Photo Credit: Rachel McLean—Fall Pasture Tour at Chad Monner's

FOOTHILLS FORAGE AND GRAZING ASSOCIATION

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November 2016

Director's Note

Well it's that time of year again. Cows are coming in from leases and calves are going to town. It's a busy time of year and some of the most important jobs can get left undone.

Harvest needs to be done. That weather isn't waiting for anyone. Cows need to be weaned and calves taken to the market. Electric fences need to be built so winter grazing can be utilized. The list goes on and on. But did anyone consider telling a story amidst all of this?? Yes, you heard me correct.

I was fortunate enough to be able to attend the Global Conference in Sustainable Beef this past month. It was an amazing event held at an amazing venue. I highly recommend you go, should you ever get the chance.

There was people from all over. South America, the United States, Australia and of course Canada. A&W had people there. Tim Horton's was represented. University faculty were present, (just to name a few). Of course, primary industry was also represented. And I have to say, this was an eye opener.

I was able to sit with people from both Tim Horton's, A&W and many more. I was blown away at the disconnect between our end consumer and the actual producer! But I was impressed by these big chains desire to understand both their consumers demands and where their beef comes from. You can't blame them for following certain trends. That is what their consumer is demanding. But where does that demand come from? By not telling our stories and listening to someone else's.

In today's day and age, it is so easy to get access to information. But no one said if that information is correct. I saw a post on Facebook right after I returned from this conference that proved exactly this.

Someone had taken a picture and posted it to social media. They explained what they thought was happening in this picture. And just like that, over 2,000 people had commented on this incorrect information. But where was the farmer in all of this explaining what was actually happening?

So I go back to my original point. Take the time to tell your story. Show people what it's truly like at calving time. Show them how low stress cattle handling works and explain why we do what we do. Because it's the right thing to do. End of story.

This can be as simple as posting a picture of swath grazing on social media or telling (politely of course) why hormones in beef aren't bad for you when you hear the conversation come up. Alberta Beef has programs where producers can go speak at schools and explain to kids where their foods come from. There are other organizations doing the same thing but they aren't telling our side of the story. It's up to us to do that.

This was one of the topics at the conference and one that really stuck with me. One speaker talked about having a conversation with someone about ranching and farming. Actually ask them questions and answer theirs. Because if we don't, someone else will and I bet we won't like that version. She also mentioned that farmers are viewed as the most trusted when it comes to learning about farming and ranching (research done on a focus group). Which we should be, it's our livelihoods!

Continued on Page 2...

IN THIS ISSUE

If you're not sure how to tell your story, do some research. There are some great resources available to us. I personally like the Beef Advocacy training, Farm & Food Care Foundation, and the Ag More Than Ever campaign. Farming and ranching is the best career out there so be proud of it and tell someone!

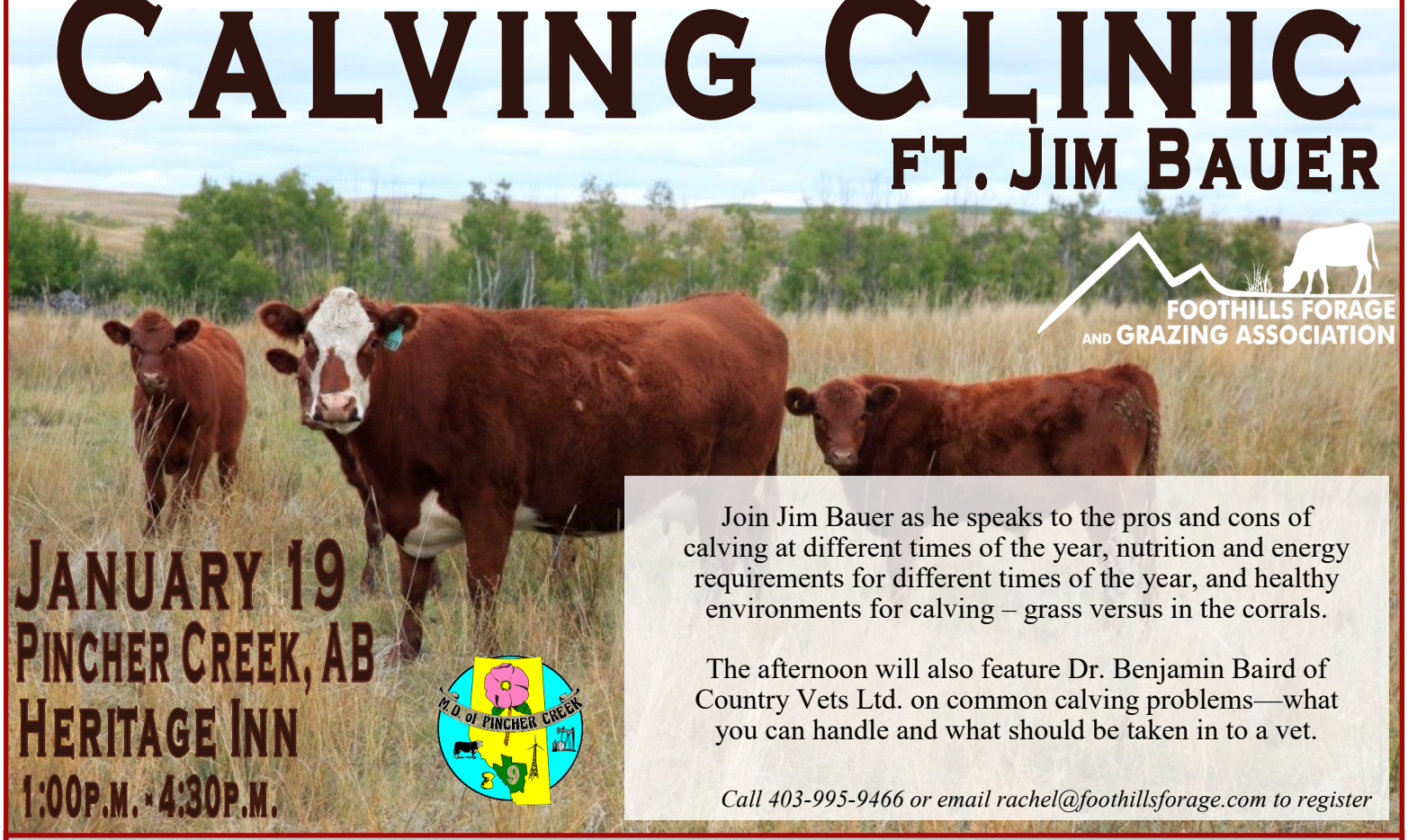
I would also like to congratulate our manager Laura Gibney who is expecting in April 2017! Stay posted for an interim manager position.

I hope your calves sell high and you tell someone about that. Happy fall everyone, see you at the next event!

Tamara Garstin

CALVING CLINIC

FT. JIM BAUER



FOOTHILLS FORAGE AND GRAZING ASSOCIATION

JANUARY 19

PINCHER CREEK, AB

HERITAGE INN

1:00P.M. - 4:30P.M.

M.D. of PINCHER CREEK

Join Jim Bauer as he speaks to the pros and cons of calving at different times of the year, nutrition and energy requirements for different times of the year, and healthy environments for calving – grass versus in the corrals.

The afternoon will also feature Dr. Benjamin Baird of Country Vets Ltd. on common calving problems—what you can handle and what should be taken in to a vet.

Call 403-995-9466 or email rachel@foothillsforage.com to register

FFGA MISSION & VISION STATEMENTS

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.

Thank you for your support!

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MD of RANCHLAND NO. 66

WHEATLAND COUNTY

Vulcan COUNTY

Kneehill County

ROCKY VIEW COUNTY Cultivating Communities

Snow as a Water Source

Source: pcwallart.com

- After a short adaptation period, pregnant beef cows will consume snow in amounts equivalent to the water intake of cows receiving liquid water. Through extensive testing in the early 1980's, the University of Alberta found insignificant differences in cow performance or body stress levels when asked to eat snow as their sole water source.

- Wintering beef cows are able to consume snow as their sole water source given that the snow is in a form that the cows can easily eat. The snow must be soft and friable so that the cows can lick a significant quantity into their mouths for melting.

- Once cows are used to consuming snow as their sole water source, they will consume small amounts of snow throughout the day during their free time. Cows can be seen licking snow before, during and after their primary feeding times.

- Although it takes ten times the amount of energy to melt a gram of snow from it's solid state to it's liquid state compared to heating the similar quantity of a liquid one degree Celsius, the key to energy use difference is found in the rate of consumption. Cows eating snow take all day to do so. Cows drinking cold trough water will consume their daily needs within minutes.

- Because of the slow and ongoing process of eating and melting snow, cows in effect use their waste heat to melt their snow. Because the melting process is such a slow process, the cow's body temperature never drops below it's critical point. Hence, the body's metabolism never needs to kick in to raise it's temperature as it does when a cow drinks large quantities of near freezing water from a waterer.

- The best indicator of whether a herd is getting enough water from melting snow is to monitor feed consumption. As long as feed consumption is adequate and consistent from day to day, the cows are getting enough water from the snow. Should feed consumption drastically drop over a short time period, water shortage may be the cause.

- The biggest stress for cattle eating snow is the transition period. Cattle that have never needed to eat snow and have only consumed water will vocalize to show their discontent. Following a day or two of discontent, the herd soon learns from the early learners that snow can be licked with positive results.

- Once cattle have learned to eat snow, the transition period is much shorter. Eventually cattle will eat snow without little discontent.

- Once cattle are accustomed to eating snow, they will often stay out in the fields where the feed is placed rather than walk home for water. The observation is that animals find it easier to eat snow rather that expend the energy to walk home to drink water.

By: Mary Ann Nelson and
Grant Lastiwka
Alberta Agriculture & Forestry

Source: http://www1.foragebeef.ca/$foragebeef/frgebeef.nsf/all/ccf1020

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Reduce Winter Feeding and Be More Profitable

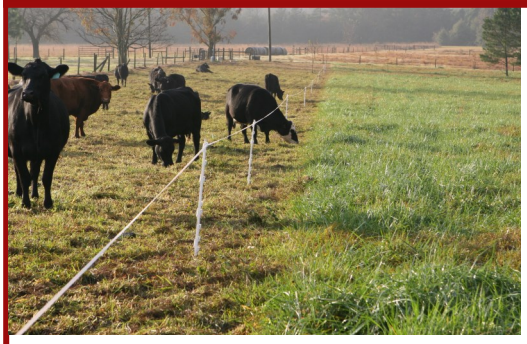


Photo courtesy of Georgia Grazing Lands Conservation Coalition

Winter feeding accounts for 40+% of the cost of producing a calf, so reducing or eliminating this bad habit can help keep your ranch in the black. One way to reduce winter feeding costs is to extend the period that cattle harvest their own feed by grazing. Here are four things livestock operators need to successfully extend the grazing season:

1) Forage in the field or pasture
2) Control of grazing
3) Cows that know how to work for a living
4) Positive attitude

Forage in the Field

Having forage in the field for livestock to graze means it needs to be grown and reserved during the growing season. This forage can come from various sources, but it requires planning so that it is suitable and available. Several options exist.

1.) Rangeland
2.) Crop Aftermath
3.) Annuals
4.) Perennials

Control Grazing

Besides forage in the field, successful fall and winter grazers control where animals graze. Strip grazing stockpile, crop residue and windrowed forages can double the number of grazing days, provide a level nutritional plane to the animals, and more evenly distribute manure. After putting up hay all summer, you wouldn't just open the gate to the stack yard and let the cows eat what they want. So why would you do it with pasture? If you have hay residue, you can just about double its use by allocating it. That's like getting twice as much feed for almost nothing!

Here's a table that gives a good comparison between feeding and managing your cattle in pasture to help you picture why strip grazing makes the most sense:
Missouri Grazing Manual, Gerrish,

Forage Utilization Rate	Management Intensity	Hay Feeding Equivalent
80%	1 day strip graze	Ring fed 2 days
70%	3 day strip graze	Ring fed 3 days OR unroll daily
60%	7 day strip graze	Ring fed 5 days
50%	14 day strip graze	Unroll every 2 days
40%	Set stocking	Gate to stack yard is open

Jim and Craig Roberts, MU Extension, University of Missouri-Columbia, 1999

Efficiency is increased with shorter grazing intervals, because animals cannot tread down and spoil feed. Overall quality is also increased because the animal's ability to "select the best and defecate on the rest" is reduced. Strip grazing of stockpiled forages, using portable electric fence, is sometimes complicated by the location of water during the winter. So take advantage of the fact that there is no re-growth to be concerned with. Just move your electric fences ahead, away from the watering source, and let the animals walk back to water over the previously grazed area.

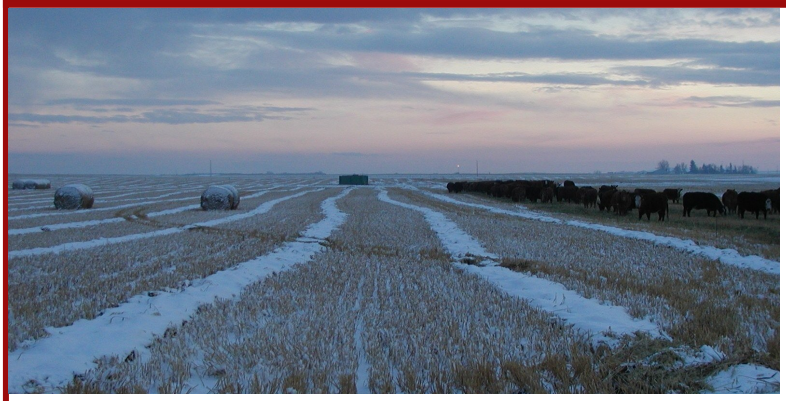
Cows that Know How to Work for a Living

Do you work for cows or do cows work for you? There ARE folks that "work for cows." I think your cows are your employees and they need to measure up! So give your cows a performance review every year.

Cows moved to a new environment, may take up to 3 years to return to their original level of productivity. But if they were born and bred on your place, they need to be able to find their own food, pick the best quality bite available at the time, get pregnant and deliver a calf every year without fuss, wean a calf every year, stay healthy, stay in the herd long enough to cover overhead, and not complain about the weather. Maybe your cows have some additional job requirements. If a cow is not meeting her job description, perhaps she needs to be someone else's welfare recipient! This includes the athletic cow that can jump clear over the electric fence.

Snow doesn't have to be a barrier to winter grazing. There may be a few conditions where it is difficult or impossible for a cow to graze through, but cows that know there is feed under the snow will work to get it. We like to get Jim Gerrish to tell a story at the Lost River Grazing Academy about a trip he made ...

Reduce Winter Feeding and Be More Profitable



...in Canada in his early career to talk about winter grazing. He told the people in Brandon, Manitoba that his cows in Missouri grazed through 10 inches of snow. They told him that was nothing, their cows "could graze through 2 feet of snow, eh?" They moved west to Saskatoon, Saskatchewan where he explained that in Missouri they graze through 10 inches of snow, and in Manitoba they graze through 2 feet of snow. They told him that was nothing that their "cows graze though 3 feet of snow, eh?"

They finally arrived in Rocky Mountain House, Alberta in a snow storm, where he reviewed what he had learn from the folks in the previous locations. A man stood up and said, "That's nothing, my cows graze though 4 feet of snow, eh!" The neighbors confirmed it! He was swath grazing, which made it easier, and these cows were not calving in February, but these cows rustled out all winter with allocated swaths, and eating snow for water!

Snow is just one more reason for strip grazing too. A problem that we often see with "set stocking" and snow is that, while the animals are doing their job of finding the "best bite of feed" they can find, they are packing the snow until it turns to ice, making the remaining feed unavailable.

Allocating feed with electric fencing prevents the animals from trampling and packing the snow, and preserves the availability.

Positive Attitude

There is an almost an unlimited number of excuses why stockpiling and winter grazing will not work, and they almost all come down to attitude!

Take heart from all the operators who are utilizing some or all of these techniques to extend their grazing seasons and reduce their winter feeding costs.

They all have different feed resources and situations, but they all share a belief that they can make fall and winter grazing work for them, and they do. You can do it too!

By: Chad and Jim Gerrish

Source: On-Pasture Newsletter
http://onpasture.com/2016/08/29/reduce-winter-feeding-and-be-more-profitable/

Environmental Farm Plan Workshop

Email rachel@foothillsforage.com to register

Wheatland County Office
Strathmore, AB
December 8, 2016
9:30am

Assistance with the EFP Workbook

FOOTHILLS FORAGE AND GRAZING ASSOCIATION

Learn About
Funding Incentive$
in Growing Forward 2

Growing Forward 2
A federal-provincial-territorial initiative

Foothills Member Appreciation

CHRISTMAS PARTY

Join us for an evening social of great food and great company! Roast Beef Dinner on us!

The night will feature a banquet, refreshments, a recap on the Australia Ag Tour, cowboy poetry, and time for fellowship and socializing.

Robbie Robertson "The Mountie Cowboy Poet"

Robbie Robertson has been associated with the Royal Canadian Mounted Police for more than 60 years. He has worked with cattle in three provinces and his performance style reflects both. He has performed in London England, Texas, Arizona, Montana, and has appeared on national television and radio. As a guest lecturer, he performs on Alaska Cruises with Royal Caribbean Cruise Lines. FFGA is excited to host one of the "The Queen's Cowboys", High River's own: " The Mountie Cowboy Poet".

Friday, December 16
Heritage Inn, High River, AB
Cocktails start at 5:00 p.m.
Dinner at 6:00 p.m.

Call 403-995-9466 or email laura@foothillsforage.com to register by December 9
***Discounted room rates available until Nov 16—2 Queen Room: $77**

FOOTHILLS FORAGE AND GRAZING ASSOCIATION

Can Grasslands Be Managed as CO2 Sinks?

As the discussion about climate change increases so has the discussion about the possibility of reducing or offsetting greenhouse gas emissions by natural plant and soil processes. In green house gas accounting, atmospheric CO2 concentration is not increasing at a rate equivalent to estimated annual green house gas emission caused by burning of fossil fuels and by land use change (e.g. deforestation). This short-fall in the greenhouse gas balance sheet is an indication that CO2 is actively being taken out of the atmosphere in large quantities through photosynthesis. The only biological entities large enough to do this are the, forests, grass and crop lands of North America. This is the "Missing Sink". About 70 to 80% of the sink is estimated to be south of the 51st parallel. Thus Canadian farm land is likely part of the sink.

The role that grasslands play in the sink activity is important if the sink is to be managed for atmospheric CO2 reduction. Agricultural scientists are interested in the sink phenomenon, because in the long run it may play a role in environmental and climatic stability and because it might be economically important to agriculture through carbon (C) – offsets within the agricultural sector and with other industrial sectors. Carbon is stored in soils and plant material growing on them and in oceans and the atmosphere. Carbon is in continuous exchange among these stores in the form of CO2. If the exchange is mostly in the direction of one of these stores, so that it is increasing at the expense of another, it is a sink. If it is losing C to a sink, it is a source.

Under a given set of climatic and management circumstances there is a point at which the sink is full. After a significant management (e.g. zero tillage) or climatic change (e.g. long term above average rainfall), which increases crop productivity or reduces soil organic matter degradation new upper levels (sink capacities) are attained. It may take 20 to 30 years to attain the new sink level. Over the intervening period the sink grows slowly. Grass and croplands which are already well managed are likely operating close to their potential sink size and although are exchanging CO2 with the atmosphere in both directions are likely already at equilibrium with the atmosphere. This means that they gain about as much CO2 as they lose on a long term basis.

Equilibrium is a responsible goal, as it means grasslands are sustainable for soil-C. In order to determine if any particular grassland may have potential to grow as a sink it is important to figure out how grassland sinks work. All CO2 uptake into an ecosystem occurs as a result of photosynthesis during the growing season. Photosynthesis is countered by respiration, resulting in CO2 emission from the living crop canopy and roots and by microbial respiration which degrade soil organic matter, litter and vegetative residues which exist above ground.

Grasslands cover 32% of the global surface and exist under different and dynamic climatic, soil and land form types. Therefore they are a huge number of small ecosystems working independently. Grasslands can be grouped into range and pasture lands as well as perennial crops as pasture and conserved forage in rotation with crop land. Range lands are extensive covering huge areas in the US and Canada. They are generally located in drier regions and are therefore not as responsive to management improvement. Never the less their large acreage means that slight improvements for C sequestration may have a large impact on climate change.

Permanent and crop land pastures in moister areas are responsive to more intensive management, increase productivity and therefore may have higher C sequestration rates than rangeland. Even though tame grasslands represent a much lower area than rangeland they may be just as significant in overall C sequestration.

Micrometeorological studies carried out by the US Agricultural Service Rangeland Carbon Dioxide Project documented ecosystem CO2 exchange for various grasslands in the Great Plains region. These studies were conducted primarily on rangeland and provided insights into processes that affect C sequestration. Most of the research was conducted during the growing season. The studies indicated that grassland ecosystems acted as small sinks during the growing season. However, few studies were conducted year round. Those that were conducted annually indicated that the dormant period, including winter were periods of CO2 loss. Thus managing the non-growing season may be as important as the growing season.

Conversion of cropland to perennial pasture is one means of increasing C sequestration rates by farmland. This topic was studied at Lacombe Research Station by investigating CO2 exchange continuously during perennial crop establishment in the seedling year and during the first production year. It is important to recognize that we have a short, cold and dry growing season in western Canada.

Continued on next page...

Can Grasslands Be Managed as CO2 Sinks?

Respiration processes by the crop and or soil occur continuously throughout the year. CO2 is released and must be re assimilated by the ecosystem when the crop canopy is growing. Net uptake of CO2 may occur during 80 to 100 days; net losses of CO2 may occur during the rest of the year. The period when most photosynthetic uptake occurs is the period of initial growth from spring until mid summer, or until hay or silage harvest or grazing occurs.

Thus it is important to ensure that canopy growth occurs as early as possible in the spring and as long as possible. Choosing species that initiate growth early in the spring are advantageous. Spring is a period when soils are moist, warming and microbial respiration is peaking. If a green crop canopy is not available to take up CO2, huge losses of C may occur, especially following dry years.

Management procedures that ensure vigorous spring growth are important. These are procedures that ensure large and vigorous tillers with adequate carbohydrate reserves in the spring.

Overgrazing of pastures in the fall and harvest during periods critical to winter survival are issues to overcome. Extending the growing season is important. The period after cutting and grazing is a period of CO2 loss as respiration is required to re establish the crop canopy. Choice of species with good regrowth capability should ensure that crop canopies are established rapidly and that net uptake is re established. Species that grow into the fall and that maintain green leaf area duration may shorten the dormant or non growing period. Leaving some green leaf area after grazing or harvest may assist in more rapid re establishment of CO2 uptake. The dormant period is extended by drought and heat. There is variation among species for drought and heat tolerance. The choice of species is highly specific to climatic regions as there is a fine line between drought and winter survival, tendency to become dormant and lack of productivity.

In areas with intermittent drought species which retain green leaf area are important. Species such as Kentucky bluegrass, which are highly sensitive to heat and drought should be avoided. Species such as alfalfa and meadow bromegrass have the ability to maintain growth under warm and drier conditions. Species such as crested wheat grass go dormant rapidly as well and are efficient in conserving moisture. Crested wheatgrass may still be suited to semi arid areas as it grows well in the spring.

Considerable research needs to be done to sort out these species x climate x dormancy interactions and their implications to C sequestration. The seedling year normally coincides with low productivity for forage stands. A nurse crop may be required to maintain meaningful productivity and economic yield. However, any delay of canopy development by the nurse crop or cutting and grazing the seedling forage stand may predispose the land to excessive losses of CO2 during warm moist autumn seasons and during the following spring as the seedling forage stand re establishes a canopy large enough to carry out photosynthesis.

Grassland technology normally thought of as beneficial to production may or may not coincide for C sequestration. Grasslands can be managed as CO2 sinks, but as in other cropping systems there are weak points which must be overcome. Determining these weak points through studying and analysing CO2 exchange of the forage establishment system has given us some clues about managing for C-sequestration.

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