



Extension

UNIVERSITY OF WISCONSIN-MADISON
WAUPACA COUNTY

AG UPDATE / SPRING 2020

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BLONDE TO RETIRE THIS SUMMER

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Waupaca Co Ag Agents

G. Blonde (1984-2020)
J. Walker (1958-84)
M. Drozd (1948-58)
V. Quick (1938-48)
G. Massey (1934-38)
A. Knott (1923-34)
J. Dance (1920-23)
P. Nyhus (1918-20)

It's not easy leaving something you love, especially when it's the only thing you know. But who we are is more than what we do, and like someone once told me, all good things come to an end. So in January, I notified UW-Madison and the Waupaca County Agriculture & Extension Education Committee that I would be retiring this summer after nearly thirty-six years.

Where did three and a half decades go! I can still remember my first day (August 22, 1984) like it was yesterday. It also happened to be the first day of the Waupaca County Fair that year and a great opportunity to meet a lot of wonderful people I would be working with for years to come. Back in the office, which was in the lower level of the old courthouse on Main Street in Waupaca (now the Waupaca Public Library) my secretary, Virginia Bowersox, who was old enough to be my grandmother at the time, was there to greet me with her big smile and few kind words. Then she handed me a picture of two little farm boys standing next to each other in bib overalls with one asking the other "You been farming long?". However, Virginia taped a little note over the caption that said "You been County Agent long"? I wasn't sure if I should laugh or cry, but it was clear we both knew I had a lot to learn. And while those were the days before desktop computers, internet, smartphones and voice mail, I had Virginia to help me get started.

Over the years, with colleagues like Steve Hemshrot, Bernie Mayek, Tom Wilson, Marilyn Herman, Connie Abert and Penny Tank, I learned the most important part of local Extension work is listening. In fact, Jim Crowley once reminded me that if I listened close enough, farmers would not only tell me what their problem was, but they'd also tell me how to fix it. Like the time Keith Long suggested having the right attitude was just as important as having the right answer, whether running a dairy farm or the county fair. Or Walter Strebe reminding me that soil and water conservation is really about leaving a legacy, because you can't pass along what you don't save.

While modern agriculture is more efficient and environmentally sustainable than ever before, ongoing challenges have been and will always be part of it, pandemic or not. Markets and marketing, labor and automation, artificial intelligence and technology, as well as ongoing changing climate. But as the second paragraph of the FFA Creed reminds us, "I believe that to live and work on a good farm, or to be engaged in other agricultural pursuits, is pleasant as well as challenging; for I know the joys and discomforts of agricultural life and hold an inborn fondness for those associations which, even in hours of discouragement, I cannot deny."

Finally, given the growing financial fallout from the current pandemic for both university and county budgets, and the uncertainty how long it might last, refilling any vacant positions will be put on hold for awhile. But when the time comes, I'm sure Waupaca County farmers and Ag professionals will welcome and support their next Extension Agriculture Agent just like they have all the others dating back to 1918, which ironically happens to be the last time we faced a pandemic.

Thank you. It's been my honor and privilege working in Waupaca County.



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What's Standing Alfalfa Worth in 2020?¹

One of the challenges for pricing standing hay is the lack of an established commodity market like corn or soybeans. Another challenge is multiple cuttings with different quality and yield, versus a single year-end harvest for grain crops. As a result, the price for standing hay often varies from farm to farm, even between fields. Here's one example for pricing a field of standing alfalfa (or grass hay) in 2020.

Example: assume 4-5 ton dry matter (DM)/acre for the entire year of dairy quality alfalfa worth \$200 to \$250/ton baled (\$0.11 to \$0.14 / lb DM); half the value is credited to the owner for input costs (land, taxes, seed, chemical and fertilizer) and half the value is credited to the buyer for harvesting, field loss, weather and price risk. Keep in mind the lower end of the price range is often more appropriate during the growing season often reflecting the increased supply...and possibly weaker demand this year from uncertain dairy/livestock markets due to the ongoing pandemic.

To estimate total annual dry matter yield potential, determine average stems per square foot at several locations in the field, then calculate using this formula: $(0.10 \times \text{stems}/\text{ft}^2) + 0.38$. Wait until stems are at least 4-6 inches and count only stems tall enough to be cut by the mower. Actual yield could be less due to environmental conditions and harvest management practices.

Using yield distribution estimates from ongoing UW-Extension field research for both three-cut (40% / 30% / 30%) and four-cut (35% / 25% / 20% / 20%) harvest systems, the following price range (rounded to the nearest \$5) may offer a starting point for buyers and sellers to negotiate the sale of good to premium quality standing alfalfa in 2020 (note, discount these values by 25-30% for good quality grass hay with RFV/RFQ between 125-150 points):

	<u>3 cuts</u>	<u>4 cuts</u>
1 st crop...	\$175-280/a	\$155-245/a
2 nd crop...	\$130-210/a	\$110-175/a
3 rd crop...	\$130-210/a	\$ 90-140/a
4 th crop...	~~~~~	\$ 90-140/a

In this example, the sale or purchase price for all cuttings the entire year would range from \$435 to \$700/acre. Again, this not the right price for every situation. Ultimately, a fair price is whatever a willing seller and an able buyer can agree on.



To help farmers and landowners better evaluate the options, Waupaca County Extension Ag Agent, Greg Blonde, developed a mobile app for pricing standing hay. It offers quick access to current baled hay markets with a projected sale/purchase price for each cutting using your own yield and harvest cost information. The app is free to download from the Google Play Store and for iPhones and iPads thru the Apple Store (search for **Hay Pricing**). The app includes links to the current WI Custom Rate Guide and the NCR Alfalfa Management Guide. For more information, contact Greg Blonde at greg.blonde@wisc.edu.

¹ Greg Blonde, Waupaca County UW-Extension Agriculture Agent. April 2020.

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Strategies to Reduce Milk Production While Limiting the Impact on Future Production

The current dairy market situation with reduced demand for products has caused excess product to build up at some dairy processing plants. To reduce milk supply, some dairy producers have been instructed to reduce milk shipped with some feeding excess milk to calves, heifers, and lactating cows, or disposing of milk into manure storage facilities or land spreading. However, it may be more cost effective to reduce production using the strategies presented in this factsheet. It is likely one strategy alone will not meet the needed reduction, so a combination of several strategies may be needed. Using a combination of strategies at lower intensity may also reduce negative impacts on animal health and welfare that may occur with more intense changes. To minimize impacts on future production, we suggest to selectively reduce production of mid- to late-lactation cows and avoid changes for transition and early/peak lactation cows. When considering these options, make sure to consult your veterinarian, nutritionist, cattle sales outlet, and Extension personnel to discuss available options and scenarios.

Culling Opportunities

Reducing milk shipped by culling cows should be managed carefully. Sale of cull cows should be limited to healthy, mobile animals able to be shipped. The ability to cull and sell cows also depends on the availability of buyers and meat processors. Cows with chronic high somatic cell counts or that are low producing and not pregnant after three inseminations are good candidates for culling. In the case where a cow is thin, there are not interested buyers, or processing plants are closed; producers can retain these cull cows for a period of time (30 to 60 days) to improve condition and carcass value, and allow time for processing plants to become available.

Earlier Dry Off

When considering drying cows off earlier than the farm's normal management practice, one can anticipate an average 500 pounds less milk from the lactation (assuming a 25,000 pound lactation) for every 10 days increase to the dry period. This would equate to approximately \$60 less Income Over Feed Cost (IOFC) for every 10 days, when milk price is \$0.15 per pound and feed cost is \$0.10 per pound DM.

Reduce Milking Frequency from 3x to 2x

For dairies milking 3X, switching to 2X is an option to reduce milk production. This may result in a reduction of about eight pounds of milk per cow per day for cows switched. High producing (over 100 pounds) cows may be stressed if switched to 2x (leaking milk, discomfort, increased mastitis, and reduced lying time). Better candidates for reducing milking frequency include fresh cows, mid- to late-lactation cows, do not breed (DNBs) cows, and cows past peak production. Possible advantages of partially going to 2X is a decrease in feed intake in addition to a reduction in other costs (labor, supplies, and electricity). The UW-Madison Extension Dairy Management site (<https://DairyMGT.info>) has the tool **Economic Analysis of Switching from 2x to 3x Milking** (Tools -> Production) that is useful.

Diet Modifications

Changing the diet can reduce production through reduced nutrient intakes. Work with a nutritionist to formulate diets to ensure nutrient needs are met and to base changes on available forage. Increasing fiber content through greater forage content, lower quality forages, or high-fiber byproducts will lead to lower energy and feed intakes. Cornell University advises increasing aNDFom to 33-35 percent for peak production cows and 38 percent aNDFom for post-peak cows to maximize fiber intake, with other nutrients balanced to meet energy allowable milk. Decreasing fat supplements and optimizing protein will help reduce production and may be useful for post-peak cows switching to 2x milking.



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Updated on April 30, 2020

The Paycheck Protection Program and Health Care Enhancement Act provides additional funds for small businesses starting April 27.

Updates for April 30:

- New guidance that clearly states that IRS Form Schedule F is used to determine income for the owner of the business.
- Employers with seasonal workers have more guidance and larger range of dates to choose when calculating maximum loan amounts based on average payroll

The Paycheck Protection Program (PPP) provides potentially forgivable loans to small businesses to cover up to two months of payroll costs and/or self-employment income during the COVID-19 crisis. Farmers are eligible for PPP loans through the Small Business Administration (SBA). Farmers must have fewer than 500 employees.

This act, signed into law on April 24 provides an additional \$310 billion to the PPP, with \$60 billion of that money going to loans made by smaller lenders.

The PPP will reopen for approved lenders at 9:30 am (Central Time) on Monday, April 27.

These loans are facilitated through lending institutions with established relationships with the SBA. Here is a list of [SBA approved lenders organized by state as of April 23, 2020](#) (Wisconsin lenders start on page 539). Farmers can also work with the Farm Credit Service organization that services their geographic area. Therefore, after reviewing the eligibility criteria below, **the first recommendation is for farmers to call their current lender(s) to see if they have that SBA relationship and ask if they are ready to accept PPP applications.** The lender may have their own restrictions, application form and documentation requirements.

Who is eligible?

Small businesses, including farms, who have fewer than 500 employees (those receiving W2s in the previous year). Independent contractors/self-employed farmers and small businesses are also eligible to make their own applications to this program.

Partners in partnerships or members of an LLC taxed as a partnership should submit one PPP application for the partnership/LLC. The self-employment income of general active partners or LLC members/managers can be reported as payroll costs (up to \$100,000 annual salary basis) filed on behalf of the partnership or LLC.

What costs are covered?

- Payroll costs, including benefits, such as paid leave, health care benefits, and state and local taxes. The portion of federal taxes that are normally taken from the employee's gross wages can be included in the calculations and used to pay their portion of federal employment tax. The employer's share of payroll taxes should be excluded from the calculations. Housing stipends or allowances are considered part of payroll and subject to the \$100,000 per employee limits.
- Interest on mortgage obligations, incurred before February 15, 2020.

Authors: Joy Kirkpatrick, Farm Succession Outreach Specialist, UW Center for Dairy Profitability and Paul Mitchell, Professor of Agricultural and Applied Economics and Extension Agriculture Economics Specialist.

April 30, 2020

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- Rent, under lease agreements in force before February 15, 2020.
- Utilities, for which service began before February 15, 2020.

The PPP cannot cover the costs of paying independent contractors (those who get 1099s instead of W2s). Independent contractors and other self-employed individuals, including farmers, should apply for their own PPP loans. The PPP loan cannot cover payroll for those employees whose principal address is not within the United States. See IRS regulations (26 CFR § 1.121-1(b)(2)) for additional guidance on determining an employee's principal place of residence.

How do seasonal businesses determine average monthly payroll?

Seasonal employers can calculate their maximum loan amount by:

- Averaging the monthly payroll for the 12-week period beginning February 15, 2019, or
- Averaging the monthly payroll for March 1, 2019 – June 30, 2019, or
- For employers who have later seasons, they can use any consecutive 12-week period between May 1, 2019 and September 15, 2019.

[PPP Interim Rule – Seasonal Employers](#)

What are the amount of the loans?

The amount of the loans are 2.5 times the amount of your average monthly payroll costs from 2019, capped at \$10 million. For specific direction on calculating the loan, read the Iowa State University's [Center for Agricultural Law and Taxation blog on guidance on PPP Loans](#)

Can a farmer include their own lost income in the loan?

Farmers can include their own lost income if their 2019 taxes indicate a net income. Current official SBA guidance give direction for loans that have self-employment income reported on the Schedule F to use line 34 for documenting net income. The 2019 IRS Form 1040 Schedule 1 and Schedule F must be included with the loan application.

If your farm/business had a zero or negative net income in 2019, the business owner(s) cannot request funds for themselves through the PPP. They can however, still request funds to cover their payroll costs for two months. **Businesses with no employees and zero or negative net income are ineligible for a PPP loan.** Farms in this category will have to rely on existing and new FSA programs and/or loans based on their equity. We are still waiting for information on the Coronavirus Food Assistance Program, the new USDA program that will make direct payments to farms in response to COVID-19. Farmers may be eligible for Pandemic Unemployment Assistance (PUA) if they are unable to work because they or family/household member was in some way affected by COVID-19; however, loss of profits does not make a farmer eligible for PUA. For more information on PUA, go to the [Wisconsin Workforce Development's website on PUA](#).

Are these truly forgivable loans?

PPP loans will be forgiven as long as:

- The loan is used to cover payroll costs, and mortgage interest, rent, and utility costs over the 8 week period after the loan is made; and
- Employee and compensation levels are maintained.
- For a loan to be completely forgiven, no more that 25% of the loan can be used for anything other than payroll. For example, if you use 30% of the loan for mortgage interest, rent and/or utilities, you are required to pay back 5% of the total loan because that is the amount over the 25% you spent on things other than payroll costs.

The applicant is required to write a letter to the lender that documents the number of Full-Time Equivalent (FTE) employees and their pay rates, plus payments to mortgage interest, lease payments and utility payments that were paid from the loan proceeds. An FTE is 40 hours/week. It is recommended that you use the FTE number in your application rather than just the number of employees so that it is the same number that is required in the request-for-forgiveness-letter.

Note: A forgiven loan is taxable income. However, the items paid from this loan are all expenses that can be deducted as the cost of business, so they should cancel each other out.

If someone is required to pay back a portion of the loan, what are the loan terms?

- Interest at 1%, accrues immediately
- Payments deferred for six months
- Loan due in two years.

How do farmers apply?

- If a farm has a PPP application in from the first time, they should contact their lender to determine if they need to re-apply or to change/update their existing application.
- Call your current lender to see if they are making PPP loans. If they are not or you don't have an established relationship with a lender, you can contact the Farm Credit Service lender for your geographic area. Here is a list of [SBA approved lenders organized by state as of April 23, 2020](#) (Wisconsin lenders start on page 539). Get their application and supporting document list.

You will need to provide your lender with payroll documentation such as payroll processor records or payroll tax filings. Independent contractors will have to provide their 1099-MISC forms.

Is there anything else I should know?

- This additional \$310 billion is available starting at 9:30 on Monday, April 27. It is distributed on a first come, first served basis. **Call your lender today!**
- As of April 25, there is nothing indicating that receiving SBA loans will affect payments from the Coronavirus Food Assistance Program, the new USDA program that will make direct payments to farmers through the FSA in response to COVID-19.
- A borrower can generally obtain both a PPP loan and an Economic Injury Disaster Loan (EIDL program); however, they can't be used for the same purposes. Here is more information on the EIDL program (see the article: ***Economic Injury Disaster Loans now open to agricultural enterprises***)
- If an owner with 20% or more ownership has a felony within the last five years the business is ineligible.
- Medical/recreational marijuana is not an eligible enterprise; hemp is eligible in state where it is a legal crop, including Wisconsin.

Here are links for more information from the U.S. Treasury:

[General Information about the Paycheck Protection Program](#)

Here is the [Paycheck Protection Program Borrower Application Form to see what type of information will be needed](#). Please note, your lender may require additional forms.

The Small Business Administration regularly updates its [PPP FAQ site](#).

Other resources: [Iowa State University's Center for Agricultural Law and Taxation](#) has information on the [Paycheck Protection Program](#)

FUNGICIDE MANAGEMENT

GUIDELINES FOR FUNGICIDE RESISTANCE MANAGEMENT

- ✓ **Choose hybrids/varieties adapted** for your region; resist the temptation to “push” relative maturity or maturity group for your region.
- ✓ **Plant disease-resistant** hybrids/varieties whenever possible.
- ✓ **Maintain** proper soil fertility.
- ✓ **Avoid sites** with a history of high disease pressure.
- ✓ **Utilize** a crop rotation that fits your area and field history.
- ✓ **Scout** fields on a regular basis, noting incidence and severity of diseases. Use this information to develop a field history for future disease management decisions.
- ✓ **Tank mix** high-risk fungicides with fungicides that have different modes of action, are active against the targeted disease(s), and have similar lengths of residual activity.
- ✓ **Do not use** reduced rates of fungicides.
- ✓ **Alternate** or tank mix fungicides with different modes of action when multiple applications are required.
- ✓ **Apply fungicides preventively** or early in the disease cycle and when a disease threat is warranted.
- ✓ **Avoid curative** fungicide applications, especially with high-risk fungicides.
- ✓ **Monitor weather conditions in-season;** warm dry weather does not promote disease development. You might be able to avoid having to make a fungicide application altogether in some years.
- ✓ **For more information,** consult University of Wisconsin Extension publication: A3878, *Fungicide resistance management in corn, soybean, and wheat in Wisconsin.*



This publication is available from the Nutrient and Pest Management (NPM) Program.

For copies, contact us:
email (npm@hort.wisc.edu);
phone (608) 265-2660 or visit our website (ipcm.wisc.edu)

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College of
Agricultural & Life Sciences
UNIVERSITY OF WISCONSIN-MADISON

FUNGICIDE APPLICATION TIMING FOR CORN, SOYBEAN AND WHEAT

Below are some general guidelines for preferred timing of fungicide application, targeted pathogens and tools to help you make the decision to spray fungicide or not. For more information, consult University of Wisconsin Extension publication, A3646 *Pest Management in Wisconsin Field Crops.*

FIELD CORN

- ✓ The best time to apply fungicide for foliar disease control in Wisconsin corn is during VT–R1 growth stages.
- ✓ Use past history of disease, scouting information and weather forecasts to make the decision to spray or not.
- ✓ For diseases such as gray leaf spot and northern corn leaf blight, scout the lower canopy prior to the VT growth stage. If symptoms of these diseases are present on the lower leaves on 50% or more plants, there is a history of these diseases in the field, and weather is warm, wet/humid, then a fungicide might be warranted to protect the upper leaves.
- ✓ Other factors to consider are the susceptibility of the hybrid being grown, the presence of previous crop corn residue and supplemental irrigation.

VT: The last branch of the tassel is completely extended; silks have not emerged from the ear sheaths. **R1:** The silks are visible outside the husks.

SOYBEAN

- ✓ Fungicides should be applied between the R1–R4 growth stages based primarily on the risk for white mold and foliar disease such as frogeye leaf spot.
- ✓ Use past field history to gauge the risk of white mold and foliar disease.
- ✓ Use the Sporecaster smartphone app to make the decision to apply fungicides for targeting white mold.
- ✓ Scout during bloom (R1–R3) to make a decision to apply fungicide for foliar disease control. Make the decision to spray for foliar diseases if symptoms are present and weather is warm, wet/humid.

R1: One open flower anywhere on the main stem. **R2:** An open flower at one of the two uppermost nodes on the main stem with a fully developed leaf. **R3:** 3/16 inch long pod at one of the four uppermost nodes on the main stem with a fully developed leaf. **R4:** 3/4 inch long pod at one of the four uppermost nodes on the main stem with a fully developed leaf.

THE LABEL IS THE LAW

Always read and follow the pesticide label.

Pay close attention to the maximum number of sprays allowed per season, recommended application rates and application timing for both target pest and plant growth stage.

WHEAT

- ✓ In Wisconsin, fungicide applications prior to Feekes 8 are generally not economically viable.
- ✓ Scout at the Feekes 8 growth stage to gauge foliar disease pressure, especially from stripe rust. If active disease is present, a fungicide might be warranted at this time, especially if weather is forecasted to be wet.
- ✓ Plan to apply a fungicide at the Feekes 10.5.1 growth stage or up to 5 days after the start of this growth stage to protect wheat against Fusarium head blight.

Feekes 8: Flag leaf is visible but still rolled up; it must be protected from disease or insect damage to ensure the plant's full yield potential. **Feekes 10.5.1:** Flowering begins; starting slightly above the middle portion of the head and continuing towards the top.



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Ivermectin products for animals are not intended for COVID-19 treatment

Published April 21, 2020

What is ivermectin?

Ivermectin is a drug for humans and animals to treat internal and external parasites, including certain types of worms, fleas, ticks, and lice.

What is the role of the FDA?

The Food and Drug Administration (FDA) is responsible for protecting the public health by ensuring the safety and efficacy of human and veterinary drugs. More information about FDA's mission [here](https://www.fda.gov/about-fda/what-we-do)
<https://www.fda.gov/about-fda/what-we-do>

FDA-approved uses of ivermectin

In humans, ivermectin tablets are FDA-approved for treatment of some parasitic worms. Some topical formulations are FDA-approved for the treatment of external parasites; for example, headlice and skin conditions such as rosacea.

In animals, ivermectin is FDA-approved for prevention of heartworm disease in dogs and cats and for treatment of certain internal and external parasites in livestock.

Ivermectin and COVID-19

In the *Antiviral Research* journal article, "The FDA-approved drug ivermectin inhibits the replication of SARS-CoV-2 in vitro," the authors found that ivermectin reduced the growth of the SARS CoV 2 virus in cell culture. This novel coronavirus is the causative agent of COVID-19. Let us be cautious however, because the research was not conducted in animals and people.

As the public became aware of this research paper, there was growing concerns about people wanting ivermectin to treat COVID-19 and self-medicating by taking ivermectin products intended for animals.

What does this mean? There is no scientific proof about the safety and efficacy of ivermectin for treating COVID-19. Based on current scientific reports, we know ivermectin reduces antiviral activity, but we do not know if it reduces the severity of the disease or the disease progression in people infected with COVID-19.

Side effects associated with ivermectin

Side-effects may include skin rash, nausea, vomiting, diarrhea, stomach pain, facial or limb swelling, and neurologic adverse events (dizziness, seizures, confusion). Sudden drops in blood pressure, severe skin rash requiring hospitalization and liver injury (hepatitis) have been reported. Laboratory test abnormalities include decreased white cell blood count and elevated liver enzymes. [Source](https://www.fda.gov/animal-veterinary/product-safety-information/faq-covid-19-and-ivermectin-intended-animals) <https://www.fda.gov/animal-veterinary/product-safety-information/faq-covid-19-and-ivermectin-intended-animals>

Any use of ivermectin for the prevention or treatment of COVID-19 should be avoided as its benefits and safety for these purposes have not been established. Data from clinical trials are necessary to determine whether ivermectin is safe and effective in treating or preventing COVID-19. For more information click [here](https://www.fda.gov/animal-veterinary/product-safety-information/faq-covid-19-and-ivermectin-intended-animals),
<https://www.fda.gov/animal-veterinary/product-safety-information/faq-covid-19-and-ivermectin-intended-animals>

What is the process for drug approval?

For a new drug compound to be approved by FDA, different clinical trials need to be conducted including phase I, II, III, and IV trials. The overall objective of these trials is to prove that the new drug is safe and effective for treating a specific condition. As you can imagine, these trials take time. The FDA has created a program to expedite approval for COVID-19 treatments, and ivermectin is not part of that program.

Phases	Subjects: Multiple animal species	Objectives
Phase I	20-80 healthy volunteers	Safety and efficacy testing
Phase II	100+ patients with a condition or disease	
Phase III	1,000+ patients	
Phase IV	Patients	Monitor safety issues

Summary of drug approval process conducted by FDA

Availability of ivermectin products for animals

Ivermectin is an important drug used by pet owners and farmers for parasite control in their animals. Ivermectin should be given to animals following the label directions or as prescribed by your veterinarian. Contact your veterinarian if you are having difficulties locating a particular ivermectin product for your animals.

What is the FDA doing to protect people from fraudulent COVID-products?

FDA is closely monitoring for fraudulent COVID-19 products and has asked major retailers for their help in monitoring online marketplaces for fraudulent COVID-19 products. For more information click [here](https://www.fda.gov/animal-veterinary/product-safety-information/faq-covid-19-and-ivermectin-intended-animals).
<https://www.fda.gov/animal-veterinary/product-safety-information/faq-covid-19-and-ivermectin-intended-animals>.

What should you do to reduce your risk of getting infected with the novel coronavirus?

First follow all CDC guidelines

<https://www.cdc.gov/coronavirus/2019-ncov/index.html>.

Stay in touch with your doctor if you become ill. Do not attempt to self-medicate using any human or animal drug.

Resources and more information

- *FDA mission*. <https://www.fda.gov/about-fda/what-we-do>
- *FAQ: COVID-19 and Ivermectin intended for animals*. <https://www.fda.gov/animal-veterinary/product-safety-information/faq-covid-19-and-ivermectin-intended-animals>
- *FDA Letter to stakeholders: Do not use ivermectin intended for animals as treatment for COVID-19 in humans*. <https://www.fda.gov/animal-veterinary/product-safety-information/fda-letter-stakeholders-do-not-use-ivermectin-intended-animals-treatment-covid-19-humans>
- *FDA Drug approval process*. <https://www.fda.gov/drugs/drug-information-consumers/fda-drug-approval-process-infographic-horizontal>
- The FDA-approved drug ivermectin inhibits the replication of SARS-CoV-2 *in vitro*. Antiviral Research 178, June 2020, 104787
<https://doi.org/10.1016/j.antiviral.2020.104787>

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Making a Feed Inventory

by Brian Holmes*

What is a feed inventory?

Doing a feed inventory establishes your current stock of various feed ingredients. Generally, the process involves determining the volume of each feed stored and then multiplying by the stored density to yield a weight of feed.

For example, silage in a bunker silo has a dimension of 30' x 10' x 50'. Its volume is 15,000 cu ft. If the silage has a stored density of 40 lb (as fed) /cu ft, the weight of feed in the bunker is:

15,000 cu ft x 40 lb AF /cu ft = 600,000 lb = 300 T as fed.

There are several ways to do a feed inventory: 1) pencil and paper, 2) computer spreadsheets, 3) commercial software that integrates with your feed weighing system. There are a number of publications and software tools that can help establish your feed inventory. Some of these materials are listed below:

Dairy Freestall Housing and Equipment (MWPS-7).
Tables of quantities of feeds in various storage types. Call 1-800-562-3618 or www.MWPSHQ.org to order.

Other MWPS publications have feed storage information as follows:

MWPS-Grain/Forage/Silage Publications

http://www.mwps.org/index.cfm?fuseaction=c_Categories.viewCategory&catID=715

MWPS Dairy Publications

http://www.mwps.org/index.cfm?fuseaction=c_Categories.viewCategory&catID=735&category=Dairy

MWPS Beef Publications

http://www.mwps.org/index.cfm?fuseaction=c_Categories.viewCategory&catID=736

The following materials can be found at the University of Wisconsin Extension Team Forage Harvesting and Storage web page:

<http://www.uwex.edu/ces/crops/uwforage/storage.htm>

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Spreadsheets

Silage Pile Capacity Calculator

Silage Pile Density Calculator

Bunker Silo Volume and Weight Calculator

Bunker Silo Density Calculator

Bunker Silo Sizing Spreadsheet - includes a section for estimating daily forage feed needs for the dairy herd.

Silage Bag Capacity Calculator

Storage Density Calculator-allows a person to calculate density based on weight removed divided by volume removed

Tower Silo Capacity Calculator

Tower Silo Capacity Calculator-Multiple Fills

Cost of Forage Storage Spreadsheet - look in the help section for calculators for storage areas for bags, piles, bunkers, silage bales etc.

Grain Bin Capacity Calculator

Estimating Winter Hay Needs for Beef Cattle

Publications

Silage Bag Capacity

Choosing Forage Storage Facilities

Density and Losses in Pressed Bag Silos

The Crop Storage Institute has a **Spreadsheet for Determining Capacity of Various Storages**

<http://www.cropstorage.com/silocap.xls>



What is inventory management?

Feed inventory management is slightly more complicated. With inventory management, you are predicting how long an ingredient will be available to feed and making adjustments accordingly. If the projected date to feed depletion occurs before a new crop comes in, you need to consider if you will reduce the rate of consumption to extend the feed ingredient, purchase more of that feed, substitute an existing feed ingredient into the ration or a combination of these choices.

How long will my feed last?

The projected **Time to Inventory Depletion** = **Feed Inventory** (tons) / **Consumption Rate** (tons/day)

For example:

100 tons stored/ 2 tons fed/day = 50 days to depletion

Will feed need to be purchased?

The projected **Feed to Purchase** (tons as fed) to meet feed needs at a given consumption rate is:

Feed Inventory (tons) – [**Consumption Rate** (tons/day) * **Time till harvest** (days)]

For example:

100 tons – [2 tons/day * 70 days] = -40 tons (as fed)
to purchase *(negative value means feed to purchase, positive value means excess feed)*

There are a number of publications and software tools that can help establish your inventory and manage it. Some of these materials are listed below:

Managing Dairy Feed Inventory (A2945) – a University of Wisconsin bulletin available through your county extension office or off the internet at:

<http://learningstore.uwex.edu/pdf/a2945.pdf>

NOTE: there is an error in this publication. Area of a circle should be $\pi \times D^2/4$

Dairy Feed Inventory Planner - a useful dairy inventory spreadsheet developed by a Michigan State University extension area dairy agent. Download at:

<https://www.msu.edu/user/steind/FEEDINV.XLS>

Instructions for the above spreadsheet are at:

https://www.msu.edu/~steind/FEEDINV_INSTRUCTIONS.pdf

The **Penn State Cash Flow** Analyzer incorporates a feed inventory component to the spreadsheet.

<http://extension.psu.edu/animals/dairy/business-management/financial-tools/cash-flow-planning/monthly-cash-flow-planner/penn-state-monthly-cash-flow-spreadsheet-2007-2010/view>

Checklist for the Top 5 Priorities for Fall/Winter Dairy Feeding Programs (eXtension article)

<http://www.extension.org/pages/65108/checklist-for-the-top-5-priorities-for-fallwinter-dairy-feeding-programs>

An article on **Calculating Bushels** is found in the “Handouts” section at:

<http://www.bbe.umn.edu/ExtensionandOutreach/FoodProductionandProcessingSafety/Post-HarvestHandlingofCrops/index.htm>

When is the best time to do a feed inventory?

There is no one best time to do an inventory. Doing an inventory at different times for different reasons may be beneficial. For example, doing an inventory in:

October/November - allows you to make a projection to see if purchased feed will be needed or if the consumption rate needs to be adjusted. This allows needed purchases when commodity prices are apt to be lower in winter and will allow purchases before December 31, assisting in tax management.

February/March - allows you to make a mid-course correction prior to the harvest season. Estimates of density will be more accurate after having fed from a storage for a while, so estimates of quantity stored will be more accurate.

June/July - allows you an early warning of inadequacy of feed supplies for the up-coming feeding season. Purchases of standing crops remain an option if deficiencies are discovered.

Anytime you are required by a lender to provide a balance sheet, a feed inventory and the feed value is needed.

Where can I get help with inventory management?

The information available from the sources in this article will be of help in doing your inventory and its management. Don't overlook the assistance available from UW Extension county agents and well-trained nutrition professionals who can help you with these issues and decisions.

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WAUPACA COUNTY

Extension Crop Production & Management Videos



Check out the following UW-Extension educational videos on various crop recommendations during low-margin years (available at [UW IPM YouTube Channel](#)):

- **Soybean Inputs that Deliver the Highest Return on Investment**
- **Practical Weed Management Strategies**
- **Fundamental Soil Fertility Strategies for Success**
- **How to Survive and Thrive on Current Corn Price Projections**
- **Low Grain Prices = Smart Disease Management Decisions**
- **Managing Insects Economically Using Conventional Hybrids**
- **Machinery/Technology Management**
- **Tillage Considerations to Reduce Operational Costs**
- **Partial Budget Analysis: A Practical Tool for Low Margin Years**

Also, go online for and search for UWEX A4137...
“Grain Management Considerations in Low-Margin Years”.