

# AG FOCUS



## Making Tiestalls More Comfortable by Margaret Quaassdorff

When we think of February, we can imagine love notes and letters printed on beautiful stationERY for Valentine's Day. When I'm reading the Journal of Dairy Science, the topics are less romantic, but it makes my heart glow when I find a rare treat of new research focusing on improving welfare and comfort for cows in tiestall housing. Since it's February, let's show some love to our more stationARY ladies. This one goes out to the tiestall cows!

If you have ever paid close attention when tiestall cows rise, lie down, or reach for feed, then you have noticed that the brisket board, and neck- or tie-rail have a significant effect on how the cows accomplish this task. In an article published by St John et al. in the December 2020 issue of the Journal of Dairy Science (<https://doi.org/10.3168/jds.2019-17665>), researchers wanted to develop new recommendations for tie-rail placement to improve dairy cow welfare. They evaluated tiestall cow injuries (hair loss, swelling, scabs and lesions), the cleanliness of the cows and the stalls they occupied, as well as bedding quantity. Researchers also recorded how the cows laid down and stood up in the stalls. They compared four different placements of the tie-rail including one set at current recommendations. They found that while cleanliness and bedding quantity remained the same, cows were limited in their ability to move within their environment without coming in contact with the tie-rail no matter what position. Furthermore, neck injuries resulted from all four positions, but in different locations on the neck depending on the placement of the tie-rail. In addition, compared to natural rising and lying ability, all placements encouraged abnormal rising and lying behaviors, which cows eventually learned to navigate more smoothly. Cows are so adaptable to our ideas of how things should be, but I think we can do better. The researchers (and myself!) long for a superior solu-

tion such as a flexible bar or chain, or a way to provide fewer obstacles via elimination of some stall hardware. If you have a tiestall setup on your farm that you feel overcomes this challenge, please send me a video or picture, as I would love to collect examples of good ideas.

A second publication (<https://doi.org/10.3168/jds.2019-17666>) from the same long-term study looked at the effects of tie chain length. They showed that cows are more easily able to lie down, and use the front of their stall more when the length of the chain was increased from the recommended 1.00m (~3.3ft) to 1.4m (~4.6ft). Lying down is an essential activity to all bovines, so it seems a no-brainer to make this small, loving, and affordable adjustment. I know that some of you will say, "She's on a shorter chain because she's a bully, or displays excessive dominant behavior over her neighbor regarding

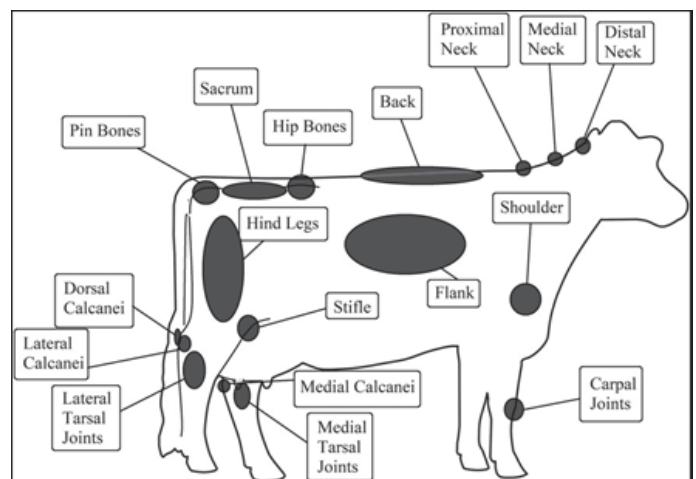


Figure 1: This figure is from the study by St John et al. (2020) indicating areas on the cows that were assessed for injury. This is also where farmers can look to evaluate their own cows for areas of possible improvement in a tiestall housing setup.

(Continued on page 3)

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## Making Tiestalls More Comfortable

(Continued from page 1)

resources.” I know cows like consistency, and cows will be cows, but try switching a few around to create a more comfortable dynamic for all. They would do this naturally in a freestall environment, where a more submissive cow would be able to get away from the situation.

So as we whole-heartedly strive for increased well-being for our tiestall cows, we cannot ignore the importance of proper and consistent daily care and management of our herd, but it helps to be open and to think about how to

effectively implement positive changes and new research ideas. Stay tuned for “Making Tiestalls More Comfortable: Part 2”, in next month’s issue.

Also, know that we have materials available from our 2019 CCE Tiestall Cow Comfort Program.

For more information contact Margaret Quaassdorff at: [maq27@cornell.edu](mailto:maq27@cornell.edu).

Also visit <https://tinyurl.com/TieStallBarnDesign> for Dan McFarland’s (Penn State Extension) Tiestall Barn Design Presentation from that program.

## Upcoming Webinars

**February 8, 2021 - Noon (CST)**

“Mind Over Matter When Something is the Matter”

Amanda Stone, Mississippi State University and  
Larry Tranel, Iowa State University Extension

<https://hoards.com/flex-309-Webinars.html>

**March 8, 2021 - Noon (CST)**

“Clean Cows Make Clean Milk”

Jim Davenport, NY Dairy Farmer and NMC Board Member

<https://hoards.com/flex-309-Webinars.html>

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## Changes Ahead by Libby Eiholzer



In March of 2012 I moved to Batavia to start my first post-college job with the NWNY Team. I knew only a handful of people in WNY and was more than a little nervous. Over the following eight years, I've had the honor of working with so many of you. Thank you to all of you who gave me the opportunity to learn

from you. Whether I was translating a difficult conversation with an employee, helping you develop a new protocol, or leading an on-farm workshop, I walked away from every interaction having learned something new.

Dairy farming in NY has certainly seen some changes during my time with the Team. I've watched farmers adopt new technologies and Spanish-speaking employees take

on more responsibility in higher level jobs. Farmers have stepped up to learn about and comply with new labor laws (while only complaining a little). One of the more exciting changes to me has been watching managers take a serious look at how they lead and manage their people, and then make deliberate changes towards a more formalized management style. I'm sure that times will continue to change, and farmers in WNY will have the smarts and know-how to change with them.

Times are changing for me as well. I've taken a new position with Cargill, where I'll be working as a technical support specialist based in WNY. I'll continue doing what I love: helping farmers and their employees make meaningful changes to be the best they can be. While I'm excited for this new opportunity, I'll greatly miss all of the friends and acquaintances that I've made during my time at Extension. Please stay in touch, my phone and email will stay the same.

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### \*\*\* PathStone Corporation is currently accepting applications for their 2021 On-Farm Housing Grant \*\*\*

This program is a matching grant of up to \$2000 to repair and upgrade existing farm labor housing. Examples of eligible repairs include, but are not limited to: bathrooms, plumbing, laundry facilities, recreation rooms, upgrading kitchens and appliances, heating, windows, ceilings, doors and other major structural components. Special consideration will be given to projects that positively impact the quality of life for farmworkers during off work hours.

Farm Owners must agree to provide \$1 for every \$1 provided by PathStone Corporation. This grant is available in Monroe, Wayne, Ontario, Orleans, Wyoming, Livingston and Genesee counties. If interested, or if you have questions, please contact Susan Lerch at 585-261-1779 for an application. **Applications will be due March 1, 2021** and the work will need to be completed by May 21, 2021. Please help us spread the word as we want to assist as many farms as possible!



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# What You Missed at the First Virtual Corn Congress by Mike Stanyard

The annual Corn Congress is usually the first winter meeting of the year for most folks and for me it marks the beginning of a new programming season. So, you can imagine how strange it was to plan for the 2021 Corn Congress to be totally via computer with no human interaction. We were not sure how many people would attend, but in the end, attendance exceeded our expectations. The all-virtual Corn Congress was held on January 6 and 7 from 10:00am to noon each day. We had 230 growers and agribusiness reps join us. Thirty-two Ag businesses sponsored and helped support the event. The program was run through Zoom and each registrant got their own link to join the meeting. Those who needed DEC credits were able to click on a link in the chat box and enter their information before and after the meeting to receive their credits. Questions for the speakers could be typed into a Q & A box and covered after each presentation.

## DAY 1:

- Lynn Sosnoskie, Cornell weed scientist, started things off with a talk on how to accurately ID the different pigweed species. She provided some excellent pictures on how to differentiate the harder to control waterhemp and Palmer amaranth. She has also tested marestalk populations across NY and found that only a very small portion are still susceptible to glyphosate.
- Jaime Cummings, formally with the NYS IPM Program and now with Syngenta, presented some recent seed treatment trial data on seedcorn maggot in corn. She addressed the possible loss of the neonicotinoid seed treatments in NY and what are the cultural and chemical alternatives.
- Gary Bergstrom, Cornell plant pathologist, gave us a closer look at a new foliar disease, Tar Spot, which has been identified in states all around us and Ontario Canada, but not in NY yet. He reviewed the fungicide trials from the Midwest and what fungicides are currently labeled in NY.
- Quirine Ketterings and Sunoj Shajahan, from the Cornell SPEAR Program, showed everyone how cleaning yield data affects final yields. Their survey of corn yield

data from 63 farms found that headlands yields were 14% less in grain fields and 16% less in corn silage fields than yields in non-headland areas.

## DAY 2:

- Tony Vyn, Purdue University agronomist, was our guest speaker to start off the second morning. He gave an interesting analysis of average yields of corn hybrids across the last couple of decades. He showed that kernel weight is contributing more than kernel number to increasing yields over time. Tony also showed that hybrids vary in their response to nitrogen and that modern hybrids are taking up more nitrogen after flowering (R1) which can lead to increased yields by staying green longer and increasing the grain filling period.
- Ken Wise, from the NYS IPM Program, gave a review of black cutworm, common armyworm and western bean cutworm biology and management. He reviewed the population dynamics of these corn pests using pheromone trap catches across the state.
- I reviewed biology and damage symptomology of nematodes in corn and gave a synopsis of the corn nematode species surveys that have been done across many midwestern states. A corn nematode survey of cornfields has not been done in NY and I will be looking for potential fields to sample this summer in the NWNY region.



Screenshot from Day 1 of the 2021 Virtual Corn Congress.  
Photo: CCE NWNY Team

(Continued on page 8)

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## What You Missed at the First Virtual Corn Congress

(Continued from page 7)

Overall, I was very pleased with how the meetings went and the amount of participation and support. I received many positive comments from attendees. For many, it was their first time on a Zoom meeting and they figured out that it wasn't as difficult as they thought. The sign-in for DEC credits was a little clunky on day one but by day 2, no problems. Many lamented that they really missed the interaction with other farmers, visiting the exhibitor booths and of course LUNCH! Others said they did not miss driving or the fattening donuts. Some felt that they were able to focus and absorb more of the materials pre-

sented and loved that they could adjust the volume and finally hear everyone! One of the best comments that I heard was that they did not have to worry about staying awake after lunch. I know many of you can relate to that!

The 2021 Soybean and Small Grains Congress will be offered virtually on February 10 and 11 from 10:00 to noon both days. It will be the same format as Corn Congress so most of you are already Zoom experts. We have a great program this year with 2.5 DEC recertification credits. To register online and view the speaker agenda visit our website at: <https://nwnyteam.cce.cornell.edu/>.

Looking forward to seeing you all there!

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## Cornell Cooperative Extension | Northwest NY Dairy, Livestock and Field Crops Program

# 2021 VIRTUAL SOYBEAN & SMALL GRAINS CONGRESS

### February 10 & 11 - 10:00am to Noon

*Both sessions will be held virtually on Zoom*

#### February 10, 2021 (10:00am - Noon)

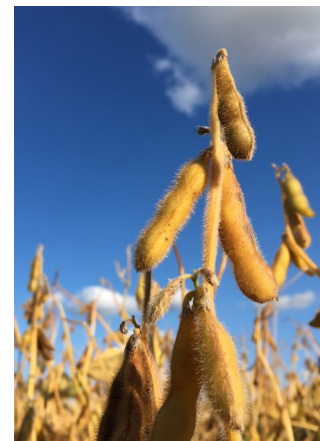
- 10:00 - 10:30** *Soybean Weed Control Updates*  
Michael Hunter, Cornell Cooperative Extension, NNY Team
- 10:30 - 11:00** *Precision Planting Wheat*  
Dennis Pennington, Wheat Systems Specialist, Michigan State University
- 11:00 - 11:30** *How to Grow 140 Bushel Wheat*  
Dwight Bartle, Wheat Producer, Brown City, Michigan
- 11:30 - 12:00** *Soybean Cyst Nematode - Tracking and Managing the New Threat to NY Soybean Production*  
Jaime Cummings, NYS IPM Program, Cornell University

#### February 11, 2021 (10:00am - Noon)

- 10:00 - 11:00** *Getting Your Best Soybean and Wheat Yields*  
Dr. Shawn Conley, Soybean & Wheat Specialist, University of Wisconsin
- 11:00 - 11:30** *On-Farm Soybean Research Networks: What are we Learning?*  
Del Voight, Soybean Specialist, Penn State Extension
- 11:30 - 12:00** *NY Small Grains Updates*  
Mike Stanyard, Cornell Cooperative Extension, NWNy Team

**Registration closes February 8, 2021**

More information is available at: <https://nwnyteam.cce.cornell.edu/events.php>



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## Ask Extension: Do Weeds Have Nutritional Value? by Nancy Glazier

The goal of a well-managed pasture system is no weeds. There is no perfectly managed system so weeds always find a home. Like any pasture plant, weeds can have nutritive values. Improved grasses and legumes tend to have higher nutrient levels, but that's not always the case. All plants are influenced by soil fertility, weather, maturity, plus other factors.

There has been much research done to assess the nutritive value of common weeds. As with any forage analysis, it's not just the crude protein levels. One method used for analysis is in vitro dry matter digestibility (IVDMD), which estimates how an animal would digest the plant. As the plant matures digestibility decreases due to increased lignin. Neutral detergent fiber (NDF) is the measure of lignin, cellulose, hemicellulose, and insoluble ash in cell walls while acid detergent fiber (ADF) is the measure to assess lignin, cellulose, and insoluble ash in cell walls. They help with comparisons.

Below is a table from some older research where the weeds are harvested with a new alfalfa seeding.

Some points to ponder when contemplating grazing weeds:

- Palatability is critical. The weeds can be very nutritious, but animals may not eat them.
- It is critical to identify the weed prior to grazing it. Weeds can look very similar; one species may be toxic while a look-alike is not.
- Keep in mind plant maturity; more mature weeds are usually less digestible.
- Watch out for physical irritants – thorns, spines, seed heads. These irritants can lead to pinkeye or mouth sores.



Will your livestock eat Canada thistle?  
Photo: CCE NWNV Team

- Know which weeds can taint the flavor of meat or milk.
- Options for weed control include herbicides, clipping or even reseeding. Grazing is an option when you do your homework. Keep in mind the risks and benefits. Nutritional requirements need to be met, livestock need to eat them and not get poisoned. An excellent summary resource of past research with table comparisons of some weeds can be found here <https://tinyurl.com/Nutritive-Value-Weeds>. Let me know if you would like a copy sent to you.

### Quality of weeds in a spring sown alfalfa harvested July 2, 1976.

Species	Growth Stage	Crude Protein, %	Invitro Digestible Dry Matter, %	Neutral Detergent Fiber, %	Acid Detergent Fiber, %
Alfalfa	Early bloom	20	70	28	23
Lambsquarters	Bud	22	73	22	17
Shepards purse	Green seed	19	55	37	29
Redroot pigweed	Flower	18	74	22	16
Yellow foxtail	Early seed	17	63	52	27
Common ragweed	Vegetative	26	77	21	17

Adapted from Abaye, A. O., G. Scaglia, C. Teutsch, and P. Raines, 2009.

# Soil, Environmental, and Economic Aspects of Soil Health Systems on Genesee River Watershed Farms

by John Hanchar



Photo: American Farmland Trust

*This article shares a recent message, press release from Aaron Ristow, Agricultural Stewardship Program Manager, American Farmland Trust, regarding farm soil health related work in the Genesee River Watershed. Message received, 16 December 2020.*

## Summary

- Many farm business owners seek to achieve improved soil health results while maintaining or improving the business' ability to achieve financial objectives.
- In 2018, in partnership with others, American Farmland Trust (AFT) launched the Genesee River Demonstration Farms Network (GRDFN) to exhibit the impacts of practical and innovative conservation practices based upon information and experience from working farms.
- Several farm business owners from counties served by the NWN Dairy, Livestock and Field Crops Program have dedicated time and effort to the project, providing farm level yield, soil health, economic and other information for analysis -- Aaron Ristow, AFT, recently commented on the work, "These studies demonstrate that soil health practices can provide environmental benefits, while maintaining or improving crop yields and increasing a farm's bottom line."

## Update from the Genesee River Demonstration Farms Network

Recently, Aaron Ristow, Agricultural Stewardship Program Manager, AFT provided an update on the GRDFN's work. Selected content from the update follows.

"Today, I'm sharing a newly released case study featuring one of nine demonstration farms in the network. [The Goulds] ... own and operate HaR-Go Farms, a 400-head organic dairy farm spanning 650 acres in northwestern New York. HaR-Go Farms produces their own feed for their cows, putting 450 acres into a five-year crop rotation of three years of hay (270 acres), one year of corn (90 acres), and one year of soybean and sorghum (45 acres each). In 2013 they began no-tilling triticale as a cover crop between corn and soybeans or sorghum to

provide additional feed for their herd. ...

"Between their hay and pasture, the Goulds keep 72% of the farm under perennial cover. They also apply manure from their cows with an injector to fertilize their fields, increasing their soil organic matter and reducing nutrient loss. The Goulds were still tilling to establish their hay crop, however, and they found it difficult to get all of their operations done in time to plant their triticale after harvesting corn. Switching to no-till saved them time and labor, equipment wear and tear, and reduced soil and nutrient loss through erosion. ...

"Implementing soil health practices including no-till, cover crops, and nutrient management, the Goulds were able to increase their net income by \$11 per acre per year, or \$4,780 annually on the 450-acre study area, ... Using USDA's COMET Tool on a 10-acre parcel, we found that soil health practices on HaR-Go Farms reduced their greenhouse gas emissions by 158%, the equivalent of taking one car off the road each year. ...

"Farmers want to do what is best for the land, but they must also consider what will keep them economically viable. These studies demonstrate that soil health practices can provide environmental benefits, while maintaining or improving crop yields and increasing a farm's bottom line." Aaron Ristow, Agricultural Stewardship Program Manager, American Farmland Trust.

## Want to learn more?

To learn more about this work read the Gould case study and other case studies here: <https://tinyurl.com/Soil-Health-Case-Study>

To learn more about the Genesee River Demonstration Farms Network visit: <https://tinyurl.com/Genesee-River-Farms>





## How Can You Improve the Health of Your Soil? by Jodi Putman

The function of organisms and the production of soil health can be encouraged by several activities. To address particular soil and plant issues, most practices are used individually, but the more these practices are implemented, the greater the impact is on soil health. To learn how you can enhance soil health, consider joining our farmer led peer to peer teaching and training series.

Technology, information and lessons learned from growers, agribusinesses, conservation organizations, landowners and the public will be shared through demonstration sites, field days, presentations at farmer and agricultural professional events and outreach in agriculture and mass media.

In order to demonstrate the effect of realistic, innovative conservation practices on farm viability, water quality and other natural resources, farmer outreach and communication will expand on five demonstration farms within the Demonstration Farm Network. If you have thought about adopting soil health practices related to interseeding, pest, residue, and nutrient management, cover crops, planting green or specialized/ customized equipment then this is the group for you! We are looking for participants in counties that are a part of the Genesee River Basin Watershed (colorful region in picture).

To participate in the group please contact Jodi Putman at [jil347@cornell.edu](mailto:jil347@cornell.edu) or call 585-208-8209.



Figure 1: Genesee River Basin Watershed Resource link: <https://geneseeriverwatch.org/watershed/>

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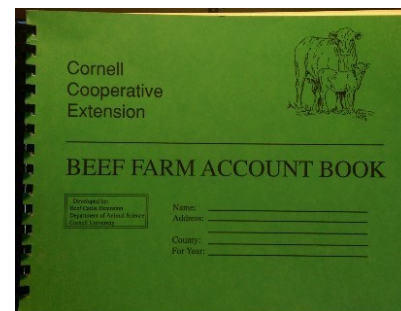
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### Beef Farm Account Books Available

The Cornell Beef Farm Account Book is once again available. The accounting record book is designed specifically for beef producers. A complete and accurate set of financial records helps producers develop accurate tax returns but as important gives them the data to analyze their business. Using this accounting record book the farm manager will have the data needed to complete the Beef Farm Business Summary. The Farm Business Summary is a confidential analysis of business records to determine the strengths and weaknesses of the beef enterprise. This allows for better decision making to increase farm profitability.

To purchase a copy of the Cornell Beef Farm Account Book, contact Nancy Glazier at 585.315.7746 or email [nig3@cornell.edu](mailto:nig3@cornell.edu).







## 2021 Hudson Valley Value-Added Grain School (ONLINE)

### Grain Storage Management & Heritage Corn and Small Grain Varieties

Thursday February 18, 2021- 10:30 am to noon & 1pm to 2 pm and

Thursday February 25, 2021 – 11am to noon & 1 pm to 2:40 pm

Registration is free but required. Register at <https://mahaplatform.com/events/6mjoixd2u>

The Seventh Annual Hudson Valley Value-Added Grain School will feature expert speakers on grain storage management and a panel of progressive farmers sharing expertise on grain storage, handling grain for seed, and packaging grains for retail. Lastly, heritage corn as well as heritage and ancient small grain varieties will be discussed by university researchers with years of experience evaluating heritage, ancient, and specialty corn and small grain varieties, including for organic systems. As the local grain economy grows, more people are re-discovering varieties from the past that bring rich flavor to breads, tortillas, brews, and other foods. *The Full Agenda and Speaker Bio's are online at:* <https://tinyurl.com/2021-Grain-School>

## The 2020 NY Hybrid Corn Grain Performance Trials Results are Now Available

This report includes a summary of our 2020 commercial hybrid corn grain trials. It shows results from four locations in New York, divided into the following two maturity ranges:

	Base 50 Growing Degree Days	Relative Maturity
Early/Medium-early	1900-2300 GDD	75-95 Days
Medium	2300-2700 GDD	95-115 Days



This report is designed to aid seed company representatives, corn growers, and extension educators in evaluating hybrids for yield capacity, stalk and root strength, and maturity in various regions in New York. It also provides information for developing ratings for the Cornell Guide for Integrated Field Crop Management.

While many hybrids included in this report are widely grown, others are new or experimental hybrids. In considering these tables, remember that this data represents only one year. Test results should be considered over several years before final conclusions are valid. Results gathered over several locations are a better guide than results at any one location.

**To view the report online visit:** <https://tinyurl.com/NY-Hybrid-Corn-Trials-2020>

For information on entering hybrids in the 2021 trials, please contact Sherrie Norman at: [san9@cornell.edu](mailto:san9@cornell.edu) or 607-255-1322 or Margaret Smith at: [mes25@cornell.edu](mailto:mes25@cornell.edu) or 607-255-1654.

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# Utility Scale Solar - What you should know

by Timothy X. Terry,  
Farm Strategic Planning Specialist - Pro-Dairy



Photo: Timothy X. Terry

*Due to space constraints the following article has been separated into two parts. Below is part one and part two will appear in next month's issue.*

In March of 2020, Gov. Cuomo announced in his State of the State address an ambitious goal of 70% of the state's electricity needs would be generated via renewable means by 2030. Under this Green New Deal the mandate increases to 100% by 2040. As a result coal-fired plants will be idled while more wind and solar projects will be initiated. For you, as a holder of large tracts of open land, that may mean that you will be visited by landmen seeking to lease all or a portion of that land to use for constructing a solar array. Understand, this is not a couple dozen panels up on the barn roof generating a few kilowatts, but acres of panels on the ground generating several megawatts of electricity. This is not necessarily a bad thing as it reduces carbon emissions and may provide a secondary income stream for you, especially if it is placed on marginal land or land not currently in productive use. That said, in order for this to be a benefit and not a detriment you need to go into it with your head up and your eyes open.

## Therefore, Basic Information

Understand that this is an industry in its infancy, and lease documents are not battle tested so don't sign any landman's forms as is. There is potential for many unrealistic provisions and expectations, and almost everything is fair game for negotiation with few, if any, "deal breakers". You will need professional legal counsel. You may be able to educate yourself on understanding the broad strokes of a commercial lease, but here the devil is in the details and is why you need an attorney.

This transaction is a commercial lease, but it's a lease on steroids and may be 50 – 70 pages long. It is at a higher level of sophistication than any ag tenant lease, utility easement, or right of way (ROW). There will be permanent structures built that do not become fixtures owned by you the landlord. Part and parcel of the lease is a solar easement on the surrounding acreage which means you can't do anything that might interrupt the flow of sunlight. So that means no tower silos, large grain bins, tree plantings, etc. upstream of the incoming sunlight. Unlike the gas lease there are no royalties or subsurface rights.

The tenant (solar company) has some unique needs to understand. The structures have greater requirements for access, maintenance, and transmission than other utility operations. The income stream from the structures is used as collateral to obtain financing, and the tenant's ability to continue operations on your land cannot be interfered with by anyone holding a superior interest in the land (i.e. -mortgage). You may need to subordinate superior liens. All lease documents will be recorded with your deed.

Go into this with the understanding that this is a long-term (>40 years) business relationship. The structures mentioned above may be sold multiple times. The tenant has the ability to assign (transfer) the lease without your approval, and this is non-negotiable. Given this, there are likely to be several tenant changes over the life of the lease. (Likewise, there could be landowner changes, too.) The presence of a solar array may also affect the marketability of your property which could impact your heirs.

The property tax liability should be a shared responsibility

*(Continued on page 14)*

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## Utility Scale Solar - What you should know

(Continued from page 13)

with the tenant paying for the increase in the assessment. You will need to make sure the tenant maintains liability insurance and names you as a co-insured. This is for your protection. They should also furnish you with a Certificate of Insurance (COI) each year, as well as indemnify you for any costs, losses, liabilities, etc. that arise from their activities. This must be all encompassing.

At some point in time the agreement and the array will reach its end of life. The structures age, are superseded by a new technology, you or your heirs do not wish to renew, whatever. The decommissioning, or removal and restoration, of the site is important and must be negotiated and established in detail upfront even though it may not occur for decades. You may not even be dealing with the same people that originally signed the lease. A Decommissioning or Performance Bond is one way of making sure there is funding available to get the job done to the satisfaction of the specifications originally negotiated. The exact nature of the bond is hard to determine, but this is where it makes sense to consult an attorney.

### The Agreement

The agreement comes in two parts: the Option Agreement and the Lease agreement, but even before that you may be presented with a Preliminary Letter of Intent. This one page document is basically a non-disclosure agreement or confidentiality clause so that future terms,

especially the financial compensation, are not disclosed to others. Sometimes these letters omit that disclosure is allowed to attorneys, accountants, financial advisors, family etc. -- so make sure that is in there.

The Option Agreement (10-12 pages) locks in the land for a due diligence period of 1-5 years while the solar company decides if they want to develop the site. You will receive some payments during the period to secure their development rights, access to the site, and your confidentiality. This gives them time to do a more thorough feasibility study including a title search, legal survey, distance to grid connection, and neighboring land availability. They are trying to determine the viability of development – financial and otherwise. No ground will be broken at this time, except for some soil borings, and they will bear all the costs. You may still farm the land during this period, but no development. In other words, no new home site, heifer barn, satellite manure storage, etc. on the optioned property.

The Lease Agreement – a.k.a. Ground Lease (50-70 pages) – shows up when the solar company decides to develop the site. You will be sent a copy of the agreement to sign within a specified period. You have no chance to renegotiate at this time **so don't sign the option agreement without also negotiating the entire lease agreement.**

Next month we'll look at negotiating.



Cornell **CALS**  
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## Troubleshooting Herd Health Issues on Your Dairy

### **PODCAST SERIES**

with Cornell Cooperative Extension Regional Dairy Specialists and Cornell CALS PRO-DAIRY

This podcast series focuses on troubleshooting herd health issues on dairy farms. Episodes will discuss specific areas to look at when experiencing issues in different life stages of the dairy cow. **Episodes are available to listen to at:**

<https://tinyurl.com/Pro-Dairy-Podcasts>

**Episode 1** - Pre-Weaned Calves (Part 1)

**Episode 2** - Pre-Weaned Calves (Part 2)

**Episode 3** - Weaning Transition

**Episode 4** - Post Weaned Heifers - Disease & Growth Issues

**Episode 5** - Heifers - Reproduction

**Episode 6** - Calving

**Episode 7** - Transition Cow Issues

**Episode 8** - Mastitis Part 1



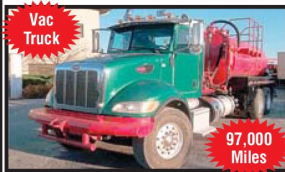
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**Vac Truck**  
2013 PETERBILT 348 VACUUM TRUCK; Paccar PX9 350 HP; 10-Spd. Manual; Clean, Double Frame w/2,940 Gallon Tank; Air-Trac Suspension; 20K Front Axle; 46K Full Locking Rears; 4.30 Ratio; 256" WB; Vacuum System Can Be Removed; 20'6" Frame Behind Cab; 188" CT; 97,334 Miles; Stk. # 6325 - \$46,900



**Long Van**  
2016 FREIGHTLINER M2 106 VAN TRUCK; 350 HP Cummins ISL; Allison Auto. 3000HS Trans.; 28" Durabody Box w/Rollup Door; 14,600# F/A; 40K R/A; AirLiner Susp.; 271" WB; 206" CT; 29" Frame Behind Cab; 5.29 Ratio; Can Separate Box from Chassis; 246,608 Miles; Stk. # 6301 - \$38,500



**Heavy Spec**  
2013 KENWORTH T800; Cummins ISX 600 HP; 18-Spd. Manual; Double Frame; 244" WB; 20K Front Axle; 46K Full Locking Rears on Hendrickson Air Ride Suspension; 3.73 Ratio; 2-Spd. Auxiliary Transmission; 164" CT; 17'6" Frame Behind Cab; 545,546 Miles; Stk. # 6321 - \$54,900



**Pete Tanker**  
2011 PETERBILT 37 TANK TRUCK; CAT 475 HP; 18-Spd. Manual; 20K F/A; 46K R/A; 19K Steerable Tag; 265" WB; 175" CT; 4,200 Gal. Tank w/Fruitland Pump; WILL SELL JUST CHASSIS; 326K Miles; Stk. #5963 - \$61,900



**23.5 Ton Crane**  
2007 PETERBILT 357 CRANE TRUCK; 430 HP CAT C13; 8LL Manual Trans.; Double Frame; Terex BT4792 23.5 Ton/92' Reach Crane w/4-Outriggers; 36" Bunk; 18" Steel Deck; 20K Front; 40K R/A; Steerable Lift Axle; 216" WB; 105,127 Miles; Stk. #6290 - \$71,900



**Nice Packer**  
2013 WESTERN STAR 4700 GARBAGE PACKER TRUCK; Cummins 335 HP; Allison Automatic Trans.; Double Frame; w/Pend-Pac 30 Cu. Yd. LH Side Load Body; 20K F/A; 46K Locking Rears; AirLiner Susp.; ECM Shows 120,338 Miles; 11,704 Hours; Will Separate Packer from Chassis; 20'6" Frame Behind Cab; 164" CT; 132,840 Miles; Stk. #6290 - \$49,900



**Clean Water Truck**  
2011 KENWORTH T800 WATER TANKER TRUCK; Cummins 425 HP; w/4,226 Gallon Advance Steel Tank and Pump; 250" WB; 16K Front Axle; 46K Full Locking Rears on Hendrickson Air Ride; 4.30 Ratio; Will Separate the Tank from the Chassis; 21' Frame Behind Cab; 172" CT; 48,978 Miles; Stk. # 6354 - \$58,000



**20K/46K Rears**  
2007 PETERBILT 357; 475 HP CAT C15; 18-Spd Manual; Clean Daycab w/Tulsa Winch; 20K F/A; 46K Full Locking Rears; Chalmers Susp.; 224" WB; 496,503 Miles; Stk. #6241 - \$39,900



**46K Rears**  
2003 KENWORTH T800; 475 HP CAT C15 6NZ Turbo; 8LL Manual Trans.; Clean Daycab w/12,800# Front Axle; 46K Rears on KW 8-Bag Air Ride; 4.11 Ratio; 180" WB; Wetline; 447,898 Miles; Stk. #5925 - \$49,900



**(2) Available**  
2004 & 2003 PETERBILT 378 TRI-AXLE DUMP TRUCKS; 475 HP CAT C15 Single Turbo; 18-Spd. Manual; 20K F/A; 44K R/A; Air Trac Susp.; Double Frame; 21' Aluminum Box; Airtag; 540,000 Miles; Stk. #6345/6346 - CALL FOR PRICE



**Dozens of Mack Dumps!!**  
1999 MACK RD688S DUMP TRUCK; 400 HP Mack E7; Engine Brake; 8LL Trans.; Rubber Block Susp.; Tri-Axle; 19' Steel Body; 20,000# F/A; 46,000# R/A; 22.5 Tires; 248" WB; Spoke Wheels; EXPORT PRICED!!!; 777,148 Miles; Stk. #5902 - \$19,500



**24 ft. Flatbed**  
2009 KENWORTH T800 FLATBED; CAT 335 HP; 10-Spd. Manual; Clean Double Frame Flatbed Truck w/Palfinger PK11001 Rear Mounted Knuckleboom; 42' Forks; 20K Front Axle; 44K Full Locking Rears on Neway Air Ride; 23' x 96" Aluminum Deck; 4.63 Ratio; 270" WB; 192" CT and 24' Frame Behind Cab; Flatbed & Knuckleboom Can Be Removed; 278,458 Miles; Stk. # 6308 - \$48,900



**6x6 Flatbed**  
2005 PETERBILT 357 6x6; Clean Double Frame 24'6" Flatbed Truck; CAT 350 HP; 8LL Trans.; 22K F/A; 46K Full Locking Rears; 425/65R22.5 Tires; Hendrickson Haulmax Susp.; 5.65 Ratio; 288" WB; 218" CT; 30' Frame Behind Cab; Will Separate Bed from Chassis; 174,108 Miles; Stk. #5701 - \$49,900



**Heavy Spec Long Flatbed**  
2005 KENWORTH T800 FLATBED; CAT 335 HP; Double Frame Flatbed Truck; 20K F/A; 44K Full Locking Rears; 21'6" x 96" Steel Deck; 5.29 ratio; 244" WB; Hendrickson Susp.; Flatbed Can Be Removed; 19' Frame Behind Cab; 162" CT; 12,584 Hours; 137,760 Miles; Stk. # 6323 - \$49,500



**Heavy Spec Chassis**  
2005 PETERBILT 357 CAB & CHASSIS; Cummins 370 HP; Engine Brakes; 8LL Manual Trans.; Quad-Axle w/Double Frame; 18K F/A; 44K Full Locking Rears; (2) 11K Steerable Lift Axles; Air Trac Susp.; 22' Frame Behind Cab; 212" CT; 302,500 Miles; Stk. #5831 - \$43,500



**Allison Auto. Dump**  
2008 PETERBILT 367; Cummins ISX 485HP; Allison Auto. Trans.; Clean Single Frame Dump Truck w/15' Steel Body w/3' Sides and 1' Sideboards; Tarp; 14,300# F/A; 46K Locking Rears on Air Trac Susp.; 204" WB; Plumbed for Pup Trailer; Engine Had Complete Rebuild (Paperwork Included); 383,992 Miles; Stk. #6264 - \$52,900



**Heavy Spec Dump Truck**  
2008 PETERBILT 340 DUMP TRUCK; Paccar PX8 330 HP; 13-Spd. Manual; Double Frame; 19' Heated Steel Body; 20K Front Axle; 20K Lift; 46K Full Locking Rears; 246" WB; Tarp; 5.25 Ratio; Air-Trac Suspension; Hitch and Plumbed for Pup Trailer; 214,987 Miles; Stk. # 6342 - \$49,900



**Will Separate**  
2011 AUTOCAR ACX64 GARBAGE TRUCK; 350 HP Cummins ISL; Allison Automatic; Shur-Pak 24 Cu. Yd. Side Load Packer; Double Frame; L/H & R/H Drives; 20,000# F/A; 44,000# R/A; Will Separate Packer from Chassis; 22' of Frame; 70,022 Miles; Stk. #6236 - \$29,900



**Heavy Spec Dump Truck**  
2006 MACK GRANITE CT713; Mack 370 HP; Engine Brake; Eaton Fuller 8LL Trans.; Hendrickson Rubber Block Susp.; 20K F/A; 46K Full Locking Rears; 20' Heated Steel Box; 500,000 Miles; Stk. #6343 - \$39,900



**20K/46K Axles**  
2005 PETERBILT 357; CAT 305 HP; Allison Auto.; Clean Cab & Chassis; 20K F/A; 46K Rears on Haulmax Susp.; 17' Frame Behind Cab; 140" CT; 216" WB; New Drive Tires; 129,217 Miles; Stk. #4894 - \$59,000



**Mack Flatbed**  
2007 MACK CTP713 GRANITE FLATBED; Mack 370 HP; 10-Spd. Manual; 18K Front Axle; 46K Rears; Hitch; 18'6" x 102" Flatbed; 266" WB; Air Ride Suspension; We Will Separate the Deck from the Chassis; 19' Frame Behind Cab; 170" CT; 218,010 Miles; Stk. # 6352 - \$42,900



**20K/46K Rears**  
2003 KENWORTH W900; 320 HP Cummins ISM; Allison Auto.; Clean, Low Mile Cab & Chassis w/20,000# Front Axle; (2) 11,000# Steerable Lift Axles; 44,000# Full Locking Rears on Chalmers Susp.; 5.43 Ratio; 250" WB; 21' Frame Behind Cab; 156" CT; Muffler Takes Up 12' Behind Cab; Stk. #6016 - \$49,900



**Heavy Spec Chassis**  
2004 KENWORTH W900; 335 HP CAT C10 Engine; 8LL Trans.; Cab & Chassis; 20K F/A; 46K Full Locking Rears; 252" WB; 21' Frame Behind Cab; 150" CT; 4.89 Ratio; Haulmax Susp.; 118,703 Miles; Stk. #6075 - \$29,900



**6x6 Crane**  
2001 INTERNATIONAL 5600I 6x6 CRANE; 435 HP Cummins N14; 10-Spd. Manual; Double Frame; Pitman Hydra-Lift HL1580 7-Ton/65' Crane; 4-Outriggers; 20'x8'6" Flatbed; 20K F/A; 46K R/A; Hendrickson HN Susp.; 244" WB; 184" CT; 25'3" Frame Behind Cab; 158,174 Miles; Stk. #6299 - \$49,900

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## FEBRUARY 2021

>> UPCOMING EVENTS <<



- 5** **FSA Fridays in February** - Feb. 5, 12, 19, & 26, from Noon to 1:00pm. A series of free webinars will be presented by the U.S. Department of Agriculture's (USDA) Farm Service Agency (FSA) in New York State. The series will cover a variety of program and services FSA offers agricultural producers in New York. The webinars are free but pre-registration is required. For more information and to register visit: <https://tinyurl.com/FSA-Fridays> or contact Lynnette Wright at: [lynnette.wright@usda.gov](mailto:lynnette.wright@usda.gov)
- 10&11** **Virtual Soybean & Small Grains Congress** - 10:00am to Noon both days. DEC Points and CCA Credits will be available. The conference will be held online via Zoom. Pre-registration is required. For more information visit: <https://nwnyteam.cce.cornell.edu/events.php>
- 18&25** **Seventh Annual Hudson Valley Value-Added Grain School (Online)** - Feb. 18 from 10:30am - Noon and 1:00pm - 2:00pm, Feb. 25 from 11:00am - Noon and 1:00pm - 2:40pm. Registration is free but required. Register at: <https://mahaplatform.com/events/6mjoixd2u>. See page 12 for more details.
- 24** **Starting a Livestock Farm - Discussion Series** - Feb. 24, from 7:00 - 8:30pm. Join Nancy Glazier and Joan Sinclair Petzen for discussion via Zoom. First session will focus on assessing resources and challenges. Contact Nancy Glazier, [nig3@cornell.edu](mailto:nig3@cornell.edu) or 585-315-7746 for more information. Details will also be on our website: <https://nwnyteam.cce.cornell.edu/>

## MARCH 2021

- 10** **Starting a Livestock Farm - Discussion Series** - March 10, from 7:00 - 8:30pm. Join Nancy Glazier and Joan Sinclair Petzen for discussion via Zoom. First session will focus on assessing resources and challenges. Contact Nancy Glazier, [nig3@cornell.edu](mailto:nig3@cornell.edu) or 585-315-7746 for more information. Details will also be on our website: <https://nwnyteam.cce.cornell.edu/>

### COVID-19 Information Websites:

Need information? View the following Cornell CALS and CCE Resource Pages that are updated regularly.

**General Questions & Links:** <https://eden.cce.cornell.edu/>

**Food Production, Processing & Safety Questions:** <https://instituteoffoodandsafety.cornell.edu/coronavirus-covid-19/>

**Employment & Agricultural Workforce Questions:** <http://agworkforce.cals.cornell.edu/>

**Cornell Small Farms Resiliency Resources:** <https://smallfarms.cornell.edu/resources/farm-resilience/>

**Financial & Mental Health Resources for Farmers:** <https://www.nyfarmnet.org/>

**Cornell Farmworker Program** [www.farmworkers.cornell.edu](http://www.farmworkers.cornell.edu) | [www.trabajadores.cornell.edu](http://www.trabajadores.cornell.edu) (en español)

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