THE DAIRY BULLETIN

A NEBRASKA DAIRY EXTENSION UPDATE Fall 2020

# Preparing Your Farm for Winter

By Kim Clark, Extension Educator Dairy

The cold weather and recent snowfall may have us scrambling to finish field work and prepare for the weather winter brings. If you haven't started preparing for winter now is the time. Below are some reminders as you prepare your animals and farm for the upcoming winter months.

1. **Face the opening of the calf hutches away from prevailing winter winds. Typically south to southeast is preferred in most Nebraska locations.**

It is critical during the first few weeks that a calf maintains its body temperature. When the ambient (environmental) temperature is outside the thermal neutral zone – the range in which a calf does not need to exert additional energy to warm up in the winter or cool down in the summer - of the calf, extra energy is required for the calf to maintain its body temperature. This energy should be used for growth and development instead of maintenance.

2. **Have calf jackets easily accessible and ready to use.**

If you aren't already using calf jackets, now is the time to begin using them. Calf jackets keep calves dry and warm so energy can be used for growth and development instead of keeping the calf warm. Calf jackets need to be clean, especially if you are recycling jackets. Calf growth and development during the first two weeks is critical.

3. **Move animals inside or provide a shelter from the wind.**

If possible, move animals inside a well ventilated barn. This will help protect them from the wind, especially calves that have a much lower percentage of body fat. Both cold weather and poor quality air will stress animals.


Figure 1: Calf jackets should be used so calves do not have to exert their energy to maintain their warmth. Instead energy should be used for growth.

4. **Ensure bedding is deep and able to wick away moisture from the animal and stays dry.**

It is important that animals be able to nest to help them maintain body temperature in the winter. It is equally important that the bedding remains dry. One solution is to put down a layer of saw dust or sand to absorb moisture and straw or wood shavings on top. Extra straw for bedding is helpful, too, for maintaining body temperature.

5. **Ensure there is adequate feed supply to make it through the winter.**

Knowing how much feed is needed for the winter and storing the feed on the farm will eliminate the need to receive and store new feed over the winter months.

6. **Have the necessary teat cream in the parlor.**

Avoid frozen teats in the winter by applying teat cream. This is also a good time to train and remind employees of the milking procedures, which now includes the addition of teat cream before cows exit the parlor.

7. **Check the heating on waterers to insure constant water access. Repair any leaks to avoid wet environments for animals.**

8. **Make building repairs including curtains and roofs.**

Over time, leaks can happen in roofs and tears in curtains. It is easiest to make these repairs while the weather is still mild and eliminates having to make the repairs during a snow storm or blizzard.

9. **Perform maintenance of all farm vehicles and equipment.**

10. **Have a backup plan for hauling milk.**

It is always good to have a plan in place just in case the milk hauler cannot make it to or leave your farm. This should include a plan to clear roads leading up to your farm.

11. **Provide employees with cold weather gear including a coat, hat, gloves, insulated boots and coveralls. They will appreciated it.**

You can never be 100% prepared for winter but starting with these reminders will help get your farm ready for the upcoming cold weather, snow and ice.

For more information visit: https://dairy.unl.edu/

# Why Do We Not Have an Estate Plan?

By Allan Vyhnalek, Nebraska Extension Educator for Farm and Ranch Succession

While there seem to be no exact statistics, it is anecdotally known — from talking to financial planners, attorneys and other professionals — that about half of our farmers and ranchers have an estate plan completed. Most professionals will indicate, “it is a short half!”

This begs the question: why do we put off estate planning? There seems to be some underlying emotion and thought to this. For quite a few farmers and ranchers, the thought of retiring is likely not something that they want to consider. So, if I’m not retiring, why would I complete an estate plan?

Some studies of farmers from both Iowa and Nebraska show that most never plan to fully retire. One thought is that, if you are not retiring, you don’t need an estate plan. However, preparing for retirement isn’t the only reason to have one. The true purpose of an estate plan does usually not lie in what happens while you are alive, but what happens when you die. The question is: what happens to your “stuff” when you do pass away? Do you want control of what happens when you are no longer here?

We also don’t do an estate plan because it is mentally tough work. Thinking about planning for the estate means that most of us go to a lawyer. As you talk to lawyers, they might go into their legalese language that is hard for some of us to keep up with. They use terms like “probate,” “wills,” “trusts,” “partnerships,” “LLCs,” “buy/sell agreements,” “POD” and “TOD.” These examples are terms and acronyms that we typically do not use daily. This can cause confusion and uncertainty.

In some cases, planning is delayed because we are afraid to make a mistake. We’ve seen others make plans, have something drastically change within the family like an untimely death, divorce or financial crisis, for example, which made the plan they currently have in place unworkable or unfeasible. This causes us to not want to make the plan for fear that something will change. The recommendation is to have a plan in place. Then if there is a change that makes the current plan untenable, you can simply change it. This will cost money, but not nearly as much as having no plan, or a plan that won’t work for your situation.

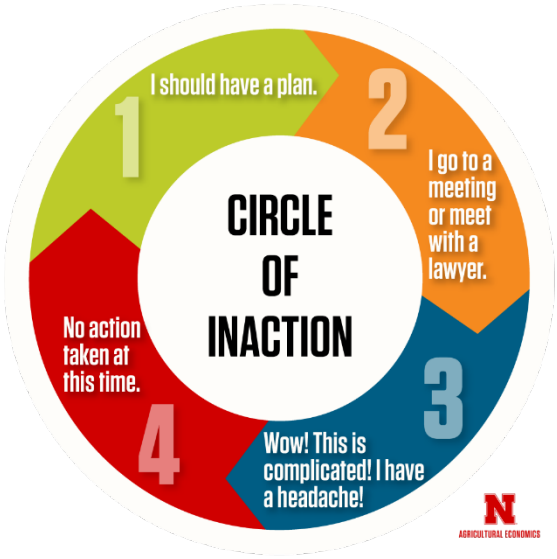
Because of the reasons that are outlined here and others, a “circle of inaction” is created when trying to develop your plan. Let’s talk about that circle.

**Step one:** You realize that you need an estate plan. If you are reading this article, you have probably already realized this need.

**Step two:** After deciding to start the process of developing a plan, you quickly realize that you need more information. So, you to go to a meeting about estate planning, and/or meet with a lawyer. Everyone is pretty good about getting this step done.

**Step three:** You've taken the leap into the planning process, but you realize that this is hard and more complicated than predicted; it is giving you a headache to just think about this. Most farmers and ranchers are programed to think about the next production step. Things like what fertilizer rate, what bull for breeding, when to apply herbicide, what herbicide — those kinds of questions. Thinking about death and about what happens to our stuff is not as clear or as urgent as production decisions. There is not a "one-size-fits-all" process, especially for multi-generational operations.

**Step four:** Sometime in the decision-making process, thinking about the estate plan was so unpleasant, that you just stop, or take no actions at this time. The dilemma of being stuck in neutral and not deciding can last from three months to three years, or longer. The crazy part is that most will circle back to step one, two and three only to end up stuck in step four again.




It is simply recommended that you get an estate plan done. Research indicates that for many families, planning is delayed until there has been a critical life event which forces the family to address the matter. Examples would be loss of life from an accident, stroke, heart attack; or it will be life changing diseases like Alzheimer's, cancer, or Parkinson's. Some members of the family will still have sound decision-making when there is a crisis. Others don't do as well, and the crisis affects decision-making. Get a plan in place ahead of this catastrophic event, when there isn't the added stress.

The correct planning should be done in five steps:

1) A plan is needed.
2) There is a need to go to a meeting and/or meet with a lawyer.
3) Family members are consulted to know what their wishes are.
4) Decisions are made and plan is developed.
5) Plan is implemented with documents signed. Remember, most estate plans can be changed if needed.

You probably will not get through the five steps listed above in three weeks or less. You can set a goal to get this done in three to six months. Get started now. Most clients who attend estate or succession planning meetings leave the meeting saying something like: "I just wished I would have started this process 10-15 years ago."

For more information on estate and succession planning, visit: [https://agecon.unl.edu/farm-succession](https://agecon.unl.edu/farm-succession)


"My hobbies are gardening and dairy farming.
I like to plant the seeds of success and milk my creativity!"


"My kids have grown up farming. They don't need any 'training'."
"We're so busy. I don't want to ask for help."
"I can't smell hydrogen sulfide, so it's probably okay to go in there."
"I'm afraid I'll get fired if I admit that I don't know how to do this."
"I've done this dozens of times."
Perhaps 80% of farm accidents are due to carelessness or failure to deal with hazards safely.
Source: CDC-NIOSH Epidemiology of Farm Related Injuries
MANURE HAPPENS. TAKE CREDIT.
UNL Animal Manure Management Team
manure.unl.edu
For more tips, watch our recent webinar on manure safety at: https://youtu.be/y8QIC50IufM.
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"Mis hijos crecieron trabajando en una granja, no necesitan ninguna 'capacitación'."
"Estamos muy ocupados. No quiero pedir ayuda."
"No huele a sulfuro de hidrógeno, entonces probablemente es seguro entrar."
"Tengo miedo de que me despidan si digo que no sé como hacer esto"
"Esto lo he hecho un montón de veces"
Quizás el 80% de los accidentes en granjas se deban a la falta de cuidado o a fallar en manejar peligros de forma segura
Source: CDC-NIOSH Epidemiology of Farm Related Injuries
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Para más tips, mira nuestro último webinar sobre seguridad al trabajar con estiércol en: https://youtu.be/y8QIC50IufM.
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# Does Wind Direction Impact Neighbor Exposure to Odor?

By Rick Koelsch, University of Nebraska-Lincoln, Professor Biological Systems Engineering and Animal Science

Roughly half of all neighbor complaints of livestock odors originate from land application of manure. A weather forecast and a little knowledge of odor dilution can be a powerful tool for keeping your neighbors happy, or at least avoiding those irate phone calls. This article summarizes those weather conditions that should be considered when planning manure application.

Incorporation of manure into the soil is always the "best" practice for controlling odor. Soil is an excellent filter for removing odors released by manure. However, maintaining residue cover for protecting soil quality and erosion and conserving water does not always allow for manure to be incorporated.

When manure cannot be incorporated, the next 36-hour period after land-applying manure is the most critical. Why? Good drying conditions over the next two days can significantly reduce the release of odors. In addition, the next two evenings are the most likely time when neighbors will experience manure's odors. Especially, when applying manure without incorporating it, pay close attention to the next 36-hour weather forecast.

**Predicted Wind Direction**

Wind direction is the single most critical information for selecting fields. Odor plumes travel in the same direction as wind and spread out laterally very little. By identifying the edges of the field perpendicular to the wind and the wind's direction, one can quickly identify the neighbors at greatest risk and those unlikely to be impacted.

For the two land application site options illustrated in Figure 1 (Field A and B), Field A presents a much smaller risk to nearby neighbors. By choosing a land application site ½ mile to the north of Field B for this southwest wind, the risk has been dramatically reduced in this example. Paying attention to the wind directional forecast for a 36-hour period after applying manure, allows a person to gauge the risk of odor affecting neighbors.

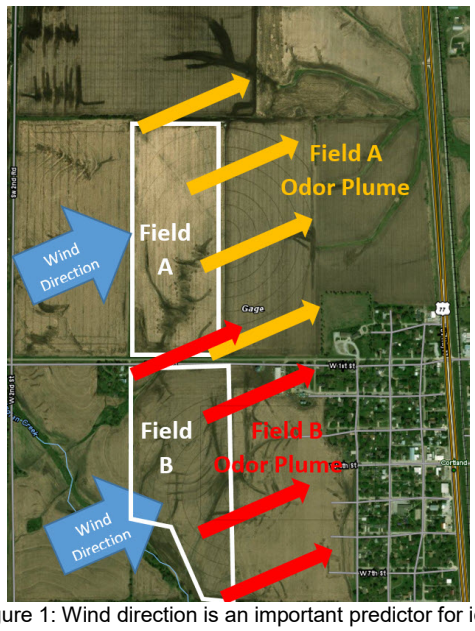


Figure 1: Wind direction is an important predictor for identifying which neighbors are at risk.

**Evening Hours and Manure Application**

Can you recall a time when you observed smoke cloud hanging near the ground? Often this is observed as air temperatures are cooling and when winds are light, which most commonly occurs during evening and nighttime hours. Under these conditions the smoke is not being diluted and is being held near the ground for all to experience. Although we cannot see odors, the exact same atmospheric conditions create the greatest risk for neighbors experiencing odors (Table 1).

Under daytime conditions, odor plumes are generally rising, being diluted with fresh air to where odors are unlikely to be noticed by your neighbors. Bright sunshine and warming air is best for dispersing odors. Higher wind speeds (especially at night) also encourage greater mixing of fresh and odorous air, and reducing the odor risk. Note that nighttime hours with low wind speeds are the conditions most likely to expose neighbors to odors from land application.

**Weather Forecasts and Odors**

Weather forecasts that provide 1) wind direction and speed; 2) sky conditions, and 3) temperature can be extremely valuable in deciding when and where to apply manure. Many weather services provide this

information in their forecasts. Aviation Weather Report and Forecast (Figures 2 and 3) shares the important forecast information in an easily reviewed visual format.

Table 1. Atmospheric conditions and their risk of holding odors near the ground.[1]

| Surface Wind Speed (mph) | Daytime Solar Radiation | | | Nighttime Cloud Cover | |
|---|---|---|---|---|---|
| | Strong | Moderate | Slight | >50% | <50% |
| <4.5 | Very Low Risk | Very Low Risk | Very Low Risk | High Risk | High Risk |
| 5 to 7 | Very Low Risk | Very Low Risk | Low Risk | High Risk | High Risk |
| 7 to 11 | Very Low Risk | Low Risk | Low Risk | Low Risk | High Risk |
| > 11 | Low Risk | Low Risk | Low Risk | Low Risk | Low Risk |

[1] Based upon Pasquill-Giffort air stability classes (Pasquill, 1961).

To access a weather report from the Aviation Weather Report and Forecast:

1. Under “Get Locations”, select a Region (or state) and click on “Go”,
2. Under “Get Forecast”, select an airport location closest to your own and click on “Go”
3. Your weather forecast should now appear for a three day period. *Note: you may have to scroll down the page to see your report.*

For the Columbus Nebraska forecast (Figure 2), note that nighttime conditions will be producing higher risks for neighbors for the immediate future. No extended periods of good drying conditions are available before the high risk night conditions occur.

**Question:** If waiting for more desirable weather conditions is not a choice, what is my best option under these conditions?

**Answer:** Note the forecasted nighttime wind direction and use this information to select a land application site with the fewest downwind residences (mainly to the south and east in this example).

The weather forecast for Sidney (Figure 3) suggests that neighbors to the north of a land application site on July 20 are at risk for odor. Spreading manure on July 19 and 20 should be avoided if neighbors reside to the north. Conditions for applying manure are more favorable on July 21 for good drying conditions and nighttime conditions that will disperse odors quickly. July 21 might be a good day for manure application on fields with greater neighbor pressure.

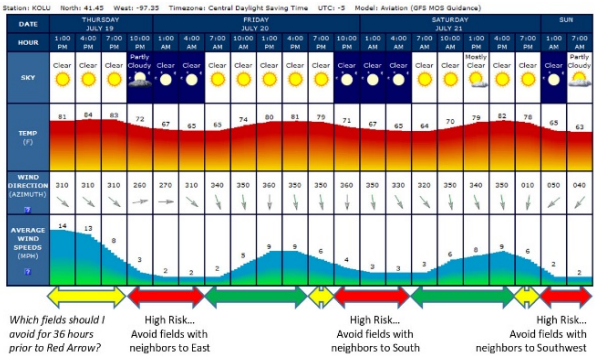


Figure 2: Weather forecast for Columbus, NE. Low wind speeds at night will place downwind neighbors at high risk for experiencing odors from manure application. Reference: Aviation Weather Report and Forecast. Air Sports Net.

Picking the right weather conditions for land applying manure, may not improve your popularity in the community, but it can go along way with improving your community’s acceptance of livestock systems.

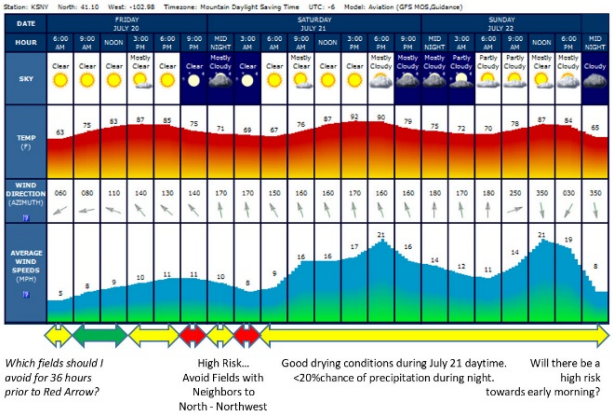


Figure 3: Weather forecast for Sidney, NE. Higher wind speeds during evening of July 21 will reduce risk of neighbor experiencing odor from nearby field receiving manure.

# CARE OF CALVES IN WINTER

## Are you prepared?

## The first 24 hours

- Dry the calf well and provide a warming box or heated room
- Feed newborn calves high quality colostrum within 2-3 hours of birth - 200-300 grams immunoglobulins is recommended
- Navel dip and vaccinate as recommended by the herd veterinarian

## Milk Replacer

- Milk should be fed at 101-105 degrees Fahrenheit
- Add a fat supplement to milk replacer or switch to a milk replacer with higher fat

## Housing

- Clean, dry bedding; Add extra bedding to hutches - straw provides added warmth
- Face hutches to the south or southeast
- Facilities should be well-ventilated

## Calf Jackets

- They should be in use when temperatures are 50 degrees Fahrenheit and lower
- Jackets should be clean
- Adjust the jacket with the growth of the calf

## Feeding

- Starter feed should be energy and nutrient dense
- Change starter feed at least 2 times weekly
- Add an extra feeding each day
- Increase the volume of milk during winter and maintain that volume all season.

## Water

- Warm water should be provided about 30 minutes after each milk feeding; this is essential for calf health and helps maintain body temperature
- All calves should have access to water - even during cold temperatures

## Hygiene

- Clean all feed and water buckets at least once a week
- Bottles including nipples should be cleaned and disinfected after each feeding

## Consistency is essential

- Routine is key!
- Feed the same time of day, same volume, same solids, same temperature each day

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# CUIDADO DE TERNEROS EN INVIERNO

## ¿Estás preparado?

## Las primeras 24 horas

- Seque bien el ternero y provéale una caja de calentamiento (warming box) o un cuarto con calefacción.
- Alimente al recién nacido con calostro de alta calidad en las primeras 2-3 horas después del parto -Se recomienda de 200 a 300 gramos de inmunoglobulina
- Cure el ombligo y vacune de acuerdo a las recomendaciones del veterinario a cargo.

## Sustituto de leche

- La leche debería de estar entre 101-105 grados Fahrenheit.
- Añada un suplemento de grasa al sustito de leche o cambie a un sustituto con mayor contenido de grasa.

## Instalaciones/Housing

- Camas limpias y secas; añada esustrato extra a los cubículos de terneros (hutches) - la paja ayuda a mantener el calor.
- Oriente los cubículos de los terneros hacia el sur o al sureste.
- Las instalaciones deben de estar bien ventiladas.

## Abrigos para terneros

- Deben de usarse cuando la temperatura está a 50 grados Fahrenheit o más bajas.
- Los abrigos deben permanecer limpios
- Ajuste el abrigo al tamaño del ternero mientras crece.

## Alimentación

- El alimento iniciador debe de ser alto en energía y nutrientes.
- Cambie el alimento iniciador por lo menos dos veces por semana.
- Añada alimento extra todos los días.
- Incremente el volumen de leche durante el invierno y mantenga ese volumen durante toda la estación.

## Agua

- Agua tibia debe de proveerse al rededor de 30 minutos después de alimentar con leche; esto es esencial para la salud del ternero y lo ayuda a mantener su temperatura corporal.
- Todos los terneros deben de tener acceso a agua - incluso durante bajas temperaturas.

## Higiene

- Limpie todos los comederos y bebederos por lo menos una vez por semana.
- Las botellas, incluyendo las tetinas, deben de limpiarse y desinfectarse después de cada alimentación.

## Ser consistente es esencial

- ¡La rutina es clave!
- Alimente a la misma hora, el mismo volumen, los mismos solidos, a la misma temperatura cada día.

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# Using Year End Financial Data for Dairy Farm Management

Robert Tigner, Agricultural Systems Economist

In a few weeks dairy farms will be preparing year-end financial documents, balance sheets and Income statements. These documents will show a challenging 2020 with COVID-19 and all that followed. Some dairy farms will have had crop production problems as well as milk dumping. The volatility in raw milk demand and milk prices reflected much of what happened in the supply chain for other consumer products too. Year-end financial documents can be used to improve the dairy farm financial performance. This article will discuss how to use those documents.

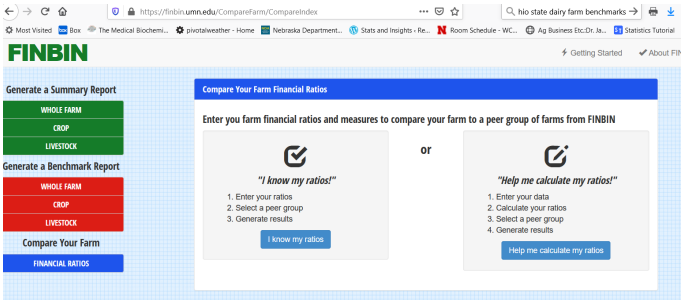


Figure 1: FINBIN website

Calculating financial ratios is very accessible and straightforward using the Finbin (finbin.umn.edu) website. (Figure 1) Finbin will either calculate for you or allow you to enter financial ratios you have already calculated. The next step is to select a peer group from the Finbin database. The peer group should be close in size and production method for good comparison. For 2019, there were 362 dairy farms in the Finbin database; 37 were tie stall barns. Not enough farms organic or rotational grazing are in the database for comparison.


Figure 2: Ohio State Dairy 15 Competitive measures.

After the dairy farm has the Finbin report comparing their financial ratios to the peer group, the work of setting goals and changing management protocols begins. Simply knowing how a dairy farm compares to a Finbin peer group does not show where to make improvement. Ohio State University has a publication ’15 Measures of Dairy Farm Competitiveness’ on its’ dairy team web site (dairy.osu.edu). The competitiveness measures include production, liquidity, profitability, solvency and human resources goals.

The past several years have been very challenging for dairy farms, many of the challenges outside the dairy farm’s control. Operating at the highest financial level will improve the success and help the diary family realize its goals.

These English/Spanish flashcards are a tool you can use to communicate with employees.

# Cows
## *Las Vacas*


Steam up cow
*Vaca de preparto*

Lame cow
*Vaca coja*
also
Limping (action)
*Cojeando*

Heifer
*Vaquilla, Ternera*

Sick cow
*Vaca enferma*

Dry Cow
*Vaca seca*


DA (Displaced Abomasum)



Additional flashcards can be found here:
https://fyi.extension.wisc.edu/dairy/files/2015/01/Biligual-Dairy-Workers-Flashcards.pdf

# Meet the Nebraska Dairy Team!

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Thank you to the Nebraska State Dairy Association and all of Nebraska's dairy producers for support!



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