JUNE/JULY 2021

# Shawano County Ag Newsletter

*University of Madison Division of Extension*

Extension
UNIVERSITY OF WISCONSIN-MADISON
SHAWANO COUNTY


Shawano County Extension
311 North Main Street
Shawano, WI 54166
(715) 526-6136

Hours:
Monday- Friday
8:00 AM - 4:30 PM

Facebook and Twitter:
@AgShawano

Website:
shawano.extension. wisc.edu


## In This Issue



## Hello All!

It is June Dairy Month! Along with June being Dairy Month, the weather is also getting warmer. Cattle can be affected by the heat when temperatures enter in the high 70s and potentially at lower temperatures when humidity is high. In this newsletter, I have included a fact sheet on keeping cattle cool this summer.

Near the end of May, the alfalfa haylage harvest was in full swing. This has brought some questions on pricing hay to the office. You will find more information on resources from Extension on hay pricing, such as the hay market report, and the 2020 Custom Rate Guide for Wisconsin in this newsletter.

There is also an app that was developed by former Waupaca County Extension Agriculture Agent, Greg Blonde to help with determining the value of standing hay. The app allows you to put in your own yield and harvesting cost information and offers a projected price based on current baled hay prices. The app can be found for android phones by using this link: https://play.google.com/store/apps/details?id=com.smartmappsconsulting.haypricing. or in from this link for iPhones: https://itunes.apple.com/us/app/hay-pricing/id1381165835?mt=8 Alternatively, you can search in your phone's app store for Hay Pricing. If you have any questions on determining the value of standing alfalfa you can also contact me at the Extension office.


**Kimberly Schmidt**
Agriculture Educator
715-526-4871
email: kimberly.schmidt@wisc.edu

# Upcoming Events

## Heart of the Farm Coffee Chats


### June 14th @ 10:00am

- Joellen (Weber) Heiman, manager Weber Farm Store will share pieces of Weber Farms family history and their products.

### July 12th @ 10:00am

-Speakers: Nancy Vance and Karen Dickell, Human Development and Relationship Educators will lead a discussion on the importance of traditions in one's family and workplace.

# Upcoming Events, cont.


# Extension Podcasts

### AgriVison Podcast

The Farm Management AgriVision podcast is hosted by Katie Wantoch, Agriculture Agent with UW-Madison Division of Extension. She will be chatting with fellow UW Extension educators as they answer questions from farmers and share their knowledge and expertise on how farmers can improve their farm management skills. Listen here: **https://farms.extension.wisc.edu/programs/agrivision-podcast/**

### The Cutting Edge: A Podcast in Search of New Crops for Wisconsin

Join UW-Madison Division of Extension as they search for new crops for Wisconsin growers, processors, and consumers. The strength of Wisconsin's agricultural economy is its diversity...something that doesn't just happen by chance. It is a product of the relentless drive of researchers and farmers to innovate, explore, and experiment. Join us for a glimpse into the exciting new research and development bringing new crops and diversity to Wisconsin.
Listen here: **https://fyi.extension.wisc.edu/grain/cutting-edge/**

# Dairy Situation and Outlook, May 20, 2021

**Written by:**

**Bob Cropp, Professor Emeritus University of Wisconsin Cooperative ExtensionUniversity of Wisconsin-Madison**

Milk prices continue to strengthen since their low in February. The February Class III price was $15.75 and had increased to $17.67 in April with May forecasted to be around $18.90. The February Class IV price was $13.19 and had increased to $15.42 in April with May forecasted to around $16.20. The higher Class III price is the result of cheese prices strengthening the end of April into early May and higher dry whey prices at $0.63 to $0.64 per pound. A year ago, dry whey was $0.39 per pound. The higher dry whey price has added about $1.45 to the Class III price. The higher Class IV price is the result of both higher average butter and nonfat dry milk prices. While butter and nonfat dry milk prices are holding cheese prices have taken a sharp downturn which spells a lower Class III price by June. On the CME the 40-pound cheddar block cheese price has fallen $0.2325 per pound from $1.8125 mid-May to now $1.5800. Cheddar barrels have fallen $0.1525per pound from $1.7800 mid-May to now $1.6275.

The higher cheese prices early May were driven by stronger demand. There were cheese purchases under the Farm to Families Food Box program which expires the end of May. With improvement in the COVID-19 situation some schools have return to in the classroom instruction and restaurants are more fully open which has increased food service sales. As we approach the grilling season the demand for process cheese increases. This partially explains the spread between barrels and blocks that earlier had barrels $0.20 or more per pound lower than blocks to now with barrels at times higher than blocks or slightly below. And cheese exports for the month of March were up some from a year ago as Mexico, the largest market bought 11% more cheese, the highest cheese export volume to Mexico since June 2018.

Dairy exports also were a very positive factor for higher dry whey, butter and nonfat dry milk prices. March exports on a milk solids equivalent basis set a new record in March and were equivalent to 18.6% of milk production. Exports of nonfat dry milk/skim milk powder and dry whey exports both set all-time highs. Compared to March a year ago exports of nonfat dry milk/skim milk powder were up 18.6%, dry whey 26.9% and butterfat 114.9%.

But cheese prices may be under pressure from relatively high cheese production and cheese stocks. Compared to a year ago cheddar cheese production for March was up 7.8% and total cheese production up 4.8%. March 31st American cheese stocks and total cheese stocks were up 7.1% and 6.7% from a year ago respectively. Also, these stock levels were higher than February stocks.

Forecasting milk prices ahead remains cloudy and uncertain. Further opening of restaurants and a move to more in classroom instruction this fall as well as conventions, conferences and attendance at sports events returning to more normal all support stronger milk and dairy product sales. Dairy exports look positive as the world economy improves and major export markets like Mexico and China increase purchases. Currently U.S. prices of butter, nonfat dry milk/skim milk powder and cheese are very competitive with Oceana and Western Europe. But dry whey prices are above world prices. However, milk production needs to slow down to support milk prices. USDA's latest forecast has 2021 daily milk production up 2.4% from 2020, the result of an average of 82,000 more milk cows and 1.5% more milk per cow. But with considerably higher feed cost the increase in milk production could slow by the second half of the year with increased culling and smaller increases in milk per cow.

USDA's milk production report for the month of April is not positive for milk prices. March milk production was revised to an increase of 1.9% from a year ago with April's production 3.3% higher. Milk cow numbers have been increasing since July of last year. Cow numbers increased another 16,000 March to April. April cow numbers were 113,000 higher than a year ago for a 1.2% increase. Milk per cow for April was 2.0% higher than a year ago.

Several states had relatively high increases in April milk production over a year ago: South Dakota 13.4%, Indiana 11.4%, Texas 7.7%, Minnesota 6.9%, Colorado 6.0%, Kansas 5.4%, Wisconsin 4.6%, Michigan 4.5%, California 4.1%, and New York 2.9%. Except for New York which had no increase in cow numbers from a year ago and California with 1,000 fewer cows, all of the other states had added a lot of cows. The increase in cow numbers in these states were: Texas 29,000, Indiana 19,000, South Dakota 18,000, Minnesota and Michigan 15,000, Wisconsin 14,000, Colorado 11,000, and Kansas 6,000.

Current Class III futures are rather optimistic. Class III is in the low $19's July through October before dropping to the $18's for November and December. But it will take a combination of lower milk production, strong domestic sales of dairy products and continued strong exports for these prices to materialize. Current butter, cheese and dry whey prices puts the Class III price in the $17's. USDA's latest price forecast has the Class III price averaging just $16.85 for the year compared to $18.16 last year.

# Value of Standing Alfalfa

**Adapted from : Determining the Value of Standing Alfalfa in 2021 by Kevin Jarek, Extension Outagamie Crops and Soils Agent**
**Published: https://outagamie.extension.wisc.edu/determining-the-value-of-standing-alfalfa-in-2021/**

Three factors to consider when determining the potential value of an alfalfa stand:

**Expected Dry Matter (DM) Yield in Tons per Acre**

The best way to determine yield is by weighing the forage at harvest, however, that is not always possible if there is no scale available. When weighing is not an option expected Dry Matter (DM) yield can be estimated by measuring alfalfa stand density as illustrated in Extension Bulletin A3320 Alfalfa Stand Assessment: Is This Stand Good Enough to Keep? ( https://fyi.extension.wisc.edu/forage/alfalfa-yield-and-stand/ ) or by utilizing multi-year data from the Wisconsin Alfalfa Yield and Persistence (WAYP) program managed by the University of Wisconsin-Madison and Division of Extension. The 2020 WAYP project summary can be downloaded for review at: https://fyi.extension.wisc.edu/forage/files/2021/03/2020-WAYP-Summary.pdf.

**Estimated Value of a Ton of DM**

The most current Hay Market Report is listed below. The value of a ton of DM is determined via the following calculations:

**Price for a Ton of DM**

As baled hay, assume moisture of 15% which means it is 85% dry matter or 0.85 DM

$$\frac{\$216}{\text{as fed ton}} \times \frac{\text{as fed ton}}{0.85 \text{ ton DM}} = \frac{\$254.12}{\text{ton DM}}$$

**Harvesting Costs**

Included in this newsletter is an updated copy of the Wisconsin Custom Rate Guide. This guide can help you determine your harvesting costs. Another resource is the Iowa Farm Custom Rate Survey found here: https://www.extension.iastate.edu/agdm/crops/pdf/a3-10.pdf

This is a short summary of a longer article written by Kevin Jarek, Extension Outagamie County Crops and Soils Agent. For a more in-depth explanation of alfalfa value: Determining the Value of Standing Alfalfa in 2021 (https://outagamie.extension.wisc.edu/determining-the-value-of-standing-alfalfa-in-2021/)

# Hay Market Report May 24, 2021

**Data Compiled by: Richard Halopka, Clark County Extension Crops & Soils Agent**
**Publushied on:** https://fyi.extension.wisc.edu/forage/h-m-r/

| *Hay Grade* | *Bale type* | *Price ($/ton)* | | |
|---|---|---|---|---|
| | | Average | Minimum | Maximum |
| Prime (> 151 RFV/RFQ) | Small Square | $243.00 | $205.00 | $280.00 |
| | Large Square | $216.00 | $85.00 | $280.00 |
| | Large Round | $195.00 | $120.00 | $275.00 |
| Grade 1 (125 to 150 RFV/RFQ) | Small Square | $229.00 | $160.00 | $290.00 |
| | Large Square | $177.00 | $85.00 | $275.00 |
| | Large Round | $152.00 | $65.00 | $210.00 |
| Grade 2 (103 to 124 RFV/RFQ) | Small Square | | No Reported Sale | |
| | Large Square | $137.00 | $85.00 | $180.00 |
| | Large Round | $116.00 | $70.00 | $155.00 |
| Grade 3 (87 to 102 RFV/RFQ) | Small Square | | No Reported Sales | |
| | Large Square | $123.00 | $70.00 | $185.00 |
| | Large Round | $105.00 | $50.00 | $160.00 |

**Demand and Sales Comments**

Hay market this week is steady with some downward pressure. Green grass may contribute to the market actions. Dairy quality hay is still in demand, but markets may have a limited supply. If you need forage or have forage to sell or straw, connect to the Farmer-to-Farmer webpage at http://farmertofarmer.uwex.edu/. You may contact your local county agriculture educator if you need help placing an ad. There is no charge for the service.

# Badger Crop Connect

CCA CEUs available

## Upcoming Webinars:

### June 23: Corn and Soybean Disease Update

- Local Update
  Alana Voss, Extension Sauk and Juneau Counties Ag Educator
- Managing Corn Diseases for Profits and When Will Soybean Fungicides Pay?
  Damon Smith, Extension Field Crop Pathology Specialist

### July 14: Legumes in Cover Crop Systems and Climate Change

- Local Update
  Josh Kamps, Lafayette County Ag Educator
- The Value of Legumes in Cover Cropping Systems After Short Season Crops
  Matt Ruark, Extension Soil Specialist
- New Normals Reflect a Changing Climate in Wisconsin
  Edward J. Hopkins, PhD, Assistant Wisconsin State Climatologist

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Register for the summer 2021 sessions at:
https://go.wisc.edu/bccsummer2021

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# Heat Stress Abatement in Dairy Facilities

Hot weather can bring a long list of problems for dairy producers. When cows are heat stressed, they eat less, produce less milk, have reduced immune function and higher SCC, and show reduced fertility. A spike in lameness often follows the hot season. In severe heat waves, cows can even die. In addition to the economic burden, the discomfort from heat stress also reduces animal welfare.

This factsheet focuses primarily on cooling cows housed in barns, where they are shaded from gaining heat from direct sun exposure. For information specific to pasture and grazing systems, see Dealing with Hot Weather in Pasture/Grazing Systems.

## Do Your Cows Need Help Coping?

Consequences of heat stress, such as drops in feed intake and milk production, occur at a delay relative to when cows begin to experience discomfort. By the time you notice a change in milk yield, the problem may have been ongoing for at least a day or more.

To stay ahead of severe problems, we can look for other signs to tell us whether cows are coping well with heat stress, or if facilities need to be modified to provide better heat abatement. Environmental factors, such as air temperature, relative humidity, or Temperature Humidity Index (THI), can only tell us so much. The best strategy for troubleshooting heat stress on each unique farm is to observe how the cows are responding.

The following signs are some natural coping mechanisms cows use to try to dissipate heat and maintain a normal core body temperature. Often, these natural mechanisms are insufficient and they need a hand from additional heat abatement in their facilities.

A clear indicator of severe heat stress is panting. Look for any cows breathing with their mouths wide open, tongues out, stringy drool hanging down, or a combination of these signs (*Figure 1*).

Before severe panting occurs, cows will show increased respiration (breathing) rates. A rule of thumb is 60 breaths per minute or 1 breath per second. When several cows in a pen are breathing that quickly or faster, they are struggling to cope adequately with the heat and additional cooling would be beneficial.

*Figure 1. The standing cows in this photo have stringy drool, and the lying cow is breathing heavily with her mouth open and tongue out. These are all signs of panting, an indication of severe heat stress. Photo by Van Os; ear tags obscured to remove farm identity.*

When cows breathe faster, pant, and sweat, they lose moisture. This needs to be replenished by increasing water intake. A sign that cows are hot is not only drinking more, but also bunching around the water trough without drinking. Cows may also bunch away from the side and end walls of the barn. This behavior reflects shade seeking, as cows associate light intensity with heat.

In addition, cows will eat less, particularly during hot times of the day. If soakers are mounted over the feed bunk, cows will seek out the cooling and will spend more time there both

**Written by Jennifer Van Os and Ted Halbach, July 2020. Reviewed by Courtney Halbach and Nigel Cook.**

eating and standing without eating. The soakers lower their core body temperature and improve feed intake and milk yield, but the increased standing time is also a risk factor for lameness.

Regardless of whether soakers are provided, cows spend more time standing up and less time lying down when heat stressed because while cows are lying down, their core body temperature rises. When they stand up, they can better dissipate heat, so body temperature falls. Based on this behavior, a higher proportion of cows standing is yet another indicator of heat stress.

This is why it is important to make sure there is sufficient, consistent, fast-moving air over the stalls or bedded pack. It is critical for the air to reach the cows and help them dissipate heat in the place where they should be spending over half their day lying down.

## Air Exchange and Air Movement

Barn ventilation systems serve 2 important functions for heat abatement: air exchange and fast air movement.

Ventilation technically refers to air exchange, meaning bringing fresh air into the barn and removing warm, humid air, including noxious gases such as ammonia. This exchange of stale and fresh air is important for both heat abatement and promoting respiratory health in cattle and people working in the barns. In the summer, the target air exchange rate is 40-60 air changes per hour, whereas in the winter, 4-8 air changes per hour can suffice.

In addition, ventilation systems serve an important function for summer heat abatement by providing fast-moving air on the cows, helping them dissipate heat. This fast-moving air is beneficial for cows in many locations, including the holding pen, the parlor, at the feed bunk, and in the lying area.

An important outcome for cow comfort is sufficient resting time. Cows need to spend at least half of their day lying down, so high airspeeds are essential over the stalls or bedded pack. A target of no less than 200 feet per minute (2.3 mph), but ideally 400 feet per minute (4.6 mph) should reach down to a height of 20-30" above the stall base. Airspeeds can be measured using a hand-held device called an anemometer, such as those sold by Kestrel (https://kestrelinstruments.com/agriculture).

To get a good "bang" for your cooling "buck," the holding area represents an opportunity to turn an area that could cause heat stress into a cost-efficient location to cool cows. Holding areas often have inadequate natural ventilation. Although many are equipped with recirculation fans to direct high velocity air onto the cows, the air can become increasingly hot and humid when it gets recycled within the space. Fast-moving air should be combined with soaker systems (*read more below*) to best take advantage of a cow's time in the holding area to cool her. To promote proper heat loss, including the body surface area available for cooling, tight bunching of cows in the holding pen should be minimized. Groups of cows may need to be brought up for milking in a staggered manner to provide the necessary space, especially during extreme heat events.

## Naturally vs. Mechanically Ventilated Barns

Naturally ventilated barns can be cost effective for taking advantage of prevailing winds. In stalls located near the air inlet at the curtains, high airspeeds can sometimes be achieved passively. To ensure fast-moving air reaches all the stalls at the proper height, installing fans over the stalls can be beneficial (*Figure 2*). Fans can be quite effective, but must be spaced sufficiently close together and with a proper angle to ensure the fast-moving air reaches cows in all stalls.

*Figure 2. In a naturally ventilated barn, fans above the stalls direct fast-moving air over the cows while they rest. Photo courtesy The Dairyland Initiative.*

For some dairy operations, barns may have site challenges such as multiple buildings close together, blocking natural wind. For this and other situations, mechanically ventilated barns can promote air exchange by forcing air to travel through the barn using exhaust fans. These mechanical barns include tunnel barns, where air enters and exits from the short sides of the barns and flows parallel to the feed bunk,

or cross-ventilated barns, where air travels perpendicular to the feed bunks.

To ensure proper fast-moving air at the cows' standing and lying heights, these barns may use various additional features such as baffles to passively push air downward at specific locations (*Figure 3*), low flat ceilings to keep the moving air at cow height throughout the barn, or fans above the stalls to force a jet of air over the cows.

*Figure 3. In a mechanically cross-ventilated barn, baffles above the stalls passively push air downward onto the cows where they lie down. Photo courtesy The Dairyland Initiative.*

For details on barn ventilation design recommendations, see The Dairyland Initiative: https://thedairylandinitiative.vetmed.wisc.edu/home/housing-module/adult-cow-housing/ventilation-and-heat-abatement/.

## Water Soakers

Water-based cooling can take 2 main forms: misting vs. soaking. High-pressure misting or fogging injects the air with very fine droplets to lower the temperature surrounding the cows. At the same time, this results in an increase in relative humidity. Therefore, this strategy works best in drier climates like the southwestern U.S.

In contrast, low-pressure soakers, sprinklers, or showers deliver coarser droplets to wet cows directly. Energy from the cows' body heat evaporates the water, cooling them. The water also draws heat away from the cows' skin directly. These processes do not depend on relative humidity, so soaking works across a range of climates and regions. The cooling effects of soakers are enhanced when combined with fast-moving air from fans. In addition, the evaporating droplets also cool the air, just like with misters or foggers.

Soaking has been shown to be very effective for reducing respiration rate and body temperature, and for increasing feeding time, feed intake, and milk yield. Similar principles apply whether soaking cows at the feed bunk in their home pen, in the holding pen, in the parlor itself, or at the exit lane.

Nozzles should deliver approximately 1 gallon per spray application over the course of 3 minutes or less. At the feed bunk, each nozzle can cool at least 2-3 adjacent cows. The spray should activate every 15 minutes or more frequently, especially in hotter weather when evaporation is quicker.

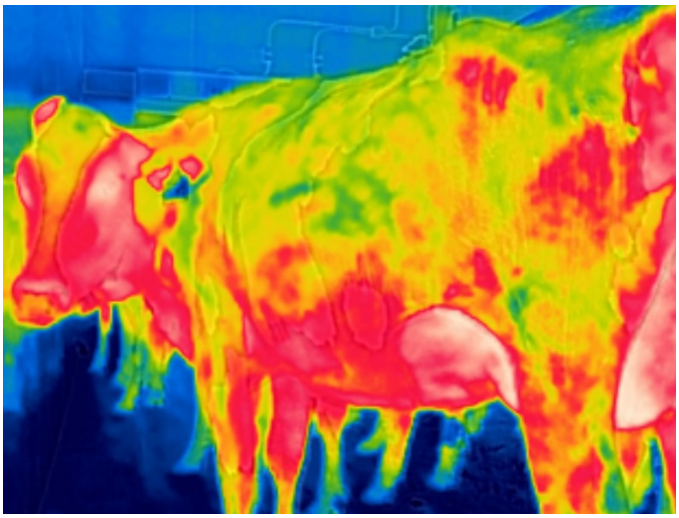

*Figure 4. Infrared photograph of a dairy cow following low-pressure soaking from an overhead shower. The cooler colors indicate areas with lower temperatures.*

## All Age Groups Benefit from Cooling

Lactating cows produce twice the amount of metabolic heat that non-lactating animals do, which makes them particularly sensitive to the heat. Nonetheless, heat stress affects cattle of all ages.

When dry cows are heat stressed, not only is their welfare and future productivity affected, but also the developing fetus they carry. Calves born from heat-stressed dams have reduced health, survival, and performance. Calves and growing heifers benefit from heat abatement, similar to adult dry and lactating cows.

Providing shade or shelter to all age groups, including dry cows and youngstock, is a basic expectation for animal welfare. Checking that all animals have access to shelter is part of many welfare audits or evaluations. Shade can be in the form of either permanent or temporary structures. When positioning a shade structure, its orientation should be north-

to-south on the long side. The shadow will move throughout the day as the sun moves across the sky, and cattle will follow the shadow. This will result in the area directly under the shade structure remaining a drier and cleaner place for cattle to rest. The distance the shadow moves is proportional to the structure's height, so a taller structure will promote more frequent animal movement.

For more information on cooling dry cows, see Dry Cow Heat Stress Management, and for cooling calves, see Heat Abatement Strategies for Calves.

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**Wisconsin Department of Agriculture, Trade, and Consumer Protection**
2811 Agriculture Dr., Madison, WI 53718 1-800-789-9277 www.nass.usda.gov/wi

# WISCONSIN CUSTOM RATE GUIDE 2020

**APRIL 2021**

## GENERAL:

The 2020 Wisconsin Custom Rate Guide was compiled by the USDA's National Agricultural Statistics Service (NASS), Wisconsin Field Office, in cooperation with the Wisconsin Department of Agriculture, Trade, and Consumer Protection, the University of Wisconsin-Extension, and the College of Agricultural & Life Sciences, University of Wisconsin-Madison.

This summary is the result of a mail and phone survey which collected rates paid by farmers for custom work performed in 2020. The figures are based on reports by custom operators and farmers who performed custom work and/or rent out equipment. There were 494 reports compiled.

**Thank you to all survey participants who provided data for this publication! Your input made this report possible.**

Most of the rates in this release include the cost of hiring a machine with fuel and operator, but exclude the cost of any materials. No attempt was made to distinguish between rates charged by custom operators who perform these operations as their main source of income and those who do custom work as a secondary source of income. This summary makes no effort to evaluate fairness of rates being charged.

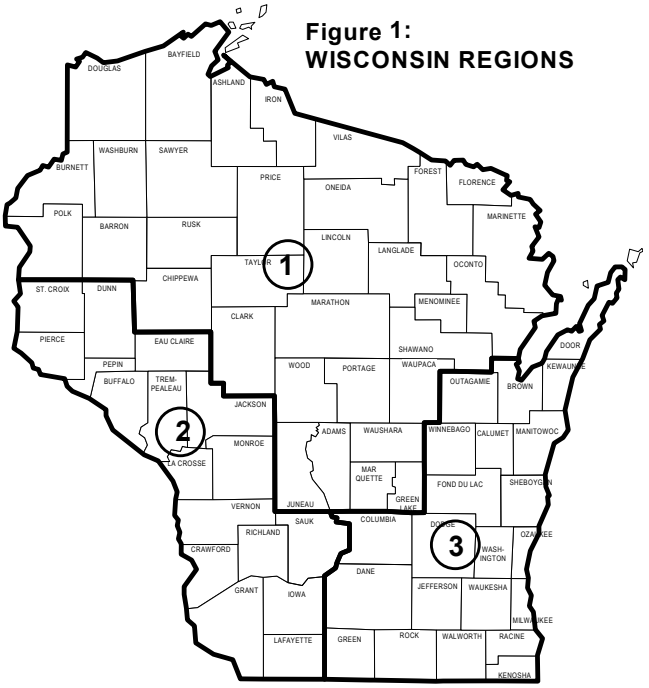


**Figure 1: WISCONSIN REGIONS**

## DATA:

Included in this release are the number of reports, the average rate, and the median rate. The average provides an estimate of the prevailing charge with reliability improving as the number of responses increases. Median values offer an additional measure of the central tendency of the survey response distribution. Median values that represent an individual operation are withheld. Rates are typically influenced by fuel costs, soil conditions, topography, field size and shape, traditional practices in an area, and type, age, and availability of equipment. Reports were edited to remove items for which the respondent's figures were widely outside the range of other respondents' replies. Certain items may have appeared on the questionnaire, but were not summarized due to an insufficient number of responses.

Price changes for machinery, fuel, and labor should be taken into account when using this 2020 data for subsequent years.

## REGIONAL DATA:

Beyond statewide figures, averages and medians at the regional level are included in this release where sufficient data was available. Please refer to Figure 1 to determine in which region your operation falls.

### CUSTOM LAND TILLAGE SERVICES, WISCONSIN, 2020

| Operation | Wisconsin | | | Region 1 | | | Region 2 | | | Region 3 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number of reports | Average | Median | Number of reports | Average | Median | Number of reports | Average | Median | Number of reports | Average | Median |
| | | Dollars/acre | | | Dollars/acre | | | Dollars/acre | | | Dollars/acre | |
| Chisel plowing | 86 | 18.61 | 18.00 | 30 | 18.50 | 20.00 | 17 | 16.59 | 17.00 | 39 | 19.58 | 20.00 |
| Disk/ripper/ harrow combination | 43 | 18.62 | 18.00 | 14 | 18.64 | 18.50 | 13 | 18.15 | 18.00 | 16 | 18.97 | 20.00 |
| Field cultivating | 87 | 14.94 | 15.00 | 23 | 15.61 | 16.00 | 15 | 14.53 | 15.00 | 49 | 14.76 | 15.00 |
| Moldboard plowing | 20 | 23.37 | 24.00 | 12 | 21.50 | 21.00 | - | - | - | 8 | 26.18 | 24.50 |
| Rotary hoe | 6 | 11.58 | 11.50 | - | - | - | - | - | - | - | - | - |
| Vertical tillage | 66 | 17.04 | 16.00 | 12 | 17.05 | 15.80 | 15 | 16.00 | 15.00 | 39 | 17.44 | 16.00 |
| Finishing disk | 35 | 17.77 | 18.00 | 15 | 17.67 | 18.00 | - | - | - | 16 | 17.81 | 16.00 |
| Offset disk | 9 | 16.89 | 20.00 | - | - | - | - | - | - | 5 | 19.60 | 20.00 |
| Disk w/ digger & drag | 7 | 20.43 | - | 5 | 22.80 | - | - | - | - | - | - | - |
| Row cultivator with fertilizer | 15 | 12.75 | 13.00 | - | - | - | - | - | - | 10 | 13.20 | 13.50 |
| Row cultivator without fertilizer | 9 | 15.11 | 14.00 | - | - | - | - | - | - | 6 | 16.17 | 15.50 |
| Subsoiling (16-20 in. deep) | 39 | 21.01 | 20.00 | 11 | 22.18 | 20.00 | 11 | 18.27 | | 17 | 22.03 | 22.00 |

- Insufficient data.

## CUSTOM APPLICATION OF FERTILIZERS AND CHEMICALS, WISCONSIN, 2020[1]

| Operation | Wisconsin | | | Region 1 | | | Region 2 | | | Region 3 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number of reports | Average | Median | Number of reports | Average | Median | Number of reports | Average | Median | Number of reports | Average | Median |
| | | Dollars/acre | | | Dollars/acre | | | Dollars/acre | | | Dollars/acre | |
| **Fertilizer** | | | | | | | | | | | | |
| Anhydrous (knife applicator) | 6 | 13.00 | 13.75 | - | - | - | - | - | - | - | - | - |
| Bulk dry (broadcast) | 37 | 6.19 | 6.00 | 15 | 6.07 | 5.00 | 8 | 7.31 | 7.00 | 14 | 5.68 | 5.50 |
| Liquid | | | | | | | | | | | | |
| Broadcast | 9 | 8.06 | 8.00 | - | - | - | - | - | - | 8 | 8.06 | 8.00 |
| Side-Dressing with Drop Nozzles | 21 | 10.48 | 10.00 | - | - | - | - | - | - | 14 | 11.14 | 10.50 |
| **Pesticides (Ground Application)** | | | | | | | | | | | | |
| Fungicide | 35 | 8.91 | - | 13 | 10.00 | 10.00 | 6 | 8.83 | 8.50 | 16 | 8.06 | 8.00 |
| Herbicide | | | | | | | | | | | | |
| Boom Sprayer | 74 | 8.58 | 8.00 | 25 | 8.58 | 8.00 | 14 | 9.21 | 9.00 | 35 | 8.32 | 8.00 |
| Broadcast or banded (only) | 11 | 12.27 | 10.00 | 6 | 14.67 | 10.00 | - | - | - | - | - | - |
| Insecticide | | | | | | | | | | | | |
| Broadcast or banded (only) | 18 | 9.00 | 9.00 | 8 | 9.38 | 9.50 | - | - | - | 6 | 8.67 | 8.50 |

- Insufficient data. [1]The prices listed reflect application only. Cost of materials is excluded.

## CUSTOM MANURE SERVICES, WISCONSIN, 2020

| Operation | Wisconsin | | | Region 1 | | | Region 2 | | | Region 3 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number of reports | Average | Median | Number of reports | Average | Median | Number of reports | Average | Median | Number of reports | Average | Median |
| **Cost Per Hour** | | Dollars/hour | | | Dollars/hour | | | Dollars/hour | | | Dollars/hour | |
| Solid Manure | | | | | | | | | | | | |
| Removal | 7 | 99.43 | - | - | - | - | - | - | - | 5 | 92.00 | - |
| Removal and spreading | 15 | 135.00 | 100.00 | 5 | 182.00 | - | - | - | - | 8 | 115.00 | 100.00 |
| Spreading | 12 | 111.67 | 100.00 | - | - | - | - | - | - | 8 | 113.13 | 105.00 |
| Liquid Manure | | | | | | | | | | | | |
| Hauling and spreading (surface) | 26 | 105.12 | 100.00 | 8 | 111.25 | 115.00 | - | - | - | 15 | 106.00 | 100.00 |
| Hauling and spreading (injection) | 6 | 132.50 | 145.00 | - | - | - | - | - | - | - | - | - |
| Agitation boat | 16 | 283.44 | 295.00 | - | - | - | - | - | - | 10 | 279.50 | 295.00 |
| **Cost Per Gallon** | | Dollars/1,000 gallons | | | Dollars/1,000 gallons | | | Dollars/1,000 gallons | | | Dollars/1,000 gallons | |
| Liquid Manure | | | | | | | | | | | | |
| Hauling and spreading (surface) | 8 | 9.37 | 8.50 | - | - | - | - | - | - | - | - | - |
| Dragline pumping and spreading (surface) | 11 | 9.41 | 10.00 | - | - | - | - | - | - | 8 | 9.63 | 10.00 |
| Dragline pumping and spreading (injection) | 15 | 9.30 | 9.00 | - | - | - | - | - | - | 9 | 9.94 | 9.00 |

- Insufficient data.

## CUSTOM SEEDING, PLANTING, AND DRILLING SERVICES, WISCONSIN, 2020

| Operation | Wisconsin | | | Region 1 | | | Region 2 | | | Region 3 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number of reports | Average | Median | Number of reports | Average | Median | Number of reports | Average | Median | Number of reports | Average | Median |
| | | Dollars/acre | | | Dollars/acre | | | Dollars/acre | | | Dollars/acre | |
| **Air seeding with fertilizer** | | | | | | | | | | | | |
| Small grains | 5 | 18.40 | 20.00 | - | - | - | - | - | - | - | - | - |
| Soybeans | 12 | 19.50 | 19.50 | - | - | - | - | - | - | 8 | 19.63 | 19.50 |
| **Air seeding without fertilizer** | | | | | | | | | | | | |
| Small grains | 12 | 19.67 | 20.00 | - | - | - | 5 | 20.40 | 20.00 | 7 | 19.14 | 20.00 |
| Soybeans | 12 | 20.21 | 20.00 | - | - | - | 5 | 20.30 | 20.00 | 7 | 20.14 | 20.00 |
| **Planting** | | | | | | | | | | | | |
| Corn (with fertilizer) | 190 | 20.95 | 20.00 | 53 | 21.19 | | 59 | 20.62 | 20.00 | 78 | 21.05 | 20.00 |
| Corn (without fertilizer) | 86 | 20.35 | 20.00 | 19 | 21.47 | 22.00 | 27 | 21.09 | 20.00 | 40 | 19.31 | 20.00 |
| Small grains | 43 | 19.29 | 18.00 | 8 | 18.88 | 19.50 | 11 | 17.09 | | 24 | 20.44 | 19.00 |
| Soybeans (with fertilizer) | 40 | 21.13 | 21.50 | 12 | 20.88 | 22.50 | 14 | 21.32 | 22.00 | 14 | 21.14 | 20.00 |
| Soybeans (without fertilizer) | 150 | 19.86 | 20.00 | 36 | 19.58 | 20.00 | 47 | 20.96 | 20.00 | 67 | 19.24 | 19.00 |
| **Drilling** | | | | | | | | | | | | |
| Alfalfa | 77 | 19.84 | 20.00 | 17 | 20.47 | 20.00 | 21 | 18.62 | 18.00 | 39 | 20.23 | 20.00 |
| Soybeans | 83 | 19.35 | 20.00 | 20 | 19.28 | 20.00 | 15 | 18.93 | | 48 | 19.51 | 20.00 |
| Small grains | 93 | 19.07 | 19.00 | 19 | 18.84 | 20.00 | 21 | 18.76 | 18.00 | 53 | 19.27 | 19.00 |

- Insufficient data.

## CUSTOM HARVESTING AND COMBINING SERVICES, WISCONSIN, 2020

| Operation | Wisconsin | | | Region 1 | | | Region 2 | | | Region 3 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number of reports | Average | Median | Number of reports | Average | Median | Number of reports | Average | Median | Number of reports | Average | Median |
| | | Dollars/acre | | | Dollars/acre | | | Dollars/acre | | | Dollars/acre | |
| **Corn** | | | | | | | | | | | | |
| Combine | 234 | 33.59 | 33.25 | 55 | 32.65 | 32.00 | 74 | 34.01 | 35.00 | 105 | 33.79 | 33.00 |
| Harvest (combine, grain cart, haul local to farm) | 83 | 41.56 | 40.00 | 21 | 43.67 | - | 21 | 43.79 | 40.00 | 41 | 39.34 | - |
| **Corn stalks** | | | | | | | | | | | | |
| Shredding | 26 | 17.87 | 15.00 | 7 | 21.86 | 12.00 | 8 | 15.50 | 15.00 | 11 | 17.05 | - |
| Baling (dollars/large bale) | 28 | 11.46 | 10.50 | 7 | 10.07 | - | 13 | 13.04 | 11.00 | 8 | 10.13 | 9.00 |
| **Small grains** | | | | | | | | | | | | |
| Combine (from swath) | 29 | 33.59 | 32.00 | 10 | 32.30 | 30.00 | 11 | 36.64 | 35.00 | 8 | 31.00 | 30.00 |
| Combine (straight) | 112 | 33.53 | 33.00 | 27 | 33.36 | - | 22 | 35.09 | 35.00 | 63 | 33.05 | 33.00 |
| Swathing (self-propelled) | 10 | 22.00 | 20.50 | - | - | - | - | - | - | - | - | - |
| **Soybeans** | | | | | | | | | | | | |
| Combine | 222 | 32.96 | 32.00 | 55 | 31.57 | 32.00 | 70 | 34.24 | 35.00 | 97 | 32.83 | 32.00 |
| Harvest (combine, grain cart, haul local to farm) | 67 | 39.06 | 38.00 | 15 | 39.53 | - | 20 | 39.85 | 39.00 | 32 | 38.34 | 38.00 |

- Insufficient data.

## CUSTOM GRAIN DRYING, WISCONSIN, 2020

| Operation | Wisconsin | | |
|---|---|---|---|
| | Number of reports | Average | Median |
| | | Dollars | |
| **Corn** | | | |
| Dollars/bushel | 7 | 0.10 | - |
| Dollars/bushel/point | 7 | 0.06 | 0.04 |

## CUSTOM HAY HARVEST SERVICES, WISCONSIN, 2020

| Operation | Wisconsin | | | Region 1 | | | Region 2 | | | Region 3 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number of reports | Average | Median | Number of reports | Average | Median | Number of reports | Average | Median | Number of reports | Average | Median |
| **Cost Per Acre** | | Dollars/acre | | | Dollars/acre | | | Dollars/acre | | | Dollars/acre | |
| Mowing | 26 | 14.48 | 14.00 | 10 | 14.40 | 14.50 | 5 | 16.40 | - | 11 | 13.68 | 14.00 |
| Mowing and conditioning | 113 | 16.61 | 15.00 | 37 | 15.35 | 15.00 | 25 | 17.80 | 15.00 | 51 | 16.94 | 15.00 |
| Raking | 88 | 8.14 | 8.00 | 29 | 8.12 | 8.00 | 19 | 7.76 | 8.00 | 40 | 8.33 | 7.75 |
| Swathing | 7 | 14.00 | - | - | - | - | - | - | - | - | - | - |
| Tedding | 41 | 7.58 | 7.00 | 17 | 7.30 | 7.00 | 6 | 7.50 | 8.50 | 18 | 7.88 | 7.50 |
| **Cost Per Bale** | | Dollars/bale | | | Dollars/bale | | | Dollars/bale | | | Dollars/bale | |
| Small Round Bales (<1,500 lbs) | | | | | | | | | | | | |
| Baling | 91 | 9.72 | 9.50 | 41 | 9.28 | 9.00 | 22 | 10.69 | 10.00 | 28 | 9.61 | 9.00 |
| Cutting, raking, and baling | 11 | 11.86 | 9.00 | - | - | - | - | - | - | 7 | 7.79 | - |
| Large Round Bales (>1,500 lbs) | | | | | | | | | | | | |
| Baling | 70 | 10.78 | 10.00 | 20 | 10.15 | 10.00 | 30 | 11.34 | 11.00 | 20 | 10.58 | 9.75 |
| Cutting, raking, and baling | 5 | 23.20 | - | - | - | - | - | - | - | - | - | - |
| Moving from field to storage | 12 | 2.98 | 2.50 | 5 | 3.35 | - | - | - | - | - | - | - |
| Small square Bales (<250 lbs) | | | | | | | | | | | | |
| Baling | 17 | 1.00 | 1.00 | 7 | 1.07 | 1.00 | - | - | - | 9 | 0.89 | - |
| Cutting, raking, and baling | 10 | 1.80 | 1.13 | - | - | - | - | - | - | 5 | 1.88 | - |
| Large square bales (>250 lbs) | | | | | | | | | | | | |
| Baling | 80 | 9.04 | 9.00 | 15 | 10.13 | 10.00 | 25 | 8.19 | - | 40 | 9.15 | 9.00 |

- Insufficient data.

## CUSTOM SILAGE AND HAYLAGE MAKING SERVICES, WISCONSIN, 2020

| Operation and unit | Wisconsin | | | Region 1 | | | Region 2 | | | Region 3 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number of reports | Average | Median | Number of reports | Average | Median | Number of reports | Average | Median | Number of reports | Average | Median |
| **Bagging silage (dollars/ton)** | 13 | 5.18 | 4.50 | 6 | 6.50 | 4.75 | - | - | - | - | - | - |
| **Blower (dollars/hour)** | 6 | 30.50 | 27.50 | - | - | - | - | - | - | - | - | - |
| **Corn silage** | | | | | | | | | | | | |
| Chopping only | | | | | | | | | | | | |
| Dollars/acre | 7 | 165.71 | 100.00 | - | - | - | - | - | - | - | - | - |
| Dollars/hour | 71 | 481.80 | 450.00 | 19 | 482.63 | - | 18 | 429.58 | 387.50 | 34 | 508.99 | 475.00 |
| Dollars/ton | 9 | 5.57 | - | - | - | - | - | - | - | - | - | - |
| Chopping and hauling only | | | | | | | | | | | | |
| Dollars/hour | 37 | 567.01 | - | 12 | 352.08 | 275.00 | 7 | 717.86 | - | 18 | 651.62 | - |
| Dollars/ton | 9 | 7.27 | - | - | - | - | - | - | - | - | - | - |
| Chopping, hauling and filling | | | | | | | | | | | | |
| Dollars/hour | 22 | 629.45 | 462.50 | 7 | 716.43 | - | 5 | 726.00 | - | 10 | 520.30 | 375.00 |
| Dollars/ton | 7 | 9.00 | 8.00 | - | - | - | - | - | - | - | - | - |
| Earlage/Snaplage (dollars/acre) | 9 | 180.00 | 100.00 | - | - | - | 7 | 210.00 | - | - | - | - |
| **Other silage** | | | | | | | | | | | | |
| Chopping only (dollars/hour) | 48 | 411.41 | 400.00 | 14 | 414.29 | 450.00 | 15 | 363.50 | 350.00 | 19 | 447.11 | 500.00 |
| Chopping and hauling only | | | | | | | | | | | | |
| Dollars/hour | 19 | 471.68 | - | 7 | 417.86 | - | 5 | 436.00 | - | 7 | 551.00 | - |
| Chopping, hauling and filling (dollars/hour) | 8 | 421.25 | 460.00 | - | - | - | - | - | - | - | - | - |
| **Pull-type chopper and tractor (dollars/hour)** | 17 | 131.18 | 120.00 | 5 | 117.00 | - | 5 | 135.00 | - | 7 | 138.57 | - |
| **Self-propelled chopper (dollars/hour)** | 66 | 473.10 | 450.00 | 15 | 520.33 | - | 21 | 449.38 | 400.00 | 30 | 466.08 | 475.00 |
| **Silo filling, upright (dollars/acre)** | 5 | 96.60 | 85.00 | - | - | - | - | - | - | - | - | - |
| **Silo filling, trench or bunker (dollars/hour)** | 22 | 189.77 | 125.00 | 5 | 128.00 | 125.00 | 5 | 393.00 | 00 | 12 | 130.83 | 135.00 |

- Insufficient data.

## CUSTOM CROPS HAULING AND TRUCKING, WISCONSIN, 2020

| Commodity hauled | Wisconsin | | | Region 1 | | | Region 2 | | | Region 3 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number of reports | Average | Median | Number of reports | Average | Median | Number of reports | Average | Median | Number of reports | Average | Median |
| **Corn** | | | | | | | | | | | | |
| Dollars/bushel | 93 | 0.16 | 0.15 | 31 | 0.19 | 0.18 | 19 | 0.15 | 0.16 | 43 | 0.14 | 0.14 |
| Maximum one way mileage | 59 | 28.1 | 15.0 | 23 | 34.4 | 20.0 | 11 | 25.6 | - | 25 | 23.2 | 15.0 |
| Extra charge per bushel over base mileage (dollars) | 34 | 0.09 | 0.05 | 17 | 0.11 | 0.05 | 5 | 0.03 | 0.02 | 12 | 0.08 | 0.05 |
| **Corn silage** | | | | | | | | | | | | |
| Dollars/hour | 27 | 93.08 | 100.00 | - | - | - | 8 | 86.88 | 87.50 | 16 | 95.20 | 100.00 |
| **Hay (all, dry baled)** | | | | | | | | | | | | |
| Dollars/hour | 6 | 90.83 | 90.00 | - | - | - | - | - | - | - | - | - |
| Dollars/bale | 9 | 3.29 | 2.00 | - | - | - | - | - | - | - | - | - |
| **Oats** | | | | | | | | | | | | |
| Dollars/bushel | 16 | 0.17 | 0.15 | 5 | 0.20 | 0.20 | - | - | - | 10 | 0.15 | 0.15 |
| Maximum one way mileage | 9 | 57.4 | 20.0 | - | - | - | - | - | - | 5 | 47.4 | - |
| Extra charge per bushel over base mileage (dollars) | 8 | 0.11 | 0.05 | - | - | - | - | - | - | - | - | - |
| **Other silage** | | | | | | | | | | | | |
| Dollars/hour | 18 | 94.44 | 100.00 | - | - | - | - | - | - | 11 | 100.00 | 100.00 |
| **Soybeans** | | | | | | | | | | | | |
| Dollars/bushel | 85 | 0.21 | 0.15 | 26 | 0.20 | 0.20 | 17 | 0.15 | 0.15 | 42 | 0.23 | 0.14 |
| Maximum one way mileage | 54 | 28.8 | 15.0 | 19 | 37.9 | 20.0 | 11 | 24.3 | - | 24 | 23.8 | 15.0 |
| Extra charge per bushel over base mileage (dollars) | 31 | 0.09 | 0.05 | 14 | 0.12 | 0.06 | 5 | 0.03 | 0.02 | 12 | 0.08 | 0.05 |
| **Wheat (all)** | | | | | | | | | | | | |
| Dollars/bushel | 35 | 0.15 | 0.15 | 5 | 0.19 | 0.15 | 5 | 0.15 | - | 25 | 0.15 | 0.15 |
| Maximum one way mileage | 27 | 26.3 | 15.0 | 5 | 38.0 | | - | - | - | 18 | 25.7 | 15.0 |
| Extra charge per bushel over base mileage (dollars) | 16 | 0.11 | 0.05 | 5 | 0.16 | 0.07 | - | - | - | 9 | 0.10 | 0.05 |

- Insufficient data.

## CUSTOM TRACTOR AND MACHINE RENTAL, WISCONSIN, 2020

| Machine rented | Wisconsin | | | Region 1 | | | Region 2 | | | Region 3 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number of reports | Average | Median | Number of reports | Average | Median | Number of reports | Average | Median | Number of reports | Average | Median |
| | | Dollars/hour | | | Dollars/hour | | | Dollars/hour | | | Dollars/hour | |
| **Tractors** | | | | | | | | | | | | |
| Tractor loader | 16 | 48.19 | 42.50 | 5 | 43.60 | - | - | - | - | 8 | 49.75 | 42.50 |
| 2 wheel drive, 150-250 hp | 12 | 43.83 | 39.00 | - | - | - | - | - | - | 6 | 41.00 | 39.00 |
| 2 wheel drive, 100-150 hp | 16 | 36.00 | 37.50 | 5 | 37.00 | - | - | - | - | 7 | 33.71 | - |
| 4 wheel drive, < 175 hp | 39 | 49.33 | 45.00 | 14 | 47.90 | 45.00 | 9 | 53.67 | - | 16 | 48.15 | 45.00 |
| 4 wheel drive, > 175 hp | 58 | 62.92 | 55.00 | 16 | 60.81 | 51.00 | 18 | 65.39 | 50.00 | 24 | 62.48 | 62.50 |
| **Bulldozer** | 7 | 105.71 | 100.00 | - | - | - | - | - | - | - | - | - |
| **Skid steer loader** | 28 | 46.41 | 44.00 | 10 | 51.70 | 57.50 | 7 | 36.29 | 35.00 | 12 | 47.92 | 47.50 |

- Insufficient data.

## CONTACT:

Your input is important to us. If you have any comments or suggestions regarding this report, please call (800)789-9277 or write to:

USDA, NASS, Wisconsin Field Office,
2811 Agriculture Dr, Madison, WI 53718-6777.
nassrfoumr@usda.gov

This report may be viewed and printed online at: www.nass.usda.gov/wi under "More State Features."

## FURTHER INFORMATION:

To better determine an appropriate charge in your situation, you are encouraged to obtain Bulletin A3510, titled "Estimating Agricultural Field Machinery Costs" from your county UWExtension office or at:

https://learningstore.uwex.edu/Assets/pdfs/A3510.pdf