

# Forage Facts

Published by the Peace Country Beef & Forage Association

August 2018, Volume 14, Issue 163



## Solar Power: Not Just for Your Watering System!

By: Carly Shaw

### Follow Us!



Follow Us and Stay Up-To-Date With Everything PCBFA!

It is likely that you have all seen or used a solar water pump on your farm or a solar powered fencer. But have you ever thought of using solar energy to power your other farming operations?

Solar photovoltaic systems are a safe and reliable technology that can be used to convert sunlight into electricity for all of your farming operations. Despite a common misconception that they are not viable in Peace Country where we have winter over half of the year, there is actually a large solar energy potential in the Peace Country! If we compare Alberta to Germany, a country which has been at the forefront of global solar development, we can see that we have significantly greater solar energy resources than they do, so if they can do it - so can we. Although we have long winters, we are able to make up for it with our long summer

days and typically over the course of a year, net solar production is close to equaling net grid consumption.

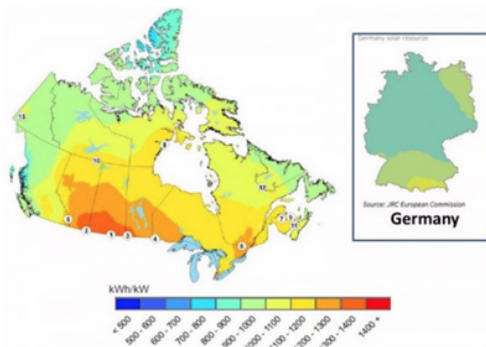


Solar Panels on an Alberta Farm [skyfireenergy.com](http://skyfireenergy.com)

If solar energy is something that you have been interested in, now is as good a time as any to invest in a Solar Photovoltaic system, as the installation and material costs are at an all time low. To top it off there are many government incentives to make it even more affordable! Under the Farm Energy and Agri-Processing Program (FEAP) On-Farm Solar Photovoltaics program, grid tied solar systems are eligible for funding of \$0.75/W to a maximum of 35% cost share of eligible expenses for a system greater than 100kW or \$0.56/W to a maximum of 27% cost share of eligible expenses for systems between 100.01kW to 150kW. It is important to note that in order to be eligible for the funding you need to have an Electrical Distribution Rate Class of 'Farm'. If not, there is no need to worry as you can just check with Energy Efficiency Alberta to determine if you qualify under a different provincial solar program.

If you are interested in applying for funding under the FEAP On-Farm Solar Photovoltaics program, give the PCBFA team a call and we would love to help you out!

### When a Farmer



Solar Panels potential of Canada vs. Germany [skyfireenergy.com](http://skyfireenergy.com)

As we talked about in the June edition of Forage Facts, having a quality water source for your cattle means cattle will be able to perform to their maximum potential. We talked earlier about the chemical aspects of our water sources and knowing what our water quality is like going into the grazing season. Now, how do we maintain that water quality throughout the season?

A grazing momma cow will eat about 12 kg of forage/day on a dry matter basis. That's about 27 lbs of grass/day! In order to digest all of that grass, she will need to drink up to 60 litres/day. On average, that's enough water to fill a bathtub!

Just like us, cattle prefer to drink clean water. Research suggests that water palatability (taste) can determine how much water a cow will drink in a day. If the water is contaminated with manure and urine, it will taste off, and cattle only drink what they need to. Whereas when watered on a clean water source, they will often drink more than they need, meaning they will be better hydrated to digest forages more efficiently and deal with weather conditions. Agriculture and Agri-Food Canada research trials actually showed that calves performed 9% better when the cows were on clean drinking water compared to those drinking directly from a dugout or stream. Their trials also showed that on average yearlings gained 23% more than yearlings with direct dugout access. (Agriculture and Agri-Food Canada; Effects of Water Quality on Cattle Performance, Willms, W.D.) This implies that cattle on clean water may actually be eating more than those that are not!



*Off-Site watering systems, such as this can help producers maintain water quality year-round*  
Photo: PCBFA

So how do we ensure that our cattle will keep drinking? When cattle have direct access to water sources, they are more than likely to contaminate the source. On average, a cow with direct water access will use her fertilizer attachment in the water about 25% of the time. If 1 in 4 animals are adding manure and urine to a water source such as a dugout, it does not take very long for that dugout to become contaminated to the point that cattle's water intake will begin to drop off.

Now imagine if we are allowing direct access to a creek or river that flows through a pasture. Those contaminants will flow downstream. If there are more producers direct watering off the same waterway, more and more manure contamination occurs. Add that to industry and other nutrient leaching, we are potentially pushing our waterways to the point that the water may become unusable! This is when the impacts of direct watering begin to affect more than just our herds. With many local municipalities in our area relying on the area's rivers and lakes for a drinking water source, upstream activities may be putting human and animal health at risk.

Animal waste, paired with hot weather conditions, also creates a perfect storm for algae growth. Studies have shown that only 1 kg of phosphorus from animal manure is enough to encourage the growth of up to 500 kg of algae! When we consider the amount of animal waste and nutrient leaching from cropping systems in our area, our lakes, ponds, and rivers may be at a high risk of large algae blooms. Algae, besides looking gross, also has a massive effect on water quality. Algae species such

### Thank You to the PCBFA Board of Directors

Jordan Barnfield  
Preston Basnett  
John Prinse  
Nancy Van Herk  
Faron Steffen  
Thomas Claydon  
Kirk Cowell  
Robbie Hale  
Allan McLachlan  
Kelvin Krahn

### Do You Have Project or Workshop Ideas?

We are always looking for ideas! Give us a call!

### PCBFA Member Perks:

- Two Free Feed Tests per year
- Ration Balancing Assistance
- CAP Application Assistance
- Environmental Farm Plans
- Scale & Tag Reader Available for Member Use
- Soil & Livestock Water Quality Testing

### Thank You to Our Municipal Partners

MD of Fairview  
MD of Peace  
Clear Hills County  
Saddle Hills County  
MD of Spirit River  
Birch Hills County  
MD of Greenview  
Big Lakes County  
County of Grande Prairie  
Northern Sunrise County



# Quality Beef Pt.2

By: Katie McLachlan



as Blue-Green Algae can even cause the water to become toxic to animals and people. Suffice it to say, we need to do our part as beef producers to ensure that not only our dugouts stay clean, but also our local waterways!

How can we improve water quality and improve

livestock performance, while also distributing nutrients to where they will do us the most good? All signs point to off-site watering. If you have ever joined us for our Annual Winter Watering Systems Tour, you know that there are a wide variety of year-round watering solutions for every situation! Trials measuring the effect of off-site watering systems have shown that even when not fenced out from the main water source, cattle prefer drinking from a water trough. In fact, when given the choice, cattle tended to drink from the trough 80% of the time. This may be attributed to how difficult the surface water was to access, through mud, steep banks, etc. However, cattle do tend to prefer an easy option over a difficult one.



*Rejuvenation of buffer zones can help ensure water quality in the long-term.*

*Photo: PCBFA*

Off-site watering also gives us an opportunity to control nutrient distribution over a pasture and potential leaching into our water. About 65% of manure will be accumulated near bedding, watering sites, and places cattle like to relax - like a bush on a hot day. By introducing an off-site watering system, and ensuring

that there is shade away from our water source in the summer, we can significantly cut down on manure's impact on our water. Fencing out water sources, including a buffer zone of vegetation, also helps reduce leaching to a great degree. A well vegetated, undisturbed strip of land along a water's edge filters many contaminants from runoff. Depending on the slope, type of vegetation, and soil type all play a part in determining how wide a buffer zone should be. PCBFA, and other organizations such as Lesser Slave Watershed Council, Cows & Fish, and others have many resources on determining proper buffer zones.

When it comes right down to it, preventing manure contamination of our water sources not only helps to keep our downstream neighbours happy and healthy,

but also puts money in our pockets by increasing efficiency of our grazing cattle!

If you are interested in off-site watering system options, we would love to go over the different options out there! There is also plenty of Canadian Agriculture Partnership (CAP) funding available to purchase watering systems, fence out riparian areas, and much more! Give us a call in Fairview at 780-835-6799 ext. 3, or email [info@pcbfa.ca](mailto:info@pcbfa.ca) to go over your options for watering systems and CAP funding!

**GET YOUR MEMBERSHIP NOW!**

**TELL YOUR FRIENDS! 2018 PCBFA MEMBERSHIP FOR ONLY \$30!**

As per our 2017 Annual General Meeting Feb 23, membership will be increasing to \$50/year on Aug 17th, 2018! Multi-year memberships will also be available to purchase.

[peacecountrybeef.ca/membership](http://peacecountrybeef.ca/membership)



# Upcoming Events

Jim Gerrish Grazing School	August 7th	Spruce Lane Ranch, near Bay Tree
Cocktail Cover Crop Farm Tour	August 9th	Meet at Fairview Research Farm
Healthy Soil, Healthy Profits: Making Your Soil Work for You	August 13th	Teepee Creek Hall
Healthy Soil, Healthy Profits: Making Your Soil Work for You	August 14th	High Prairie AgriPlex
Cattle Marketing Evening	September 14th	Rycroft Ag Society Hall

Thank You to our Corporate Sponsors



**ONE TIME FENCING LTD.**



PCBFA receives funding from the Government of Alberta



If you would like more information, or to register for any of these great upcoming events please visit our website, [peacecountrybeef.ca](http://peacecountrybeef.ca), email [info@pcbfa.ca](mailto:info@pcbfa.ca) or call 780-835-6799 ext. 3



*Oh, the Places We'll Go!*

We need your help choosing our next Study Tour Destination!

Vote On our Website!  
[peacecountrybeef.ca](http://peacecountrybeef.ca)

## Connect with Us!

Liisa Vihvelin  
Manager  
Fairview, AB  
P: 780-835-6799  
C: 780-523-0443  
E: [liisa@pcbfa.ca](mailto:liisa@pcbfa.ca)

Akim Omokanye  
Research Coordinator  
Fairview, AB  
P: 780-835-6799  
C: 780-835-1112  
E: [akim@pcbfa.ca](mailto:akim@pcbfa.ca)

Katie McLachlan  
Environmental & Communications Coordinator  
Fairview, AB  
P: 780-835-6799  
C: 780-772-0277  
E: [katie@pcbfa.ca](mailto:katie@pcbfa.ca)

Monika Benoit  
Extension Coordinator  
High Prairie, AB  
P: 780-523-4033  
E: [monika@pcbfa.ca](mailto:monika@pcbfa.ca)

Marianne Krahn  
Admin Assistant  
High Prairie, AB  
P: 780-523-4033  
E: [marianne@pcbfa.ca](mailto:marianne@pcbfa.ca)