

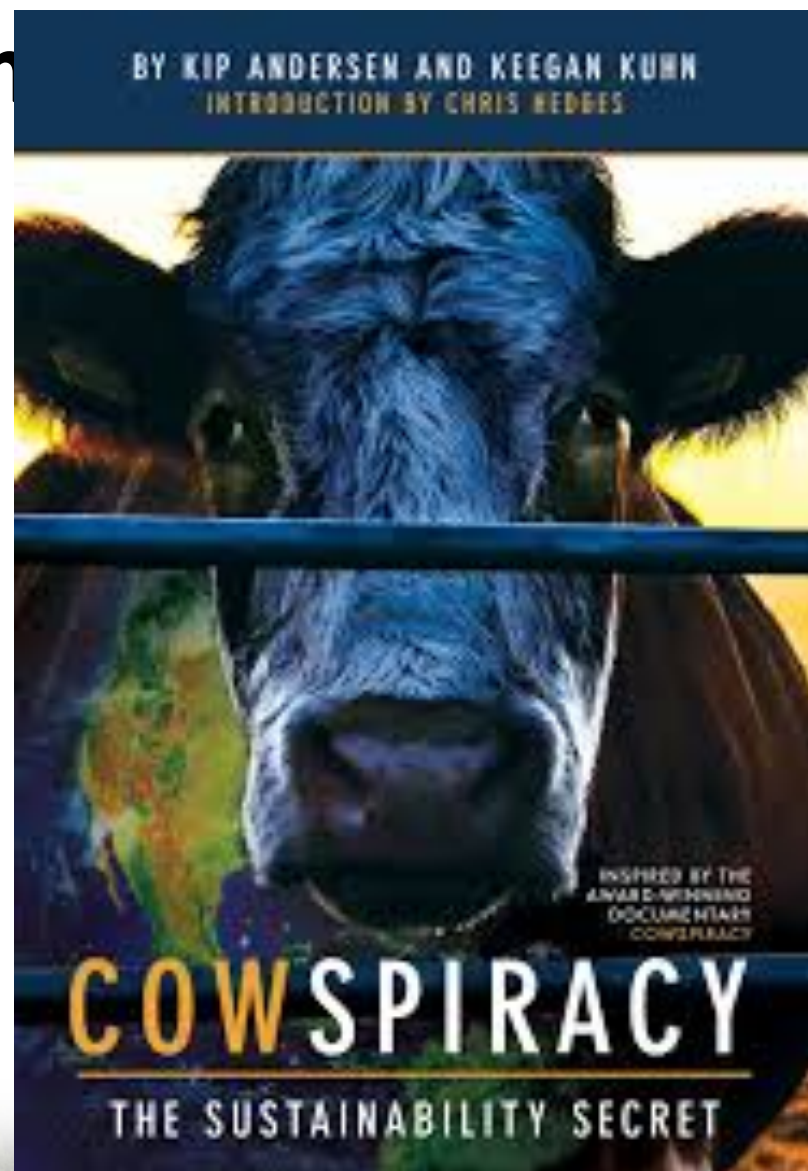
Symposium *Production bovine dans le Nord*

**Rouyn-Noranda, Qc
8 février, 2017**



Ce sont des enjeux mondiaux





Ces perceptions peuvent façonner les politiques environnementales mondiales

MEAT AND THE ENVIRONMENT: ECOLOGICAL DEVASTATION ON YOUR PLATE



“Livestock are one of the most significant contributors to today’s most serious environmental problems. Urgent action is required to remedy the situation.”

Henning Steinfeld, Chief of the
Food and Agriculture Organization of The United
Nation’s Livestock Information and Policy Branch

29 November 2006



**Viande et environnement :
Désastre écologique dans votre assiette**
«Le bétail est l’un des contributeurs les plus significatifs aux problèmes environnementaux d’aujourd’hui. Il faut agir rapidement pour remédier à la situation»

Ces perceptions peuvent façonner les politiques environnementales mondiales



Why beef is the new SUV



By **John D. Sutter**, CNN

Updated 10:32 PM ET, Tue November 24, 2015



Source: CNN

Would you stop eating beef to save the planet? 02:44

Pourquoi le
bœuf est le
nouveau VUS

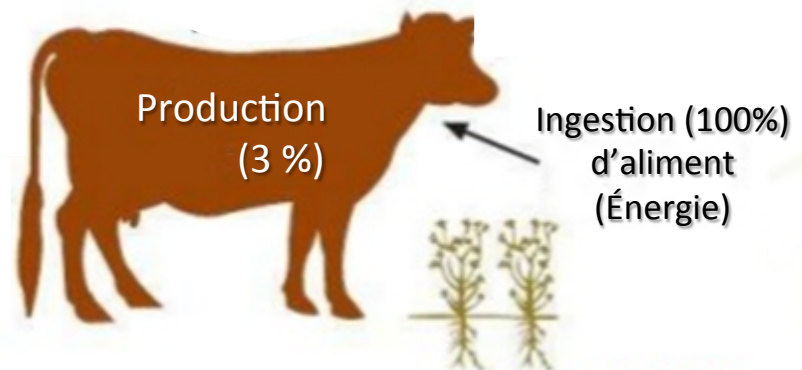
Devriez-vous arrêter de
manger du bœuf pour
sauver la planète?



Recherche en environnement du BCRC

- L'industrie n'avait pas de faits pour contrer les accusations selon lesquelles le bétail est mauvais pour l'environnement.
- Le BCRC n'avait pas financé de projets de recherche liés à l'environnement en raison de fonds limités.
- Nous devons soutenir la recherche pour rassembler les faits dont nous avons besoin ... mais par où commencer?
- Regardez ce que nos brillants chercheurs ont fait!







Définir l'empreinte environnementale de la production bovine canadienne

Project Title:

Defining the Environmental Footprint of Canadian Beef Production

Researchers:

Tim McAllister, Ph.D. and Karen Beauchemin, Ph.D.

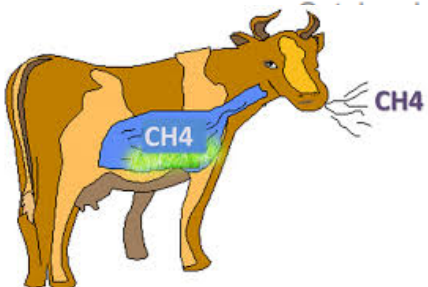
tim.mcallister@agr.gc.ca

Project
Code:

ENV.02.13

Completed:

In Progress
Results
expected in
March 2018.



Émissions des gaz à effet de serre de la production bovine canadienne en 1981 par rapport à 2011

G. Legesse^A, K. A. Beauchemin^B, K. H. Ominski^A, E. J. McGeough^A, R. Kroebe^B,
D. MacDonald^C, S. M. Little^B and T. A. McAllister^{B,D}

^ADepartment of Animal Science, University of Manitoba, Winnipeg, Manitoba, Canada R3T 2N2.

^BLethbridge Research Centre, Agriculture and Agri-Food Canada, PO Box 3000, Lethbridge, Alberta, Canada T1J 4B1.

^CEnvironment Canada, Gatineau, Quebec, Canada K1A 0H3.

^DCorresponding author. Email: tim.mcallister@agr.gc.ca

En 2011, la production de bœuf au Canada ne nécessitait que 71% du cheptel reproducteur (vaches, taureaux, veaux et génisses de remplacement) et 76% des terres pour produire la même quantité de poids vif à abattre qu'en 1981. Comparativement à 1981, en 2011, la même quantité de poids d'abattage a été produite avec une réduction de 14% des émissions de CH₄, de 15% des émissions de N₂O et de 12% des émissions de CO₂ provenant de l'utilisation des combustibles fossiles. La production de CH₄ entérique représentait 73% des émissions totales de GES pour les deux années. La production estimée de GES par kilogramme de poids vif ayant quitté l'exploitation était de 14,0 kg d'équivalent CO₂ en 1981 et de 12,0 kg d'équivalent CO₂ en 2011, soit une baisse de 14%. Une réduction significative de l'intensité des GES

equivalents for 1981 and 12.0 kg CO₂ equivalents for 2011, a decline of 14%. A significant reduction in GHG intensity over the past three decades occurred as a result of increased average daily gain and slaughter weight, improved reproductive efficiency, reduced time to slaughter, increased crop yields and a shift towards high-grain diets that enabled cattle to be marketed at an earlier age. Future studies are necessary to examine the impact of beef production on other sustainability metrics, including water use, air quality, biodiversity and provision of ecosystems services.



De quelle manière?

- **Efficacité reproductive améliorée.**
- **Meilleure gestion des prairies et des fourrages.**
- **Génétique améliorée (par exemple, croissance pré-sevrage).**



De quelle manière?

- Efficacité reproductive améliorée
- Meilleure gestion des prairies et de fourrages
- Génétique améliorée (par exemple, croissance pré-sevrage)
- **Amélioration des taux de croissance en parcs d'engraissement et de l'efficacité alimentaire**
- **Meilleurs rendements des cultures céréalières**
- **Meilleure alimentation / gestion nutritionnelle**



De quelle manière?

- Efficacité reproductrice améliorée
- Meilleure gestion des prairies et de fourrages
- Génétique améliorée (par exemple, croissance pré-sevrage)
- Amélioration des taux de croissance en parcs d'engraissement et de l'efficacité alimentaire
- Meilleurs rendements des cultures céréalières
- Meilleure alimentation / gestion nutritionnelle

Améliorer l'efficacité de production a des avantages environnementaux!





Au Canada,
produire 1 kg de
bœuf génère 15
% moins de gaz à
effet de serre
qu'en 1981 grâce
à des pratiques
de production
améliorées.



RAISE YOUR
BEEF IQ
beefresearch.ca

L'efficacité alimentaire était de
10:1 en 1950



**Aujourd'hui
elle est de 6:1**



RAISE YOUR
BEEF IQ
beefresearch.ca



Posted on [January 11, 2016](#) by [Beef Research](#)[← Previous](#) [Next →](#)

L'empreinte environnementale de la production bovine canadienne

Produire du bœuf en émettant moins de GES et en utilisant moins de ressources

Over the years, Canada's beef industry has invested a lot of time and resources in, and reaped considerable economic benefits, from improvements in productivity and efficiency. With higher forage and feed crop yields, less land needs to be bought, leased or rented to produce the same number of calves or the same amount of beef. Similarly, improved feed conversions mean that less forage is needed to winter the cow herd or less feed grain is needed to grow a pound of beef.

These improvements in productivity and efficiency have also produced environmental benefits. To produce high yields, forages need an extensive root system that promotes healthy soil, healthy soil microbes, improves structure, reduces soil losses due to wind and water erosion, and builds up soil organic matter (also known as carbon sequestration). Better feed conversion efficiencies are accompanied by reductions in methane and manure production.



Subscribe

Email *

Recent Posts

- › [Reminder: Artificial insemination \(AI\) webinar tomorrow](#)
- › [Practical applications of forage rejuvenation: Webinar February 24](#)
- › [Dr. John McKinnon named inaugural recipient of the Canadian Beef Industry Award for Outstanding Research and Innovation](#)
- › [Why use artificial insemination? Webinar January 28](#)
- › [The Environmental Hoofprint of Canada's Beef Industry](#)

Recent Comments

- › [Reynold Bergen on The Environmental Hoofprint of Canada's Beef Industry](#)
- › [Tristan Stallcup on How much feed](#)



Login

Calg

A

> HC

> NE

Ca

Ca

Wo

> VIE

> EN

> LIF

> DF

> SP

> YC

> HC

> GA

> FE

Events

The resu

when they are being fattened before slaughter, says the study published in the journal Animal

CTV
NEWS
KITCHENER



NEWS VIDEO WEATHER SPORTS MORE CONNECT

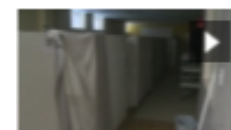
FEATURED



AM Update: Police looking for Brantford shooter



5th serious barn fire in southern Ontario this year



'First stable thing' for at-risk youth on its way out



Jurors hear timeline of Tim Bosma's alleged murder

Study finds Canadian farmers cutting emissions while producing more beef



when they are being fattened before slaughter, says the study published in the journal Animal

Reserve today and

Search Google or Castanet **NEW**

Sports ShowBiz Classifieds

250.491.8

Schedule a Ser

Business

4 Remaining



Reserve today and

DRIVE
www.dr

LEA

with less

Print Font Size: - +



L'utilisation d'implants hormonaux signifie que moins de ressources sont utilisées pour produire du bœuf

11%
PLUS



BOEUF



AVEC

20%
MOINS



BÉTAIL



RÉSULTE DES
PRATIQUES DE
PRODUCTION
COMME L'EMPLOI
DES IMPLANTS
HORMONAUX ENTRE
1977 ET 2007



SI NOUS DEVIONS REVENIR À LA TECHNOLOGIE DES
ANNÉES **1950** TOUT EN MAINTENANT LES TAUX DE
PRODUCTION ACTUELS, LE RÉSULTAT SERAIT

12%
PLUS

BÉTAIL



10%
PLUS

TERRE



11%
PLUS

ALIMENT



4%
PLUS

EAU



7%
PLUS

DIESEL



10%
PLUS

FUMIER
ET GES



8%
OU
PLUS

PRIX AU
DÉTAIL



BCRC
BEEF CATTLE RESEARCH COUNCIL



Dear Dr. Reynold Bergen,

My name is Lianna. I am 11 years old, and I go to Frost Road Elementary in Surrey.

My class and I have been studying about water consumption. We found out that animal agriculture uses more water than us people have been using every day! We are concerned about it, and need your help. We all have researched how much water is used for 1lb of beef. The answers that we found were not good to the environment.

I have watched the news at times, all I could see in the television was murder and pollution. Also some things about water consumption, but has only to do with people consuming water. Why is it that there is nothing in the news about water consumption from animal agriculture? I ate a Big Mac about a week ago, and I'd like to know how much water is being used for just one Big Mac.

Most of the answers we found for how much water is being used for 1lb are over 1,000 gallons! Hopefully you understand and try to find a way to take action for it. If you keep ignoring it, there would be no more water to drink for our future generation.

Thank you for your time in reading my letter.

Sincerely,

Lianna Soliva

Cher Dr. Reynold Bergen,

Mon nom est Lianna. J'ai 11 ans et je vais à l'école Frost Road à Surrey (BC).

Ma classe et moi avons étudié à propos de la consommation d'eau. Nous avons découvert que les animaux d'élevage consomme chaque jour plus d'eau que les humains. Nous sommes préoccupés et avons besoin de votre aide. Nous avons tous cherché la quantité d'eau nécessaire pour produire 1 lb de bœuf. Les réponses que nous avons trouvées ne sont pas bonnes pour l'environnement.

Je regarde les nouvelles à l'occasion et tout ce qu'on y voit est la mort et la pollution. Parfois aussi quelques faits en lien à la consommation d'eau, mais seulement en lien à la consommation humaine. Pourquoi on ne parle pas de la consommation en eau des animaux en agriculture? J'ai mangé un Big Mac il y a environ une semaine et j'aimerais en savoir plus sur la quantité d'eau nécessaire à la production d'un seul Big Mac.

La plupart des réponses que nous avons trouvées sur la quantité d'eau utilisée pour produire 1 lb de bœuf est 1000 gallons. J'espère que vous cherchez des actions pour y remédier. Si vous ne faites rien, il ne restera plus d'eau à boire pour la prochaine génération.

Merci de votre temps pour la lecture de ma lettre.

Sincèrement,

Lianna Soliva



Quelle quantité d'eau est utilisée pour produire une livre de bœuf canadien ?



Sajjin Thandi
Frost Road Elementary
8606 162nd Street
Surrey, BC V4N1B5

Beef Cattle Research Council
180, 6815 - 8th Street N.E.
Calgary, Alberta T2E 7H7

March 30, 2016

Dear Beef Cattle Research Council,

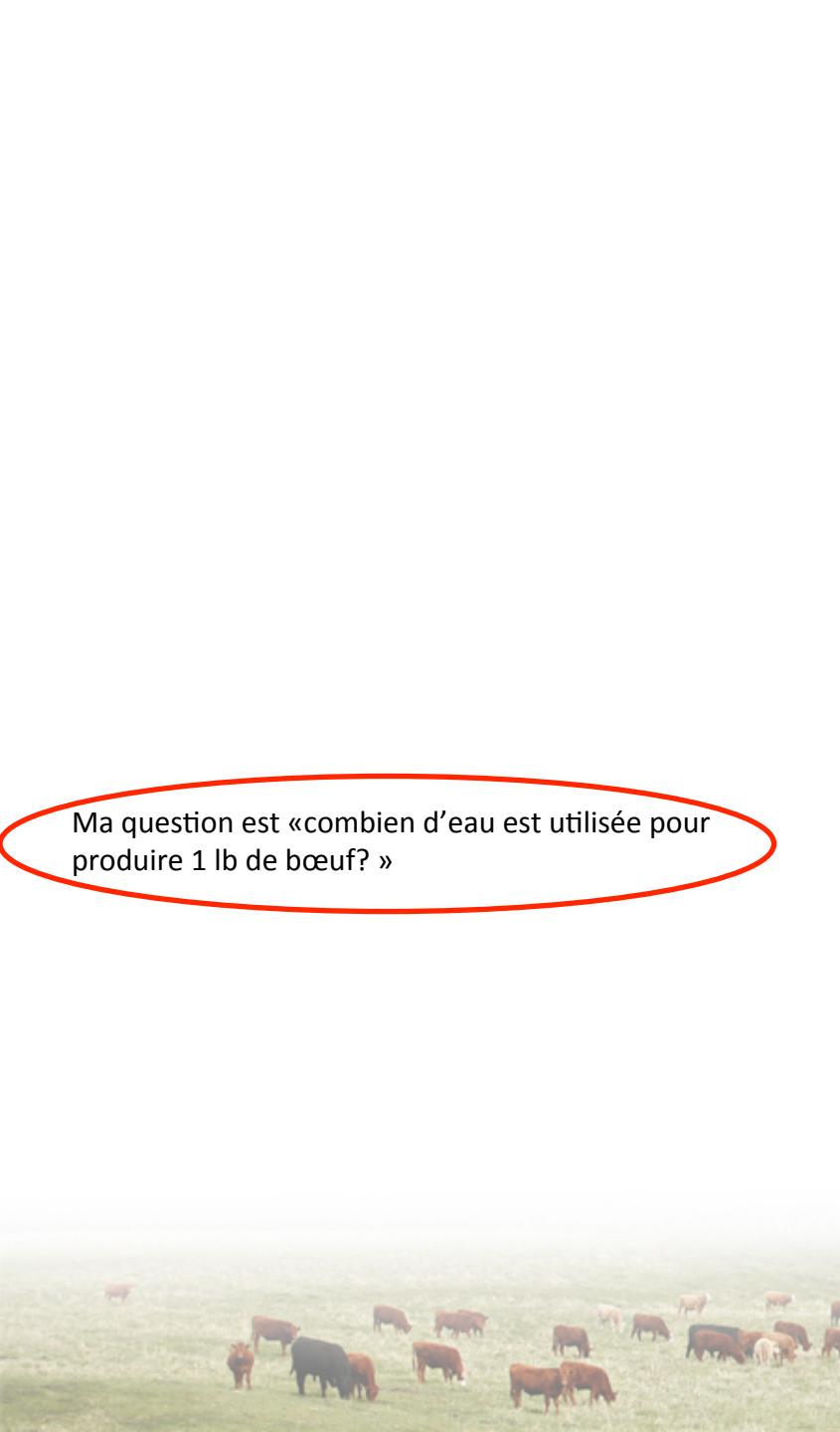
Hello, my name is Sajjin. I am a student at Frost Road Elementary and my grade 6 class has been researching for weeks to find the answer to an important question: How much water is used to produce one pound of Canadian beef? There are many factors to consider such as watering, grain, cleaning buildings, cleaning beef and so much more. Trying to find a reliable answer is hard, as many websites say different amounts such as Huffington Point, who say one 1847 gallons per pound, Meatmythcrushers, who say 441 gallons per pound, and food tank says 1799 gallons per pound. Answers vary and are not dependable, and that is why I am writing to you. I need you to answer the question because I am concerned. I need to know the answer to this question because I want my children to have clean, fresh drinking water. I need to know the answer because you are not the only people who should know.

Sincerely,

Sajjin and the class of Madame T.

RECEIVED

APR - 7 2016



Ma question est «combien d'eau est utilisée pour produire 1 lb de bœuf? »

Jeni

10~02~16

RECEIVED

APR - 7 2016

To Doctor Reynold Bergen,

Hi! My name is Jeni Concepcion. I'm 11 years old, in grade 6 and I go to Frost Road Elementary.

For about 4 months, our class has been studying water. We've been doing a lot of research about conserving and consuming water.

I am writing this to you because I have a concern regarding the water used to produce beef.

I care because soon one day, there will be no water to make our resources and unfortunately, no water for the whole world to consume.

My question is "how much water is used to produce 1lb of beef?"

Online, there has been multiple results, according to a UC Davis study, "it takes 441 gallons of water to produce 1lb of boneless beef" but I can't mark the exact answer. That's why I ask of your help in answering this question, "how much water does your company use to produce beef?"

Please we need your answer.

Thank you!

~Jeni 😊

Alberta Beef Producers 165, 6815 – 8th Street
N.E. Calgary Alberta, Canada T2E 7H7

Sushrit
8606 162st, Surrey, B.C.
February 2016

RECEIVED

APR - 7 2016

Attention: Alberta Beef Council

Dear, Alberta Beef Council,

My name is Sushrit I live in Surrey B.C. And I'm in the sixth grade. I go to Frost Road elementary. Lately my class has been doing research and at the rate people like you and me are using up water, it concerns me that we won't have enough water for the many years to come. Dear reader I know your company makes millions of dollars transporting beef to Canadians around the country, but have you realized the amount of water use has an enormous impact on the earth's fresh water. We want to know how much water it takes to produce one pound of beef. And maybe you could feed the cows grass because growing corn and grain uses lots of water.

Now getting to the point I may have mentioned some of these things above but that doesn't mean they are not important. Alberta Beef Council (A.B.C.), why don't you feed cows grass. If you people think it's not clean, why don't you fertilise/clean the grass? Plus growing corn and grain uses lots of water and cleaning stables, infrastructure uses lots of water. A.B.C. can you also let me know how much water it takes to produce one pound of beef. I'm very very concerned about the water because, there are many people in need of this water and we have to think about the future. If we don't save our water we will soon run out of it. Oh, if you want me to look up how much water it takes to produce one pound of beef, I did and I got tons of different answers. I'll give you a few examples, a website called U.S.G.S says it takes 7,360 litres of fresh water to produce one pound of beef and a documentary called

Si vous voulez que je regarde combien d'eau il faut pour produire une livre de bœuf, je l'ai fait et j'ai eu des tonnes de réponses différentes.



Dans Cowspiracy, on dit qu'il faut 2640 litres d'eau pour produire une livre de bœuf.

Saviez-vous que les bovins de boucherie utilisaient 55 % de l'eau douce mondiale, tandis que les maisons en utilisaient seulement 5 %.

Aux nouvelles, ils disent de prendre moins de douches pour économiser l'eau, mais pourquoi ne parlent-ils pas de vous ?

Cowspiracy says it takes 2,640 litres of water to produce one pound of beef. A.B.C. as you see these are very different answers please give me a dependable answer because all these are all over the place? And back to your water usage. Did you know beef cattle farms use 55% of the world's fresh water, while houses use only 5% of the world's fresh water? On the news they say take less showers to conserve water, but *why don't the talk about you guys?*

Thank you Beef council for taking your time and reading me letter. I hope this changes your perspective and it would be really nice if you write a letter back answering my questions or at least some of them, thank you again

Sincerely

Sushrit

Sushrit



Dans les cinq dernières semaines, notre classe a essayé de trouver combien d'eau est utilisée pour produire une livre de bœuf. Nous avons trouvé beaucoup de réponses à cette question mais nous ne sommes pas certains laquelle est la bonne.

Marshall Xie
Frost Road Elementary
8606 162 St,
Surrey, BC

February 28, 2016

Katelyn Laverdure
Alberta Beef Producers
165, 6815 - 8th Street N.E.
Calgary, Alberta
T2E 7H7

Attention: Communications Manager

Dear Ms. Laverdure,

What will happen if the world runs out of fresh water? Well, that's what's happening now.

My name is Marshall and I go to FrostRoad elementary school. For the past five weeks or so, our class have been trying to find out how much water is used to produce one pound of beef. We found many answers to that question but we are not sure which one is correct. At www.vegsource.com it is said that it takes about 441 gallons of water to produce 1 pound of beef. Also at www.gracelinks.org it says that it takes 1,800 gallons of water to produce 1 pound of beef.



Et n'oublie pas que les 441 gallons ou les 1800 gallons d'eau ne sont pas seulement utilisés pour faire boire les vaches, mais incluent aussi :

- Eau d'abreuvement
- Eau utilisée pour irriguer les pâturages que les vaches broutent
- Eau utilisée pour la croissance des cultures qui alimentent les vaches
- Eau utilisée pour la transformation du bœuf

And don't forget that the 441 gallons or 1,800 gallons of water is not only used for the cows to drink, but it also includes:

- Water the animal drinks
- Water used to irrigate pasture land that the cattle graze
- Water used to grow crops the cattle are fed
- Water used in the processing of the beef

But, no matter how much it takes, it's still a lot of water!

We as humans must face this problem one day, and facing it earlier will reduce the consequence.

And you can help by reducing the amount of water used to produce beef and also by reminding people to save water. (e.g. fix leaks before it's too late!)

Thank you for reading. This means really much to me.

I hope people will change one day, so that our children will have a happy future, and they can experience life the good way. I hope you will change and help save water.

Sincerely yours

Marshall



2500 gallons / lb ... vegsource.com
441 gallons / 1 lb ... Beef council
660 gallons / 0,25 lb ... Cowspiracy
1248 gallons / 1 lb ... Huffingtonpost.com

Mais toutes ces différentes réponses sont mélangeantes.

Je voudrais vraiment trouver une réponse sûre.

37-8418 163 St.
Surrey, BC
V4N 6K8

February 27, 2016

The Alberta Beef Council
180, 6815 8th Street NE
Calgary, Alberta
T2E 747

Subject: Water Usage

Hello,

I am a 6th grade student at Frost Road Elementary. I am writing this letter to change the way you produce beef.

My class learned that it takes water to get beef from the farms to your plate. We also learned that producing beef can use up quite a bit of water. The reason why so much water is being used is not just because of the water that the cows drank, it is because of the fact that watering grain, cleaning buildings, and cleaning meat all require water.

My class found out on vegsource.com that it takes 2,500 gallons of water to produce one pound of beef, but the beef council said that it is 441 gallons. On cowspiracy.com, the video showed that it takes 660 gallons to make one quarter pound beef burger, which is the equivalent to two months of showering. Also, on huffingtonpost.com I found that 1,248 gallons of water are needed to produce one pound of beef. But all these different answers are so confusing. I would really like to find a dependable answer. Do you have one?

I think that this usage of water has an impact on the planet. I think that others should know about the impact that it has on the planet too. I also wish that water use was more balanced between developing countries and beef production. I care about being a responsible consumer because I do not think it is right to have one side of the world having so much water and the other side with no water for their agriculture or themselves.

Sincerely,
Edem



Frost Road Elementary School
8606 162nd Street, Surrey, BC V4N 1B5

March 31, 2016

RECEIVED

APR 11 2016

Dear Alberta Beef Council:

My class is learning about the usage of water. I am very curious about water. I am wondering what I can do to cut back on how much water I use. Humans are using too much water.

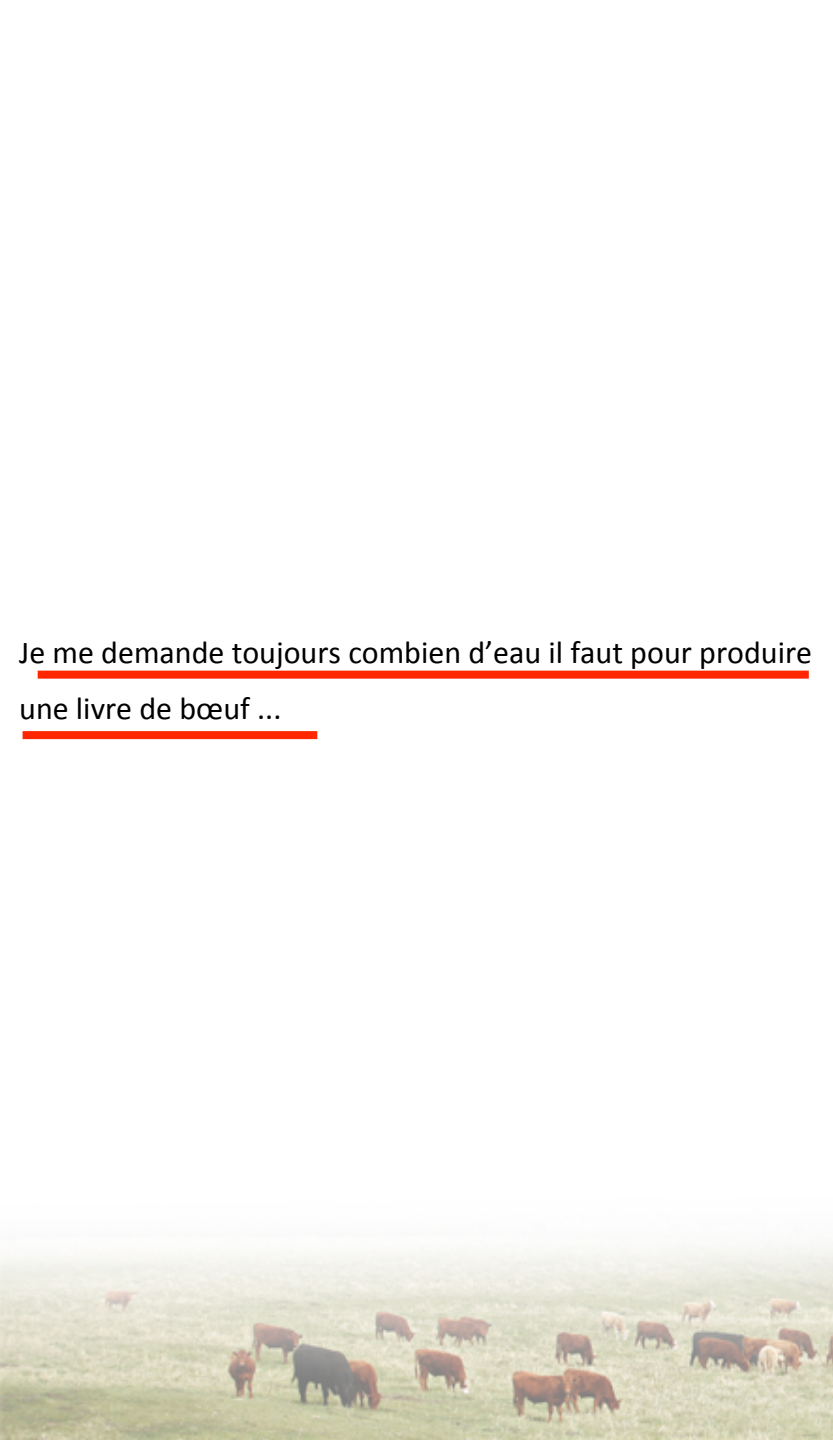
My family and I enjoy eating beef. We like steaks and hamburgers especially. It was a surprise to learn that it takes a lot of water to produce beef. I am still wondering how much water it takes to produce a pound of beef because I searched on http://www.vegsource.com/articles/pimentel_water.htm and it says that it takes 441 gallons of water to produce a pound of beef. On another website, <http://water.usgs.gov/edu/activity-watercontent.html> it says that it takes 600 gallons of water. How much water does it take? Why does it take so much water to produce beef?

I want you to try to convince people to cut back on their eating of beef, so they use only as much water as they need. I am only eleven years old and can only control how much water I use. I can also talk to my family and ask them to use less water. This is very important to me.

Sincerely,

Daniel Murchie

Je me demande toujours combien d'eau il faut pour produire
une livre de bœuf ...



Combien d'eau faut-il pour produire 1 lb de bœuf ?

RECEIVED

APR 12 2016

Hi Alberta Beef Council,

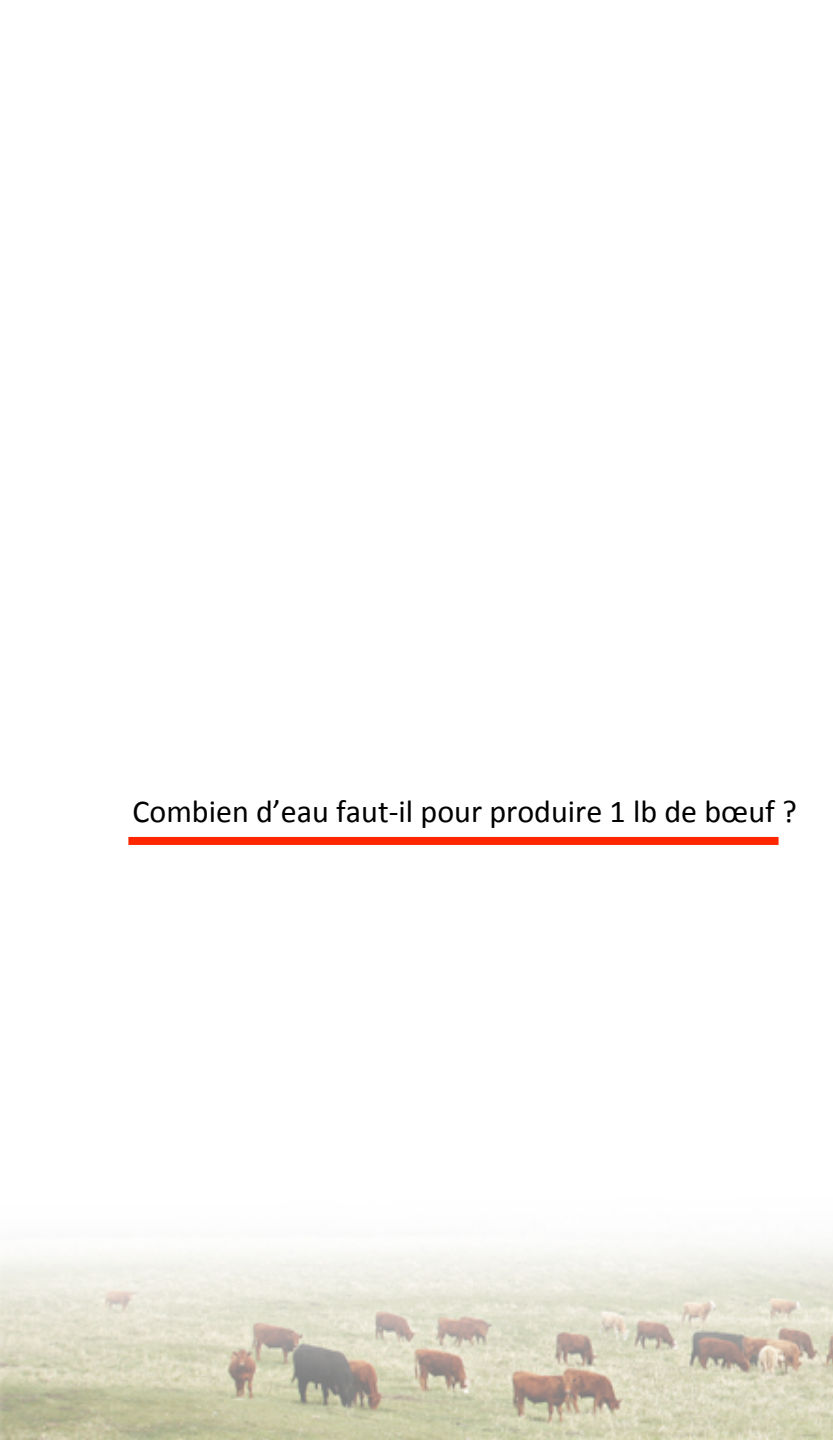
My name is Brandon and live in Surrey, BC. I'm concerned about whether you can stop people from eating too much beef. I have that concern because you need water for beef. You need a lot of water for beef because cows eat food and their food needs water to grow. They also need water for their shelter because they live in barns and barns are made out of wood and you need water for wood. You also need to clean the barn with water. I learned that 1% of the earth's water is fresh water and 99% is salt water and the cows use the fresh water only. So there wouldn't be enough water for everyone because 1 out of 5 (20%) people can't access clean water to drink. Will you make a change to make the impact smaller and give us more fresh water to drink?

I know you're not the water council, but please stop the impact or make it smaller. And once again, shall we stop people from eating too much beef?

I also have another question. How much water does it take for 1LB of beef? My class is always researching to find the answer, but none of the answers are the same. Some websites I used are Vegsource.com, Beefreach.ca and Foodtank.com. I noticed that the range is 440G – 1000 G. My socials teacher also showed my class a video named Cowspiracy to find the answer, but it didn't help. Please answer my question.

Sincerely,

Brandon Yan



Ma classe est en train d'apprendre sur les utilisations de l'eau, et nous avons commencé avec l'utilisation de l'eau dans le bœuf. La moyenne que nous avons trouvée était 2500 gallons dans seulement une livre de bœuf, sommes-nous corrects ?

Dear, Katelyn Laverdure (communications manager)

I'm very concerned about how much water do we use, could you help me with that? Let's start with the topic of beef!

Hi, I'm Crystal Lacuesta, I'm 11 years old, and I go to Frost Road Elementary in Surrey British Columbia.

My class is learning about water usage, and we started with the water usage in beef. The average we found was 2,500 gallons in just one pound of beef, Are we correct? How much beef does your company use? Is it close to the amount we found or is it more that 2,500 gallons? Wait, that's crazy, that's a lot of water. If you think about it, we had that amount in every province in Canada (which is $10 \times 2,500 = 25,000$) that's a lot of water. The more we lose, the more water will become rare and expensive. We already have oil becoming expensive and on top of that water! Our economy could go down in seconds. Okay! Okay! Off topic, back to water in beef.

Many websites say that the amount of beef consumption in the U.S is 270.7 pounds a year, imagine how much water would be be used in 270.7 pounds of beef. Do we really need that much water for beef, we only buy it and let it go to waste by not eating it or just leaving it in the freezer. Sorry! That sentence might have seemed like I was threatening to put your company out of business, Sorry again!

I was also wondering how much beef does your company produce in a year? You probably make millions of pounds of beef, but I guess you are paid a lot.

Well, Thank you for taking your time to be reading this letter!! And if you could answer any of my questions, I would very much appreciate if I could get a response for any of my questions.

Sincerely, Crystal Lacuesta.



APR 12 2016

Alberta Beef Council
165, 6815 - 8th Street N.E.,
Calgary, AB T2E 7H7

Tuesday March 1

Frost Road Elementary,
Division 3, Aiyana
8606 163 Street, Surrey BC

Dear the WHOLE Alberta Beef Council,

Moo (Hello)! I am writing to you because I love cows, and water. Please read this letter when you have the time to.

Hi, my name is Aiyana and I go to Frost Road Elementary. I am in Grade 6. My class and I are studying water in social studies. Mainly about how much water is used in one perfect and good pound of beef. Your website said that only 8 gallons of water for one pound of beef. But, it also said that was just all the water that was consumed by the cow for one pound of beef. Shouldn't there be more? What I'm trying to say is isn't there water in there food? And the field that they live in needs water to keep fresh right? Where is all of this water going? Is it just going to cows? People need water to, just like all of the other animals and plants in the world.

Principalement sur la quantité d'eau qui est utilisée dans une parfaite et bonne livre de bœuf. Votre site web mentionnait seulement 8 gallons d'eau pour une livre de bœuf.



My class and I have some questions for you. Please answer as much questions as you can. Is all the water just for the cows? What about all of the lakes and ponds that are getting destroyed because of the water that you are taking from them? Where does all of the extra water go? What about all of the land that is slowly disappearing because there is no more water? What are you going to do about all of that land? If you have any way to decrease the amount of water that you use for the cows please do that. Even the smallest amount of change like even if you just decrease the amount by 1% could really change the world for the better. Don't you think?

Now for the main question I was asking about. How much water does it take to produce one pound beef, including the agriculture and the water in the food? My class and I did some research and these are some of the numbers for the gallons of water that's used in one pound. Here's what we found:

1. 114 gallons
2. 1 847 gallons
3. 150 gallons (per $\frac{1}{4}$ pound)
4. 2 500 gallons
5. 9 gallons
6. 8 gallons (your answer)

Most of the websites said 114 gallons per pound; can you tell me the real true answer? I am asking you because I trust you for the answer because you are the Beef Council. Can I trust you?

I shall wait for you to reply. Please reply as soon as possible.

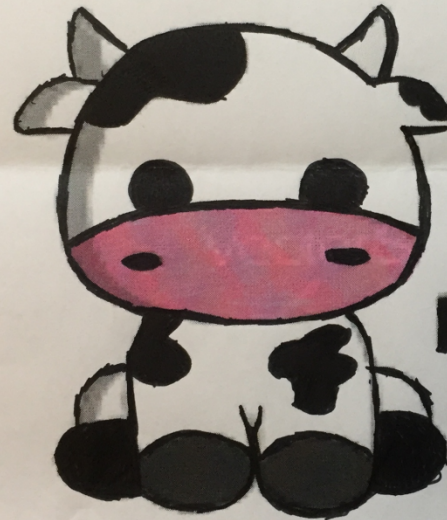


Thanks for reading,

Aiyana ☺

Aiyana

Frost Road Elementary,
Division 3, Aiyana
8606 163 Street,
Surrey BC



MOOOOOO!



1. 114 gallons
2. 1 847 gallons
3. 150 gallons (par $\frac{1}{4}$ de livre)
4. 2 500 gallons
5. 9 gallons
6. 8 gallons (votre réponse)
7. 5 000 gallons (courriel au BCRC)
8. 10 000 gallons (Pimental)





2

3 **Intensité de l'utilisation de l'eau de la production de bœuf canadien en 1981 par rapport à 2011**

4

5

6 **Getahun Legesse ^{a,1}, Marcos R. C. Cordeiro ^{b,1}, Kim H. Ominski ^a, Karen A. Beauchemin ^b,**

7 **Roland Kroebe ^b, Emma J. McGeough ^a, Sarah Pogue ^b, Tim A. McAllister ^{b,*}**

8

9

10

11 ^a Department of Animal Science, University of Manitoba, Winnipeg, Manitoba, Canada R3T 2N2

12 ^b Lethbridge Research and Development Centre, Agriculture and Agri-Food Canada, 5403 1st

13 Avenue South, Lethbridge, Alberta, Canada T1J 4B1

- **Combien d'eau faut-il pour produire une livre de boeuf au Canada?**
- **De quelle manière l'empreinte hydrique de l'industrie canadienne du bœuf a-t-elle changé au cours des 30 dernières années?**



Les bovins ont besoin d'eau pour :

- Boire (facile à estimer)
- Transformation du bœuf (information non disponible)
- Croissance des cultures



Cultures

- **Fourrage:**
 - Espèces pérennes introduites ou indigènes, foin
 - Ensilage d'annuelles, affouragement en vert, pâturage en andains (swath grazing) et sur balles (bale grazing)
- **Céréales et suppléments de protéines**



Besoin en eau des cultures

- Dépend de la culture.
- Dépend du stade de croissance.
- Dépend des dates de semis et de récolte.



Utilisation en eau des cultures



Statistique
Canada

Statistics
Canada

Rechercher dans le site Web



[Accueil](#) → [Publications](#) → [92-195-X](#) → [Page principale](#)

Publications

Glossaire illustré

92-195-X

Page principale

Renseignements
supplémentaires

Recensement de 2011

Produits de référence

Géographie

Consultation sur le recensement

Recensement de l'agriculture

Autres liens

Recensement de la population
de 2006

Région agricole de recensement (RAR)

Définition détaillée

Les régions agricoles de recensement (RAR) sont composées d'un groupe de divisions de recensement adjacentes. En Saskatchewan, les régions agricoles de recensement sont des groupes de subdivisions de recensement unifiées adjacentes, qui ne respectent pas nécessairement les limites des divisions de recensement.



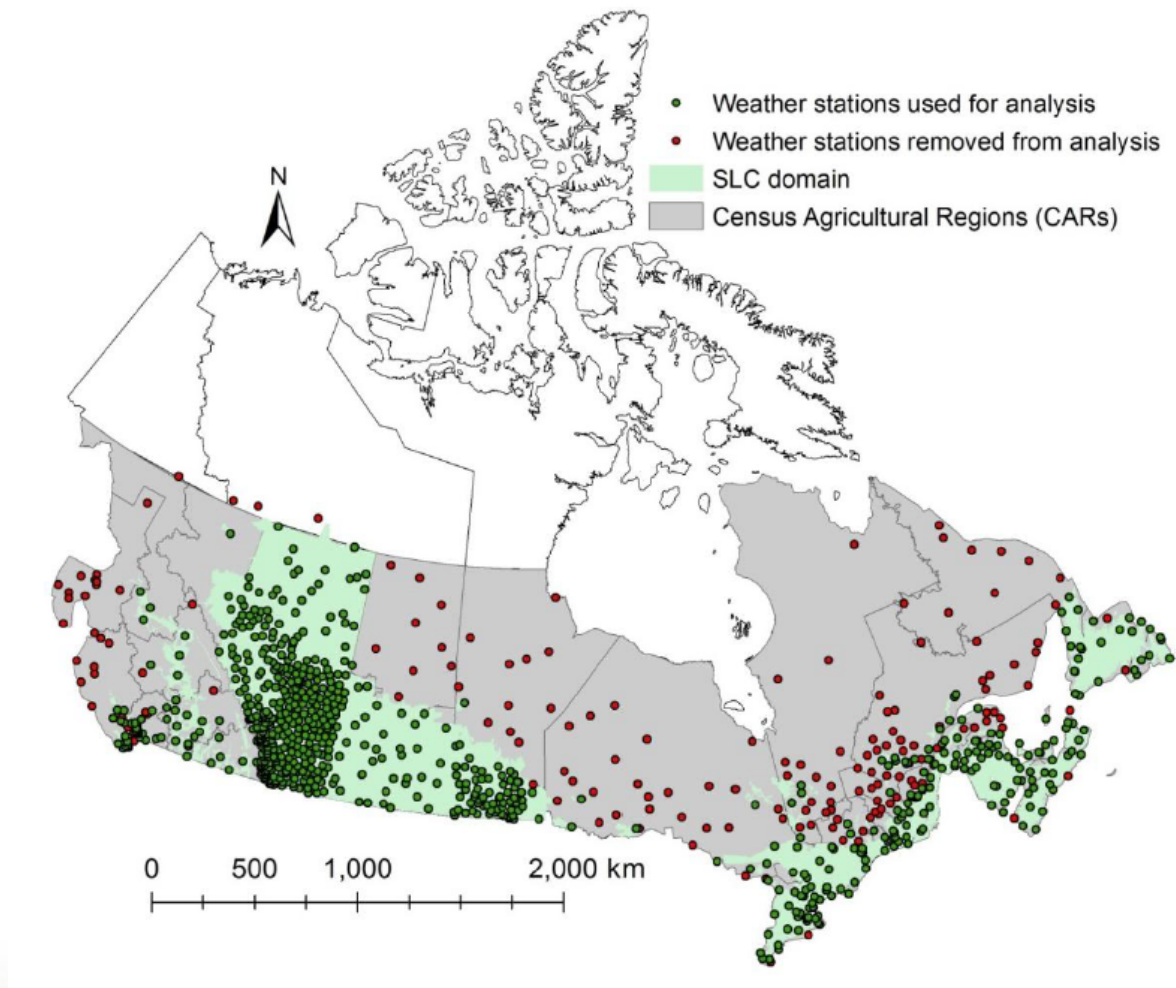
Recensements

2011, 2006, 2001, 1996, 1991, 1986, 1981



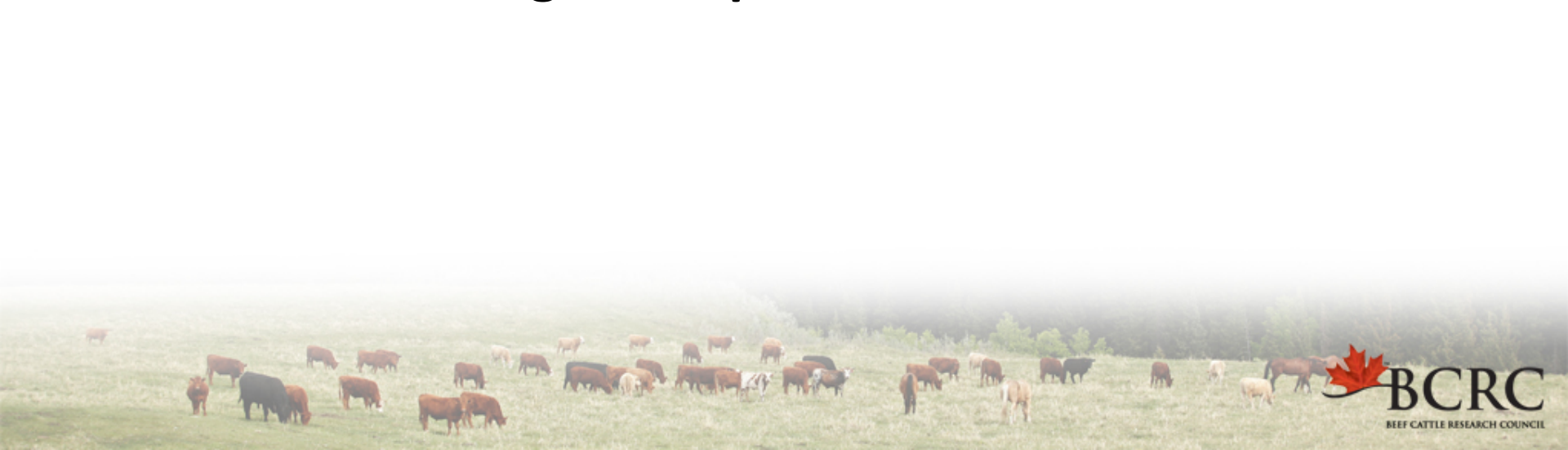
Rendements des cultures

- Dépend de la disponibilité de l'eau
- Précipitations, température, humidité du sol



Sources de l'eau

- Précipitations
 - Eau verte
- Irrigation (BC, Alberta, Saskatchewan)
 - Eau bleue
 - Inondation, gicleur, pivot central

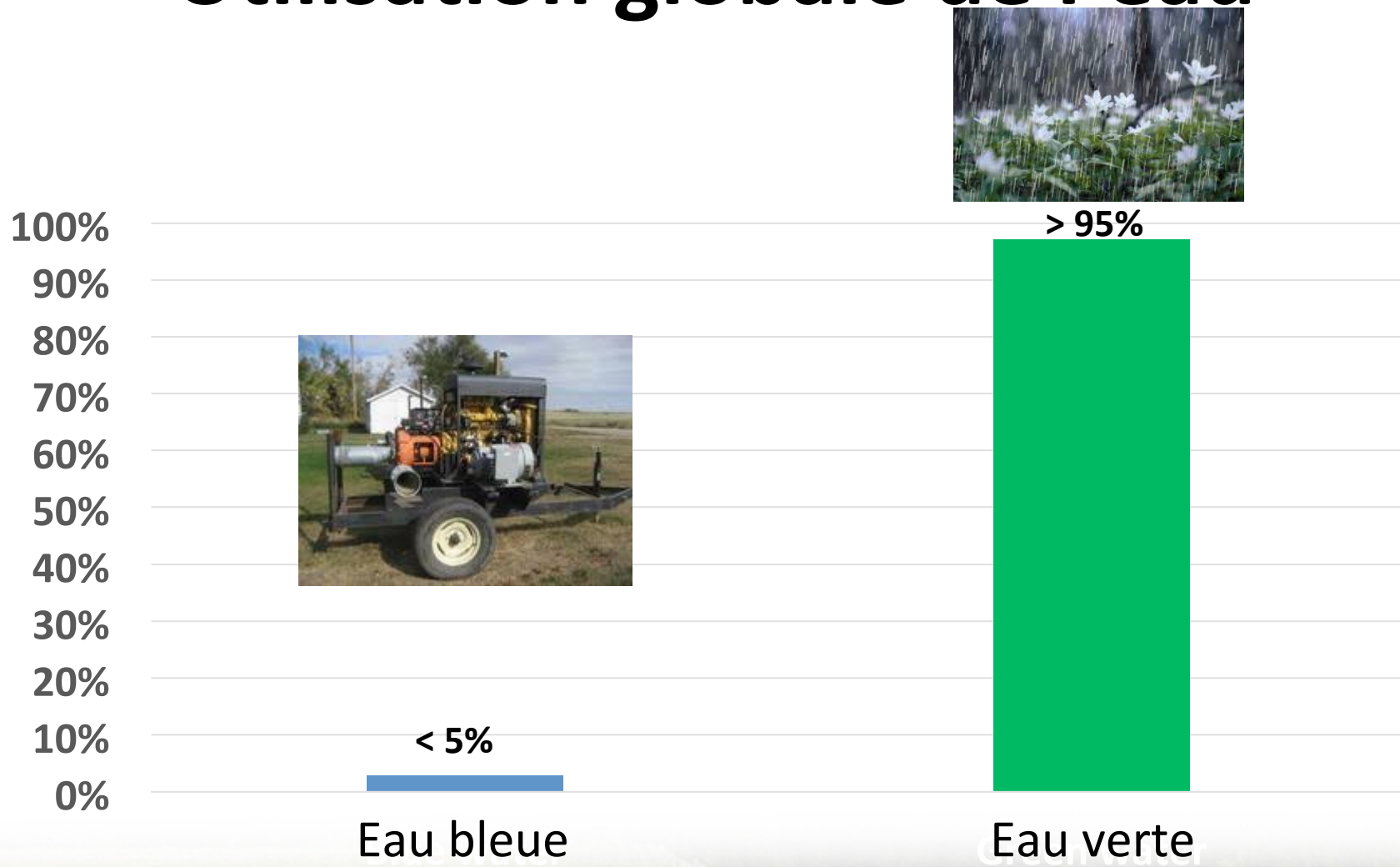


Estimation de l'eau utilisée pour:

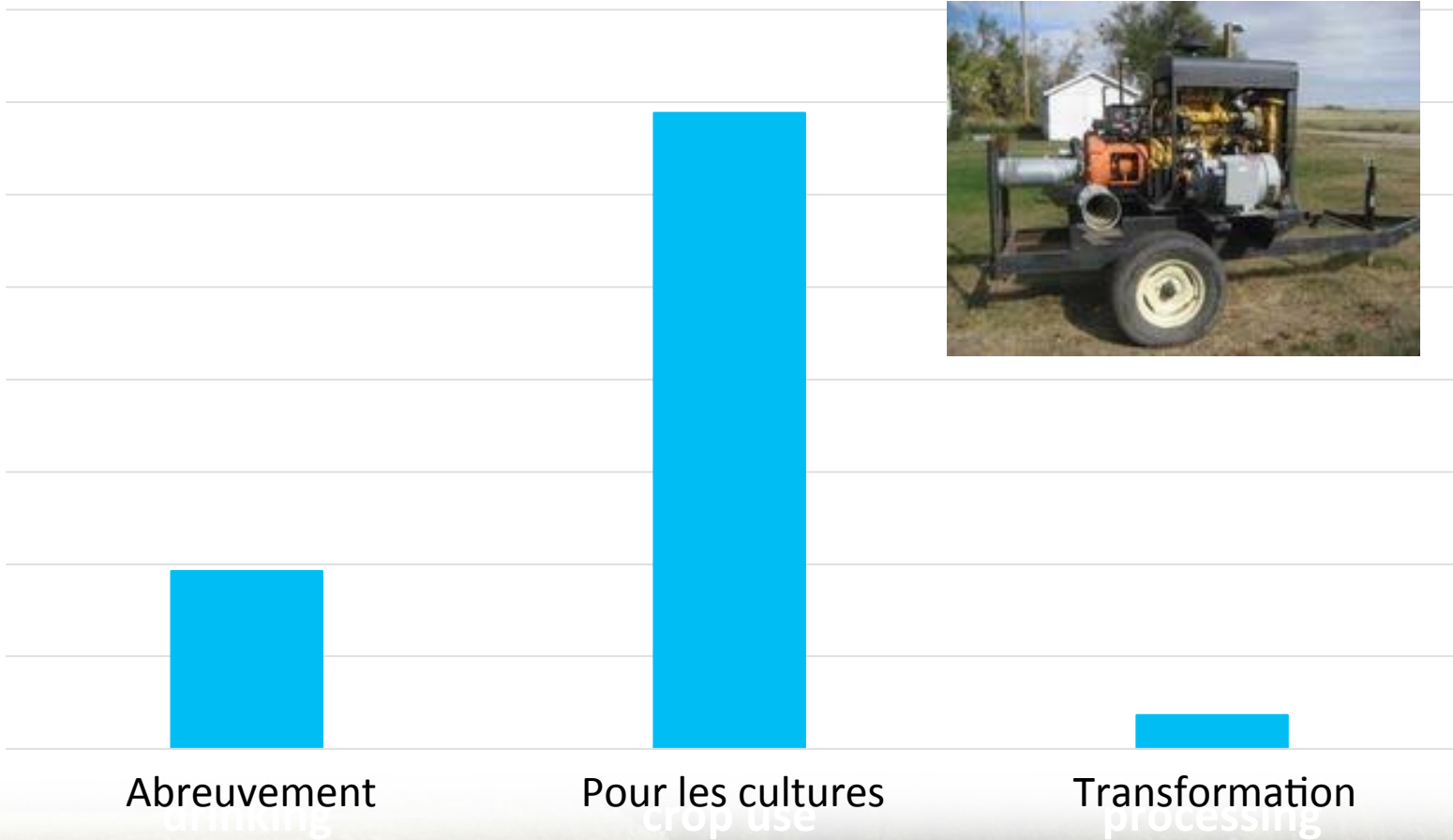
- Abreuvement du bétail (**bleue**).
- Production du fourrage et des autres cultures. pour l'alimentation du bétail (**bleue** et **verte**); 49 différents programmes alimentaires.
- Transformation du bœuf (**bleue**).



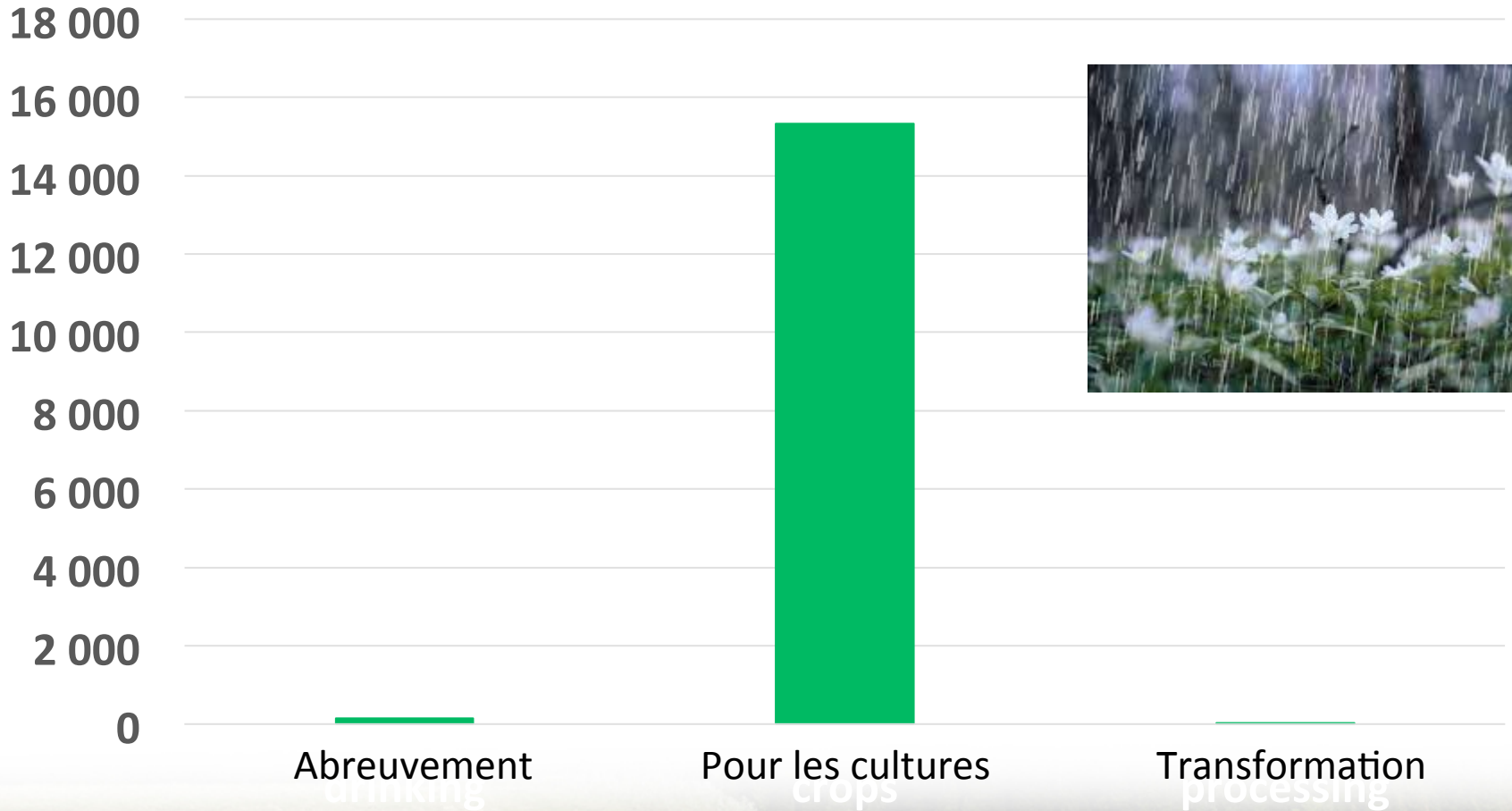
Utilisation globale de l'eau



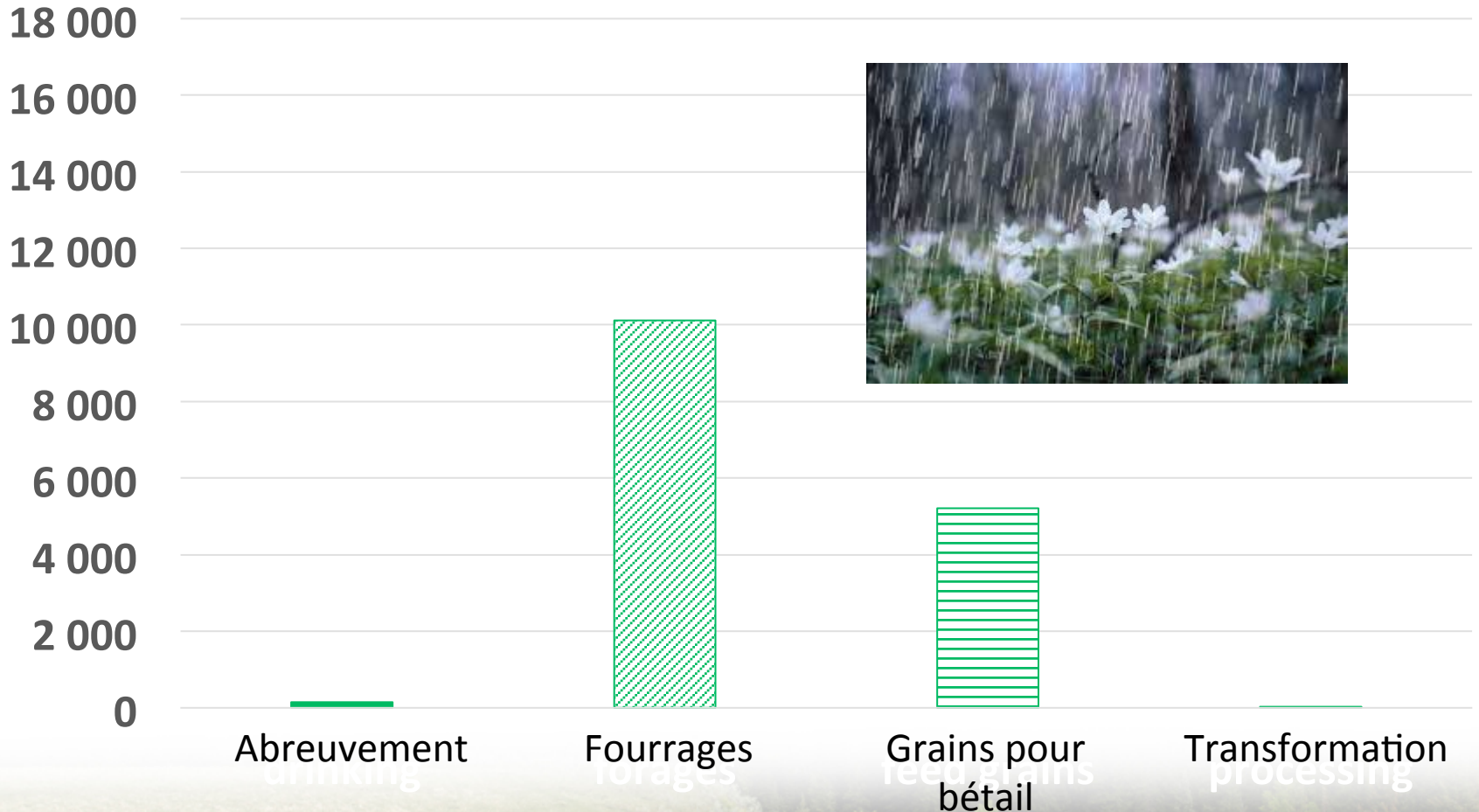
Utilisation d'eau bleue (l / kg boeuf)



Utilisation d'eau verte (l / kg bœuf)



Utilisation d'eau verte (L/kg bœuf)



Utilisation d'eau (gallons / lb)

- Eau bleue = 46
- Eau verte = 1 544
- **Bleue + verte = 1 590**

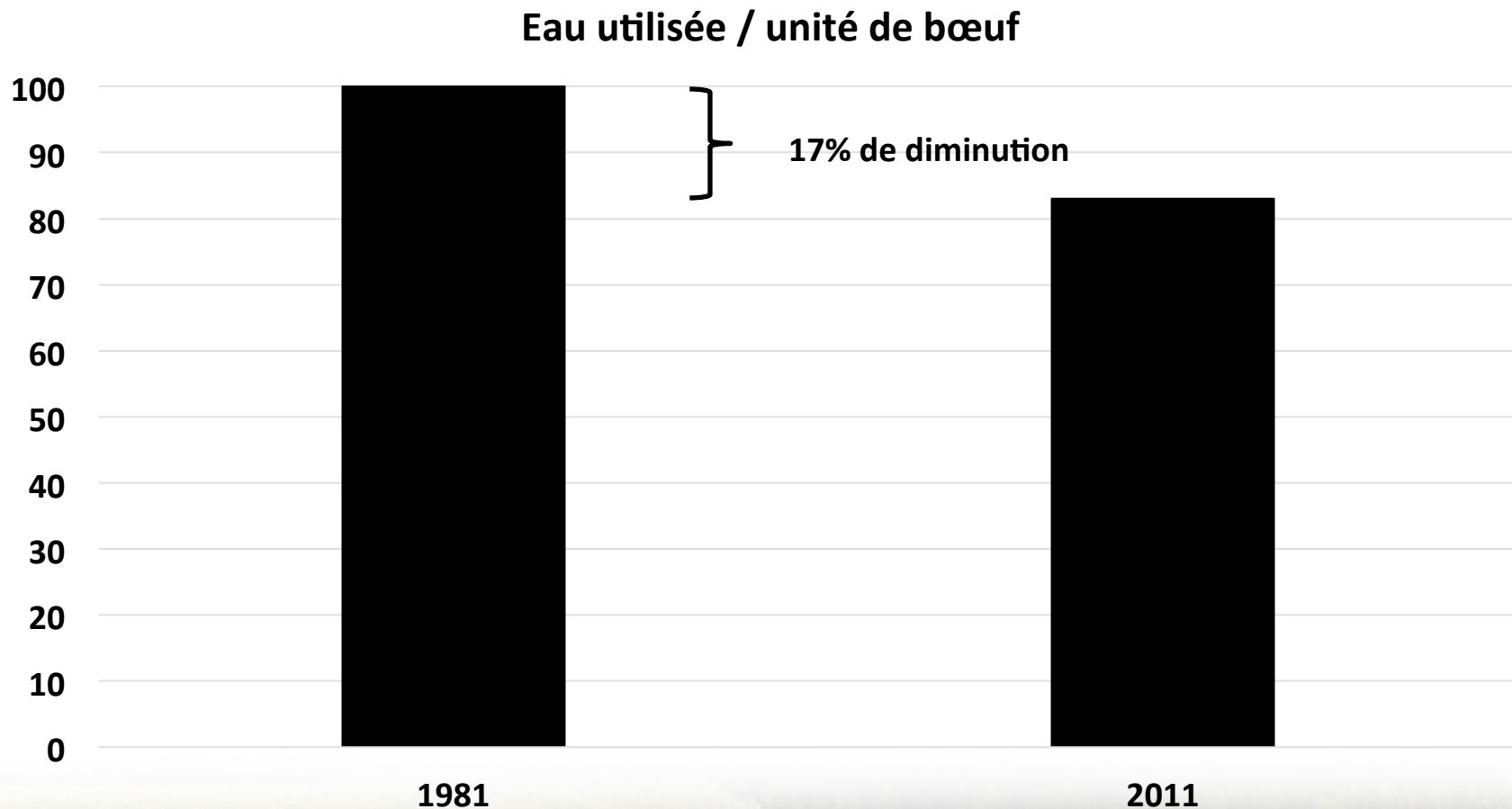


Utilisation d'eau en 2011 (gallons/lb)

- 8
- 9 ← 46 (eau bleue)
- 114
- 600 ← 1 590 (verte + bleue)
- 1847
- 2500
- 5000
- 10 000



Utilisation d'eau (1981 vs 2011)



Pourquoi l'utilisation de l'eau diminue-t-elle?

- **Augmentation des rendements des cultures**
 - Par exemple, l'utilisation de l'eau a chuté de 42% pour le maïs et de 11% pour l'orge
- **Efficacité améliorée**
 - Cultures utilisent plus efficacement l'eau
 - Technologie et pratiques d'irrigation
- **La sélection génétique et les pratiques agronomiques liées aux fourrages et aux grains destinés au bétail seront les éléments clefs à travailler pour réduire davantage l'utilisation d'eau dans le futur**



[» Return to Blog Homepage](#)[SHARE](#)   [Print Page](#) Posted on [December 14, 2017](#) by [Beef Research2](#)[← Previous](#) [Next →](#)

L'empreinte hydrique de l'industrie canadienne du bœuf diminue

In 2016, the Beef Cattle Research Council's (BCRC's) Science Director received 10 letters like this:

"Dear Dr. Bergen.... My name is Emma. I am in 6th grade at Rime Street Elementary. My class found out on vegsource.com that it takes 2,500 liters of water to produce one kilogram of beef. Another site said 25,000 liters.... all these different answers are confusing. My social teacher also showed us a video named Cowspiracy, but it didn't help. Do you have a dependable answer?"

Eleven-year-olds aren't the only ones asking these questions. So are consumers, retailers, and others. When the facts aren't available, exaggerated opinions often fill the gap. A quick google search provides more answers with less consistency. Numbers vary from 100,000 liters/kg (BioScience 47:97-106), 43,000 liters/kg (43,000) (BioScience 54:909-918):



Subscribe

Email *

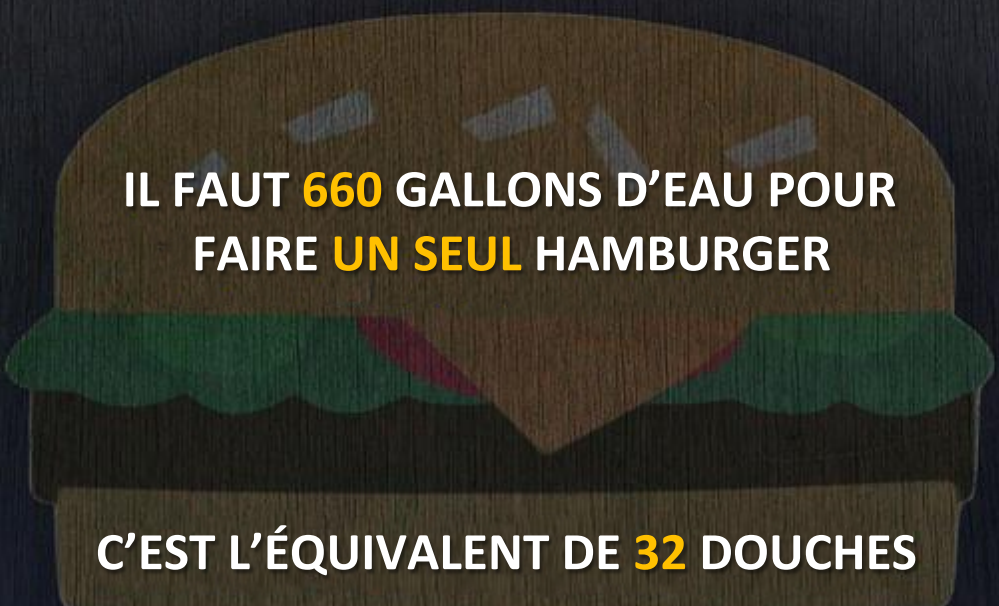
Recent Posts

- › [Canada's Beef Quality Audit: What have we learned? Webinar February 14](#)
- › [BCRC progress and activity in 2017](#)
- › [Top 10 blog posts of 2017](#)
- › [Happy Holidays from the BCRC](#)
- › [Preventing reproductive wrecks: Webinar January 23](#)

Recent Comments

- › [Beef Research on The Canadian beef industry's water footprint is shrinking](#)
- › [BCRC: Top 10 blog posts of 2017 | Rural Roots Canada on Copper](#)





IL FAUT **660** GALLONS D'EAU POUR
FAIRE **UN SEUL** HAMBURGER

C'EST L'ÉQUIVALENT DE **32** DOUCHES

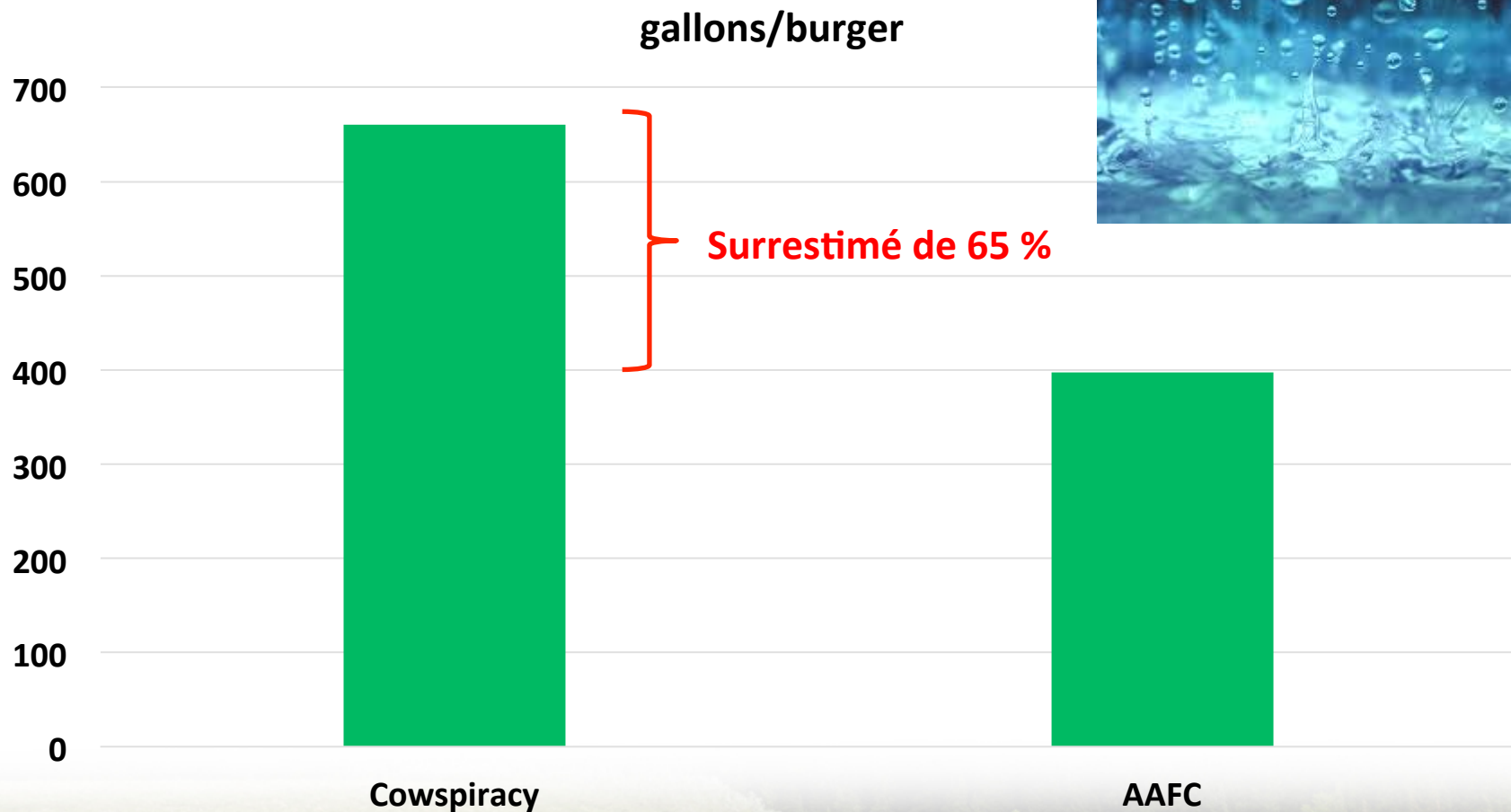
COWSPIRACY

THE SUSTAINABILITY SECRET

'EPA: "VIRTUAL WATER, REAL IMPACTS."



Cowspiracy vs. Science



IL FAUT **660** GALLONS D'EAU POUR
FAIRE **UN SEUL** HAMBURGER

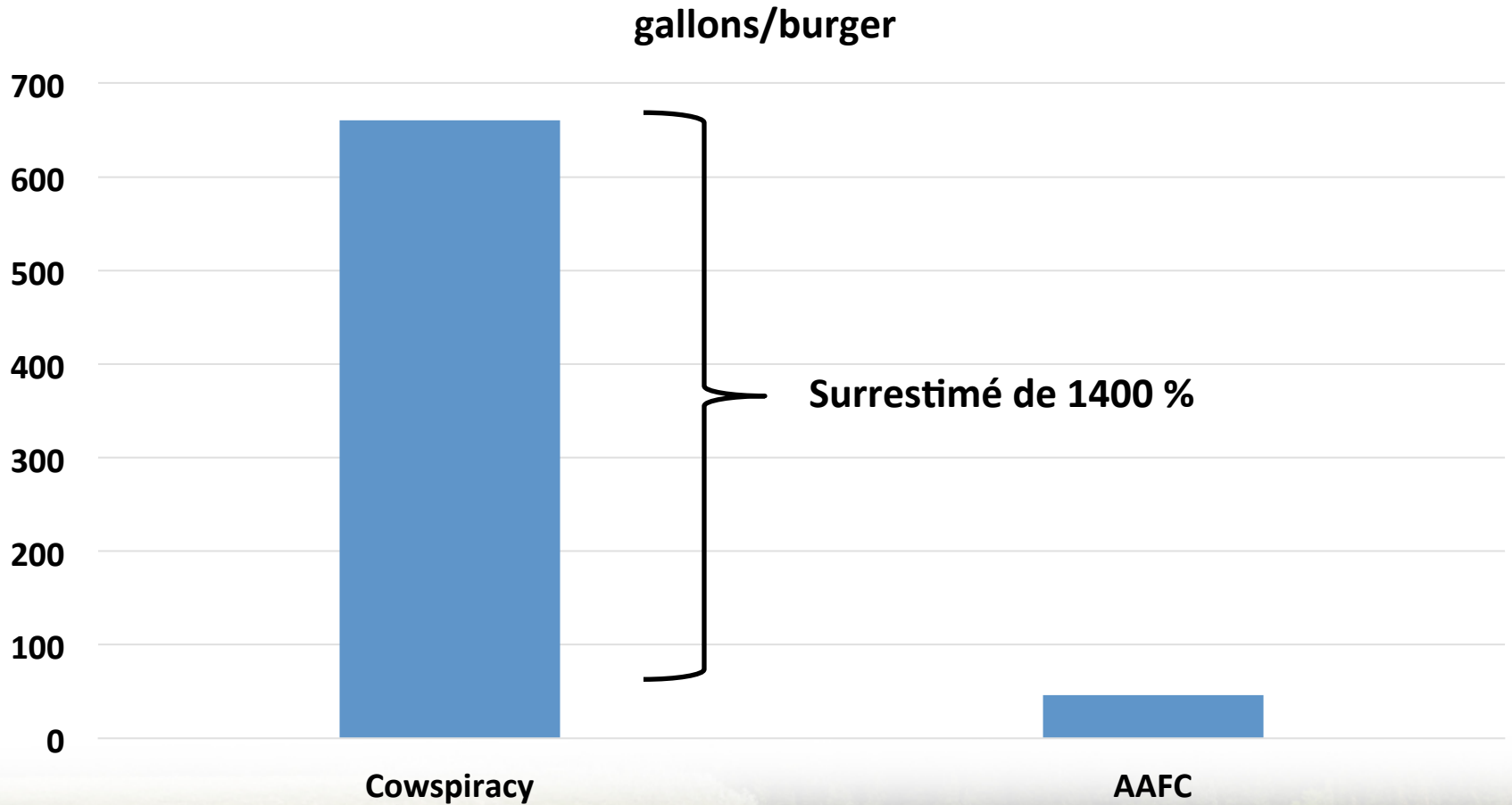
C'EST L'ÉQUIVALENT DE **32** DOUCHES

COWSPIRACY
THE SUSTAINABILITY SECRET

'EPA: "VIRTUAL WATER, REAL IMPACTS."



Cowspiracy vs. Science





Grass Routes Newsletter
December 21, 2017

In This Issue

Western Canadian Cow Calf
Survey
Canadian beef industry's
water footprint is shrinking

Keep Up With Us

Facebook

@AlbertaBeef



The Canadian beef industry's water footprint is shrinking

In 2016, the Beef Cattle Research Council's (BCRC's) Science Director received 10 letters like this:

"Dear Dr. Bergen.... My name is Emma. I am in 6th grade at Rime Street Elementary. My class found out on vegsource.com that it takes 2,500 liters of water to produce one kilogram of beef. Another site said 25,000 liters.... all these different answers are confusing. My social teacher also showed us a video named Cowspiracy, but it didn't help. Do you have a dependable answer?"

Making New re Canad

Canada's
decades,

The amou
by 17% fr
cattle are
more beef

These res
assessing
the Univer

ber 2017

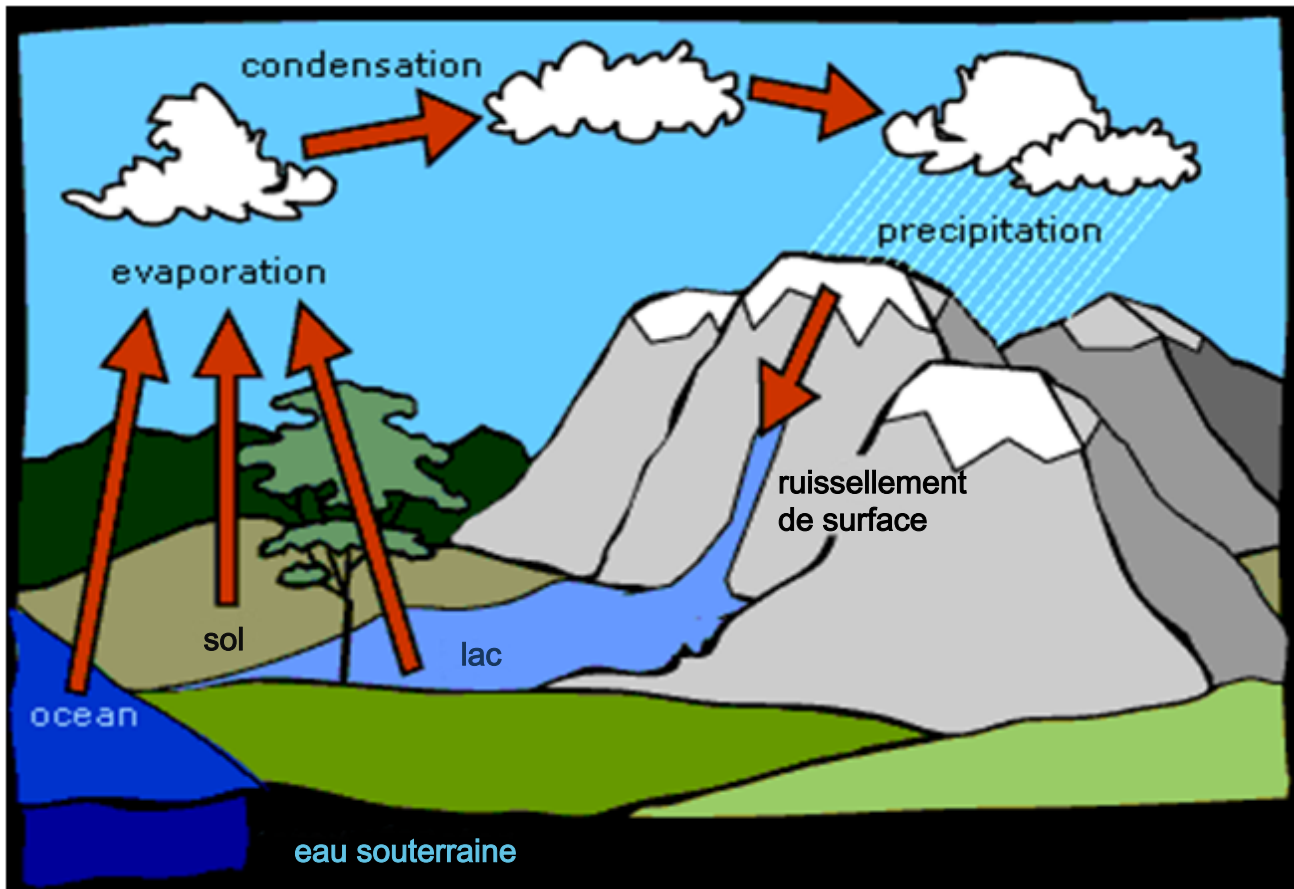
several

increased
s for beef
producing

one
chers at
bridge. It

[Land Home](#)

and
Canada



Évapotranspiration 40 %

Ruissellement
10 %

Infiltration
superficielle
25 %

Infiltration en
profondeur 25 %

Couverture de sol naturelle





Ce sont des enjeux mondiaux





Leap

LIVESTOCK ENVIRONMENTAL ASSESSMENT AND
PERFORMANCE PARTNERSHIP



[Overview](#)

[Partners](#)

[Activities](#)

[Publications](#)

[Database](#)

[News and Events](#)

Le but de cette activité est de développer des indicateurs et des méthodes qui peuvent être appliqués pour mesurer plus largement la performance du bétail dans une vision systémique. Les domaines d'intervention potentiels comprennent la consommation et la rareté de l'eau, la perturbation des cycles des nutriments et la biodiversité.

Sector specific guidelines
for LCA

GHG emissions database
for feed

Evaluation of wider
environmental impacts

Communication and
advocacy strategy

Component 3

Development of indicators and methods for the evaluation of wider environmental performance of livestock

Livestock production is complex and interacts with the environment in many different ways, such as through the consumption of resources, alteration of ecosystems and emissions to air, land and water. Many of these impacts are not reflected in the GHG intensity of emissions. Measurements of GHG emissions are therefore partial metrics, and ones that can lead to misleading policy signals if not put in the proper context of the wider relationship between livestock and the environment.

Contacts

LEAP Partnership secretariat
FAO Headquarter
Livestock-Partnership@fao.org

Getahun Legesse is a Research Associate at the University of Manitoba. Getahun received his Ph.D. in Livestock Production Systems analysis from the University of Hohenheim in Stuttgart, Germany. He is currently collaborating in an ALMA funded project with the Watershed Science and Modelling Laboratory to support standardizing beef cattle populations as well as in estimating feed and water demands associated with beef cattle production by taking into account several physiological and environmental factors such as size and type of animal, diet and weather conditions. He is working on a collaborative project that aims to define the environmental footprint of Canadian beef. He is the first author of a board-invited review paper titled 'Quantifying water use in ruminant production' that has recently been published in the Journal of Animal Science. He is also a member of an international team charged with developing guidelines for assessment of water footprinting in livestock, a work being facilitated by the Food and Agriculture Organization of the United Nations (FAO).



Getahun Legesse is a Research Associate at the University of Manitoba. Getahun received his Ph.D. in Livestock Production Systems analysis from the University of Hohenheim in Stuttgart, Germany. He is currently collaborating in an ALMA funded project with the Watershed Science and Modelling Laboratory to support standardizing beef cattle populations as well as in estimating feed and water demands associated with beef cattle production by taking into account several physiological and environmental factors such as size and type of animal, diet and weather conditions. He is working on a collaborative project that aims to define the environmental footprint of Canadian beef. He is the first author of a board-invited review paper titled 'Quantifying water use in ruminant production' that has recently been published in the Journal of Animal Science. He is also a member of an international team charged with developing guidelines for assessment of water footprinting in livestock, a work being facilitated by the Food and Agriculture Organization of the United Nations (FAO).





Projects

Applying our data



Applied Research Project

ALMA

Biodiversity Assessment of Alberta's Beef Industry

This collaborative research project is assessing the impacts of beef production on biodiversity in Alberta.





Food and Agriculture Organization
of the United Nations

Google Custom Search



[About FAO](#) | [In Action](#) | [Countries](#) | [Themes](#) | [Media](#) | [Publications](#) | [Statistics](#) | [Partnerships](#)

English



Leap

LIVESTOCK ENVIRONMENTAL ASSESSMENT AND
PERFORMANCE PARTNERSHIP



[Overview](#)

[Partners](#)

[Activities](#)

[Publications](#)

[Database](#)

[News and Events](#)

News

Events

Appel à la coopération technique pour l'évaluation de la biodiversité dans le secteur du bétail

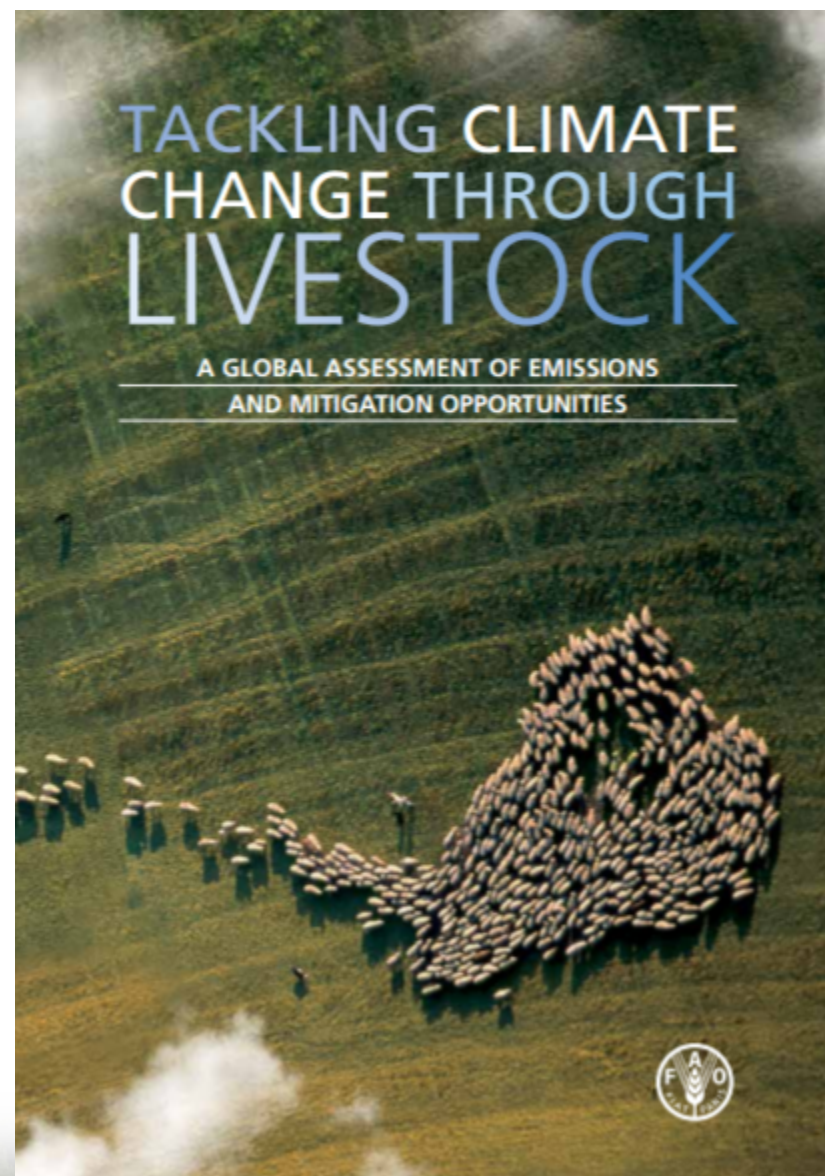
Building global technical consensus through the Livestock Environmental Assessment and Performance (LEAP) Partnership



15/03/2017 Livestock has an important influence on biodiversity, ranging from negative to positive impacts. Due to its intrinsic complexity, including biodiversity in quantitative environmental assessments of the livestock sector is a challenge. After having developed, amongst other, several guidelines for the assessment of GHG emissions, water footprinting and nutrient modelling along livestock supply chains, the LEAP partnership is now forming a new technical advisory groups (TAG) to build global technical consensus on biodiversity assessment. A chair and

technical members are sought for this group. Interested experts can apply until by **30th April 2017** (*deadline extended*).





Notre empreinte environnementale par kg de bœuf a diminué au cours des 30 dernières années:

- La production de GES par kg de viande bovine est en baisse de 15%**
- Le besoin d'eau par kg de bœuf est en baisse de 17%**
- Biodiversité? À suivre**
- Séquestration du carbone? À suivre**
- Cette recherche aide à renverser les idées fausses**
- Cette recherche a des impacts internationaux (ONU)**



Trouver le juste équilibre?

Compétitivité de
l'industrie

Confiance du
public

Productivité

Production
conventionnelle

Utilisation et résistance
aux antimicrobiens

Environnement et
changements climatiques

Qualité du boeuf et
salubrité des aliments

Soin des animaux



Trouver le juste équilibre?

Compétitivité de
l'industrie

Confiance du
public

Production
conventionnelle

Utilisation et résistance
aux antimicrobiens

Environnement et
changements
climatiques

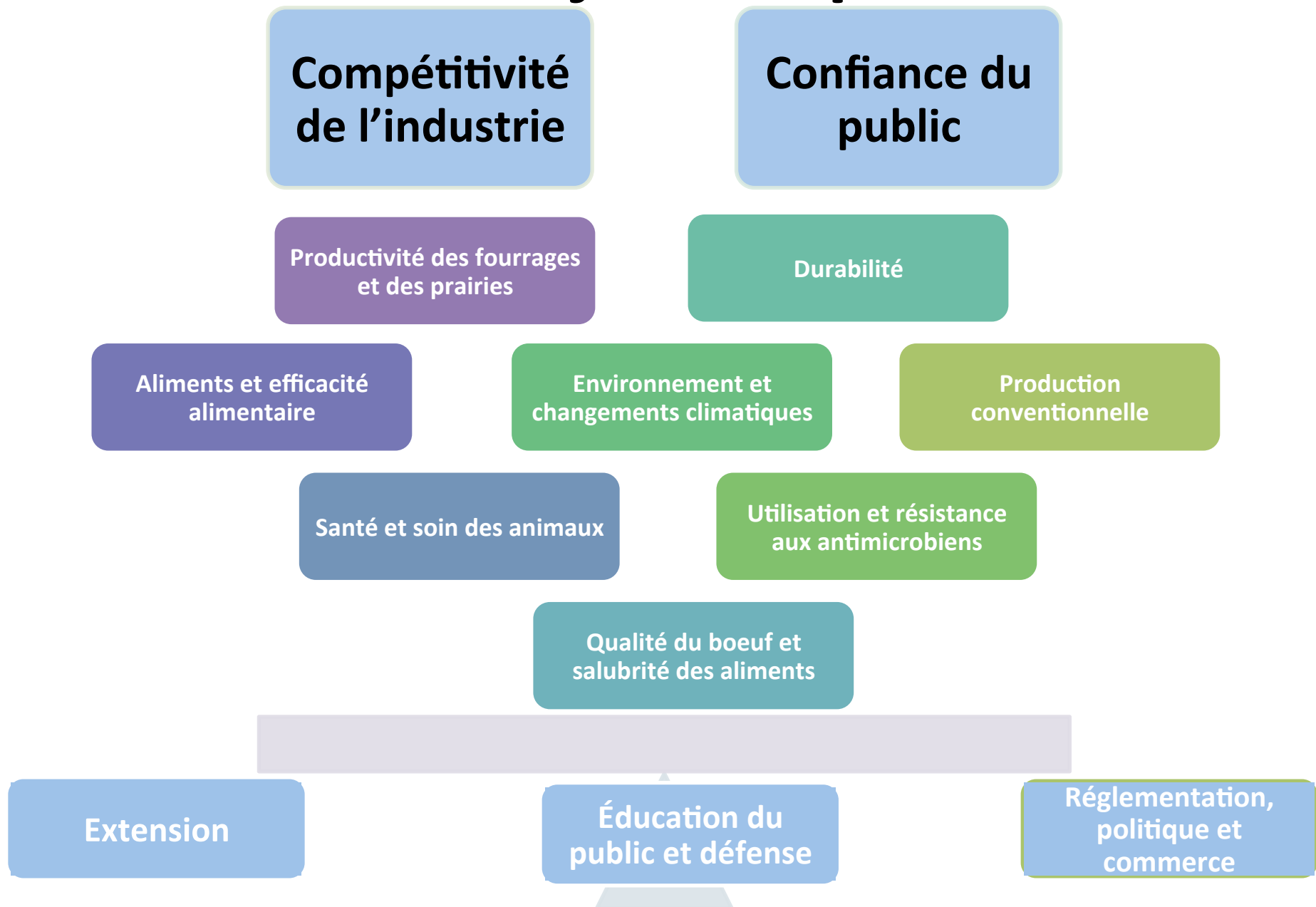
Soin des animaux

Productivité

Qualité du boeuf et
salubrité des aliments



Trouver le juste équilibre?



Des questions?

www.BeefResearch.ca

Restez connectés :



@BeefResearch



facebook.com/BeefResearch



beefresearch.ca/blog/subscribe



youtube.com/BeefResearch



Inscrivez-vous aux nouvelles du CCA
www.cattle.ca

L'efficacité alimentaire était de
10:1 en 1950



Aujourd'hui
elle est de 6:1



RAISE YOUR
BEEF IQ
@
beefresearch.ca

