Not too long ago we saw grain markets with corn at $7.00 per bushel and soybeans at $17.00 per bushel. Grain markets dictate what happens to vegetable contracts and we have contracts for 2016 that are 15 to 20 percent lower than in 2015. We saw milk at $25 per hundred weight (cwt). Beef producers also were selling at high prices of around $250 per cwt for feeder cattle and around $140 per cwt for fed cattle.

There is an axiom in business which says that the cure for high prices is high prices. High prices for all areas of agriculture have disappeared. Currently dairy producers are probably better off than other producers due to lower feed costs which have resulted in the projected income over feed costs to hold around $9.00 per cwt for the rest of 2016. A number of indicators currently point to continued low prices, at least in the short run. Grain in storage has increased, supplies of butter and cheese in storage has increased, beef producers are marketing less heifers and are increasing the size of their herds. The value of the dollar remains high which stifles exports.

This is a year where producers may need to make some hard decisions on the future of their farm operation. Cash flow projections for nearly all avenues of agriculture in 2016 result in negative returns.

Corn projections, depending on type of soil, result in projections of a negative $50 to $100 per acre. Soybean projections are a little better with projections of negative $50 per acre to break even. A current projection for feeding beef cattle shows a producer who purchases feeder cattle at 750 pounds and feeds them to 1350 pounds would result in a loss of between $7 and $130 per animal for different parts of the country.

Producers need to talk honestly and early to their suppliers, the bank, the nutritionist and also to the rest of the family. They should complete a financial analysis to have a clear picture of where their farm business is and where it is going. Producers should also track their income and expenses by each individual enterprise that they are producing. I believe all of the major accounting software programs have this as an option in their menus. If a producer uses a spreadsheet such as Excel, a column may be included which will allow expenses and income to be sorted and totaled by crop or product produced.

For 2016 producers need to look at reducing input costs. Reducing rent or not cropping low yielding fields, applying fertilizer to low testing fields and reducing fertilizer to higher testing fields. Applying row fertilizer rather than broadcast applications. Reducing tillage operations and using minimum tillage or no-till planting may be another option to reduce overall costs. Producers may look at planting more acres to a crop with lower input costs.

Producers may need to look at options for increasing cash income. One option may be to find an off-farm job, another may be to do some custom work or to start an off-farm business. When looking at other types of business a producer needs to study it thoroughly and to not overestimate potential income. Another concern that arises is the issue of accounts receivable. A producer needs to be sure they will be paid for any work they do, if they receive a bad check then there is no additional income.

Producers may need to look at other options. One of these may be to think about exiting farming. The average age of farmers is around 60 years old. It may be better to exit earlier while there is still equity in the farm operation rather than later after a couple of bad years eats up that equity.
High Quality Forage
By: Matt Lippert, Wood County

In reviewing what I have written about before in this newsletter, I found that I discussed fiber testing and measures of forage quality in October 2014, fairly recently for a newsletter that doesn’t come out that often, but for such an important topic also a year and a half ago. There are many reasons to keep forage quality on the front page for 2016:

1. **The milk price.** Improving the protein content and lowering the fiber level, will allow for feeding higher forage diets while maintaining or increasing milk production. If you haven’t paid for the last load of feed before the next one arrives improving home grown forage should be an important goal for you.

2. **Increasing production.** Pay attention to this one, it will sound the same as #1 if you don’t follow closely. Not only can we lower the fiber in the forage but we can improve the quality of the fiber in the diet. Some feed tests don’t include NDFd 24, 30 or TTNDFD. Some report RFV instead of RFQ. Reports that don’t report or rank feeds based on fiber digestibility are missing a very important factor. Not all fiber is of equal quality, the differences can account for big differences in animal performance. It pays to improve your efficiency and production with quality forage.

3. **High forage inventories.** Fortunately there is more feed around this spring than there has been for a while. Winter damage or drought may change forage supply but for many there are decent supplies, maybe not always of high dairy quality feed however. There is often a trade-off between forage quantity and quality. If you have some forage reserve perhaps we should take that opportunity and focus on quality this year? Shorten the cutting interval on your alfalfa, date of first cutting, days between cuttings, or plant height. Later, for corn silage, consider leaving more stubble.

4. **Inventory management and TMR rations.** You can get more use out of average to below quality forages if you can channel them to animals that don’t require high energy feeds, such as heifers and dry cows. Making high quality forage in 2016 to mix with more average forages may also improve animal performance.

I have already mentioned some of the chances to improve forage quality. First we need to measure it. If you are using forage tests that don’t report fiber digestibility you may not realize that your forage fiber quality it lacking. Until you measure it you just don’t know. Really good quality such as is measured by TTNDFD of over 42% is harder to obtain than you may realize. In season we can reduce cutting interval, especially if you have grasses in your hay mix. Grasses rank well for NDFd- but this is only when harvested in a timely manner, grasses decline fairly quickly in forage quality. We can improve our forage harvesting technique to speed drying and reduce loss in the field.

Long term we can select for species with high forage quality: BMR, Low-lignin, highly digestible grasses and summer annuals are all possibilities for improving forage quality. We can do well with conventional alfalfa and corn silage if we harvest it at the correct stage, and preserve it well with rapid and clean harvest techniques and careful packing and closing of silage structures.

Even in the highest producing herds, forage is the main source of fiber and baseline milk production. You already understand forage quality? Do you ever experience milk production loss from less than ideal forage? We can always do better; we can improve profitability, improve production, animal health and reduce purchased feeds with high quality forage.
More than 30 percent of our food relies on insect pollination. According to USDA, honey bees are estimated to support $15 billion in crop production, while wild native bees supply an estimated $3 billion in pollination services. Managed colonies of European honey bees have suffered a 50-percent decline in recent decades. Between 2006 and 2014, approximately one in three managed honey bee hives were lost each winter. As securing hives of European honey bees for crop pollination becomes more difficult and expensive, protecting and restoring habitat for native pollinators becomes even more important. Recent research has shown that wild native bees, which number more than 4,000 species in North America, contribute substantially to crop pollination on farms where their habitat needs are met.

How can we in agriculture support and enhance native pollinators? Native pollinators need sources of food and shelter. These can be provided by establishing or enhancing pollinator habitat in non-productive or less productive areas of fields such as fence rows, windbreaks, and field corners. Practicing IPM with pollinators in mind, and using flowering cover crops in your rotation to support bees are additional practices to enhance native pollinator populations. For best results seek to provide pollinators with a variety of flowering plants that bloom throughout the growing season. In providing pollinator shelter we need to understand that native bees don’t build the wax or paper structures we associate with honey bees or wasps, but they do need places to nest, which vary depending on the species. Wood-nesting bees are solitary, often nesting in soft-pithed twigs or beetle tunnels in standing dead trees so having some dead trees or brush near fields can be beneficial. Ground-nesting bees include solitary species construct nests and tunnels under bare ground so providing areas near production fields that are untilled will encourage ground-nesting bee populations. Cavity-nesting social species–bumble bees–make use of small spaces, such as abandoned rodent burrows, wherever they can find them. These populations will also benefit from areas that are left undisturbed.

Where can I find more information on Pollinator Conservation? For a general discussion on pollinator conservation see the Xerces Society Pollinator Conservation website http://www.xerces.org/pollinator-conservation/. Additional information on native bees can be found in the UW-Extension publication G4001, Supporting Native Bees http://learningstore.uwex.edu/Assets/pdfs/G4001.pdf


For a bigger bang for your buck consider using cover crops that attract and support pollinators. See Cover Cropping for Pollinators and Beneficial Insects http://www.sare.org/Learning-Center/Bulletins/Cover-Cropping-for-Pollinators-and-Beneficial-Insects.


Feed a Bee: Bayer Crop Science is working to increase forage for pollinators, including honey bees. To do so, the company is offering a special partnership to the agricultural industry on the purchase of pollinator seed. For details on the program, take a look at this “Bayer – Feed a bee Partner Order Form”(http://wisconsinpotatoes.com/admin/wp-content/uploads/2016/02/bee-order-form-flower-seed-bayer.pdf) and call the contact listed on page one of the form for more information.
Quality grades (QG) on carcasses are an evaluation of a carcass in regards to consumer acceptability and palatability (such as flavor, tenderness, juiciness, etc.). The carcass grades associated with marketing steers & heifers that are generally under 30 months of age are: prime, choice, select, and standard. Carcass grades associated with sale of older animals (cows, bulls) are as follows: commercial, utility, cutter, and canner. The QG is primarily derived from marbling score at the cut loin surface between the 12 and 13 rib. The other factor in determining the QG is the maturity class.

When marketing animals, farmers should be targeting to at least hit low choice. If the buyer thinks that the animal or lot will grade less than that, the animal or lot will be discounted. This may not be as critical for your marketing plan if you are selling direct to the consumer, but for the sake of your business and consumers, you should still shoot for hitting low choice or better because the end meat products will have likely have better flavor and juiciness. Ideally, animals destined for meat should be marketed prior to 24 months of age.

Cattle that are marketed after 18 months have a much greater chance of being graded in the B maturity class on the grid above, due to physiological factors used as indicators of maturity. Skeletal ossification, the hardening of cartilage into bone, is one of the primary markers of maturity, so the older the animal gets, the more likely it will get classified in an older maturity class. Other factors that help determine maturity class in quality grading include rib shape, fusion of vertebrae, chine bone texture/color, and lean color. The chart below describes what each maturity class should look like in relation to the maturity markers.

In addition to QG, yield grade (YG) is an important factor in the price you receive for your marketed cattle. Yield grade is the estimate of closely trimmed retail cuts that a carcass will provide. Yield grades can range from a score of one to five. Buyers will predict YG based on the condition, weight, and estimated loineye area of the animal. As external fat thickness increases, the numeric YG increases, meaning fewer closely trimmed retail cuts will result from that carcass, leading to “lower cutability”. The actual calculation for YG on a carcass includes external fat cover, percent kidney, pelvic, & heart fat, loineye size, and carcass weight. These measurements are inserted into a formula to then calculate YG.

Figure 1. The relationship between marbling, maturity, and carcass quality grades. Adapted from the USDA Agriculture Marketing Service document on US Standards for Grades of Carcass Beef (1997). Supplemental beef grading information labeled in red is from Texas A&M University’s Meat Science website on USDA beef quality and yield grading (last updated March 2013).

Figure 2. Maturity markers for quality grading of beef carcasses. Adapted from the White Paper “Animal Age, Physiological Maturity, and Associated Effects on Beef Tenderness” by J. Daryl Tatum, Ph.D., Colorado State University (2011).
Tables 1-3. Demonstration of how packers determine grid pricing. Table one shows the base grid pricing scheme. Table two shows where the base grid is inserted (at YG three in this case) and the spread of where premiums and discounts can be applied. Table three shows the final pricing grid with all premiums and discounts in place. Notice that where there might be carcass issues (too big or too small of carcass, dark cutter, stag, etc.), the packer has placed discounts in an effort to ensure that farmers are bringing the “right” kind of animal. Other potential pitfalls include inadequate marbling, excess external fat, and lack of uniformity. Adapted from the White Paper “Animal Age, Physiological Maturity, and Associated Effects on Beef Tenderness” by J. Daryl Tatum, Ph.D., Colorado State University (2011).

For more in-depth information on how each carcass quality grade is selected or evaluated, please visit [http://goo.gl/lpgE4i](http://goo.gl/lpgE4i) which will take you to a beef grading factsheet.

It Pays to Cover the Bunker
By: Craig Saxe, Juneau County

Bunker silos offer many cost advantages to producers that can handle forage in this type of storage system. Of course, covering the silage is the on-going challenge. Covering silage usually, with plastic and tires placed side-to-side can be a major job. For this reason, some bunker owners choose to “take their chances” and not cover the silage or look for an alternative cover material. Although, many researchers have and are continuing to look for other options, to date, nothing has been found that works better than the weighted plastic cover.

A Kansas State University study showed that covering immediately with a plastic cover results in the least dry matter loss averaging about a 15% dry matter loss. When no cover was used, significant dry matter loss occurred to a depth of 26 inches. Loss values of 62% in the top 13 inches and 34% in the next 13 inches were typical. By delaying covering for a period of 7 days, the study demonstrated significant dry matter losses in the top 13 inches during the delay period, but after the cover was added, further dry matter loss was similar to that of the immediately covered bunker. In other words, covering is effective on a “better late than never” basis but is most effective when applied immediately. This study was based upon a 180 day storage period. The study strongly supports the recommendation of covering the bunker silo with a material like plastic that excludes oxygen and rain water.
Microscopic Organisms Can Make or Break Your Crop
By: Nav Ghimire, Green Lake County

In a single teaspoon of soil there are 1 billion microbes. Even though you can’t see microbes, they play a key role in your crop’s success or failure.

It’s important to keep microbes happy—they can’t function alone and so much of what farmers do depends on them. Your tillage practices, fertilizer applications, soil pH and compaction levels all affect soil productivity. Boost soil health—and yields—by keeping microbes happy.

Microbes play an essential role in nutrient uptake. Soil organisms recycle nutrients, break down crop residue and help build the soil. The type of residue plays a role in decomposition. Coarse forms such as straw, seed coats, etc., are high in carbon and need to be balanced out with nitrates. Soybeans are a 30:1 carbon-to-nitrogen ratio while corn is 60:1 and wheat is 100:1.

To break down carbon-heavy residue, microbes need energy in the form of nitrates. When you apply nitrates, only 40% of applied nitrogen makes it directly to the plant. Most of the nitrogen is used by microbes, which later becomes beneficial for the crop.

Simple steps can ensure your soil is a healthy environment for crops and microbes. When we talk about soil health a lot of it is understanding the soil is living, and microbes are like livestock that need food, shelter, water and air. Operator needs to think that these living organisms benefit me—what can I do to promote them? Some of the steps are listed below:

- Have optimum nitrogen to manage your residue carbon loads. Talk to your extension educator for nitrogen tips if you’re unsure of application rates. When figuring out nitrogen, phosphorus and potassium application rates, don’t forget about zinc, copper, sulfur and other micronutrients important to soil and microbial health.
- Soil needs oxygen. This could come from light tillage, but if soil erosion is a risk, full tillage might not be the best idea. Improve drainage to avoid ponding, which depletes oxygen levels, and consider cover crops. When we keep the soil covered it makes a better environment for microbes. “Living root systems are essential for soil biology.”
- Run through the what ifs. If I use this chemical with this fertilizer, this will happen. Find out how it affects soil health.

The Role of Organic Matter
Organic matter plays many different roles in soil—from increasing microbial activity to improving water-holding capacity. According to Ohio State University, soil organic matter plays a key role in soil health by:

- Providing food and energy for soil microbes. Microbes are essential to break down carbon, which helps plants take up nutrients.
- Adding nutrients to the soil to boost crops throughout the growing season as the organic matter breaks down.
- Regulating soil ecological functions, which helps improve cation exchange capacity and manage pH balance.
- Improving soil’s moisture retention and structure. This will keep water in the soil during dry years and help with drainage in wet years.
- Wondering what you can do to boost soil organic matter? Ohio State University has an online tool to calculate how much organic matter is in your fields.

The source of this article is Farm Journal Magazine: March 2016. Material is edited for content and length.

Laundering Pesticide-Contaminated Work Clothes
By: Lyssa Seefeldt, Marquette County

When working with pesticides, sometimes you might get something on your clothing. NDSU Extension Service with Nebraska-Lincoln, Iowa State University, Michigan State University and the University of Minnesota have released a publication called "Laundering Pesticide-contaminated Work Clothes" that you might find helpful. This is available as a pdf either at NDSU's web site or at the following link: http://goo.gl/7BRbXi.
June Dairy Breakfast Events

**June**

3 **Mayor's Dairyfest Breakfast**, Central Wisconsin State Fairgrounds, Expo Building
   513 E. 17th Street, Marshfield 54449. 5:30 AM-9:30 AM. Tickets: $6; Children under 6-Free. Music, chance to win door prizes, and take a souvenir ceramic mug.

12 **Marquette County June Dairy Breakfast**, Lyons’ Farm, Tom & Brittnry Lyon, W7141 Eagle Ave., Westfield 53964
   Adults: $7.00; Children: (5-10) $5.00; Children 4 and under-Free

17 **Wisconsin Rapids Dairy & Berry Breakfast**, Lincoln High School,
   1801 16th Street South, Wisconsin Rapids 54494, 6 AM-10:30 AM
   Adults: $7.00; Children: (5-12) $5.00; Children 4 and under-Free

18 **Portage County’s 37th Annual June Dairy Brunch and Open Farm**
   Groshek Farms, Inc.—Casey & Sue, Henry, Keith & Autumn, Wayne & Jill
   3271 Sky View Rd., Amherst Junction, WI 54407, 8 AM-12:00 Noon.
   Donation: Adults: $6.00; Children: (6-10) $2.00; Children 4 and under-Free

19 **Marshfield FFA Alumni June Dairy Breakfast**, Heiman Holsteins
   11875 Hwy. 10, Marshfield 54449; 7 AM–Noon
   $7.00 (ages 11 & up); $4.00 (Children Preschool to age 10)

25 **Auburndale FFA Alumni Dairy Breakfast**, Auburndale Village Park, 7AM-11 AM
   $6.00 (ages 10 & up); $3.00 (Children K4-age 10); Preschool-Free

25 **Green Lake County Focus on the Farm Breakfast**, Hilltop Dairy Farm—Rich, Cal & Loren Greenfield family, N477 County Trunk Q, Markesan 53946, 7 AM-12 PM
   Adults: $7.00, $6.00 in advance; Children 5 and under-Free

26 **Waushara County Dairy Breakfast**
   Location yet to be determined.
   For information, please call the UW-Extension Office, 920-787-0416