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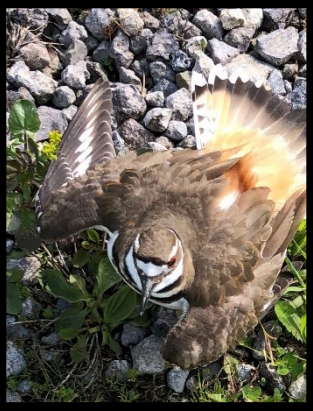
OHIO STATE UNIVERSITY EXTENSION

COSHOCTON COUNTY AGRICULTURE & NATURAL RESOURCES



Coshocton County Extension
724 South 7th Street, Room 110
Coshocton, Ohio 43812
Phone: 740-622-2265
Fax: 740-622-2197
Email: marrison.2@osu.edu
Web: http://coshocton.osu.edu

Hello Coshocton County! The weather to kick off April has been great and a lot of field activity is already underway. It looks like a good shower or two is in the forecast. For those who like to track the weather, I have included an article from Jim Noel with his spring forecast. If his predictions hold true we will be getting an early run at it.

If you enrolled in either the CFAP 1 or 2 programs through the FSA Office, you may see some assistance in your checking account this week. For beef producers, a top-up payment has been added to the CFAP 1 payments from last April. This adjustment will translate into an additional payment ranging from $7 to $63 per animal. For crop producers, a top-up payment of $20 per acre will be made for acreage reported in version 2 of the CFAP program last July. Both payments will be automatically issued by the Farm Service Agency. The USDA has also re-opened the enrollment for CFAP 2 so if you are an agricultural producer (and not already enrolled), there is now a 60 day window to sign up. Just call our local Coshocton Farm Service Agency office for details at: 740-622-8087. Kudos to our local FSA office for all their hard work. Our Farm Office Team will be discussing this latest round of funding on our Farm Office Live webinar tonight and Friday morning.

Sincerely,

David L. Marrison

Coshocton County OSU Extension ANR Educator

THE OHIO STATE UNIVERSITY
COLLEGE OF FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES

Farm Office Live to Analyze USDA's "Pandemic Assistance for Producers" Initiative

By: Barry Ward, David Marrison, Peggy Hall, Dianne Shoemaker and Julie Strawser – Ohio State University Extension
Source: https://u.osu.edu/ohioagmanager/2021/04/05/farm-office-live-to-analyze-usdas-pandemic-assistance-for-producers-initiative/?preview_id=5134&preview_nonce=522fd325ef&_thumbnail_id=-1&preview=true

April's "Farm Office Live" will focus on details of the USDA's Pandemic Assistance for Producers" initiative announced on March 24, 2021. Changes were made in effort to reach a greater share of farming operations and improve USDA pandemic assistance.

During the webinar, we will be sharing details about the pandemic initiative and discussing some of the changes made to the Coronavirus Food Assistance Program (CFAP). Our Farm Office Team will also provide a legislative update and discuss changes to the Paycheck Protection Program and Employee Retention Credits. They will also be on hand to answer your questions and address any related issues.

Two live sessions will be offered on Wednesday, April 7, from 7:00 – 8:30 p.m. and again on Friday, April 9, from 10:00 – 11:30 a.m. A replay will be available on the Farm Office website if you cannot attend the live event.

Farm Office Live is a webinar series addressing the latest outlook and updates on ag law, farm management, ag economics, farm business analysis and other related issues. It is presented by the faculty and educators with the College of Food, Agricultural and Environmental Sciences at The Ohio State University.

To register or view past recordings, visit https://go.osu.edu/farmofficelive. For more information or to submit a topic for discussion, email Julie Strawser at strawser.35@osu.edu or call the Farm Office at 614-292-2433.

Spring Weather Update

By: Jim Noel
Source: https://agcrops.osu.edu/newsletter/corn-newsletter/08-2021/weather-update-noaanwsohio-river-forecast-center

The climate pattern is in a state of a flux. The La Nina pattern is weakening rapidly and will cause changes in weather patterns in the coming weeks and will result in lower confidence forecasting for a while during this change.

For April it looks like a warmer than normal month with normal or slightly below normal rainfall. However, there will still be big swings in temperatures so the last freeze will likely be in the normal range which is generally mid-April for southern Ohio to late April for northern Ohio. Evaporation rates will be above normal. This will all result in typical or earlier than normal planting. Beneficial rains will fall over most of the corn and soybean belts in April with the least rain likely in the eastern areas including Ohio. Over the next two weeks we expect 0.50 to 2 inches of rain with normal rainfall being 1.5 to just under 2 inches. Hence rainfall is forecast the next two weeks to be 50-100% of normal.

Soil moisture is in good shape in southern Ohio but is short in northern Ohio and needs to be watched carefully. Soil moisture will improve in most of the corn and soybean belts in April especially in the western half of the region which needs it. However, soil conditions in Ohio will likely stay the same or get a bit drier in April with above normal temperatures, above normal evapotranspiration rates and normal to below normal rainfall.

You can get all the latest information from the NOAA/NWS/Ohio River Forecast Center on drought risk here: https://www.weather.gov/ohrfc/DroughtBriefing

Seasonal information can be found here: https://www.weather.gov/ohrfc/SeasonalBriefing

The outlook during the growing season from May through summer looks like a warmer to hotter than normal summer. It is not clear whether this will be more of a consistent warm of whether it will be more of an impact to maximum temperatures above 95. We will keep you posted on that.

Rainfall confidence from May through summer is quite uncertain. With La Nina weakening that could offset some of the risk to the drier side. Hence, at this time the outlook supports normal to slightly drier than normal. In the summer 30-50% of rainfall comes from local soil moisture so it is important to watch your local soil moisture between now and Memorial Day as it will be a big driver in summer rains. Bottomline, we are aware there is some risk for growing drought risk into summer but confidence is still low in the outcome. https://www.cpc.ncep.noaa.gov/products/predictions/long_range/poe_index.php?lead=4&var=p

In summary, the tendency supports warmer weather overall through the planting and growing season with rainfall normal to below normal. There is some risk of expanding drought but confidence in that remains low at this time.

Control of Dandelion with Spring/Summer Herbicide Treatments

By: Mark Loux, OSU Extension Weed Specialist
Source: https://agcrops.osu.edu/newsletter/corn-newsletter/08-2021/control-dandelion-springsummer-herbicide-treatments

Dandelion seems to be on the increase in some fields, as we noted in a video last summer and CORN article last fall. Fall is the optimum time of year to reduce dandelion populations with herbicides, so we expect them to become more of a problem in fields that are not treated in the fall at least occasionally. If history is any indicator, other causes can include oversimplification of herbicide programs in soybeans, omission of residual herbicides, and delaying burndown herbicides until later in spring. All of these occurred during the first few years of RoundupReady soybeans, and we had some dense stands of dandelions that developed in late 1990's. We again have some very effective weed management platforms for soybeans, and the possibility of the same happening. In addition, while POST applications of glufosinate have broad-spectrum activity on annual weeds, they are not that effective on dandelion and other perennials, which can allow some of these weeds to get more of a foothold.

In the absence of fall herbicide treatments especially, control of established dandelions in corn and soybeans will require effective burndown and POST herbicides. Do not expect adequate control of established dandelions from just the burndown or just the POST. Where the burndown herbicides are relatively ineffective for whatever reason, the POST herbicides will also likely be less effective. It's also necessary to include residual herbicides to help control the dandelion seedlings that can emerge after planting from seeds produced last fall and this spring. Some things to consider:

- Our experience with dandelion over the years has shown that the effectiveness of spring burndown herbicides on dandelion can be extremely variable. We conducted research with Purdue and Penn State back in about 2000, where we applied glyphosate and glyphosate + 2,4-D weekly from early April to early May. Control generally improved with the later applications. The glyphosate + 2,4-D was more effective, but under some colder than normal conditions in late April, control decreased considerably. We suggest avoiding applications during this type of weather.
- Most effective burndown will generally result from combinations of glyphosate with 2,4-D or dicamba. Increasing rates of these products can improve control, but will not overcome the negative effects of cold weather. The addition of a chlorimuron-containing product can help in soybeans. In corn, products or mixtures that contain higher rates of atrazine and mesotrione have also been effective for suppression well into the growing season (adding 2,4-D can help).
- The addition of herbicides with contact activity to the burndown can make it appear as though control has been improved, but can actually reduce the activity of the systemic herbicides, and plants regrow sooner in some cases. This includes sulfentrazone, flumioxazin, saflufenacil, and metribuzin, and glufosinate.
- POST followup in soybeans should include glyphosate, and as with burndown, mixing with 2,4-D (Enlist) or dicamba (Xtend/XtendiMax) will be most effective. We would suggest including glyphosate with glufosinate in LLGT27 soybeans (resistant to both of these herbicides). Some of these same options apply to corn, along with mixtures that contain mesotrione. Adding a high rate of Classic in soybeans may also help any of these.
- After doing battle with dandelion this coming season, make a plan to apply herbicides this fall, when a little money goes a long way.

Calibration for Rate Controlled Sprayers

By: Dr. Erdal Ozkan
Source: https://agcrops.osu.edu/newsletter/corn-newsletter/08-2021/calibration-rate-controlled-sprayers

I had an article in last week's CORN newsletter encouraging growers to fine tune and calibrate their sprayers. I had mentioned that the next couple of weeks may be the last best time period to do this since planting season is just about to start. There would not be any better time to do this than now. The next day I got an email from a grower asking me this question that I get often: "I have a rate controller in the cab that regulates the flow rate of the sprayer regardless of the changes in sprayer ground speed. So, should I still calibrate the sprayer to find out the application rate?". The answer is, Yes, you should. Although the rate controllers do an excellent job with regulating the flow rate of nozzles to keep the application rate constant, a manual calibration at least once a year is needed to ensure the rate controller is functioning properly.

Here is why we should confirm the accuracy of rate controllers: Unfortunately, electronic controllers usually cannot detect flow rate changes on each nozzle on the boom, and none can detect changes in spray pattern. If a nozzle is plugged, or extremely worn out, the rate controller cannot tell us this is happening. It will still try to maintain the constant application rate by changing the system pressure and force other nozzles to spray less or more to overcome the problem in one or several nozzles. If the ground speed sensor works based on revolutions of the tractor wheels, the ground speed determined may not be accurate, because of the slippage that may occur under some ground conditions. Even the tire pressure being off just a few psi may change the tire revolutions per minute leading to erroneous travel speed readings. Finally, Controllers don't show changes in spray patterns that may happen when a nozzle is defective, plugged, or worn-out. So, we will have to continue manually checking the flow rate of the nozzles, and visually observing the changes in spray patterns until the technology is developed to do these observations remotely, and on-the-go.

As I mentioned in the article in last week's CORN newsletter, it usually doesn't take more than 30 minutes to calibrate a sprayer, and only three things are needed: a watch or smart phone to record the time when measuring the nozzle flow rate or the travel speed, a measuring tape, and a jar graduated in ounces. Please take a look at the Ohio State University Extension publication FABE-520 for an easy method to calibrate a boom-type sprayer. Here is the URL for this publication: http:// ohioline.osu.edu/factsheet/fabe-520

Not knowing limitations of rate controllers may create serious problems. I already mentioned how smoothly the rate controllers keep the application rate the same regardless of changes in travel speed. However, this convenience comes at a cost if the controller is forced to make drastic changes in the application rate as a result of too high or too low of a travel speed. As you know, to achieve best results from pesticides, the application rate, as well as the droplet size must remain relatively unchanged during the entire spraying. When sprayer speed goes up, to maintain the pre-set application rate, the controller requires the system pressure to go up to increase the nozzle flow rate. This, unfortunately results in more drift-prone droplets coming out of the nozzle, especially if the nozzle used is designed for low application rates within the recommended pressure ranges. Conversely, when the sprayer slows down, the opposite happens: the controller forces the system to lower the pressure, in order to reduce flow rate of nozzles. This will result in production of larger than the desired size of droplets, leading to inadequate coverage. If you are spraying Dicamba or 2,4-D herbicides, you need to pay even more attention to operation of rate controllers. As you know, only a small number of nozzles at specific ranges of pressure can be used to spray these products. Significant changes in ground speed may force the rate controller to make significant changes in spray pressure that may be outside the allowable legal pressure range required to spray these herbicides. Without you realizing it, you may find yourself in violation of the label. Make sure the nozzle size selected will allow the controllers to make necessary changes in the flow rates while still staying within a safe, applicable and allowable pressure range.

A Mineral Program is Key to Successful Grazing

By: Garth Ruff, Beef Cattle Field Specialist, OSU Extension (originally published in Farm & Dairy)
Source: https://u.osu.edu/beef/2021/04/07/a-mineral-program-is-key-to-successful-grazing/

The grass is getting greener by the day and the grazing season is within sight. In previous editions of this column my colleagues have covered a variety of topics to consider before turning livestock out to pasture this spring. While checking fences, watering systems, pasture fertility, and forage establishment are often on our minds before spring turnout, another thing we need to consider is our mineral program.

Having a sound, balanced mineral program in place is important throughout the year as minerals are involved in most if not all metabolic functions of our livestock, including growth, reproduction, and lactation. However, it is often on pasture where we run into mineral imbalances and issues. While some issues are harder to detect such as reduced daily gain or lost milk production, others like Grass Tetany are more obvious, and they all can have severe impacts on herd/flock profitability.

Minerals are complex, yet important

There isn't always a silver bullet for balancing mineral requirements for livestock in pasture. Soil type, pH, and fertility all have an influence are mineral availability to the forage, and thus the mineral intake of the livestock. Furthermore, due to their chemistry (and the periodic table) minerals interact with each other, and these interactions can cause deficiencies or toxicities within the animal.

Here in Ohio we know that many of our pasture soils are deficient in selenium and/or magnesium. Selenium is an important mineral for developing muscle, and often times can be supplemented via injection to young calves and lambs.

Magnesium is a bit more complicated. Grass Tetany is the clinical symptom of a magnesium deficiency. Lush, fast growing forages are often magnesium deficient, especially in fields with high soil test potassium levels. As

we look to utilize the rapid forage growth this spring, this is a good time to order and feed a Hi-Magnesium mineral blend. Copper is also important. Dr. Steve Boyles' recommendation is to feed a mineral to beef cattle with at least 1000 ppm. Keep in mind copper is also toxic to sheep at high levels.

Not all mineral mixes are equal

In the long run "cheap" mineral mixes aren't that cheap. Have you ever blamed the bull for your cows not getting bred? Perhaps fertility was compromised by the lack of mineral bioavailability to the cow. Cheap minerals may contain adequate levels of required nutrients but if they are in a form that is not nutritionally available, what good are they?

If comparing bioavailability of mineral complexes: Organic > Sulfate = Chloride > Carbonate = Oxide. Magnesium oxide is the only mineral in the oxide form that is bioavailable. One might shy away from mineral mixes with other minerals in the oxide form.

As bioavailability increases so does the cost of the mineral mix in the bag. Cheap red trace mineral blocks are red because the predominate mineral in them is Iron Oxide, which is the scientific name for rust, which livestock have no requirement for.

Vitamin M[angement]

A successful pasture mineral program is only good if managed. We need to know expected mineral intake. Calculate the number of head, counting youngstock, too. Often producers complain about over consumption of mineral and do not account for the calf/lamb getting its share too. We want to have adequate access and consumption. Mineral requirements change with the animal's stage of production and environmental situations that reduce feed intake. If mineral intake is too high move the mineral feeder farther away from the water source and loafing areas.

Salt

Some producers 'cut' their mineral when they think animals are eating too much. Adding salt makes adequate mineral intake tougher to achieve. For example, if a mineral with a recommended feeding rate of 3.0 ounces per day is mixed in a 50:50 ratio with plain white salt, animals need to consume 6 ounces per day to supply the targeted amount of 3.0 ounces of mineral.

What are the costs?

Many free-choice mineral mixes are formulated for 2-4 ounce daily consumption rates. On the high end, if cow consumes 4 ounces of a supplement per day for 365 days, then she consumes 91.2 pounds of the supplement in a year ((4 oz x 365 days) ÷ 16 oz/lb).

Many mineral and vitamin supplements are packaged in 50-pound bags, so a cow mineral bag with a 4 oz/d intake contains 200 animal days worth of mineral ((50 lb x 16 oz/lb) ÷ 4 oz/d). If your mineral is $35 per bag, that's $0.175 per day. This is cheap compared to the lost productivity lost (fertility) of a poor mineral program! Happy Grazing.

Spring Pasture Management Impacts Overall Production

By: Victor Shelton, NRCS State Agronomist/Grazing Specialist
Source: https://u.osu.edu/beef/2021/04/07/even-on-spring-grass-cows-may-need-more-fiber/#more-10671

Yes, it's getting to be that time of year — new spring green growth! The cows start complaining about eating hay and bellowing when they hear my voice or even just see me. It's not that the hay is any less delectable, it's just not what they know is available across the fence. It's about like a kid walking by a candy store; the focus is on the treat.

I've listened to several pretty intense arguments over the years on the topic of when to start grazing in the spring. Some spoiled cows are never denied their micro-greens and sadly, the pastures usually show it. I've heard some say, "the cows know best." They do have excellent biological feedback from their stomachs that

tells them there is usually more energy and protein in that lush new forage. This is even more true with small ruminants such as sheep and goats who can and will sometimes select specific plant parts because of differences in energy or nutrients that are needed at the time. Perhaps this is the ruminant animals "gut" instinct.

Unfortunately, just like eating too much candy from the candy store, ruminants eating too much lush green cotton candy growth early in the year can have its consequences. If you don't believe me, let them graze that short new growth for two or three days and then run them through the cattle chute to work them. You won't want to be the person tailing them in the chute. Like I've said before, don't stand too close behind those cows! One cough or skuttle from the cow in front of you and you might be covered.

What the cows try to initially ignore is the same thing your doctor may tell you: you need fiber. If that particular pasture was grazed down tight last fall and little or no residual was left behind, there is little or no fiber present. This young lush forage is rapidly fermentable in the rumen and may not meet two critical forage roles: maintaining the rumen forage mat and stimulating cud chewing. The rumen/fiber mat is essentially a mass of long-fiber plant matter that slows down and buffers the rumination and digestive processes of any other feeds that are consumed. It keeps the microbe balance, pH and digestive speed of the rumen stable throughout the day.

I can hear my wife saying, "cut to the chase." Okay, it is somewhat situational. Ideally, continue feeding hay until the forages have grown more and start containing more lignin. Lignin is a major component of the plant cell wall and give plants structure. Those fields grazed short last fall will lack sufficient fiber to go with all the washy high-water, high-protein forage that will come on with first growth. All ruminant livestock need to balance the carbon-nitrogen ratio in their rumen to maintain that mat. If they don't, then they will not perform the way you want them to and have less gain and milk production. The plants just go through their system faster than they can effectively utilize it.

If stop grazing heights were maintained with the last grazing prior to winter, then that dry forage left behind can help to balance out the lush forage. At a minimum, everyone should leave at least one field, ideally the one they plan to use first in the spring, with a fair amount of residual over winter and, in this case, more is better (four to six inches). That field can also provide a great alternative for calving over a muddy lot.

If you watch the cows after early turnout, they will graze exclusively on the lush new forage for two to three days and if sufficient fiber is not present, they will quickly start hitting fence rows and eating about any dry material they can find and will actually eat straw too if available, something they would normally rarely do.

Another alternative is to feed some hay along with the new growth. The cows will then eat enough dry hay to help balance out the fiber needs to maintain that rumen mat. This is certainly better for the cow, but not particularly ideal for the forage. Grazing too early can be costly by reducing total forage production for the entire grazing season. Grazing too early in the spring does nothing but remove the solar panel the plants need to start building sugars and growing new roots. The forages really need to be able to fully leaf out or canopy and get a good start before animals start removing that new growth, otherwise production will be reduced. Forages should be at least eight to ten inches tall, ideally more. If the cows-to-pasture acres ratio is low, then starting to graze a bit early might help to keep growth under control later, but in most cases, the cows-to-pasture acres is higher than it should be and therefore, detrimental to overall production.

If I have plenty of hay, then I'd continue feeding hay. Strategically, saving the better hay for early spring and feeding less quality hay earlier is usually a good thing and that usually is also true nutritional-wise for spring calving cows too.

That biological feedback mentioned earlier doesn't always work quick enough when it come to poisonous weeds — for some, it doesn't take very much. I am already seeing a fair amount of poison hemlock in some fields and especially along roadsides and low areas. Poison hemlock looks a lot like cow or wild parsnips but has purplish colored streaks and spots on the smooth stem. This plant is poison to both livestock and humans. It is a true biennial so it will set seed the second year — so kill it the first year! It is a prolific seed producer. Do not handle with bare hands. According to Purdue's toxic plant website, poison hemlock has toxic components that include the volatile alkaloids coniine and gamma-conicine. A lethal dose for a horse is four to five pounds of leaves. Cattle may be poisoned with one to two pounds, and sheep with a half-pound or less. Humans are often poisoned, mistaking the roots for parsnips, the leaves for parsley or the seeds for anise.

Poisoned animals show signs within two hours of eating the plant, and tend to become nervous, will tremble and become uncoordinated. After the excitement phase, the animal becomes depressed. The heart and respiratory rates slow down, the legs, ears and other extremities become cold, colic and/or bloating may occur. Even at this stage, the animal may not die, but may remain like this for several hours to days, and then recover. In lethal cases, the animals tend to die within five to 10 hours after the onset of the clinical signs, typically from respiratory failure (in which case the mucus membranes will appear blue). A mousy odor has been reported to emanate from affected animals. Contact your local extension office for more information on this plant or control methods.

I'll end today with a reminder on magnesium. It is a good idea to move to a high magnesium type mineral supplement (usually 10-20% instead of 1 or 2%) and continue with it until we are past the early flush of new forage. The issue with insufficient magnesium is more of a problem where nitrogen and/or potassium has been recently applied or in excessive amounts. For more detailed information about grass tetany, contact your local extension service or large animal veterinarian.

Management of spring regrowth will impact overall production. The cows or sheep are the tools to help manage the forage! Remember, it's not about maximizing a grazing event, but maximizing a grazing season! Keep on grazing!

Bessy is in Heat- What Do I Do?

By: Maurice L. Eastridge, Professor and Extension Dairy Specialist, Department of Animal Sciences- The Ohio State University
Written for the Farm and Dairy Newspaper

Growing up on a small dairy farm in Kentucky, my father primarily used a herd bull on our dairy farm, but my grandfather had a registered herd and even though he had a 'clean up' bull, he primarily bred with artificial insemination. When the technician came to breed a cow, he would retrieve the ampule (glass capsule) of semen from the liquid nitrogen tank, etch the neck, break off the top, and then load the insemination rod by pulling the semen into the rod. Then along came the straw of semen that could be loaded directly into the insemination rod. Which bulls to choose from? Well, we chose among the best of the Holstein sires versus cost for our two Holstein herds. There was no question as to crossbreeding of dairy cattle, of course there was no sexed semen, and for sure, we were not breeding dairy cows to a beef sire. This only happened if the neighbors beef bull got out and bred some of our cows or heifers unintentionally.

Today, the breeding decision is more complex based on the plans for the offspring. Is the offspring to be used for head replacements? If so, then dairy sires of high merit will be selected and semen sexed for females may be considered, especially for breeding the heifers with higher fertility. If the offspring is going to be sold, then are they for dairy breeding or beef? If going for beef, then should we be breeding the cow to a beef sire instead of a dairy sire and are we interested in semen sexed for males? Wow, a lot to think about in deciding who to

breed Bessy to when she comes into heat.

In the April 2021 issue of the Journal of Dairy Science, D.P. Berry from the Animal and Grassland Research and Innovation Center in Ireland published an invited review paper on “Beef-on-dairy – the generation of crossbred beef x dairy cattle”. Many excellent facets were addressed in this article to where and why the dairy industry has changed to consider breeding some cows to beef sires. Figure 1 is from the paper and outlines a decision tree to consider for Bessy. During the pre-breeding phase, should she be culled? If not, then if she is genetically superior, then breed her to high merit dairy sire using sexed or conventional semen. If she is of low genetic merit, then breed her to a beef sire. From this point, then decisions have to be made as to which females are going to be kept based on genotyping and then a transaction index used as to how those for beef will be reared for the desired markets. Given that dairy producers are often focused on thinking about changes in prices per hundredweight for their milk, the author shared the impacts of the differential price for calves born from dairy x dairy versus beef x dairy. As the differential varies between 0 to $200, the equivalent price per pound of milk increases as the differential price for the calf increases and the differential price for milk is greater with lower than higher producing herds as the differential price of the calf increases. This is relative intuitive, but it may help to reflect on the equivalent price change in milk instead of just the differential price received for marketed calves. Either way, the pros and cons of various breeding decisions need to be considered which are also addressed in the paper.

Certainly, there is a lot to consider and evaluate for a given dairy herd in which semen to use with Bessy based on herd genetics, number of replacements needed, and available beef markets. Ohio State University Extension has been offering some programs to focus on these options and they have teamed up with Michigan State University to offer additional programs during April 21, April 28, and May 5. For additional information or to register, go to: go.osu.edu/beefmanagement.

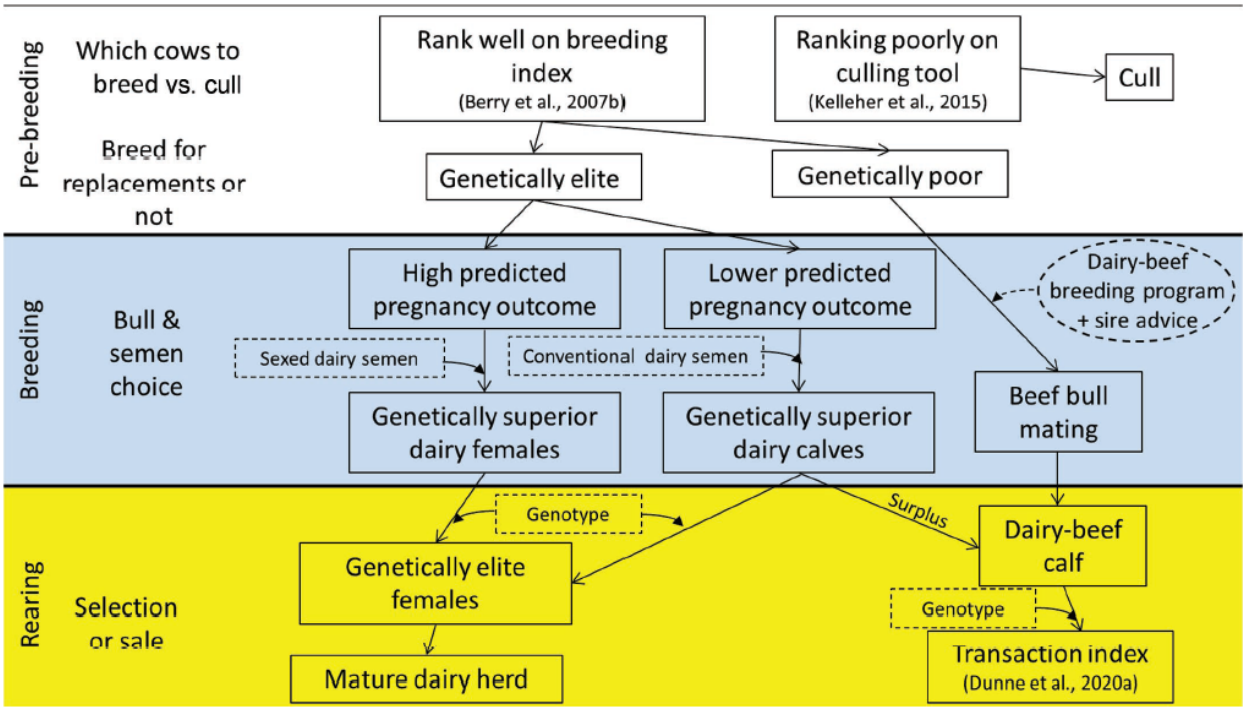


Figure 1. Decision tree for breeding decisions during the production cycle of a dairy cow (Berry, J. Dairy Sci.104:3789, April 2021)

Contagious Keratoconjunctivitis (Pinkeye)

By: Susan Schoenian, Sheep & Goat Specialist, University of Maryland Small Ruminant Extension Program
(Previously published on the Maryland Small Ruminant Page)
Source: https://u.osu.edu/sheep/2021/04/06/contagious-keratoconjunctivitis-pinkeye/#more-434
(Image Source: Susan Schoenian, University of Maryland)

With sheep sale season here and fly season near, so is the potential for pinkeye. Join Susan Schoenian this week from the University of Maryland as she discusses the symptoms and preventative measures that can be taken to keep this issue at bay in your operation.

Pink eye is the lay term used to describe any number of diseases affecting the eye(s) of animals. The more proper name is infectious keratoconjunctivitis. Webster's Dictionary defines keratoconjunctivitis as "a combined inflammation of the cornea and conjunctiva."
Pink eye is an infectious and contagious bacterial disease of sheep, goats, and other animals. Though most common in the summer and in young animals, it may occur at any time of the year and in sheep and goats of any age. It occurs in all sheep and goat-raising areas of the world, though the primary causative organisms may vary.

Pink eye is caused by one of a number of different microorganisms. In the United States, the microorgansims most commonly associated with pinkeye in sheep and goats are Chlamydia psittaci ovis and Mycoplasma conjunctivae. The Chlamydia organism is the same organism that can cause enzootic abortions in ewes and does. Several other bacteria may play a secondary role in infections.

The causative organism(s) can be determined by a veterinary diagnostic lab from a scraping or swab of the conjunctiva. Depending upon the causative organism, pink eye can be contagious to people.

Symptoms

Pink eye tends to occur as an outbreak in a flock or herd. The causative organism is commonly introduced via purchased sheep or goats. The microorganisms that cause pink eye are widely distributed and may persist in resistant, carrier animals. Spread occurs via direct contact. Sheep and goats raised under intensive conditions are most commonly affected.

When sheep and goats eat out of the same trough, they can easily transmit or contract the disease. Overcrowding and poor ventilation contribute to the spread of the disease. Dry, dusty conditions and irritants such as flies tend to predispose or exacerbate the disease. Flies or dust can carry the bacteria to the eye.
Whatever organism is responsible, the symptoms are similar. Affected animals blink repeatedly and have an aversion to bright sunlight. The side of the face below the eye may be wet due to tearing. Upon close examination, the membranes of the eye appear red and inflamed. The eyes become cloudy or opaque. An ulcer may develop. The condition is painful and may affect one or both eyes. Pink eye can cause temporary blindness in affected animals; permanent blindness in severe cases.

Sheep and goats rarely die from pink eye. The cost of the disease is associated with treatment costs (medicine and labor) and production losses, as affected animals may have difficulty finding food and water. Animals that suffer temporary blindness may require hand feeding or watering to prevent production losses.

Treatment

Affected animals should be isolated from the rest of the flock to prevent spread of the disease. They should be housed in a clean, dry, comfortable, and shady place. Pink eye is usually treated with any number of

antibiotics that are injected into the body or placed directly in the eye.

The most common treatment is to apply terramycin ointment to the affected eye(s) two to four times per day. Some veterinarians advocate the use of intramammary mastitis tubes for the treatment of pink eye. As with the terramycin ointment, the antibiotic is applied directly to the eye.

Ointments are usually more effective than powders or sprays.

They are less irritating to the already inflamed eye. Eye drops are easier to administer than ointments. Before applying medicine to the eye, the animal's face should be cleaned and the debris around the eye(s) should be removed. Surgical gloves should be used when affected animals are handled.

Sometimes, subconjunctival injections of penicillin are given or the antibiotic is dropped into the eye. When it is not practical to treat individual animals repeatedly, antibiotics may be injected systemically. Long-acting oxytetracyclines (e.g. LA-200®) are most commonly used. Tylosin (Tylan®) is also effective against the causative organisms of pink eye.

Because most of these antibiotic treatments are not FDA-approved to treat pink eye in sheep and/or goats, veterinary advice should be sought. Extra-label drug use requires veterinary approval, even if the drugs can be purchased over-the-counter or via mail order. Subconjunctival injections should not be attempted by lay people.

Despite intensive efforts, treatment may have little effect on the course or severity of the disease. Pink eye is similar to sore mouth (orf) in that the disease is usually self-limiting and the majority of affected animals will clear up without treatment, usually in a week to 10 days. Severely affected animals may take longer to recover. Recovered animals have resistance for varying lengths of time. It is possible for them to become reinfected, as acquired immunity is not strong or long-lasting.

Prevention

There is no vaccine to prevent pink eye in sheep and goats. Because the microorganisms that cause pink eye in cattle (Moraxella bovis) are different from the ones that cause pink eye in sheep and goats, the vaccine used to prevent pink eye in cattle will not prevent pink eye in sheep or goats.

The best way to prevent pink eye is to maintain a closed flock or herd. Do not purchase animals from public auctions. Isolate new livestock for at least 30 days. Show animals should also be isolated upon returning to the farm, as pink eye is common at fairs and expositions.

Dust and fly control will aid in the control and spread of pink eye. Protection from sunlight should be provided. Complete disease eradication is difficult because the organisms that cause pinkeye are widespread and may persist in carrier animals.

Differential diagnosis

Entropion (inverted eyelids)

Entropion is a congenital disorder which is characterized by the turning in of one or both of the eyelids. Left untreated, the cornea becomes cloudy and ulcerated, leading to permanent blindness. Entropion can be corrected, but is a highly heritable trait.

Neurological disease

Blindness may be a symptom of various diseases that affect the central nervous system of sheep and goats: polioencephalomalacia (polio), pregnancy toxemia (ketosis), listeriosis (circling disease), vitamin A deficiency, toxins, and acute lead poisoning.

Noninfectious pinkeye
Noninfectious forms of pink eye can occur when the eye is irritated by bright sunlight, dust, hay, or grass. Injuries or trauma may also affect the eye(s).

2021 East Ohio Women in Agriculture Program Series

The 2021 East Ohio Women in Agriculture Program Series has offered (and continues to offer) a variety of financial, production, and home-related topics to help you as a woman in agriculture. Webinar Registration is available at go.osu.edu/eowiaseries2021 . Webinars are Thursdays from noon – 1:00 PM. Here are the remaining webinars in the series:

April 8 – Bury Seeds, Not Stress—Sarah Noggle and Bridget Britton, OSU Extension – When you live where you work, there are stressors that can go unacknowledged. Agriculture life brings unique challenges to us personally and professionally. Join us as we identify what makes us unique and talk about coping strategies.

April 22 – Reaching Your Educational Goals – Dennis DeCamp, OSU Extension – Regardless of age, educational opportunities are always available. Explore options for obtaining and funding education to meet your goals while maintaining a balanced life.

May 13 – Veterinarians: Building a Relationship & Knowing When to Call – A working relationship with your veterinarian can teach you when it's appropriate to try something at home vs. having them out on a call to improve your farm's husbandry & production.

May 27 – He Said, She Said – Emily Marrison, OSU Extension – Women in agriculture often work with men in agriculture. Explore ways to improve interpersonal communication for more productive work settings and peaceful home environments.

Field Day Registration is available at go.osu.edu/eowiafielddays2021 .

Field Days are 5:30 PM meal/ 6:00-8:30 PM program. Here are the remaining field days in the series:

May Field Day – Tuesday, May 4 – Raising Livestock on 5 Acres or Less with Sandy Smith, OSU Extension (Carroll County) – So you have some land and you want some extra income or a supply of food for your family. This session will investigate all of your options and possibilities.

July Field Day – Wednesday, July 14 – Hands-On Tractor Operation Skill-Builder with Dee Jepsen, OSU Farm Safety Specialist (Stark County) – Examining the utility of the compact tractor – safety, parts, color coding, hand signals and operation will be discussed in this interactive audience driven session.

We hope you will find one or more of these resources and programs helpful. Happy Spring!

"Our greatest fear should not be of failure, but of succeeding at something that doesn't really matter."

D.L. Moody

CFAES

OHIO STATE UNIVERSITY EXTENSION

East Ohio Women in Agriculture

2021 Program Series

Who should attend:

Women and young women (high school age) who are interested, involved, or want to become involved in food, agriculture, natural resources, or small business.

These webinars are a great place to learn, share and network. Be surrounded by other women who are facing the same day-to-day ups, downs, adventures and dilemmas as you.

- 10 free webinars 2nd and 4th Thursdays January-May 12:00 to 1:00 PM
- 3 free in-person field days 1st Tuesdays March-May 5:30 to 8:30 PM (Dinner available for $15)

Webinar Registration

go.osu.edu/eowiaseries2021

Field Day Registration

go.osu.edu/eowiafielddays2021

THE OHIO STATE UNIVERSITY
COLLEGE OF FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES

Webinars and Field Days

Date & Time	Title & Description	Event Type
Thursday, January 14, 2021 12:00-1:00PM	Farm Income Tax Update - Barry Ward, OSU Extension This update will arm farm taxpayers with tax information on current critical issues including insight into new COVID related legislation.	Webinar
Thursday, January 28, 2021 12:00-1:00PM	Cooking with Cast Iron – Christine Kendle, OSU Extension Are you not sure what pan to use? How to season it? How you should care for your cast iron cookware? This class is for you!	Webinar
Thursday, February 11, 2021 12:00-1:00PM	QPR (Question, Persuade, Refer) Suicide Prevention – Panel QPR includes how to "ask a question to save a life," recognizing warning signs, and referring for help.	Webinar
Thursday, February 25, 2021 12:00-1:00PM	Insurance - Get Covered! – Kim Davis, Kim Davis Insurance Agency, LLC Just because you pay an insurance premium doesn't mean you're covered for everything! Don't miss this fun, interactive session discussing all types of insurance.	Webinar
Tuesday, March 2, 2021 5:30-8:30PM	Hands-On Tractor Operation Skill-Builder – Dee Jepsen, Ohio State University Examining the utility of the compact tractor – safety, parts, color coding, hand signals and operation will be discussed in this interactive audience driven session. (May be outdoors weather permitting)	Field Day
Thursday, March 11, 2021 12:00-1:00PM	LOL – Lots of Loans! – Panel Hear from our panel to find the right fit for your needs. Including lines of credit, ag real estate, equipment & building loans/leases, home loans, home equity loans, youth loans, etc.	Webinar
Thursday, March 25, 2021 12:00-1:00PM	The Mystery of Fruit Tree Pruning – Paul Snyder, OARDC Secrest Arboretum This session covers the basics of how and when to prune fruit trees, highlighting the most common backyard fruit tree, the apple tree.	Webinar
Tuesday, April 6, 2021 5:30-8:30PM	Soils and Sustainable Agriculture—Erika Lyon and Heather Neikirk, OSU Extension and Clint Finney, NRCS Jefferson/Harrison What is sustainable for you? Dig into improving the health of your soils and the basics of soil testing services and kits. Explore sustainability and stewardship practices and opportunities for utilization in small farm animal and plant-based enterprises.	Field Day
Thursday, April 8, 2021 12:00-1:00PM	Bury Seeds, Not Stress—Sarah Noggle and Bridget Britton, OSU Extension When you live where you work, there are stressors that can go unacknowledged. Agriculture life brings unique challenges to us personally and professionally. Join us as we identify what makes us unique and talk about coping strategies.	Webinar
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Cancellation Policy: In-person sessions may be cancelled due to university, state or local guidelines on group events. The event will not be rescheduled. No registration fees will be refunded.