Extension
UNIVERSITY OF WISCONSIN–MADISON

Chippewa Valley Agricultural Extension Report

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Inside this issue:

Did you know?

Dunn County Farms produce:

- $82.1 Million in Grains
- $77.8 Million in Milk
- $18.8 Million in Cattle & Calves
- $11 Million in Vegetables
- $7 Million in Hay and Other Crops

Source: 2017 Agricultural Economic Impact Report

Wantoch transitioning to new Extension Farm Management Professor of Practice position in July 2022

University of Wisconsin–Madison Division of Extension is pleased to announce Katie Wantoch as the new Extension Farm Management Professor of Practice. This position is a new, exciting part of the Agriculture Institute's Farm Management Program and will emphasize financial and strategic business management for commodity and specialty crop farms across Wisconsin. Wantoch will work to identify needs and provide outreach education to find solutions to the most critical issues facing Wisconsin agricultural producers in the areas of farm financial and risk management.

Financially viable, healthy farm businesses are essential to Wisconsin's $100 billion agriculture economy. Farmers must continually identify and evaluate opportunities and challenges to meet their mission and goals and enhance their competitive position. With this comes an increased need for effective business management skills for farm owners and managers. Whether beginning, early career, or established operations looking to expand, transition, or diversify their enterprises or invest in new ideas or technology – successful farm businesses utilize strategic business information, resources and tools to make informed decisions.

Wantoch has been integral to the Extension Farm Management Program since joining Extension in 2010 as a county-based Agriculture Agent in Dunn County. Her contributions to the Program have helped to build valuable programming in the area of farm financial and risk management and farm succession. She will start her new role as a state outreach specialist on July 5, 2022, after returning from presenting her research entitled, "Motivational Interviewing as a Tool to Address Farm Stress, Farm Succession, and other difficult conversations," at the International Farm Management Congress in Copenhagen, Denmark. Katie can continue to be reached at katie.wantoch@wisc.edu. Learn more about her work at https://farms.extension.wisc.edu/author/kwantoch/.

Determining the Value of Standing Alfalfa in 2022

Kevin Jarek, Crops and Soils Agent, Outagamie County, UW-Madison Division of Extension

Determining a "fair" market value for standing alfalfa during the 2022 growing season may be a challenge considering the highly favorable market conditions for corn and soybeans. *Opportunity* cost can be defined as the loss of a (potential) gain from other possible alternatives (rotating to a grain crop) when another alternative is chosen (keeping the existing alfalfa stand). As of May 2022, new crop corn is near $7.00 per bushel for fall delivery while new crop soybeans are more than $14 per bushel.

Due to the wide variation in corn and soybean yields from county to county and individual fields, each landowner will have their own unique circumstances to consider when evaluating opportunity cost. Yield estimates (https://www.nass.usda.gov/Statistics_by_State/Wisconsin/Publications/County_Estimates/) are available for those who may not have actual production history (APH) records as buyers and sellers negotiate these issues. Landowners should consider both the economic and environmental impacts (long term crop rotation plans, erosion limitations, etc.) before they make any final decisions related to particular alfalfa stands in 2022. Open and honest communication about both parties' needs is required for a successful negotiation this year.

The absence of daily quotes as compared to other agricultural commodities (grains) requires us to rely on the most recent hay market prices available at https://cropsandsoils.extension.wisc.edu/hay-market-report/. The three most significant factors to consider when determining the potential value for any individual cutting of alfalfa or the stand for the entire growing season include the following:

- Expected Dry Matter (DM) Yield in Tons per Acre
- Estimated Value of a Ton of DM
- Harvesting Costs

Ideally, one would be able to weigh all the forage being harvested from any individual cutting from a particular field. This is the best way to ensure both parties are treated fairly in any formal arrangement in which standing alfalfa is bought or sold. If a scale is available, multiple forage samples should be collected during the process of harvesting to determine an accurate value for the average dry matter (DM) content of the feed being sold. Once you have agreed upon a fair price or value for a ton of DM (may be with or without harvesting costs), you simply multiply the harvested tonnage by the agreed upon value per DM ton then adjust for harvesting costs. Unfortunately, not all farms have access to drive-over scales. However, making an effort to get at least one individual wagon or load weight from a state-certified scale at harvest will significantly improve the accuracy of any yield estimate made that does not include a scaled weight.

Expected dry matter (DM) yield can be estimated by measuring alfalfa stand density or by utilizing multi-year on-farm data sourced from the Wisconsin Alfalfa Yield and Persistence (WAYP) program. The project is managed by the University of Wisconsin-Madison/Division of Extension. The 2021 WAYP summary can be viewed at: https://arlington.ars.wisc.edu/wp-content/uploads/sites/115/2022/04/2021-WAYP-Summary.pdf.

When determining a fair price for an individual cutting of alfalfa or all cuttings for the entire growing season, buyers and sellers should discuss the following six considerations to estimate realistic DM yields, account for weather risk and field losses, account for reasonable harvest costs, and calculate a fair price for a ton of DM.

1) Stand Density: Alfalfa stands with an average of **55 stems per square foot** are defined as not being limited and having full season yield potential. Due to the high variability in alfalfa stem counts throughout many fields these past few growing seasons, it would be wise for buyers and sellers to evaluate stands to determine a realistic potential yield. WAYP project data can help you estimate DM yield derived from on-farm data collected over the past 14 years. Local growing conditions, alfalfa stand condition after overwintering, age of the stand, composition of the stand, soil texture/series, soil fertility, and soil drainage can all significantly impact alfalfa DM yields during any given growing season. It is not advisable to purchase standing alfalfa without taking each of these considerations into account before any final arrangement is agreed upon by all parties involved.

2) Percentage of Overall Season Yield Per Cutting as Determined by the WAYP Program On-Farm Data:

- 3 cut system – 46% (1st crop) – 28% (2nd crop) – 26% (3rd crop)
- 4 cut system – 36% (1st crop) – 25% (2nd crop) – 21% (3rd crop) – 18% (4th crop)
- 5 cut system – 32% (1st crop) – 21% (2nd crop) – 18% (3rd crop) – 16% (4th crop) – 13% (5th crop/fall cut)

WAYP data collection begins with the first full production year following new seeding. Fifth cutting and late fall cutting data were collected in years when available. It should be noted that four-cut systems represent the largest percentage of the data. The low, mean (average), and high values for DM yield over the life of the project are illustrated below. In addition, 2021 data is included so you can compare the most recent year's data to the other benchmark measurements established over the past 14 years.

3) Total Season Yield: The WAYP program has an observed yield range of less than 3.0 tons to more than 6.0 tons DM per acre. The most frequently observed yield has been **4.0-4.49 Tons DM per acre per year**.

4) Weather Risk and Field Losses: Management practices applied to the site by the buyer during the cutting and harvesting of alfalfa will influence the final quality measurements. Purchased baled hay may have a known, measured quality from a forage test. Alfalfa purchased standing in the field has unknown quality until after harvest due to weather risk, insect or disease pressure, advancing maturity, leaf shatter, and harvesting losses. These factors need to be considered and accounted for when determining the final price. An adjustment of 25 percent to the value of the alfalfa standing in the field may be considered a reasonable method to further account for the buyer's risk.

(Continued on page 3)

Determining the Value of Standing Alfalfa in 2022, continued

5) Determining the Value of a Ton of DM Alfalfa: Hay Market Demand and Price Reports for the Upper Midwest are located at https://cropsandsoils.extension.wisc.edu/hay-market-report/ on the UW-Madison Division of Extension Crops and Soils website with updates posted regularly. The most recent report (April 25, 2022) indicates large square bales of Prime Quality (>151 RFV/RFQ) alfalfa averaged $228.00 per ton. 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 percent, which means it is 85 percent DM or 0.85

$228.00 / as fed ton	X	as fed ton / 0.85 ton DM	=	$268.24 / Ton DM

When is the last time you successfully harvested all your alfalfa without any weather damage? You may harvest four high quality cuttings, or four lower quality cuttings depending on the weather. Earlier we identified the difference between purchasing alfalfa that has already been harvested. It is a known quality. Standing alfalfa must be adjusted for both field losses and potential weather risk, both of which can significantly impact the quality of the harvested forage. **The buyer and seller can decide if they wish to use a factor other than 25%.**

If we use $268.24 per ton DM and apply a 25% risk adjustment, we end up with a risk adjusted value for a ton of DM standing alfalfa as follows: ($268.24 X 0.25 = $67.06), $268.24 - $67.06 = **$201.18 per ton of DM.**

6) Harvesting Cost: Expenses are based on the costs reported in the Wisconsin Custom Rate Guide 2020 at https://fyi.extension.wisc.edu/news/2021/05/12/2020-custom-rate-guide/ or the 2022 Iowa Farm Custom Rate Survey at https://www.extension.iastate.edu/agdm/crops/pdf/a3-10.pdf.

Using values cited in the rate guide, one may spend $17 per acre cutting and conditioning the alfalfa, $14 per acre merging the alfalfa, and $55.00 per acre chopping, hauling, and filling an upright silo or a bunker silo (**adjust your costs as needed**) resulting in $86.00 per acre invested for each cutting. **Your harvesting costs may be higher or lower than those cited here;** however, this is what is used for this example. If you harvest four (4) cuttings, total harvest costs are $344.00/acre for the season ($86.00 X 4 cuttings = $344.00). **If the buyer's harvesting costs are less, you can adjust downward. If the buyer's harvesting costs are higher, you can adjust upward.** While the landowner who established the alfalfa has the expense of the land, taxes, seed, chemical, and fertilizer, the buyer assumes the risk of field losses and weather damage exceeding the 25 percent quality adjustment discussed earlier.

Once you have calculated or agreed upon the value of a ton of DM and have made a reasonable yield estimate, you may proceed. In this first example we used a 4.0-ton DM yield for the season at a value of $201.18 per ton DM. Four (4) tons of DM X $201.18 per ton DM = a final harvested value of $804.72. After we deduct the cost of harvesting $344.00, (4 cuts X $86.00), we are left with the following:

Harvesting 4.0 tons of DM total value would be $804.72 less harvesting costs of $344.00 = $460.72 residual

- 1st Cutting = $ 460.72 X 36% of total yield (1.44 tons DM) for the season = $165.86
- 2nd Cutting =$ 460.72 X 25% of total yield (1.00 tons DM) for the season = $115.18
- 3rd Cutting = $ 460.72 X 21% of total yield (0.84 tons DM) for the season = $ 96.75
- 4th Cutting = $ 460.72 X 18% of total yield (0.72 tons DM) for the season = $ 82.93

Every cutting of alfalfa removes a significant amount of potassium (K) from the soil. A one-hundred-pound application of potash fertilizer (0-0-60 or 0-0-62) provides 60 or 62 lbs. of K2O per acre. If full alfalfa yield potential is to be realized, we need to replace the nutrients removed from the field during harvest. The UW Nutrient and Pest Management Fast Facts identifies the specific quantities of nutrients removed by various field crops and is available at https://ipcm.wisc.edu/download/pubsNM/NutrientManagementFastFacts.pdf.

One DM ton of harvested alfalfa removes 60 units of K2O. Using a price of $885/ton for 0-0-62, we can calculate the cost per unit of K2O as follows: 2,000 lbs. X 0.62 = 1,240 lbs. of K2O per ton of fertilizer, $885/ton divided by 1,240 units of K2O per ton = $0.71 per unit. Pest management also needs to be considered. Guidelines for treatment thresholds for potato leafhoppers are at https://fyi.extension.wisc.edu/forage/cut-bale-scout/.

Additional Considerations: The best way to determine the potential value standing alfalfa may have for both the buyer and the seller in any transaction would be to use the most relevant local conditions, pricing, and data to develop a crop enterprise budget. This budget should accurately reflect the true costs of production (cropland rental rates, crop input costs, etc.) where a particular transaction is expected to occur. Crop enterprise budgets for forage and grain crops are available for viewing and download at: https://farms.extension.wisc.edu/files/2022/05/UWCrop-enterprise-budget-spreadsheets.xlsx.

Additional Methods for Determining the Value of Alfalfa – Is There an App for That? Additional methods to calculate the value of standing alfalfa include an app that can be downloaded for free at https://play.google.com/store/apps/details?id=com.smartmappsconsulting.haypricing. Those with iPhones and iPads can download the app from the Apple Store by searching "Hay Pricing".

Avian Influenza Concerns: Don't Let Your Biosecurity Guard Down

Ronald Kean, Extension Poultry Specialist, UW-Madison Department of Animal and Dairy Sciences

There have been several confirmed cases of highly pathogenic avian influenza (HPAI) in eastern Canada and in a number of U.S. states. Several wild ducks and one commercial turkey flock have tested positive for the virus in the United States. Outbreaks in Canada have affected both commercial and exhibition poultry flocks. Wild birds infected with the virus likely comingled on their breeding grounds in the Arctic last summer, with some migrating through Europe and others to North America.

Outbreaks of HPAI can have devastating impacts. Many will remember that in 2015 the U.S. poultry industry suffered from HPAI outbreaks. More than 200 poultry flocks in several states were directly affected, and more than 50 million chickens and turkeys either died from the disease or were euthanized to stop the spread of the virus. Many countries enacted trade embargoes, so exports decreased greatly. Breeding flocks died, limiting replacements for several months afterward. Increased biosecurity efforts added greatly to production costs as well. The total impact on the U.S. economy has been estimated at $3.3 billion, including costs from lost production, indemnity payments, federal veterinary staff hours, etc.

What should poultry producers do now? Prevention is key, so a strong biosecurity program is most important.

Because wild birds may be carrying the virus, growers should minimize interactions between wild birds and domestic poultry flocks.

Outdoor access carries some risk of exposure. If domestic birds are allowed outside, there are steps that can decrease that risk. Covered pens to keep wild birds out can help. Keeping feed and water inside can make the range less attractive to wild birds. Eliminating standing water areas or fencing them off from flocks are other ways to limit exposure to wild birds.

If domestic birds are housed indoors, care should be taken so that humans do not carry the virus in. Changing footwear before entering, disinfecting shoes, cleaning equipment, etc., are all helpful. The HPAI virus can spread by bird feces, so care should be taken to avoid tracking it into coops.

Watch for signs of disease. Poultry growers should monitor their flock for signs of disease. Sudden deaths, unusual swelling, and purple discolorations are common signs of HPAI. Signs like these in multiple birds should be reported immediately to USDA APHIS at 1-866-536-7593. More information on biosecurity and HPAI is available at this website:

www.aphis.usda.gov/aphis/ourfocus/animalhealth/animal-disease-information/avian/defend-the-flock-program/defend-the-flock-program

The UW-Madison Division of Extension and Nutrient and Pest Management Program will be hosting the third annual webinar series for the 2022 growing season. The purpose of this series is to provide agronomists, crop consultants, and farmers with timely crop updates for Wisconsin. These free webinars will be offered, on the 2nd and 4th Wednesday of the month at 12:30 PM, March through October 2022. Registration is required. The series will be split into three sets of webinars: spring, summer, and fall. The webinars in each season can all be registered for at one time. Information on upcoming webinars is below or check out: **https://cropsandsoils.extension.wisc.edu/programs/badger-crop-connect/**.

Register for the summer 2022 sessions: **https://go.wisc.edu/bccsummer22**

National Migraine & Headache Awareness Month

Jenny Vanderlin, Associate Director of the Center for Dairy Profitability, UW-Madison & Heather Schlesser, Agriculture Educator, Marathon County, UW-Madison Division of Extension

June is National Migraine and Headache Awareness Month. When people hear the word migraine, they often associate it with a severe headache. But a headache is only one symptom of a migraine. So, what exactly is a migraine? Mayo Clinic defines a migraine as a "headache that can cause severe throbbing pain or a pulsing sensation, usually on one side of the head." Mayo also states that migraines affect children, teenagers, and adults – in other words, anyone can get a migraine.

As warmer temperatures creep into much of the country and farmers begin their season of planting and haymaking, they are especially prone to severe headaches and/or migraines. With our delayed spring it is likely that farmers will push themselves harder than usual to take advantage of every hour of daylight to get the crop in. Weather changes and the drive to get things done typically bring on a transition in eating and sleeping habits which may cause dehydration and fuel stress. All of which are triggers for a headache and more specifically a migraine.

Unfortunately, we can't change weather patterns or the amount of work it takes to get the crops planted in a shortened window. However, there are ways that we can learn what triggers our headaches and/or migraines and take steps to lessen them. Mayo Clinic has many suggestions on how to monitor your symptoms such as keeping a headache diary, listing each onset, how long it lasted, and what may have caused it. Lifestyle choices such as eating healthy foods, exercising, drinking enough water, and getting enough sleep will help keep your stress under control which in turn will help the number and severity of your migraines.

There are over-the-counter medications that will help and in severe cases, a prescription may be an option. The important thing is to notice signs and symptoms of a headache or migraine and do something before it takes hold.

FARM PULSE

FINANCIAL MANAGEMENT SERIES

Extension to launch Farm Pulse: Financial Management and Analysis online course to make sense of farm financial management

Katie Wantoch, Agriculture Agent, Dunn County, UW-Madison Division of Extension

UW Extension will launch a new self-paced online course, *Farm Pulse: Financial Management and Analysis* to assist farmers in evaluating their finances, taking the pulse of their farm business, and setting goals for the future of their operation. The course is adapted from Extension's farm management *AgVentures: Building a Vision*. *Farm Pulse: Financial Management and Analysis* is a new program for farmers interested in learning how to use farm financials to explore their farm business decisions. This Farm Pulse online course provides the framework for informed financial decision-making. "It is important during these challenging times for farmers to be proactive about their farm financial management," says Katie Wantoch. "Transitioning curriculum to online in Canvas (UW's learning management software) and making it self-paced means individual farmers or farm families can complete the modules at a time that works best for them and from the comfort and safety of their own homes or offices."
The *Farm Pulse: Financial Management and Analysis* course will delve into such topics as farm records, financials statements (balance sheet, income statement, statement of cash flow, statement of owner equity), farm financial measures and ratios, and decision-making. Participants can choose either a dairy or livestock case farm to follow throughout the course, completing hands-on and interactive financial activities.

Additional information will be available late Summer 2022 or by contacting Katie Wantoch at katie.wantoch@wisc.edu.

Overview of Extension's *Farm Pulse Program: Financial Management and Analysis* course

- Module 1: Introduction, dairy and livestock case farms
- Module 2: Farm financial model
- Module 3: Financial analysis
- Module 4: Decision making

The Farm Pulse: Financial Management and Analysis work is supported by USDA/NIFA grant under Award Number 2018-70027-28586.

Farm Management AgriVision Podcast Reaching Audiences Worldwide

Katie Wantoch, Agriculture Agent, Dunn County, UW-Madison Division of Extension

The Farm Management AgriVision Podcast is a monthly educational podcast series developed by Extension educator, Katie Wantoch, to deliver research-based information on how farmers and those interested in farming can improve their farm management skills. Material for the podcast episodes is based on the monthly *Wisconsin Agriculturist* magazine's AgriVision column, which Wantoch contributes to each month. Podcast episodes are recorded by host Wantoch and a fellow UW Extension educator. Episodes are distributed on Apple Podcast, Google Podcast, and Spotify. Episodes and description are also posted to the UW Extension Farm Management website (https://farms.extension.wisc.edu/programs/agrivision-podcast/)

with transcripts and Extension resources that may be mentioned during the episode. The AgriVision podcast series began in November 2020 and has had over 1,100 plays from listeners in the United States (Wisconsin, Ohio, Texas, California, Minneapolis, New York, Michigan, Virginia, Washington), Germany, Ireland, Belgium, United Kingdom, South Africa, Canada and New Zealand.

What kind of dairy cow should you be creating?

Matt Lippert, Agriculture Agent, Clark & Wood County, Heather Schlesser, Agriculture Agent, Marathon County, and Lyssa Seefeldt, Eau Claire County, UW-Madison Division of Extension

In 2019 Cargill conducted a Feed4Thought survey of consumers from the United States, China, Mexico, and Spain. In this survey, they asked consumers to identify the word that best described what they wanted a farmer to be. The survey showed 30% of respondents wanted farmers to be "sustainable." The second most-used word to describe what they wanted farmers to be was "efficient" (28%). [1]

Sustainability has different meanings depending on whom you ask. To a consumer, this could mean farmers are using the best practices to be good stewards of the land and natural resources. For a dairy farmer that produces not only feed for their animals but milk for the consumer, how can they be good stewards and efficient? The use of genetics can play a role. We have seen this through genetic selection of plants that allow the farmer to use fewer chemicals and other inputs to grow a crop. What about animal genetics? Can farmers create more sustainable or more efficient cattle using genetic selection?

Shifting demand and genetic selection

We have all seen that the demand for milk in the United States has been on the decline. However, what may not be obvious is that the demand for dairy products, like butter and cheese, is on the rise. This change in consumption demand suggests altering the genetic selection goals of a dairy animal. In the early days of dairy farming when the demand for fluid milk was high, animals with the greatest milk production were selected to be parents of the next generation. However, with a shift in consumer demand for products like butter and cheese, the selection pressure no longer needs to be on pounds of milk produced. In essence, the water content of milk has become an expense to the farm, making it no longer adequate to look at just total production per cow.

Today many herds in the United States produce over 6 pounds of fat and protein per cow per day. Some herds accomplish these high values with lower dry matter intake than others. Genetic residual feed intake is now calculated by the Council for Dairy Cattle Breeding, a partnership of DHI testing associations, USDA, artificial insemination companies, and dairy cattle breed associations.[2] With this calculation, we can now include the efficiency of production in genetic selection programs.

A tale of three heifers

If we look at three heifers that start out with similar body weights and average daily gains, we expect them to have similar growth performance and feed consumption. However, as these animals grow, we find that this is not the case (see Table below).

	Heifer A	Heifer B	Heifer C
Initial birthweight (BW), lb	575	567	582
Average dairy gain (ADG) lb/day	2.16	2.18	2.14
Expected Feed Intake, lb	18.5	18.5	18.5
DMI, lb	12.1	18.5	25.6
Estimated CH_4 emissions, mcal/d	1.8	2.7	3.7

Heifer A eats less than expected at 12.1 pounds per day, Heifer B eats the expected 18.5 pounds per day, and Heifer C eats 25.6 pounds per day. When we look at this difference over multiple heifers in a herd, other differences become more prominent.

If we focus on genetically selecting animals that perform like Heifer A, feed costs and methane emissions can be reduced. Selecting animals with reduced methane emissions allows us to create a more carbon-neutral dairy farm. In contrast, animals like Heifer C will have a much greater feed cost and methane emission, which has a greater impact on the environment and decreased sustainability.

Residual feed intake has a high heritability of approximately 19%; this is comparable to the heritability for milk or butterfat.[3] Selection for residual feed intake can lead to changes in feed efficiency. With declining land resources and expanding urban centers, it is essential to create animals that efficiently utilize the nutrients they are supplied with.

Beef x dairy crosses

When we look at the overall beef population in the United States, we see the population of beef animals has declined since 1996. The decline in beef animal numbers and an increase in reproductive efficiencies has allowed dairy producers to become significant producers of beef. Therefore, dairy cattle produce protein in the form of fluid milk, and in the form of beef. Historically, animals who could not get

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What kind of dairy cow should you be creating? continued

pregnant with dairy semen were bred with beef semen. However, with the adoption of genomic testing and reproductive efficiencies over the past several years, the number of dairy animals bred with beef semen has dramatically increased.

Dairy producers are producing replacement heifers at a rate faster than needed. This allows farms to be more selective in the replacement animals they keep, and genomics helps to identify these animals. To prove this point, let's look at a real herd from eastern New York. This herd has 2,400 milking cows and genomic testing is done on all of them. The results of that testing show how the top 25% of the herd compares to the bottom 25%. Net merit of first lactation cows varies by 368 points between the top 25% of animals and the bottom 25%. The top 25% averages 658 for net merit while the bottom 25% averages 290 for net merit. The sold and died rate for the top 25% of the herd was 13.5% while the sold and died rate for the bottom 25% of the herd was 40.9%. Selecting for traits like productive life, which is a measure of how many months a lactating animal remains in the herd, or livability, which is a measure of deaths on the dairy, and daughter pregnancy rates allows us to create cows that will stay in the herd longer and be more productive.

Once we determine the top cows, we want to ensure they pass along their genetics to the next generation while the bottom cows, which may be as much as three-fourths of the herd, do not. These bottom animals become prime candidates to breed to beef semen. This allows us to accelerate the genetic progress of our herd while creating an additional revenue stream from the beef x dairy calves created.

Beef x dairy crossbred calves are a sustainability mechanism for the dairy industry. Dairy farmers that produce milk and beef are considered more carbon-neutral than a standard cow-calf operation because they are producing two protein products from one operation.

To be able to properly tap into this market, we need to know what feedlots are looking for genetically, and from a management standpoint. To maximize profits on these crossbred animals it is important to select appropriate beef sires that produce calves that possess these wanted traits. The goal is to raise animals that finish at Yield Grade 2 to 3, and grading Choice or better.

Crossbreeding cattle

Crossbreeding can increase performance and help introduce superior traits from one breed into another. For example, crossbreeding a Holstein with a Jersey can increase milk fat percent and increase fertility while reducing the feed intake combined with a smaller frame size. Crossbreeding has the potential to maximize output and efficiency at the same time. For Jersey herds, Holsteins have the potential to increase frame size, thereby increasing the market value.

Conclusion

The combination of chromosomes inherited by an animal plays a role in their ultimate phenotypic expression. If we can select the animals with greater feed efficiency, livability, productive life, and daughter pregnancy rate, then we can feed the world with fewer inputs and greater sustainability and efficiency. While we will always have a top and a bottom to our herds, we can move where these averages lie through genetic selection. It is essential to keep in mind that crossbreeding can be a tool that can be used to influence the herds of the future. As inbreeding rates increase, genetic variation can be introduced through crossbreeding.

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1. Cargill. (2019, Aug 6). High consumer expectations, low levels of appreciation make it tough to be a farmer, finds new research. https://www.cargill.com/2019/high-consumer-expectations-low-levels-of-appreciation; 2. Canadian Dairy Network (2021, March 30). Heritability Estimates Used for Genetic Evaluation in Canada. https://lactanet.ca/en/heritability-estimates-used-for-genetic-evaluation-in-canada/; 3. VanRaden, P., Toghiani, S., and Gaddis, K. (2021, Dec). Changes to CDCB Evaluation System (December 2021). Council on Dairy Cattle Breeding. https://www.uscdcb.com/cdcb-changes-to-evaluation-system-december-2021/

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