

## Hay Supply Nearing 50-Year Low, Prices Near Records High, February 4-10

Hay supplies remain short and prices continue to rise as Texas cattle ranchers try to feed herds through winter, according to Texas A&M AgriLife Extension Service experts. The 2022 drought and subsequent poor hay production resulted in stressed hay supplies going into winter, according to AgriLife Extension specialists. Those short hay supplies and demand have now pushed hay bale prices toward record high prices. The U.S. Department of Agriculture Jan. 27 Texas Hay Direct Report priced large round bales of good-to-premium Bermuda grass between \$70 and \$175 each with prices for the same quality hay reaching \$410 per ton in the Panhandle. Most counties across the state are reporting decent quality bales above \$100. Deeper than usual culling in preparation of that winter feeding shrunk Texas cattle numbers and the national herd to lows not seen since 2012, said David Anderson, Ph.D., AgriLife Extension economist, Bryan-College Station. Cattle producers expect good calf prices in the future but feeding cows until spring forages are ready to graze is the concern now. Anderson said drought and high fertilizer prices were the two major factors that led to near-record low hay production. Grass needs soil moisture to grow during the summer hay season, but pastures also need fertilizer, especially nitrogen, to maximize growth and yields. Vanessa Corriher-Olson, Ph.D., AgriLife Extension forage specialist, Overton, said \$160 per bale was around the breakeven point during the 2022 season for hay producers who maintained pastures with average inputs due to the cost of fertilizer, weed and pest control applications. High commodity prices for grains, which are ingredients in supplemental feeds added alongside hay rations during winter, are exacerbating tight hay supplies. “It’s no shock that hay prices are so high,” she said. “The drought, poor range and pasture conditions and high feed costs have all worked together against producers.”

Anderson said Texas pastures produced the lowest amount of hay since 2011. Hay yields averaged nearly 1.95 tons per acre over the last decade but totaled 1.56 tons per acre in 2022. Texas produced 4.44 million tons of hay in 2011 compared to 6.5 million tons in 2022. The number of hay acres cut and baled was also down to 4.19 million compared to a 10-year average of almost 5 million acres. U.S. hay production followed the Texas trend. According to the December 2022 hay stock reports, the 71.9 million tons of hay on hand was the smallest amount since the USDA began tracking forage supplies in 1973. Texas hay supplies were 37% below the December 2021 report and other Plains states like Oklahoma, Kansas and Nebraska were all at least 30% below their stocks last year. Hay stocks in southeastern states were also down except for North Carolina. “So, you have less hay production in Texas, but you also have less production in all the states around you that might be a source to have bales shipped in,” Anderson said. “Usually, one region is dealing with drought and lower supplies and producers can go elsewhere for relief. Having less hay everywhere at the beginning of winter puts a strain on producers, even if there are fewer cattle to feed.”

Corriher-Olson said supplies are the concern now, but that pasture management will determine the long-term production in pastures. Many hay producers avoided input costs like fertilizer and herbicides during the drought. Some pastures received reduced fertilizer applications while other fields received nothing. The reduced management and overgrazing during the drought could cost producers this season, she said. Fertilizer prices have fallen some, but they remain relatively high, she said. Much of the state, especially the hay-producing region of East Texas, received good winter moisture and is poised for production while other parts of the state like West Texas, South Texas and the Panhandle remain relatively dry. Long-term outlooks show the state has equal chances of moisture or drought until July, Corriher-Olson said. East Texas has higher chances of receiving rainfall after July. Producers who maintained their pastures and avoided overgrazing in 2022 should be in good shape if good soil moisture is available, she said. Fields that were not fertilized or sprayed for weeds and/or overgrazed could have a difficult time bouncing back. “Hay production in 2023 will depend on management in 2022,” she said. “Fields that were not managed will have a harder time recovering even with moisture and fertilizer because the first thing to respond will be annual weeds, and they will be competing with perennial forages.” Whatever the case may be, Corriher-Olson said hay producers should be ready to capitalize on appropriate management, whether that is applying fertilizer or monitoring and treating weeds and pests like fall armyworms.

Jason Cleere, Ph.D., AgriLife Extension beef cattle specialist, Bryan-College Station, said high grain prices have compounded the short supply of hay and high winter feed prices. In 2011, ranchers could rely on heavier rations of grain-based feed and less hay to meet the daily nutritional needs for cattle. However, global events and the drought of 2022 have pushed grain prices much higher during this current drought cycle, he said. Most producers culled their herd deeper than usual to reduce the number of mouths they must feed through winter. Some producers are looking for other supplemental feed options to cut costs where they can, but many options relate to availability and weighing the logistical cost and capabilities of each operation. Whatever producers incorporate into their winter feeding plans, Cleere said they need to maintain cow body condition scores well enough to ensure those cows are ready to breed following this spring calving season. “It’s a challenging year, but indications point toward extremely good prices for next year’s calf crop,” he said. “I suspect producers are going to be short on hay if we don’t get an early spring green-up. My main message would be: Don’t cut too many corners now that you can’t take advantage of good calf prices in the future.”



Tight hay supplies and high winter feed prices are challenging Texas cattle producers' ability to get as many cows as possible through winter in good condition. (Texas A&M AgriLife photo by Laura Mckenzie)

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**Spring Potatoes, February 11-17**

Potatoes are one of America's most popular vegetables and the average American consumes 125 pounds a year. Now is the time of the year to start planning for planting potatoes in your spring garden. Potatoes can be an easy crop to grow and can result in a bountiful harvest. However, potatoes are a cool season crop and if wanting to grow them in your spring garden you need to plant as soon as the threat for frost has passed. Potatoes grow best when the days are warm, and the nights are cool.

Two types of potatoes commonly planted here in East Texas are red and white. The red type is the most popular and store longer than the white type, however the white type has better cooking qualities. Recommended red type varieties are Dark Red Norland, Norland, Red LaSoda, and Viking. Recommended white varieties are Atlantic, Gemchip, Kennebec, and Superior.

Potatoes need full sun and do best in loose, well drained, slightly acid soil. All debris should be removed from the soil before making beds. Soil should be worked into beds that are 10 to 12 inches high and 36 inches apart. Because potatoes need adequate fertilizer early in the

season, apply most of the fertilizer just before planting. Use 2 to 3 pounds of complete fertilizer such as 10- 20-10 for each 30 feet of row in bands 2 inches to each side and 1 inch below the seed piece. Do not allow the fertilizer to touch the seed piece. Apply fertilizer by flattening the beds at 6 to 8 inches high and 10 to 12 inches wide. Using the corner of a hoe or stick, open a trench about 4 inches deep on each side of the bed. Apply half of the fertilizer in each trench. The seed pieces will be planted in the row between the two bands of fertilizer.

Potatoes are grown from the buds or eyes that are present on potatoes. You should purchase good seed potatoes, do not buy potatoes from the grocery store for planting. One pound of seed potatoes will make 9 to 10 seed pieces. To create seed pieces, you should cut seed potatoes into about the size of a medium egg. Each seed piece needs at least one good bud. Seed pieces should be cut 6 days before planting and remain in a well-ventilated spot until planting, this action will help to prevent rotting after planting.

Potatoes should be planted when soil temperature 4 inches deep reaches 50 degrees F. For Polk County this typically occurs in mid to late February. Plant the seed pieces three inches deep and 12 inches apart. Cover the seed with soil and pack the soil with your hands or feet. Moisture stress followed by irrigation or rainfall can cause cracks in potatoes. To prevent this, keep soil moisture supply constant. Do not over water as this can cause rot or damage to the potatoes. Potatoes should be harvested when the tops begin to die, and the potato skin becomes firm. This typically occurs around 95 to 110 days after planting.

Potatoes are one of the most popular vegetables in America. By planning now for your spring garden, you can enjoy a bountiful potato harvest and can enjoy home grown French fries.

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**Killer Fungus of Hardwood Trees, February 18-24**

Hypoxylon canker is a fungus that causes cankers and death of oak and other hardwood trees. The disease is common in East Texas and all across the southern United States. Relatively healthy trees are not invaded by the fungus, but the hypoxylon fungus will readily infect the sapwood of a tree that has been damaged, stressed, or weakened. Natural and man-caused factors that can weaken a tree include defoliation by insects or leaf fungi, saturated soil, fill dirt, soil compaction, excavation in the root zone of the tree, removal of top soil under the tree,

disease, herbicide injury, drought, heat, nutrient deficiencies, competition or overcrowding, and other factors. The hypoxylon fungus is considered a weak pathogen in that it is not aggressive enough to invade healthy trees. In addition to the hypoxylon fungus, weakened and stressed trees may become susceptible to a host of other insect and disease pests.

Hypoxylon canker activity usually increases when prolonged drought occurs. When drought stresses trees, the fungus is able to take advantage of these weakened trees. The moisture content of living wood in live, healthy trees is typically 120% - 160%. It is difficult for hypoxylon canker to develop in wood that has a normal moisture content. However, any of the factors listed above could weaken or stress trees causing the moisture content of the wood to reach levels low enough for the hypoxylon fungus to develop. When this happens, the fungus becomes active in the tree and invades and decays the sapwood causing the tree to die. Once hypoxylon actively infects a tree, the tree will likely die.

An early indication that hypoxylon canker may be invading a tree is a noticeable thinning of the crown. Also, the crown may exhibit branch dieback. As the fungus develops, small sections of bark will slough from the trunk and branches and collect at the base of the tree. Where the bark has sloughed off, tan, olive green, or reddish-brown, powdery spores can be seen. Different tree species that are infected with hypoxylon canker will produce the different colors of spores. By the time the spores become visible, the tree is dead. In four to eight weeks, these tan areas will turn dark brown to black and become hard. They have the appearance of solidified tar. After several months, the areas will become a silver-gray color.

Once the fungus invades the tree, the sapwood begins to rapidly decay. Dark decay lines can be seen running through the wood. Trees that have died from hypoxylon canker and are located in an area where they could fall on structures, roads, fences, powerlines, etc., should be removed as soon as possible. During removal, it is very dangerous to climb trees killed by hypoxylon canker. Because the fungus decays the wood so rapidly, the tree may not support the weight of a climber. Instead, use bucket trucks or other mechanical lift devices.

Probably all oak trees are susceptible to hypoxylon canker. In addition, elm, pecan, hickory, sycamore, maple, beech, and other trees may be infected. The fungus spreads by airborne spores that apparently infect trees of any age by colonizing the inner bark. The fungus is known to be present in many healthy trees and can survive for long periods of time in the inner bark without invading the sapwood. As mentioned earlier, when a tree is weakened or stressed, the fungus may then invade the sapwood and become one of several factors that ultimately cause the tree to die.

There is no known control for hypoxylon canker other than maintaining tree vigor. Apparently, the spores of this fungus are so common in most areas that removing trees

infected with hypoxylon canker is of little value in controlling the spread of the disease. Also, infected firewood is not considered to be a source of inoculation. The fungus does not kill groups of trees by spreading from tree to tree. There is usually little that can be done to avoid naturally occurring stress factors, but many man-caused stress factors can be avoided. During drought periods, supplemental watering is recommended, if the tree is near a water source. Damage to tree roots around construction areas commonly predisposes a tree to infection by hypoxylon canker.



Articles and images courtesy of Texas A&M Forest Service <https://tfsweb.tamu.edu/>

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**Magnesium Deficiency in Tomatoes, February 25- March 3**

With spring gardening now right around the corner many gardeners are gearing up for hopefully a successful year. Tomatoes are one crop that will be an essential in almost every garden. A common disorder in Tomatoes is Magnesium deficiency. By learning the symptoms of magnesium deficiency in tomatoes you will be able to recognize the signs and implement a management strategy.

The main symptom of Magnesium deficiency in tomatoes is interveinal chlorosis which is the yellowing of leaves. Interveinal chlorosis is typically developed overtime due to the high

Magnesium requirements of tomatoes during later growth stages. Interveinal chlorosis is typically first observed in the lower older leaves. This is a result of the plant moving Magnesium from the older leaves to new growth when there is a Magnesium deficiency in the soil. The first signs of interveinal chlorosis will be a few localized yellow spots. As Magnesium becomes more limiting, yellowing will intensify and can eventually cause advanced symptoms of dark purplish black spotting. When the deficiency is severe enough it can cause dead spots to occur on the leaves. Symptoms seen with Magnesium deficiency can also be caused by extremely low pH. If your soil pH is below 5.5, toxic quantities of Iron and Manganese can be taken up by the plant. A soil test can be conducted to determine the pH and Magnesium levels in the soil. By conducting a soil test prior to planting you can implement methods to mitigate the problem if the soil test results in a low pH or Magnesium levels.

If you do not recognize a Magnesium deficiency until the tomato plants are showing symptoms. Epsom salt, which is composed of Magnesium Sulfate, makes an easy and practical way to increase Magnesium levels in the soil. Epsom salt should be applied at a rate of 2 pounds per 100 gallons of mixed water through drip or leaching irrigation. Epsom salt will not reverse damage that has already occurred but can prevent future interveinal chlorosis in the leaves.

More information on growing tomatoes can be found on the aggie horticulture website. <https://aggie-horticulture.tamu.edu/> This includes guides for both home gardeners and commercial tomatoes growers. The website also includes information on variety selection, disease identification, and problem solving common problems. In addition to tomatoes the website includes information on a variety of crops from blueberries to watermelons.



Magnesium deficiency in tomatoes, image taken from Mississippi State Extension

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