Cornell Cooperative Extension

Central New York Dairy, Livestock and Field Crops

Serving Chenango, Fulton, Herkimer, Madison, Montgomery, Otsego, Saratoga and Schoharie Counties

January 2019

Welcome to the CNYDLFC Team's quarterly newsletter! Over the last year our team has expanded which has lead to more information sharing. Our hopes are to compile articles that producers find relatable and enjoyable.

If you have content suggestions, please feel fee to contact Kevin, Dave, Ashley or Nicole.

Wishing you a Happy, Healthy, Joyous 2019!

~Nicole Tommell, Farm Business Management Specialist

Winter 2019

Biostimulants: What are they and do they work?

Source: **blog-crop-news.extension.umn.edu**/2018/12/biostimulants-what-are-they-and-do-they.html

In recent years, biostimulants have sparked an interest with many crop producers. With these products getting more attention, we find there is much to debate on their effectiveness. Before we discuss whether Extension recommends them, let's talk about the different types and what they actually do.

What are biostimulants?

A legal definition of biostimulants has yet to be decided. However, the European Biostimulants Industry Council describes them as "Substances and/or microorganisms whose function when applied to plants or the rhizosphere is to stimulate natural processes to benefit nutrient uptake, nutrient use efficiency tolerance to abiotic stress, and/or crop quality, independently of its nutrient content."

There are many categories of biostimulants. The most popular are humic acids, seaweed extracts, liquid manure composting and beneficial bacteria and fungi.

- Humic and fulvic acids – parts of soil organic matter resulting from the decomposition of plant, animal, and microbial residues.
    - e.g. peat, mineral deposits of leonardite and soft coal
    - Dark in Color
    - Can increase the cation exchange capacity
- Seaweed Extract
    - Derived through different extraction processes.
    - Soluble powders or liquid.
- Liquid manure composting
    - Made by mixing manure water and a blend of proprietary materials thought to feed specific bacteria in the manure. This provides adequate conditions for microbial growth. The liquid is then used as a biofertilizer.
- Beneficial bacteria and fungi – concentration of bacteria and/or fungi in the soil that help with root growth.
    - E.g. Bacillus and Rhizobium fungi
    - Majority of products marketed toward large scale commercial agriculture.

Biostimulants have been shown to increase many factors that affect plant growth including, root growth, root diameter, soil water holding capacity, increased microbial activity leading to increased nutrient availability and many more. Most of the time, however, responses are highly variable. It depends on weather, soil type, organic matter content, tillage system, and the type of crop rotation. One thing to remember is that these products cannot provide nutrients and be considered a biostimulant. They do not affect a fertilizer, but can increase/speed up the process of availability.

What does the research say?

Most data on these products is for high value horticultural crops instead of a corn/soybean system. However, research at the University of Minnesota has shown that in most cases those products are ineffective and do not live up to the expectation. For example, the products thought to increase enzyme activity rarely do compared with plots that did not receive the treatment. Products thought to provide better overall growing conditions and increase grain yield also do not show any improvements when compared to untreated.

Recommendations

When thinking about using these products we recommend doing a replicated strip trial before integrating them into your entire operation. To see these products make a difference and pay for themselves, consider contacting a local or regional Extension Educator, or your crop adviser to help you set up a trial and interpret the results.

By: Anne Nelson and Paulo Pagliari
UMN Extension Nutrient Management
Support for this project was provided in part by the Agricultural Fertilizer Research & Education Council (AFREC).

An Extra Pound of Feed

By: David R. Balbian, Area Dairy Management Specialist

If the average cow in your dairy herd were to consume an extra pound of feed per day what would happen? What I specifically mean is an extra pound of feed dry matter. For a Total Mixed Ration (TMR) that is 50% dry matter, it would be 2 pounds of that TMR which would represent 1 pound of dry matter.

For typical one group or high group TMRs that additional 1 pound of dry matter would support between 2 and 2.5 pounds of milk. That would assume all of the nutrients went into milk production. We never know how individual cows will partition nutrients. So, some or all nutrients could go to growth (1st calf heifers) or to replenish body condition on thin cows. In any regard, the nutrients derived from additional feed can be quite valuable.

A dairy nutritionist I know has mentioned to me that he will never forget the advice a professor in college gave. He said, "One of the things you will face when you are working with dairy farms is *bare bunk disease*."

The first thing to think about is feed availability. Is there feed available to your cows nearly around the clock (23 hours/day)? This will depend on your feeding schedule, how often you push feed up (so the cows can reach the feed), and how much feed you target to be left over per day.

I know some of you may be saying I want nothing left over because feed is too expensive to waste. That approach could be limiting feed intake on the herd or at least on individual cows. In the past, a common industry recommendation was to have 5% left over. Today, many well managed herds are targeting 2 to 3% left over. They also may not be discarding that left over feed, as was a common practice in the past. It may be added back to a lower group ration or an older heifer group. Try not feeding it to younger heifers because of the risk of spreading Johne's disease.

What does your manger surface look like? Is it smooth & easy to clean? OR is it rough pitted concrete with slimy & stinky feed reside left between the rough concrete? That will have an impact on feed intake.

How often do you dispense fresh feed and how do you manage that feed? Some farms are able to feed once per day with multiple push-ups. Others find that feeding 2 or 3 times/day works best for them. Cows are motivated to eat when fresh feed is dispensed. Is there fresh feed (or feed pushed up) when cows return to the barn after milking? How stable is that feed? Is secondary fermentation causing the TMR to heat up in the feed bunk? If that is the case, what is the cause? Is it starting at your storage? Is the face of your bunk silo too wide or poorly managed? Are you loading the mixer wagon the night before, rather than loading with fresh feed in the morning?

Do cows have enough resting time? This has been deemed to be Vitamin R when it comes to dairy nutrition! Tons of research has shown that cows have a strong desire to rest and that inadequate resting time significantly reduces milk production (and feed intake). Cows should have comfortable dry stalls with enough time to get 12 to 14 hours/day of lying time. How much time do cows (the last ones into the parlor) stand in the holding area? We'd like to see cows standing no more than 1 hour per milking for both 2X and 3X milking. This means (hopefully) that when the last cows return from the milking parlor the first cows are done eating and have laid down, thus providing that space for late arriving cows to eat.

Overcrowding can be a large contributor to reduced resting time. This is especially true with 3 or 6 row barns, where there is actually inadequate feed bunk space with 100% stocking density. When excessive overcrowding occurs animals will frequently sacrifice eating time to achieve adequate resting time. Grouping first calf heifers together (not having to compete with older cows) has proved to be very beneficial to those younger animals in feed intake and milk production.

How about feed bunk space? Current guidelines are for 24 inches of feed bunk space per cow. Most head locks provide that spacing. However, from a practical standpoint we often see a few slots open, especially with large mature cows. This means we typically use a little more than 24 inches/cow. If you have a fresh cow group the recommendation is often 30 inches of bunk space/cow.

IF we are able to make some changes to increase feed intake by one pound of dry matter what would be the economics? Most one group TMRs or high group TMRs will cost between $0.11 and $0.13 per pound of dry matter. Current milk prices for most people are between $15 and $18/cwt. That would be $0.15 to $0.18 per pound of milk. So, let's say our one pound of dry matter costs $0.13. Let's say we get 2 pounds of milk at a price of $16.50. The milk value would be ($0.165 x 2) $0.33. That would give us a ($0.33 - $0.13) $0.20 economic benefit/cow/day. On 100 cows milking that would be a $20/day benefit or a ($20 x 365) $7,300 benefit per year. Is this equal to getting a $20 or $22 milk price? No, but it can help even with our low milk prices.

Do these things always work out as my example above? No, you're likely to see varying results because we cannot always predict how your cows will partition the extra nutrients consumed. That being said, the benefits to higher feed intake are almost always positive. What might happen if you make a change and get a 2 pound increase in dry matter intake?

Late gestation requirements for ewes prior to lambing

By: Ashley McFarland, Area Livestock Specialist

Quite often producers tend to forget about the nutrition requirements their ewes need to maintain themselves, as well as their fetus. Approximately 80 percent of fetal growth occurs in the last 4-6 weeks of gestation.

The goal is to prevent pregnancy diseases (milk fever, pregnancy toxemia) in the ewe, in order to do so producers need to provide all the nutrients the ewes need to maintain a healthy pregnancy. Not only does the ewe need the right nutrients to maintain herself, but she also needs to maintain the growing lambs in utero, udder development, and the development of colostrum. The best indicator you did your job correctly with feeding the ewe is the color of the colostrum, once she lambs. If the color is a bright yellow color and very thick, the ewe has been fed correctly, a pale yellow and thin consistency would indicate the ewe was lacking requirements in her diet prior to giving birth.

The last 4-6 weeks prior to lambing is a very critical phase in the flock, for both the ewe and the lamb(s). The ewe will require more energy and protein than she has required previously and it will double or triple if she is carrying more than 1 lamb. "Energy is especially important during late gestation as it affects lamb size and vigor at birth. Lack of energy results in small, weak lambs that are more prone to create problems for the shepherd and many of these are at increased risk for mortality."
(Mike Neary-Purdue Sheep Specialist)

Another issue sheep farmers have to deal with is the lambs are growing quite a lot in the last 4-6 weeks and are taking up more and more space in the ewe. This occurring will cause the ewe to eat 25-35% less than her original diet. That is why it is very important to slowly increase the nutrient density of the ewe's diet to go along with the fetal growth.

A Bred ewe that is roughly 160 pounds should be on a 14% protein diet, along with free choice minerals and vitamins throughout her gestation. This will allow is the ewe to maintain a healthy pregnancy and weight, a good supply of minerals will also ensure healthy and vigorous lambs at birth.

Body Condition Scoring is another critical issue sheep producers need watch. This will help determine what feed requirements are needed for the ewes. The ideal BCS at lambing should be between 3-3.5, below a 3 producers tend to see pregnancy diseases in the thin females and above a 3.5 we see the same for being too heavy.

"Energy is especially important during late gestation as it affects lamb size and vigor at birth. Lack of energy results in small, weak lambs that are more prone to create problems for the shepherd and many of these are at increased risk for mortality."
(Mike Neary-Purdue Sheep Specialist)

All of the pregnancy diseases can be prevented from proper nutrient and management. If you are looking for help with these requirements your veterinarian can work closely with your nutritionists to set up a plan for your operation.

Ten things to know about Dairy Revenue Protection

By: Dr. Jennifer Ifft and Jerzy Jaromczyk, Cornell University

There are many options for dairy farms to manage milk price, feed price, and production risk. RMA recently announced a new insurance product, Dairy Revenue Protection (Dairy-RP). Below are a few reasons why farms may want to consider learning more about Dairy-RP.

1. Dairy-RP provides protection against revenue decline due to either unexpected price or state – or regional-level – milk yield declines.
2. Flexible price protection: producers have either a class pricing option (Class III and IV) or a component pricing option. Prices used for the final revenue guarantee are based on USDA Agricultural Marketing Service monthly average prices
3. Milk yield protection: Dairy-RP provides protection against state- or regional-level milk yield declines (as estimated by NASS).
4. Purchased quarterly: coverage levels and protection factors can be changed for each 3-month coverage period
5. Dairy-RP and LGM-Dairy can be used by the same farm in the same crop year (July 1-June 30), but not in the same quarter
6. Farms can participate in Dairy-RP and MPP (Margin Protection Program) *at the same time*.
7. Protection can be purchased for up to 15 continuous months (5 quarters).
8. Coverage levels range from 70-95% in 5% increments and premium subsides range from 44-59%. Producers select a protection factor between 1.00 and 1.5 in 0.05 increments.
9. Qualifying beginning farmers or ranchers can receive an additional 10 percent of premium subsidy.
10. Like other crop insurance policies, Dairy-RP can be purchased from a local crop insurance agent, which can be found here: http://cli.re/gzPVWy

To learn more about Dairy-RP, take a look RMA's livestock policy webpage, which has an FAQ, fact sheet and other details on Dairy-RP: http://cli.re/GAnpEL

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Risk Management Agency

Biggest Bang for the Crop Buck

By: Kevin H. Ganoe, CCA Area Field Crop Specialist

I knew that I had the basis for the article I wanted to write in a slide set I put together for a meeting when the dairy industry began its downturn. My frustration was that I put that slide set together for a meeting in November of 2015 for the 2016 growing season. Now this article looks ahead to a continued down turn of all commodities coming into a 2019 growing season. Likely by now you have looked at how to maximize your profit or minimize your losses any number of ways but if you will allow me here is my list of biggest bang for the buck ideas coming into the 2019 cropping season.

"Do what you can get done."

I have, likely you have, heard this put in a dozen different ways but one of the best things you can do is have a plan in place to that looks at a core set of acres that you know you can get planted and or harvested. Without a doubt the weather the last two growing seasons might make you question how much that plan is worth especially 2018, whereas this is being written there is still corn and soybeans in the field and manure looking to be spread.

A crop plan for your 2019 acres for will allow you to see how to allocate your crop resources, scant though they maybe. Every dollar needs to count and although you may not get it perfect by having a plan getting the crop in and off as timely as you can, is one of the biggest hurtles you face. Just being ready doesn't usually cost much and if equipment repair to get going is an issue then better to spend resources here because you can't harvest what you don't plant and you can't make money on forage crops that aren't harvested timely to provide quality. So know what you can get done and do it. Only plant and harvest what you can do so successfully. It is always risk to put dollars in the field so minimize that risk as much as you can.

Is your free land costing too much?

Over time you have likely heard me use the expression of the "free Land" people describe to me that turns out at the end of the day to cost more than no rent or low rent is worth. Most free land isn't free at all it will cost you. Although a generalization in many instances this land is low pH, low fertility and somewhat poorly to poorly drained and you don't necessarily have any kind of lease that allows you a little more trust you can put some long term resources in to it to make it productive for your use. No one wants to give up land in particular if you need a place to spread manure or you want to hold on to it as a buffer against neighbors and neighboring farms. But if you think it isn't costing you take the time to think it through and make sure.

Weed control is dollars well spent.

I have too often seen corn, and soybean, growers look to save a few cents or even a few dollars an acre to move to herbicides that are less expensive only to not get the weed control they were before. If there was ever a "if it is not broke, don't fix it" moment this is it. Likely you didn't realize what weeds you were controlling and now with different herbicides some of those slight differences in spectrum of control show up. And if you were trying to just get by on fertilizer dollars what little you save might be quickly eaten up by weed competition.

I need to be careful in stating this because more than ever we need to look at weed control programs and make sure we are not setting farms up for herbicide resistant weeds or even just making sure we don't allow tough to control weeds to get a start. But of all the places to try to be cheap, weed control isn't one of them.

Follow nutrient management plan

If you have a comprehensive nutrient management plan now is the time to make the best use of it. Being accurate with manure application rates and applying manure evenly across a field shouldn't be viewed as just a regulatory requirement it is the difference in between profitability or not. Even if you aren't required to have a plan work with your crop consultant to develop one anyway. Make sure you have a clear understanding of what nutrients are needed to grow your crops and what value your manure and the previous crop have to meet those nutrient requirements. Now is the time to have a soil test to account for nutrients in the soil so you are not under or over applying nutrients. In particular, this is maybe the time to stop "traditional" yearly P and K topdressing of hay fields when manure may be supplying sufficient nutrients already.

Now may not be the time to lime because the amount needed won't give an immediate payback in this crop year. At a high lime requirement, you may need the better part of a year to see the pH change sufficiently to see the return on your dollar spent.

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Mortality Disposal Guidance

PRO-DAIRY e-Alert, Published July 31, 2018

The New York State Department of Agriculture and Markets has issued a letter to New York dairy and livestock producers signed by David Smith, DVM, Director, Division of Animal Industry, with Mortality Disposal Guidance.

Many of you are aware that companies that have been picking up dead stock from farms have halted pick-ups. The NYS Department of Agriculture and Markets (NYSDAM) is discussing the situation with the companies to determine a course of action regarding the disposal of downed and dead animals. In the meantime, New York producers will need to consider other methods of disposal. The following information is provided as guidance; however, these activities may also be subject to local law.

On- Farm Burial

On-farm burial may be a viable option for many farms. New York Agriculture and Markets Law has the following provisions for disposal. These provisions are applicable to all farms, including farms operating under a Concentrated Animal Feeding Operation (CAFO) permit.

https://www.agriculture.ny.gov/AI/AILaws/Article_26_Circ_916_Cruelty_to_Animals.pdf

§ 377. Disposal of dead animals.

The carcasses of large domestic animals, including but not limited to horses, cows, sheep, swine, goats and mules, which have died otherwise than by slaughter, shall be buried at least three feet below the surface of the ground or otherwise disposed of in a sanitary manner by the owner of such animals, whether the carcasses are located on the premises of such owner or elsewhere. Such disposal shall be completed within seventy-two hours after the owner is directed to do so by any peace officer, acting pursuant to his special duties, police officer, or by a designated representative of the commissioner.

Notwithstanding section forty-one of this chapter, any violation of this section shall constitute a violation. This section shall not apply to animal carcasses used for experimental or teaching purposes.

The Department also recommends the following considerations for onsite burial:

- Locate onsite mortality management activities so that prevailing winds and landscape elements minimize odors and protect visual resources.
- Locate the facility down-gradient from springs or wells whenever possible; at least 200 feet from wells and open water; above the 100-year floodplain elevation; and avoid areas with seasonally high-water tables. (Please note that State law requires that the highest part of the buried animal must have at least 3 feet of soil over it and burial must occur within 72 hours.)
- Onsite mortalities should not be disposed in liquid manure storages.

Any farm operating under a CAFO permit must carefully observe the provisions of the permit and the farms Comprehensive Nutrient Management Plan (CNMP), including working with their AEM Certified Planner.

On-Farm Composting

You may also choose to compost dead animals.

Farms operating under a CAFO permit that choose to compost must do so in accordance with the 2014 Cornell Waste Management Institute recommendations "Composting Animal Mortalities" or the NY 316 NRCS Standards as planned in their CNMP.

For non-CAFO farms, you may compost mortalities on-site without a permit using 2014 Cornell Waste Management Institute recommendations. In addition, under State law, up to 10 carcasses per year can be from off-site sources, and the animal carcasses must be placed within the compost pile on the day received (6 NYCRR Part 360-3.2 (a)(4)). To handle additional off-site animals, the farm must obtain a solid waste management facility registration under 6 NYCRR Part 360-3.2(b)(3).

Animal Health Best Practices

The Department strongly recommends the following precautions:

- Be decisive when it's time to cull an animal. Make the decision early while the cow is still marketable. With disposal being more difficult now, it's more likely that every dealer, market, and slaughter buyer will be refusing marginal (weak/non--thriving) calves and cull cows for fear that they will not make it successfully all the way to slaughter.

If chemical euthanasia is used to dispatch an animal on the farm, the option for composting might be restricted due to chemical exposure to birds of prey, scavengers and neighbors' free-roaming dogs. You must take precautions to be sure that dogs, cats, and wildlife cannot gain access to the animals being composted.

Why is early castration on bull calves important?

By: Dr. Michelle Arnold, University of Kentucky Large Ruminant Extension Veterinarian

This topic has come up regularly over the past few months. There are many opinions on this specific topic, however there are more pros than cons of castrating bull calves earlier in life. There has been quite a lot of research done by universities, across the country in the past few years on this topic. They have indicated there is a slight increase of weight seen in steers at the end vs. bull calves, they have also been able to identify that calves castrated in the first 30 days tend to have higher quality carcasses, than calves castrated at 6 months of age.

– Ashley McFarland,- Livestock Specialist- Central New York Dairy, Livestock, and Field Crops Regional Team

"In the United States, more than 17 million bulls are castrated yearly that range in age from 1 day to 1 year old. It is well known that this procedure is painful and causes a period of slowed growth rate and poorer feed efficiency, especially if the procedure is delayed until the calves get older and heavier. If castration is performed at the feedlot or backgrounding operation, these calves have a marked reduction in weight gain and are twice as likely to get sick as steers (one study found 28% sickness in steers vs 60% sickness in bulls castrated on arrival). The benefits of castration for feedlot owners and those who retain ownership through the feeding phase far outweigh the negative effects and include:

1. Reduced aggressiveness and sexual activity by lowering testosterone levels

2. Decreased number of "dark cutters" due to high muscle pH

3. Higher quality grade-more consistent, marbled, and tender beef

4. Steer carcasses command higher prices at market

Although these advantages are clearly proven, many cow-calf producers do not castrate because they are afraid steers will not wean off as heavy as bull calves despite the fact that research has proven this to be untrue. Even though steers command a higher price at the market, the difference in price has not been enough to overcome the reluctance of many to adopt this as a routine practice. However, the rapidly changing situation of the welfare implications of cattle castration may ultimately move the industry to demand early castration or adopt some method of pain control if castration is delayed.

Several methods of castration are commonly used. The three most common castration procedures for cow-calf producers are surgical removal of the testes, banding of the scrotum with rubber bands, or crushing of the testicular chords with a burdizzo clamp.

The method chosen often depends on multiple factors including the potential risk of injury to the operator, the size of the calf, the handling facilities, and experience with a certain technique .Failure may also occur during banding if only one testicle is in the scrotal sac when a band is placed. The calf will become a "stag" with the characteristics and actions of a bull due to the retained testicle.

There is virtually NO difference in performance of the calf if knife cut, banded, or clamped at a young age.

In a study at Oklahoma State reported in 2011, it was found there was absolutely NO advantage in the growth rate of bulls before weaning compared with bulls that were castrated (by any method) at 2-3 months of age and given an implant. In a similar study conducted in 2009, bulls castrated at birth performed similarly to those castrated at 4 months of age, indicating that leaving a bull intact for a "period of time" did not increase gains either. It is important to note that these studies did utilize an implant in the steers to replace the hormone influence lost by removing the testicles.

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Biggest Bang for the Crop Buck, *Continued from page 6*

Do you have enough N?

Nitrogen is needed for grass growth so whether the crop is corn or grass hay so make sure you have enough N. Sufficient nitrogen and weed control are a must for a good corn crop so look for other places to reduce input dollars. The more accurately you account for all sources of nitrogen available to your crop the less risk there is in over or under applying N.

Not the time for products of questionable value

Turning to an online dictionary, in this case Urban Dictionary, where foo foo dust is defined as: "A reference to a (non-existent) power or mysterious ingredient or hidden effort that creates desirable results. Results achieved, as if by magic, perhaps by slight-of-hand." Call these products what you want they often promise to give you more yield and profit and do so applying less nutrients or by enhancing plant growth. Now is a time to stick to with what has a proven track record and is scientifically sound.

Reseed or make current hay stands better

There are good reasons to put in a new seeding. Maybe you have a conservation plan to keep up with; maybe you have hay ground that is less productive so you want that yield kick and nitrogen benefit you get by rotating corn to an old sod and keep the hay acres you need by reseeding.

Keep all of that in mind because a new seeding can be a large out lay of dollars and it can be risky because in many instances you aren't getting your money back the seeding year and seedings have been known to fail for various reasons. If you still have good grass stands use nitrogen and manure to keep those fields productive and remove the seeding risk for the time being.

Be deliberate

Setting priorities as to what inputs will make you the most of your crop dollar is the place to start. For corn weedcontrol and nitrogen are the two big items you just can't have a profitable crop without.

Why is early castration on bull calves important? , *Continued from Page 8*

The animal welfare implications of late castration are beginning to be a force in the beef industry. As guidelines are being established for pain prevention and control, castration is recognized as one of the most stressful and painful experiences for livestock by measuring blood cortisol concentrations and the levels of specific brain neurotransmitters which are associated with pain in food-producing animals. Visible pain responses to castration include struggling, kicking, tail swishing, and restlessness during the procedure followed by swelling, stiffness, and increased recumbency (lying down) whether surgical or nonsurgical techniques are used. Blood cortisol levels, used as an indication of pain, spike almost immediately from surgical castration and clamping while banding causes a slower yet longer period of cortisol elevation. Banded calves have actually shown signs of pain in response to scrotal palpation a month or longer than calves that were clamped.

Perhaps the most important fact gleaned from the many studies conducted on castration is: **the earlier the better.** Calves castrated from 1-7 days old showed very few behaviors associated with pain and their plasma cortisol levels were essentially the same as the calves left intact. The risk of hemorrhage and infection is much lower, the risk of injury to the person performing the castration is lower, and the procedure is relatively quick and easy. The issue of pain control during and after castration is one of growing importance in the United States. Application of local anesthesia prior to castration is mandated in some countries because it significantly reduces the cortisol response to castration. This effect only lasts as long as the anesthetic but, when combined with a non-steroidal anti-inflammatory drug (NSAID) such as flunixin (Banamine®), the cortisol response can be virtually eliminated in young calves, regardless of the castration method used.

These calves also show increased feeding activity and fewer pain associated behaviors. The major obstacle in the US to pain relief for castration is no approved drug exists that is actually labeled for this use. Any NSAID used for pain would be considered extra-label use and must be administered only under the direction of a veterinarian with a valid veterinary/client/patient relationship. However, as research continues to validate methods of measuring pain, then drugs will begin to be approved for pain relief because their effect will be measureable.

Castration is considered to be a necessary management practice for cattle. Work with your local veterinarian to establish the optimal herd health program for your farm and institute an early castration program to minimize the pain, stress and complications that go along with this procedure. As we move toward more validated tests to determine pain and stress response, the fewer excuses we have not to do what is within our abilities to minimize it. A proactive approach diminishes the likelihood that the government will dictate what we have to do at the farm level. The corporate world and consumers are watching for our response. **What will you decide?**

Are you ready for tax season?

By: Nicole Tommell, Farm Business Management Specialist

With the ushering in of the New Year, many farm businesses begin preparing for tax season. Whether you use QuickBooks, Excel or a ledger book system, accurate record keeping is essential for a smooth accounting session. Some farm families' visit with their accountants during the 4th quarter to begin compiling information needed to complete their tax documents. Unfortunately due to our tough harvest season, many may not have had the opportunity to visit with their tax professional.

Basic Dates to be aware of

Depending on your business structure, income tax must be filed by either March 15 (C-Corporations/S-Corporations) or April 15 (most filers). Some farm accountants will file extensions, make sure you are aware if this is done. Give your accountant a call to gauge their schedule during this tax season. Farm business taxes are lengthy and will take time to prepare, allocate for that time especially if you believe a refund will be returned to you.

Gross Income

Did the farm barter this past year with another farm/ landowner? Did you get a refund check from an animal pharmaceutical company for a purchase? Were there any rents, royalties or dividends paid to the farm? If so, remember to bring them to the attention to your accountant. Often times we might cash a check and forget that the funds are considered part of our gross income. All forms of income need to be identified and shown in the gross income portion of a tax statement. Make a copy, keep a ledger with details of the check, or if there was a stub, retain and submit to the tax professional with notations.

Is it a farm expense or a personal expense?

Although most farm expenses can be used as a deduction if properly allocated, there are some expenses that should be separated. Splitting out farm expenses and personal expenses can be aggravating and time consuming. Electricity, telephone, fuel oil, insurance, repairs, interest, taxes, etc., are all expenses that can be red flags during audits. Keeping track of usage percentages will assist your accountant in properly allocating on the farm Schedule F. If it becomes too cumbersome, work with your tax professional to find fair percentages that show personal expenditures. Do what feels comfortable.

Over the previous fiscal year, did the farm acquire a new piece of machinery? Did you have to make a large purchase directly related to your farm business? Was there a trade of older equipment? Documenting large purchases when they are made will help most farm families remember the happenings of the year. Including information such as date, price, make, model, potential trade in piece, description of equipment will assist the tax preparer in creating a depreciation schedule for the specific item. However, if a piece of equipment /machinery was sold outright, documenting that transaction is necessary.

Compiling all the paperwork

Finally after the dust settles and all expenses are allocated in the correct category, compiling the supporting documents is key for speed and accuracy of the tax preparer. Organized documents with notations become an accountant's friend. Becoming familiar with your specific documents if a question arises is also necessary. Below is a list of documents that should be in the farm tax folder.

- Income/Expense Sheet
- Profit/Loss Statement
- All machinery/equipment purchase documentation
- New structure details
- All tax documents for fiscal year (property and school)
- All interest statements from banks, mortgage companies, machinery lenders
- Cash receipts (excel spreadsheet or ledger with correct expense allocation)
- Retirement /401K Statements
- Payroll deductions/ payroll allocation
- Annual credit card compiling statement (if one is received)
- Any USDA payment statements
- 1099s/ W-2 's
- New loan information (personal loans, operating loans, remortgages, restructures)
- Sales of equipment for cash (bill of sales)
- Loan payoffs

Final Thoughts

With the close of 2018 and the difficulty we have all faced in agriculture, I realize that many farm folks may be behind with the accounting functions of their business. Unfortunately, accounting is the necessary evil in directing our farm businesses with sound decision making as we move forward. If you fell in the trap of putting data entry off until tomorrow, let's make a New Year resolution to continually log income and expenses throughout the new year, start a folder of important documents for the tax preparer and keep a log of large transactions that may impact depreciation. Just a little tweaking of a farm's basic accounting system can provide less stress for future tax seasons. If you are looking to transition to a new accounting system, the first quarter is always the best time to begin!

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