cause was not previously diagnosed because he did not recognize there was a problem until it happened again and after he had learned that under good management alfalfa stands can persist for many years. The first stand was sown in 2003 and produced good yields in 2004 with a decline in 2005. It was replaced with a single crop of cotton in 2006 and replanted to alfalfa that fall, again producing well in 2007 with the decline becoming visible again in 2008 (Figure 1). Adjacent fields do not appear to be affected; but, the problem was definitely spreading in this field.

Whitefringed beetle, a relative of alfalfa weevil and clover root curculio from central South America, was first detected in the southeastern USA in the mid 1930's. This pest has over 385 host plant species including alfalfa, cotton, peanuts, okra, soybeans, cowpeas, sweet potatoes, beans, peas, and numerous species of weeds, along with woody plants such as willow, peach, pecan, and even pines. Whitefringed beetle has been documented in New Mexico since the early 1980's. Documented records are currently limited to Dona Ana, Chaves, Eddy, Lea and Quay Counties. Infestations are probably more widespread, but seriously underappreciated because the insect is difficult to detect. You basically have to be in the right place at the right time and think outside the box to find them. While the legless larvae live underground mining thicker host plant roots, adults live above ground. The adults are transported on hay or other plant material, equipment and vehicles, building or landscaping materials, fence posts, or other miscellanea stored near the field – whatever they decide to crawl onto or into for shelter.

One insect can infest an entire field over time because whitefringed beetles are only known as females. No males have ever been found and fertile eggs are produced through a process called parthenogenesis. Each adult can produce 600-700 eggs over an average 2-5 month adult life span laying them in multiple egg masses of up to 60 eggs each. Eggs are laid (from 5 days to 3 weeks after the adults emerge) indiscriminately on the soil surface (or just below it), on living or dead plant material, and on farm equipment, among other places. Egg masses are camouflaged by a gelatinous coating that helps them to adhere to their substrate. Larvae hatch within 10-11 days in summer or up to 100+ days in cooler weather and complete their development below ground feeding on roots, tubers, underground stems, dead plant matter etc. Larvae are pink to off-white grubs up to ½ inch long with a brown or dark pink head (Figure 2). Pupation may occur from late April through late July usually 2 to 8 inches deep in the soil, although some pupae are found as deep as 18 inches.

The dark gray adults are about ½-inch long and have a short, broad snout and several narrow, darker gray ridges on their wing covers. A distinguishing feature is a narrow white stripe bordering the wing covers (Figure 3). They emerge from April through October to feed on foliage. Emergence may occur after irrigation, which also often forces them to leave the field temporarily finding refuge in and around nearby homes and other structures. Adults chew barely noticeable notches along leaf margins of alfalfa and other plants causing little damage. September/October is a good time to look for adults. They cannot fly and might be found crawling under alfalfa windrows. Unfortunately, these beetles are very good at 'playing possum,' which along with their color and size (Figure 3) make them easy to overlook amongst assorted ground debris. It is best to use a long-handled pitch fork to turn over some hay watching carefully for rattlesnakes as you look for these beetles.

Plants decline and die for a variety of reasons besides whitefringed beetle, and unless the right samples are dug in the right places at the right time, this pest may not even be detected or associated with the observed damage. These weevils seem to infest scattered plants in a field. Look for spots where there might be a dying or declining plant or two or a place where grasses or weeds have invaded (Figure 1). Carefully dig some alfalfa plants in this area, roots and all. When digging plants, the soil should be soft enough (as after irrigation) to dig at least 6 to 12 inches (18 inches is better). Insert the shovel straight down and leverage the shovel, soil, and roots out in one operation without scarring the root. A tarp or window screen provides a good surface for separating damaged roots and larvae from the soil. Affected alfalfa roots can have external chew marks as well as tunnels and holes where the larvae chewed their way in or out. Some larvae may still be inside the root and 20+ larvae have emerged when roots were kept in a baggie overnight. White grubs of other insects, such as green June beetle also feed on alfalfa roots and may be found in the sample, but not at the population levels that lead to the damage inflicted by whitefringed beetle. Whitefringed beetle larvae are always legless



Figure 1. A two-year-old stand of alfalfa destroyed because of root-feeding by whitefringed beetle grubs. Note the sparse stand of alfalfa plants and abundant growth of weeds and grasses. The previous stand also was in this condition after two years.



Figure 2. Whitefringed beetle larva. Note the well developed, slightly darker brown head capsule on the right, the chewing jaws, the multi-segmented body and the absence of legs just behind the head. (Photo by Edward L. Barnard, Florida Department of Agriculture and Consumer Services, www.insectimages.org.)

(Figure 2) while white grubs always have 3 pairs of well-developed, easy-to-see jointed legs just back of their heads. Sample remnants should be disposed of in a way that no living grubs can escape.

No insecticides are currently labeled for use on alfalfa to control whitefringed beetle. Products labeled for alfalfa weevil may not completely eradicate the pest, but they can aid in control of adults. Crop rotation is the best option using crops that have insecticides labeled for control of whitefringed beetle. Insecticides with residual soil activity are more efficient. Grass crops also are a good choice as they are generally not good hosts.

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 3. Adult whitefringed beetle: so named because of the white stripe down its side. Also note the elbowed antennae, the short, broad snout, and the darker gray ridges running the length of the wing covers. (Photo credit: Pest & Diseases Image Library., Bugwood.org).

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