



Innovation, education and regenerative agriculture

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GRASSROOTS NEWS & VIEWS MAY 2021

Director's Note - Marcel Busz

Howdy folks!

Hello everyone! Most of us are probably mid-calving, kidding, or lambing right now and I hope that is going well for you or maybe it went well if you are reading this after the busyness of it all. I am glad that the weather has been cooperating so far albeit the lack of rain here near Duchess, AB. We are sitting pretty good here yet this spring as we had a bumper year for rain last year and we have lots of stockpiled grass ahead of us. Anyway, we pray for more rain.

This past winter I began listening to podcasts and now I am hooked. Pretty much whenever I am driving, I'm listening to some sort of podcast, I even bought some headphones to listen to stuff when I'm doing mindless tasks like fixing fences. The Working Cows podcast is one that I listen to. There are a few episodes (24, 87, 107), on what is called Instinctive Migratory Grazing where you retrain cattle to have a herd instinct and the claim is that you can strip graze without all the fencing. If this is all true and good, it would be paradigm changing. I would like to learn more about this and see if it actually works. If you are doing this, please reach out to me.

On the Mattheis Ranch, the ranch I am managing, we have 10+ miles of shallow buried pipeline which give me lots of opportunity to tie in a water trough at different places. I had a portable trough that I was moving around with the herd, but it was kind of small so this winter I went to the drawing board to build something larger and yet easy to move. The trough I

built holds about 1000 gallons, drains fast with two 3-inch drains, the hitch can be lifted with 1 finger and it pulls easily with a quad. The trough is on its first location this year and seems like it will work well. A picture of it is below.

FFGA doesn't have a lot of events coming up due to not being allowed to have in-person events and a bit of webinar fatigue but we do have what I think is going to be a good 2-part webinar series coming up. "If You Can't Beat It, Eat It" will be early in June (see page 7 for more details) with Kathy Voth and Kelly Cooley. I was able to go the in-person event of the same name in Fort McLeod with Kathy Voth just over a year ago pre-covid and it was really good.

I hope to see many of you soon when we can begin doing in-person events again.

Happy Grazing;

Marcel Busz

Portable water trough designed and developed by Marcel on the Mattheis Ranch.



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New tools to understand natural habitats on farmland



Photo: Sonja Bloom

Alberta EFP, (Environmental Farm Plan) is updating to a new version of the online webbook. Included in the update is a new Habitat Management Tool that includes the Habitat & Biodiversity Assessment Tool. In this post, we hope to answer some of the more common questions on this new update.

What changes are being made?

Alberta EFP is introducing a new Habitat Management Chapter with other updates with the launch of the new version of the AEFP WebBook. The Habitat Management Chapter will be unlike any other as it also includes the Habitat & Biodiversity Assessment Tool. Using a similar format as the rest of the webbook, a series of question prompts will guide the farmer through the assessment to help develop an action plan. This tool will allow farmers to understand the habitat on their land better, how they can positively contribute to Alberta's biodiversity and offer another perspective on the value of their land.

Some chapters previously located under farmstead sites and field sites are now considered whole-farm chapters. The whole farm chapter section will appear as follows;

- Chapter 1 - Site and Soil Characteristics
- Chapter 2 - Water sources
- Chapter 3 - Water Bodies is now a stand-alone chapter
- Chapter 4 - Environmental Emergency Planning is now mandatory
- Chapter 5 - Habitat Management is a new chapter
- Chapter 6 - Trees, Shelterbelts, Woodlots and Bush

Upon approval of the workbook, producers will also receive a report indicating how they would have scored against the Sustainable Agriculture Initiative Platform's Farm Sustainability Assessment (FSA) 2.1. The FSA is a global standard that allows producers to demonstrate their sustainability performance against an internationally accepted framework. The report is for awareness purposes, and cannot be used to make a claim.

Why is this new content being added?

Alberta EFP is also working towards alignment with the global Farm Sustainability Assessment silver standard. Habitat and biodiversity are components of this assessment. In order to support Alberta farmers and maintain market access, it was clear that this was a useful component to add to the Alberta EFP.

When is the launch of the new web-book?

Alberta EFP launched the new web-book version on March 29, 2021

Who it will affect?

When the webbook is updated, the producers who are currently working through their EFP will likely be the participants who it will affect the most.

How long does working through the new content take?

Producers with completed EFP workbooks wishing to upgrade to the new version 3.1 can expect to complete the new material in approximately 1 hour.

What support can I expect from Alberta EFP?

The Alberta EFP team will be offering webinars for specific questions on the Habitat Management Tool. Over the next few months, you will see more content also available through the website, social media or email. Alberta EFP welcomes suggestions for support materials so that we can ease the transition with these new changes. As always, the technician assisting you with your workbook or the Alberta EFP team is available by phone or email to answer any questions you may have.

News release from Alberta Environmental Farm Plan (<https://www.albertaefp.com/about/blog/recent/new-tools-to-understand-natural-habitats-on-farmland-129/>). To learn more about starting or renewing your EFP visit <https://www.albertaefp.com/>



On the Cover: A participant at the Riparian & Range Pasture Walk inspects the amount of 'trash' left after the growing season in a pasture. Photo: FFGA

Thank you to our municipal supporters!



3 tips for training your cattle dog to work stock



Photo: Kathy Voth

I recently read a blog written by Michaela Mann, who was one of my peers at South Dakota State University. In her blog post for Ranch House Designs, Mann lists the top five reasons every cattlemans needs a cow dog, citing that these four-legged ranch hands are loyal, hard-working, intelligent, forgiving, and a source of selfless friendship.

Mann writes, “A dog is a staple in many households, acting as a loyal companion, a playmate and protector. The

role of a family dog takes on a whole new meaning when the dog is also a cattle dog. A cattle dog is a valuable asset to many cattle operations. They help ranchers through the daily work of raising cattle, and at the end of the day, these dogs come home and serve as man’s best friend.”

While having a cattle dog is incredibly rewarding and valuable for many ranch outfits, there is a huge difference between a well-trained dog and one that causes a lot of heartache and frustration when it comes time to work cattle. A few years ago, I witnessed some of the most athletic and disciplined cattle dogs work alongside their trainers at the National Cattle Dog Finals where I worked as an emcee of the event. On the flip side, I’ve seen some train wrecks while working cattle at the neighbor’s place when a poorly trained dog decides to go rouge and not listen to instructions from its owners.

vest in a dog, I want it to work. Ask the trainer or owner when the dog ‘turned on,’ which means, when did he mature and have the desire to work stock? Do your homework ahead of time before making a purchase.”

2. Take a 4-H obedience class with your dog.

“I highly recommend the dog takes a 4-H obedience class with a kid in the first year,” advises Naasz. “The classes help socialize the dog to be in new situations and around other people. I have found that the more you socialize the dog, the better they can be as a stock dog because new and different situations don’t bother them as much. You can easily take them to trials or to work cattle at the neighbor’s, and the new area won’t bother them. Some dogs get leery of situations outside of their comfort zones, so it’s important to train them early and also not to be nervous when working.”

3. Understand low-stress cattle handling.

“I try to practice low-stress cattle handling,” says Naasz. “The way you handle your dog directly impacts how the cattle respond. The quieter you can be with your dog, the better it is for your cattle. You want to teach your dog to be confident when working cattle, but not overly aggressive. It’s stressful to have a dog that’s constantly biting at the heels of the stock. In a small control area when training, you can teach a dog not to be so aggressive.”

Naasz also recommends introducing a cattle dog to the cow herd slowly to get the livestock and the pup acclimated to each other. He says a dog’s best years are between four and eight, and patience and practice are the keys to making a stock dog a good one.

Author: [Amanda Radke 1](#) | Jun 23, 2015. Original article can be found at <https://www.beefmagazine.com/blog/3-tips-training-your-cattle-dog-work-stock>

Here are three tips for training a cattle dog to be a valuable member of the ranch from Tim Naasz, a national champion dog trainer and South Dakota cattlemans:

“You don’t have to spend a lot of money to get a good dog,” says Naasz. “When shopping for a dog, especially one that isn’t papered, make sure you can look at the parents and see what they are doing. You want to see that the parents are actually working cattle dogs. When I in-

UNIVERSITY OF CALGARY

WATER & AGRICULTURE POLICY RESEARCH SURVEY

Water is critical for successful farming and ranching, but too much or too little can create problems as is well known in the water scarce region of Southern Alberta. With climate projections predicting more severe drought and flood events in the future, it is clear that both water and agricultural policy and management may need to change to support a thriving farm and ranch community.

A research team from the University of Calgary wants to understand what farm and ranch practices or policy changes may provide more stable and effective agricultural futures. By taking the time to complete a short survey (10-15 minutes), you will not only help this study, but will raise awareness about the needs and opportunities for long term agricultural success in southern Alberta.

Please click the following link to complete the survey:
https://survey.ucalgary.ca/jfe/form/SV_6SDz5OuT5cZkhhE



Connect with the FFGA on social media!



Weed control in pastures



Photos: Sonja Bloom

What Is A Weed?

This is an easy question to answer in a monoculture such as wheat stands or canola, but it is more difficult in a pasture situation. Most agree that weeds are plants that possess some undesirable traits such as being prolific seed producers; the seeds shatter as soon as or even before they fully ripen and they often have effective means of spreading. In grain crops, weeds often reduce yields and therefore profits. In pastures, the most undesirable traits a plant may have are that it is poisonous or not consumed by animals. Some examples are thistles and woody species. Other species we consider as weeds in pastures are those that exhibit low productivity or are productive for only a short time during the summer. Some examples like dandelions and wild plantains are perennials and others are annual weeds like foxtail and ragweed. Whatever the weed problem, sound production practices are the key to controlling them.

Weed Control In New Seedings A Clean Start

The time to begin your weed control strategy in a pasture is in the establishment phase. If weeds are not controlled at the outset, they may choke out a new seeding or allow weeds to encroach into the established stand.

When seeding a new pasture, test the soil and apply needed fertilizers to the proper levels for your seed species. Start with a well-tilled seedbed. No-till may also be used to establish pastures but this method requires special no-till drills and some type of sod suppression prior to seeding. Seeding rates are also important. Become familiar with the seeding rates for the species you are planting, then calibrate your seeder so you are sure you are planting the correct rate. Using rates that are too low will invite weed encroachment.

When possible, select fields with low weed populations. Avoid fields severely

infested with perennial weeds like Canada thistle. If perennial weeds exist, it is important to control them prior to seeding a new pasture. If pre-seed herbicides are utilized watch out for products with carry-over residues.

One non-chemical strategy for controlling weeds prior to seeding a pasture is to till or mow every 14 to 21 days throughout the summer, then follow with a late summer seeding in early to mid August. This helps deplete the weeds carbohydrate reserves, weakening and eventually killing them. Late summer seeding means fewer annual weed problems as well. Do not use a companion crop or graze these seedings until the following spring.

Annual weeds may likewise threaten a new pasture seeding. A companion crop such as oats or barley will decrease annual weed levels and control soil erosion. Seed these crops at 1.5 bu/acre. A higher seeding rate may be too competitive for the underseeded species. It is most desirable to chop these small grains at the boot stage rather than harvesting for grain. Harvesting as silage or hay provides a higher quality forage and allows more time for the underseeded grass and legumes to establish. When harvesting for grain, consider an early maturing short-strawed variety that stands well to avoid lodging and smothering the pasture seeding.

Pastures may also be seeded using perennial ryegrass as a companion crop as it establishes quickly. If used, add 2 lb/acre of a forage type of perennial ryegrass (not a turfgrass variety) to the mixture. Even with a companion crop, annual weeds are likely to grow. In these instances, it will be necessary to remove the weeds to avoid too much competition. This may be accomplished by green chopping or even baling the material off the field. This should be done when the weeds are 10 to 12 inches tall.

Weed Control in Established Pastures

Once pastures are established, it is important to keep weeds from invading and reducing pasture condition.

Rotational grazing

Many pastures become severely infested with thistles and other problem weeds due to continuous grazing. Cattle will over-graze areas of young, succulent growth and under-graze more mature areas. Overgrazing results in an open sod

that allows light to penetrate to weed seeds and seedlings. Under grazing can be harmful as well, as excessive growth will smother new shoots, inhibit tiller development and weaken the desirable species. This will create open spots which allow weed encroachment.

A properly managed rotational grazing system avoids these problems. Cattle are left in a paddock until the grass has been grazed to the proper height, then are moved to another paddock and so on. The original paddock is grazed again only when it has had sufficient time to recover. This helps maintain a healthy, vigorous pasture which can easily compete with weeds. The proper rest period for a paddock depends on the species and time of year. Rest periods of 15 to 20 days are common in early spring. In late summer, when growth has slowed, rest periods may be as long as 35 days. Maintaining proper fertility and pH is also critical in maintaining a healthy stand and decreasing weed encroachment.

Walk Your Pastures

Another key to weed control in established pastures is to walk your fields often. This is the best way to catch weed problems before they become serious. Weeds should be hoed, pulled, sprayed or cut before they set seed and spread.

Know Your Weeds

Scouting for weed problems early is an effective tool for identifying and controlling weed problems before they develop into situations that cannot be easily managed. This requires a trained eye and the ability to identify weeds in their early growth stages.

Tillage

It is nearly impossible to destroy all weed roots with tillage. Repeated tillage of these areas for one growing season often eliminates the infestation arising from roots, but this is seldom a practical approach in pastures. Areas where thistles are controlled with repeated tillage must be watched carefully for new plants that start from seeds. These should be removed when they are small so that they do not form roots with buds.

Biennial thistles in Manitoba include bull, and musk (or nodding) thistle. Bull thistle seldom forms dense stands but musk thistles are quite invasive and can render large areas unsuitable for grazing if not controlled. Biennial thistles form a

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rosette of leaves the year seeds germinate and must undergo winter to shift from vegetative to reproductive growth. Plants flower the following summer and die at the end of summer or with the first frost. Preventing seed production is the key to managing biennial thistles.

Mowing

Mowing is an option for weed control in pastures. Mowing annual weeds once will usually control them if the pasture is healthy and exhibits rapid regrowth. Serious annual weed problems are rare in pastures and are indicative of declining health of desirable species. These paddocks may be candidates for improvement or renovation.

Perennial weeds like Canada thistle, milkweed and goldenrod require a different approach. Mowing once will not control these weeds. Mowing on an interval that allows these plants to regrow to 8 to 12 inches between mowing will eventually kill these plants. Keep in mind that mowing this often will likely weaken desirable species. These areas may need to be improved by one of the methods listed below.

Herbicides

There are a number of herbicides registered for use in pasture situations. Not all are intended for use on newly seeded pastures. It is important to read product labels carefully. Producers should pay

particular attention to pasture species registered for application, stage of pasture development registered for application, weeds species controlled, and grazing intervals.

Pasture Improvement

If annual weeds are a serious problem, or weeds are encroaching due to thin stands, introducing new species or increasing density of current species, will help reduce these problems. Pasture improvement may be accomplished by the steps listed below:

- Mow or graze closely in late fall, prior to snowfall. This weakens the existing species, making them less competitive with the new seeding, and improves seed to soil contact when seeded next spring.
- Frost seed the following spring by spreading seed of desirable species on the soil surface. Do this after snow has melted, during the spring freeze/thaw cycles. --or--
- Interseed into the existing stand with a no-till drill as early in spring as possible. --or--
- Disk lightly and interseed into the existing stand with a grain drill as early in spring as possible. Using press wheels or otherwise packing the soil after planting will improve success.

- Graze these paddocks lightly until mid to late summer to allow the new plants to establish.


These techniques will be most successful when attempting to introduce new species into an open sod. They are much less effective on dense grass sods.

Summary

Remember, these keys to success when managing pasture weeds.

- Soil test and fertilize accordingly
- Select adapted species combinations
- Use appropriate seeding rates
- Control perennial weeds prior to seeding
- Practice rotational grazing
- Walk pastures to catch emerging weed problems
- Control developing weed problems
- Consider renovating pastures that are beginning to develop weed problems

The above information was in part based on an article written by Dennis Cosgrove and Jerry Dole of the University of Wisconsin. Article is from Manitoba Agriculture. Original article can be found at <https://www.gov.mb.ca/agriculture/crops/weeds/print.weed-control-in-pastures.html>



Agronomy & Forage Specialist Support

In partnership with Agriculture Research Extension Council of Alberta, FFGA is pleased to offer Forage & Agronomy Specialist support to ranchers & farmers across Alberta!

Forage Specialists:

- Grant Lastiwka
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To access this support please call into the FFGA Office at 403.995.9466 or send an email to;
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Designing the watering system for your grazing method



Photo: Sonja Bloom

One of the challenges of designing a rotational grazing system is providing an abundant supply of clean drinking water to cattle located in multiple paddocks or pastures. The use of surface water (creeks and ponds) has multiple drawbacks.

Fencing across a creek is always a challenge because of storm flows damaging the fence and the fence preventing debris from flowing down the creek. Also, cattle tend to degrade the banks of the creek, increasing sediment loading and decreasing water quality.

Perhaps the biggest challenge is: There just aren't enough creeks to go around when you are trying to supply multiple paddocks.

Mechanical watering systems have many advantages but also present some challenges of their own:

- They cost money to install and operate.
- Many times, there is no electricity available for pumping at remote locations.
- Cows tend to congregate around waterers, the waterers often leak, and cows spill water – all of which lead to a muddy area around many waterers.

Some of these challenges can be addressed and costs minimized by proper planning.

Reducing the number of waterers required

Placing a waterer through a fence enables one waterer to be used from two paddocks.

Care must be exercised to provide enough watering space for cows from each side of the fence. For individual waterers, it is recommended to have at least one cup or bowl for each 15 cows.

For a drinking tank, it is recommended to provide 1 foot of accessible tank perimeter per 10 cows. That means 1 foot per 10 head on each side of the fence for a split installation. Cows tend to drink as a group, so adequate access to the waterers is important.

Another option for reducing the number of waterers required is to place a waterer in a lane or a common area that can be accessed from a number of paddocks.

Availability of power

If electricity is unavailable at a remote site, water can be pumped by solar power. In general, solar pumps are most efficient when pumping from surface water or shallow groundwater (less than 50 feet deep). Pumping from deep groundwater requires more energy and considerably more investment in solar panels.

Due to the intermittent availability of solar power (nights and cloudy days), a solar-powered watering system requires considerable reserve storage, either in the waterer itself or in a tank that feeds the water-

ers. I would recommend two to three days of storage capacity.

A typical 1,000-pound cow would drink up to 18 gallons of water per day in hot weather but on rainy or cloudy days would drink considerably less, so I would use a figure of 12 gallons per head per day. This reserve storage could be in the drinkers, the storage tank or a combination of the two.

Stream crossings are still an option for livestock watering, although they have the drawbacks mentioned above.

Mud around waterers

“Heavy-use areas” can be installed around waterers to minimize mud problems. An excellent publication on these surfaces is available from the University of Kentucky

The principle of heavy-use area construction is to stabilize the soil underneath the top layer so that it does not move, settle and form mud holes.

When choosing the site for waterers, it is wise to choose a site that is high and well drained. In addition, regular checking and maintenance of valves and pipes is important in preventing excess mud and wasted water. The stabilized area should extend at least 15 feet from the waterer for cows and 8 feet for goats or sheep.

The same strategy can be used to stabilize travel lanes to prevent erosion. Travel lanes should be fairly narrow (12 to 15 feet) and crowned in the center to promote drainage. Lanes should be fenced to force animals to stay on the stabilized area.

If they have a choice, they will go back and forth between muddy and stabilized areas, which can cause foot problems due to rocks being picked up by muddy feet.

Choice of drinker type

Individual drinkers have the advantage of helping keep the water cooler and cleaner in hot weather, and they are virtually freeze-proof in cold weather (at least in the South-east.)

Tank waterers, which can be made of galvanized steel, plastic or concrete, have the advantage of greater accessibility to a number of animals and more water storage in the waterer itself. Individual waterers must have water provided to them at all times because the water would be quickly depleted if the supply were cut off. That is especially a consideration when solar pumps are used to supply waterers.

Sizing the supply system

Whether using solar or conventional electric power to pump water, it is important to size the pump and piping to deliver the maximum needed flow of water without excessive friction loss in the pipe. Three

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Save the Date



The Southern Alberta Grazing School for Women & Alberta Range Stewardship Course are pleased to offer a collaborative, online school in July 2021

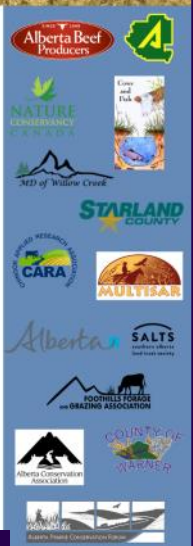


Mark Your Calendar:

- Tuesday July 20, 2021
- Thursday July 22, 2021
- Tuesday July 27, 2021
- Thursday July 29, 2021



Stay tuned by following our organizing committee's social media for updates and agenda





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<https://agtodayksu.libsyn.com/>

If You Can't Beat It, Eat It!

Webinar Series

Invasive Plants: Introduction and Impacts

Guest Speaker Kelly Cooley will walk us through what identifies a plant as invasive, impacts on pasture and rangeland, identification of commonly found species and basic principles of integrated weed management.

June 1, 2021

12:30pm - 2:00pm

Zoom Registration - <https://bit.ly/3nKxi6VA>

Conditioning Cattle to Eat Weeds and Range Health & Managed Grazing

Guest Speaker Kathy Voth will discuss range health, managed grazing and conditioning cattle to graze weeds using a systems approach.

June 8, 2021

12:30pm - 2:00pm

Zoom Registration - <https://bit.ly/3b2Rpl9>

Webinars are free to attend, registration is required.

You can register by typing the link into your web browser or you can visit

<https://www.foothillsforage.com/livewebinars>



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(Continued from page 6)

things potentially contribute to pressure drop in water pipes: the length of the pipe, the flow rate of water and the elevation change from one end to the other.

If we try to force too much water through a small pipe, friction loss will reduce the pressure at the waterer, reducing the flow rate and sometimes causing the valve to not operate properly. The supply system should be able to pump water needed for a day in about four hours, since cows tend to drink as a herd.

With a maximum rate of 18 gallons per day, 100 cows would need 1,800 gallons of water. To pump that in four hours, the flow rate would be 7.5 gallons per minute.

Figure 3 (bottom left corner) may be helpful in sizing the pipe needed to supply the waterer. In the above example, if the flow rate is 10 gallons per minute, and the watering site is 300 feet from the pump, a 1 1/4-inch PVC pipe would be needed to limit the pressure drop to 5 psi.

If sufficient pressure exists to allow 10

psi pressure drop, a 1-inch pipe would suffice.

The drinker valve should have at least 10 psi of pressure at all times to operate reliably. Also, remember that if you are pumping uphill, you will lose pressure as well.

For every 10 feet of elevation, the pressure drops (or increases if going downhill) by approximately 4.3 psi. The pump needs to be sized to deliver the needed flow rate at the total pressure it will be working against.

That pressure includes elevation change from the water level in the well or surface of a pond to the top of the storage tank, friction loss in the pipe and the operating pressure of the valve.

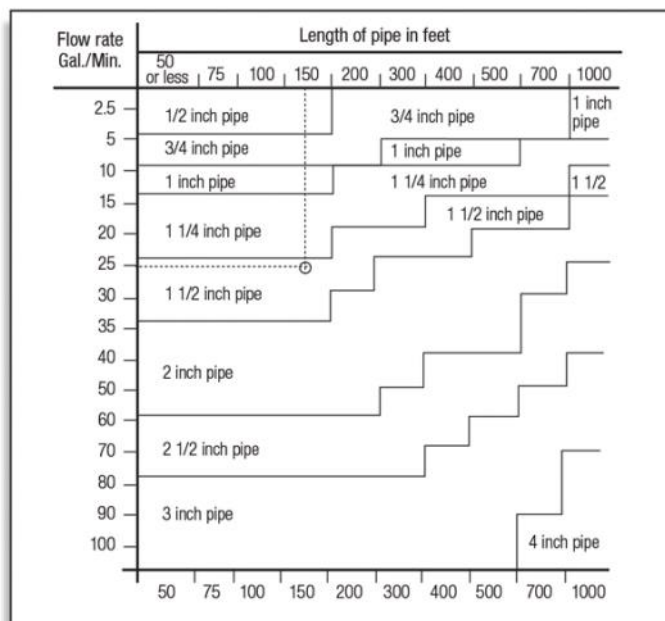
For long runs, and especially with large pipes, you may need to imbed any corners of the pipe in concrete to prevent movement of the pipe when water starts flowing. Repeated movement may cause cracking and leaking.

Sanitation

Waterer control valves should always be fitted with anti-siphoning devices. This prevents contaminated water from being sucked from the trough down into the well or water source when the pump shuts off. Also, waterers should be designed for ease of cleaning. The easier they are to clean, the more likely they are to be cleaned. Using these principles will help you provide an abundant, reliable, clean water supply to your herd at a minimum cost.

John W. Worley is with J. Phil Campbell Research and Education Center - University of Georgia. Original article is <https://www.progressivecattle.com/topics/facilities-equipment/designing-the-watering-system-for-your-grazing-method>

Figure 3 Recommended size for PVC or plastic pipe



Based on a pressure drop of 5 psi and a maximum flow velocity of 5 feet per second. For a pressure drop of 10 psi the pipe length can be doubled. For 2.5 psi, the length should be halved. TO USE: Move downward in pipe length column and horizontally on flow rate, read pipe size in area where lines intersect. For example: A length of 150 feet and flow rate of 25 gal. per min. requires 1-1/2 inch pipe.

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Mission: Assisting producers in profitably improving their forages and regenerating their soils through innovation and education.

Vision: We envision a global community that respects and values profitable forage production and healthy soils as our legacy for future generations.

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