



CRSB INDICATORS FOR PRIMARY PRODUCTION: DRAFT 1

Public Consultation (February 9 – April 10, 2016)

Comments Received and CRSB Responses

The Canadian Roundtable for Sustainable Beef (CRSB) released the first draft of its sustainability indicators for beef operations for a 60-day public consultation, from February 9 to April 10, 2016. Many of the comments received were related to interpretation and the verification process. The CRSB's Verification Committee is currently drafting the scoring and interpretation guide for the indicators. The guide includes potential measures that can be used to achieve the desired outcomes, as well as minimum requirements and barriers to entry for each indicator.

Below is a table that contains the CRSB's responses to each of the comments received through the consultation. We would like to thank everyone who submitted comments for their time and constructive feedback. A second, 30-day consultation for the second draft of the indicators has an anticipated release date of Fall 2016.

SECTION	COMMENT	COMMENTER RECOMMENDATION	CRSB RESPONSE
General	We need to begin with a product that tastes good. If the end consumer, if they eat at home or in a restaurant, does not have an enjoyable eating experience, they may not return to eat that product a second time; there are many other products to choose from. Begin with the end in mind.		Quality is an important factor for all stakeholders in the supply chain, and most importantly, consumers. It is included in one of the Food indicators.
General	Make indicators more active and clearer in terms of intent, make indicators more consistent: maintain or improve, or maintain or enhance.		Thank you. We have reviewed all the indicators and used more active and consistent language.
General	Having participated previously in value chains, I am concerned that the additional input costs, time requirements and auditing costs will be placed on the primary producer.		We have had several discussions about this topic and are consciously developing the indicators to be cost-effective, realistic and feasible for producers. This comment will be shared with the CRSB's Verification Committee, who is developing the audit component of the framework.
General	There is an underlying assumption that climate change is the direct result of green house gas emissions and I don't think that "science" has demonstrated this to be a fact. Global warming can be documented as occurring in excess of 500 years.		There is scientific consensus that greenhouse gas emissions contribute to climate change ¹ .
General	If we did not employ energy to varying degrees, little of the work we do could be done efficiently, if at all. The use of energy has allowed us to make technological breakthroughs and discoveries. Do		The CRSB supports the responsible use of innovation and technology in advancing sustainability and continuous improvement. This is reflected in the Efficiency and Innovation

¹ IPCC, 2013: *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Stocker, T.F., D. Qin, G.-K. Plattner, M. Tignor, S.K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P.M. Midgley (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, 1535 pp. Available online: http://www.climatechange2013.org/images/report/WG1AR5_ALL_FINAL.pdf

	not try to be politically correct and drink the “green kool-aid”.		indicators.
The term “sustainable”	This term suggests that we can repeat what we have been doing for years & years without negatively affecting things...perhaps we should aim a little higher, embrace technology and attempt to utilize resources more efficiently every time. We learn as we try.		<p>The CRSB adopts the following definition of sustainable beef: ‘a socially responsible, environmentally sound and economically viable product that prioritizes Planet, People, Animals and Progress’.</p> <p>The CRSB supports the responsible use of innovation and technology in advancing sustainability and continuous improvement. This is reflected in the Efficiency and Innovation indicators.</p>
General	According to Gary Smith (professor of meat sciences), millennials lie when they say they want & will pay for sustainable, natural, animal welfare attributes. Affordability & convenience are the keystones. Do not try to diminish the conventional markets, because they are the mainstay of our industry. The trendy ones will be niche at best, and many of the fast food restaurants that have tried this approach have failed.		Consumers are asking questions about how their food is produced. The verification framework we are developing is one tool that will help the value chain provide answers to those questions in a credible and transparent manner.
General	How do we measure economic viability by producer?		<p>The CRSB is actively working to recognize and quantify economic components of our work. For example, the National Beef Sustainability Assessment is benchmarking profitability and cost of production.</p> <p>The CRSB did not include a specific economic indicator due to privacy reasons. There is also an underlying assumption that the verification framework needs to be economically feasible for adoption.</p>
General	We feel that the economic indicator is not sufficiently addressed. [E]conomics are fundamental to the success of any sustainability initiative and we encourage the CRSB to look at ways of applying economic indicators (that of course do not invade privacy) to any revised draft.		

<p>General</p>	<p>I do not agree with the use of the term “Natural Resources” as one of the 5 categories for indicators. The word Natural can be interpreted in many different ways and lead to confusion and criticism of the Sustainable Beef initiative. Some key parts of the Primary Beef Production model currently followed in North America do not use natural resources or follow natural processes. The use of non-renewable resources like oil and gas to fuel the production of feed and operate cow-calf operations is not natural. Nor is the use of man made chemicals for fertilizers, herbicides and pest control. These are long standing agricultural practices but they are not natural.</p>		<p>The categories (principles) were defined by the Global Roundtable for Sustainable Beef and have been adopted by the CRSB. The Natural Resources indicators focus on topics such as water, grasslands and habitat. Indicators on energy consumption and crop protection products are included in Efficiency and Innovation.</p>
<p>CRITERIA GRSB - Natural Resources - Criteria #2: Practices are implemented to improve air quality.</p>	<p>I do not understand how a sustainable beef production system can <u>IMPROVE</u> air quality. The supposition is that a sustainable beef production system could act like an air filtration or scrubber system by reducing the concentrations of undesirable substances-of-concern (including gases) in the air.</p> <p>Rather, at best, a sustainable beef production system, e.g. cattle housed in the field (pasture) year round, might have negligible impact on air quality or a very limited zone/range of influence on air quality.</p> <p>A more likely reflection of reality is for a sustainable beef production system to minimize its impact on air quality, similar to Criteria #3 on net greenhouse gas emissions.</p>	<p>GRSB - Natural Resources -Criteria #2. Practices are implemented to minimize impacts on air quality.</p>	<p>These principles were developed by the Global Roundtable for Sustainable Beef and provide guidance to the national roundtables. In the Canadian context, the language in the CRSB indicator is centered around management.</p>

General	Sections 2.2, 2.3 and 2.5 are well written.		Thank you!
	I am very supportive of the development of the Sustainable Beef initiative. With the increasing challenges to validity and social license of the beef industry, there is a growing need to be able to demonstrate and defend the way beef is raised and processed. While I have been very critical above of the Natural Resources section, the criticism is mostly because I want to see a well-designed and highly defensible system capable of assessing and demonstrating a Sustainable Beef industry.		Thank you! We are working very hard to ensure the indicators are well designed and defensible. For this reason, we are following the International Social and Environmental Accreditation and Labelling (ISEAL) Codes and guidelines closely.
General	While it might be too early in the process, I wonder what the implications are for producers who do not meet the indicators that are developed. How or who would do the assessments? Will not meeting the indicators or standards limit a producer's ability to market his cattle? If there are not consequences to not meeting the indicators, consumers, environmentalists and critics will quickly come to the conclusion the initiative is mostly a public relations exercise.		This will be a voluntary program. There will be minimum requirements for entry (e.g. minimum scores on the indicators and barriers to entry). Further information has been provided on this in the second public consultation document.
General	It is only in the Appendix that they mention methane emissions (once in the whole document). There is an inference that methane can be reduced with higher feed efficiency but feed efficiency is also only mentioned once. There is a discussion about how difficult it is to do a carbon balance at the farm level but methane emissions from the animals represents 75 to 80% of the carbon footprint of beef and I think that if this work is to be		Methane is included in the carbon emissions indicator under Natural Resources. Proxy and direct measures, such as feed efficiency, will be included in the interpretation guide that is currently being developed by the Verification Committee.

	taken seriously the methane emissions need to have a much higher profile.		
General	Good job at keeping indicators outcome based and not prescriptive or showing favoritism to any one way of showing sustainable beef production.		Thank you very much.
General	It is very important that these indicators are attainable for producers. Many of these indicators are common sense and most are common practice already.		Thank you. We are working hard to ensure the indicators are appropriate yet meaningful.
General	Generally in strong agreement. Need to flesh out the verification process and specific indicators (VBP is a good example) to bring clarity and move forward.		Thank you very much. We are currently working on the verification process.
General	Need to clarify and localize measurements (particularly Greenhouse gas).	Examine indicators/measurements that can be done at individual farm level (eg: fuel use, pasture cycling)	<p>We will share this recommendation with the Verification Committee, who is currently developing the verification process for the indicators (i.e. how the indicators will be verified on operations). Since the indicators are outcome-based, there will be flexibility around how the outcomes can be achieved.</p> <p>Further information on measurement and interpretation has been provided in the second public consultation materials.</p>
General	I believe a majority of beef producers are following this sustainable beef protocol but their records are not being made available to the consumer and other stakeholders. Transparency is the key....if we utilize an internet data base such as the CCIA tag data base or BIX 2, and give everyone access to follow how our food is produced, I believe we can		<p>The verification framework is a tool that can be used to demonstrate sustainability on beef operations and identify opportunities for improvement.</p> <p>The CRSB's Verification Committee will be working on chain of custody and traceability. This comment</p>

	give assurances to ALL our customers that our beef is raised humanly and with the environment as a major concern. Consumers want to be informed....with the digital technologies available today, it should not be too difficult to put a bar code on a piece of beef in a store & have the means for the consumer to scan it and get information such as where it was raised, vaccinations & treatments and possibly feed protocols.		will be shared with this committee.
General	Traceability - The ability for programs under the CRSB to demonstrate traceability is critical and this is not explicitly included in the document and should be considered for the next draft.		The Verification Committee will be working on chain of custody and traceability. This comment will be shared with this committee.
General	There has only [been] one year where there has been a profitable outcome for the cow/calf enterprise in Manitoba since the BSE event. The cow/calf sector is dropping year after year. There is no future for the beef industry if there are no cow / calf producers left.	You need to do some actual investigative analysis of the information that is available. I believe that you will find that at current values the sector is not profitable and therefore unsustainable.	One of the CRSB's areas of work is benchmarking. We are conducting an economic assessment on the beef industry. This assessment covers profitability. The results from that work will be released in mid-2016.
General	In general, the indicators are supported with the exceptions noted above.		Thank you.
General	Generally, very good indicators that cover a wide yet important spectrum of issues. They are open enough that they are doable, yet provide a good indication of what excellence in sustainability should look like.		Thank you.
General	Thank you for this opportunity to review your indicator framework. We compliment the CRSB for proposing indicators of social and environmental		Thank you for your comments.

	performance.		
General	We support the intention to connect the CRSB standard to the Canadian Roundtable on Sustainable Crop, so as to address feed standards. For example, you may wish to have a CRSB performance measure about 'preference for CRSC-certified procurement of feed'.		We are working closely with the Canadian Roundtable for Sustainable Crops (CRSC) to ensure alignment. The CRSC is currently developing its own standard, so this could be a consideration when the indicators are up for review.
General	[We] would like to commend the CRSB for the development of comprehensive, practical and clearly written indicators!		Thank you very much.
General	We encourage the CRSB to look in more detail at the indicators as many are not outcome-based indicators as suggested in the documents overarching statements. This is fundamental to the success of the initiative from a credibility perspective.		Thank you. We have reviewed all the indicators to ensure they are outcome-based.

<p>General</p>	<p>Many of the overarching statements in the documents do not correlate with the detail within the document. Examples are detailed both above and below. We encourage the CRSB to review these and ensure that what is suggested in the overarching statement is actually delivered in practice.</p>		<p>The public comment focused on just the indicators; the verification and interpretation guide for these indicators are forthcoming.</p> <p>The indicators represent what will be measured on beef operations (i.e. the desired outcomes). The CRSB's Verification Committee is developing the indicator interpretation guide, which will provide further details on how the indicators can be measured.</p> <p>Further information on measurement and interpretation has been provided in the second public consultation materials.</p>
<p>General</p>	<p>The topic of sustainable feed production should also be included.</p>		<p>Sustainable feed is being addressed by the Canadian Roundtable for Sustainable Crops (CRSC). We are working closely with the CRSC to ensure alignment.</p>
<p>General</p>	<p>A definition of Sustainable beef is offered, " A socially responsible, environmentally sound and economically viable product that prioritizes the planet, people animals and progress". I have many difficulties with this draft definition. First of all who gets to decide what is or is not socially responsible, environmentally sound and sustainable? These are the concerns I expressed in my initial remarks. Note that I do not question economically viable. Hopefully that will be left to the market place. But what is really of concern is the closing part that "..prioritizes the planet , people, animals and progress". This is meaningless. To prioritize means to rank in</p>		<p>The CRSB has adopted the Global Roundtable for Sustainable Beef's definition of sustainable beef: 'a socially responsible, environmentally sound and economically viable product that prioritizes Planet, People, Animals and Progress' which was approved by both roundtables' membership.</p>

	<p>importance and since the things to be ranked include the planet, people, animals and progress there can be multiple rankings. I am not nit picking here. Words have meaning and the wording of this Lynch Pin idea of “Sustainable beef” needs to be absolutely clear. For example it would not offend this definition to put progress first and animals last. I think what the drafters really meant was to “balance “ these considerations in a responsible manner. I also note that the definition comes directly from the Global Round Table. I note on reading the GRSB that the word “balance” is in their preamble. Most definitely the definition needs to be revised to declare its real intent.</p>		
General	<p>It might be helpful to know what and who are the players on this Global round tables, what is its mandate, what is its authority and who is making these decisions?</p>		<p>We have included a short description of the Global Roundtable for Sustainable Beef in the document. Please visit their website for more information: http://www.grsbeef.org</p>
General	<p>But the obvious concern is how are each of these indicators to be defined as suitably sustainable, how or whether they will be, or even can be, enforced and what, if any, are to be the sanctions against non compliance.</p>		<p>The indicators represent what will be measured on beef operations. The CRSB’s Verification Committee is currently developing the indicator interpretation guide and assurance protocols, which will include minimum requirements for entry into the program. Further information on measurement and interpretation has been provided in the second public consultation materials. The program is voluntary.</p>
General	<p>In general I think this is a huge, and hugely unnecessary layer of bureaucratic oversight and a potentially great imposition on producers. At the very least producers need to know what precisely constitutes compliance with the indicators. The</p>		<p>Consumers are asking questions about how their food was produced, and businesses such as food service and retail companies require assurances that the product they are sourcing is sustainable. This enables communications about sustainability</p>

	<p>measures or “indicators” are, for the most part laudable, but one merely needs to look to past experience to see the good things that have been accomplished without such a bureaucratic overload. In the Canadian livestock industry for example huge progress has been made in the creation of enlightened animal care codes and all of the “indicators” outlined in 2,3 have been addressed within them.</p>		<p>with consumers. The verification framework focuses on providing a tool for producers to demonstrate their good practices and identify areas of potential improvement. Participation is voluntary.</p> <p>The CRSB is committed to considering existing tools and programs within the Canadian beef industry so they can be utilized in the verification framework. The Beef Code of Practice is one of those tools. Further information on measurement and interpretation has been provided in the second public consultation materials.</p>
General	<p>There is concern [...], as referenced in the document ‘Indicator’ refers to what will be measured in the context of the desired outcome and The CRSB indicators reflect how sustainability will be measured on individual beef operations. The concern arises from the fact that many of the ‘indicators’ are input action indicators as opposed to outcome-based indicators i.e. many are not ‘measurable (or outcome based) indicators’. An example of this is 2.1 Natural Resources points 1 – 6. We encourage the CRSB to develop true indicators on outcome measures that clearly define what the measure actually is.</p>		<p>We have reviewed all the indicators to ensure they are outcome-based. The Verification Committee is currently developing the indicator interpretation guide, which will provide further details on how the indicators can be measured. There are numerous ways of achieving the desired outcomes for each indicator; therefore we are avoiding prescriptive metrics so not to limit those options.</p>
General	<p>We would encourage the CRSB to ensure interpretation of the wording is clear. The document states that the indicators are applied on what is ‘within the farmers control’.</p>		<p>We have revised this wording to reflect what is within the farm’s control but also its contribution to the overall system, recognizing that the farm is part of a broader system.</p>

	<p>We would not want this to be interpreted incorrectly. For example, an operation has limited ability to improve river or stream quality on their operation, if the water quality upstream is poor; this example applies similarly for air quality. The operation will thus only be measured on what is within its control. We would be concerned if this was interpreted as if the river is polluted already the farm can acceptably under the CRSB guidance pollute it some more? This brings the critical issue back to the above point as to what will actually be measured at the individual farm?</p>		
General	<p>Linked to the above point, whilst appreciate that much change can be driven on-farm and that what is within producers control is in some impact areas limited, the collective membership and reach of the CRSB offers a significant opportunity to affect broader, landscape level change and would like to see this reflected in the CRSB's scope and framework.</p>		<p>Indicators will also be developed for processors. Those indicators are forthcoming.</p>
General	<p>The measurement of air quality and carbon balance are more scientifically feasible to estimate at a national level – So what will be the outcome based indicator at farm level – There is not one documented?</p>		<p>There are farm-level indicators for both carbon balance and air quality in the Natural Resources principle.</p>
General	<p>Minimum practices: Whilst respecting the need to engage a large number of producers in the sustainability journey, it is not clear if there will be any minimum expectations for participating farmers e.g. how will buyers be assured that participating farmers are meeting baseline expectations around worker health and welfare, protecting native forests</p>		<p>The CRSB's Verification Committee is developing the indicator interpretation guide and scoring system, which will include the minimum requirements for entry into the program. Further information on measurement and interpretation has been provided in the second public consultation materials.</p>

	etc.?		
General	I don't support most of these "indicators" as they are not indicators, but rather principles or criteria. I also don't think that this captures the depth and breadth of issues in the beef sector. As it stands, this document is not very useful as guidance for producers or as a basis for the verification stage as it is not possible to see what is being "measured" or what the baseline is.		<p>The indicators were developed by a multi-stakeholder committee. We believe they cover a broad range of important topics for the sector.</p> <p>The CRSB's Verification Committee is developing the indicator interpretation guide, which will support the practical interpretation of the indicators during verification at the farm level and identify the minimum requirements for entry into the program. Further information on measurement and interpretation has been provided in the second public consultation materials.</p>
General	For the most part, these are not indicators-only a few are measurable. According to Figure 1, an indicator is "what are we going to measure?" yet most of the "indicators" are worded as if they are "principles" and/or "criteria"- or "what is the intent" and "what are the conditions to be met." For example, 2.1, 1) Riparian areas, surface and ground water sources and nutrient runoff are responsibly managed to help maintain or improve watershed health.	Modify all current "indicators" to reflect something that is measured. For the example given at the left, the indicator could be "E.coli counts in waters adjacent to livestock operations" or "nutrient concentrations in water". When it comes to "implements practices" how is this measured? Is it a count of practices? Is there a certain area of "habitat" or are there species counts, etc.	<p>The CRSB's indicators are outcome-based. For example, there is an indicator on soil health, and there are many ways to measure and achieve soil health.</p> <p>The Verification Committee is currently developing the indicator interpretation guide, which will provide further details and options for measurement. Further information on measurement and interpretation has been provided in the second public consultation materials.</p>
General	In general my comments are those of a sceptic. I think the initiative can be very positive for the industry but it will be important, in my view, to recognize from the outset that beef production, as pursued in Canada today, and for the past several decades has been, and remains, highly sustainable and environmentally responsible. So why not just		Consumers are asking questions about how their food was produced, and retail and food service companies require assurances that the product they are sourcing is sustainable. This initiative focuses on providing a framework for producers to demonstrate their good practices and an opportunity to communicate those practices to

	keep doing what has proven so very successful in the past?		consumers.
General	I plead in this opening overview that Members of the Round Table recognize from the outset that terms like “sustainability” and “social license” are buzzwords that originated with activists and have different and more intrusive meaning for them than many sincere producers might suppose.		The CRSB has defined sustainability beef as ‘a socially responsible, environmentally sound and economically viable product that prioritizes Planet, People, Animals and Progress’. We are giving further depth to that definition through our work.
Introduction	The document recognizes that there will be extra costs and time (which equals opportunity cost) associated with participating in the sustainability verification process, but makes no mention of how these costs might be recovered. Specific to the Natural Resources pillar, [we] would like to see mention of participation in ecological services payment programs as a tool to both enhance ecological services and recover some of the cost associated with these efforts.	CSRB supports the development of ecological services programming that provides payments or cost-sharing to producers who participate in enhancing the services appropriate to their operations.	The CRSB recognizes that this is one tool for producers and can be further explored through our upcoming projects. One of the goals of the Verification Committee is to develop an assurance framework that is cost-effective and realistic. The CRSB is exploring different funding models to help spread costs throughout the value chain.
Figure 1	Figure 1: The note is cut off and only partially readable		Thank you. We have fixed that.
1.3 Indicators 1. Natural Resources (GRSB Principle)	Inconsistent/misleading wording page 4. “and enhances ecosystem health”	Should be “and maintains or enhances ecosystem health”	These principles were developed by the Global Roundtable for Sustainable Beef. They provide guidance to the national roundtables. In Canada, the watershed health and ecosystem indicators are worded as ‘maintains or enhances’.
Introduction	The document states “This framework consists of two key components: indicators and verification. The indicators will determine what will be measured; and the verification protocols will outline how the indicators will be measured.” We believe that there is a need for additional elements in the		The CRSB believes capacity building is essential for uptake of the verification framework as well as continuous improvement. The Verification Committee is currently working on appropriate ways to incorporate capacity building into the framework.

	framework if the CRSB's mission of 'continuous improvement' is to be realized. Experience in [...] and other sustainability programmes has shown that verification alone will not deliver continuous improvement, and that activities such as capacity building for those undertaking the required actions and those that support them as well as engagement with policy makers, to provide a amenable environment to encourage positive change is needed. This should be considered for inclusion in the framework.		
Introduction	There is no opening statement that lays out the need, or rationale for this effort. Do not producers need an explanation why this national and global initiative is necessary in the first place. The stated purpose is "to advance continuous improvement in the sustainability of the global beef values chain". The industry has been making continuous and sustainable improvements for the past several decades. Producers need specifics about what needs to be done that hasn't already been achieved or is in progress.		A statement has been added to clarify this.
NATURAL RESOURCES			
General	Perhaps add 'maintains' to the indicators that say 'employs' or 'implements' as there may be significant positive impacts of the producer maintaining their current management practices on carbon sequestration, native ecosystem maintenance, air quality, etc.		Thank you. The indicators have been revised to reflect the comment.
General	There is no outcome indicator for water use, has		Watershed health is addressed in Natural

	this been considered?		Resources, and water use is addressed in the energy and resources indicator within Efficiency and Innovation.
General	The preservation of natural ecosystems can enhance the sustainability of an operation from an economic, social and environmental aspect.	Discuss a means of including this suggested indicator.	Natural ecosystems are covered in the Natural Resources principle, where there is an indicator on grasslands and another on habitat for wildlife.
Indicator 1. Riparian areas, surface and ground water sources and nutrient runoff are responsibly managed to help maintain or improve watershed health.			
	As written this indicator will be very difficult to come up with a verifiable indicator. For example with this wording it could be acceptable to maintain a compromised watershed on the basis it was compromised to begin with.	Riparian areas, surface and ground water sources and nutrient runoff are responsibly managed to meet environmental standards.	The CRSB's Verification Committee is developing the indicator interpretation guide, which will include a suite of potential measures and minimum requirements on each indicator for entry into the program.
	"watershed health" and glossary in Appendix A – "ecological systems are functioning well"- how do you measure this? How do you break down impacts from other activities/sectors in a watershed?		Further information on measurement and interpretation has been provided in the second public consultation materials.
	Maybe make more note of ecosystem impacts and the services that lands under use by cattle operations provide?	Operations will maintain or implement practices to maintain or enhance ecosystem function and associated ecological goods and services	We have a diverse set of indicators that address ecosystem function and goods and services more specifically, including ones on water, air, grasslands and habitat.
	After "maintain", should say "good health" to specify we don't want to maintain an unhealthy watershed	Riparian areas, surface and ground water sources and nutrient runoff are responsibly managed to help maintain or improve good watershed health.	These comments will be addressed through the work of the Verification Committee, which is currently developing the indicator interpretation guide. The guide will include minimum requirements for each indicator and barriers to entry.
Indicator 2. Soil health is maintained or improved.			
	As written it will be difficult if not impossible to come up with a verifiable indicator. It would also allow degraded soils to be maintained in that condition. The verifiable indicator would be that	Soil health is maintained to acceptable standards.	Further information on measurement and interpretation has been provided in the second public consultation materials.

	soils are maintained or better than acceptable standards. This could also accommodate the differences in soil health and composition between native grasslands, tame pastures and cultivated fields, all of which are part of the primary production of beef.		These comments will be addressed through the work of the Verification Committee, which is currently developing the indicator interpretation guide. The guide will include minimum requirements for each indicator and barriers to entry. Further information on measurement and interpretation has been provided in the second public consultation materials.
	“Good” in front of “soil”	Good soil health is maintained or improved.	
Indicator 3. Operation employs beneficial management practices that support carbon sequestration and minimize emissions.			
	This does not make sense to me. My understanding is planted cereal crops do not result in carbon sequestration. If cows or calves are fed grain how would this be seen as supporting carbon sequestration? What kind of emissions are included. Animal emissions? Equipment emissions? Vehicle emissions? There are multiple variables when it comes to emissions and it is hard to imagine how it would be possible to develop a range of indicators. For example if one rancher lives three times the distance from an auction mart than another rancher, transporting his calves will result in more emissions than the other rancher. So is the rancher transporting longer distances not minimizing emissions? I do not see how it would be possible or practical to measure or have indicators that would measure vehicular emissions at the individual producer level. One way to do this	Deletion is suggested.	There are many practices that sequester carbon and help minimize emissions (e.g. low stress weaning and handling, grassland management) ² . The CRSB would like to raise greater awareness of these strategies and has therefore kept the indicator.

² Legesse, G.A., Beauchemin, K.A., Ominski, K.H. et al. 2015, Greenhouse gas emissions of Canadian beef production in 1981 as compared with 2011. *Animal Production Science*, 56(3): 153-168 <http://www.publish.csiro.au/?paper=AN15386>

	would be to measure the amount of fuel consumed per year but where would the line be drawn on what is acceptable?		
	Make more outcome-based.	Operation utilizes tools to understand how to manage and measure carbon sequestration and minimize emissions.	The indicators have been revised to reflect more active language. For the first version of the indicators, the focus will be on raising awareness of practices that support sequestration and minimize emissions.
Indicator 4. Operation implements practices to manage its impact on air quality for people and animals.			
	What are the practices a primary producer can manage to impact air quality? The word implements is problematic as it implies minimizing impacts on air quality does not currently happen.	Operation applies management practices aimed at maintaining acceptable air quality for people and animals.	This indicator is specific to air quality for people and animals. We have removed 'implements' from the indicator.
	Beef cattle production systems in Canada can also significantly influence ecosystem health and well-being, such as native grasslands, forests, and sensitive plant species, e.g., lichen. For example, reports from Europe and the USA indicate ammonia emissions (primarily from livestock production - cattle) can have detrimental effects on sensitive plant species and deforestation. In addition, ammonia is reported to sustain invasive nitrogen-loving plant species that in turn can displace other species that do not thrive in nitrogen-rich environments.	2.1 Natural Resources #4 - Operation implements practices to manage its impact on air quality for people, animals and ecosystems (OR SHOULD IT READ, "and the planet" INSTEAD OF "and ecosystems" IN ORDER TO BE CONSISTENT WITH THE DEFINITION OF SUSTAINABLE BEEF ON PAGE 3?).	The CRSB decided to include just people and animals in the indicator. Ammonia emissions will be included in the indicator interpretation guide as it relates to air quality in barns. There are also indicators on watershed, soil, grassland and habitat health that focus on ecosystem health. See response above.
	"...for people and animals" seems to limit the scope of impact, which is more general, including plants or even the environment as a whole. Mentioning 'people' separately we support.	"...for people and wildlife", "...for people, as well as plants and animals", "...for people and the environment" (These are all similar in intent.)	
	Does this include odor? Odor may be hard to		The CRSB's Verification Committee is developing

	manage economically.		the aspects of air quality that will be included. Odour has been discussed as a component of air quality. This comment will be shared with the Verification Committee.
Indicator 5. Operation implements practices to maintain or enhance grasslands, tame pastures and native ecosystems			
.	This statement needs some revisions. Cattle as domestic animals are not part of native ecosystems and the words native ecosystems should be removed. If there is interest in promoting the value of carbon sequestration, split the statement into two. One for grasslands and pastures as they can sequester carbon when properly managed. Another for wetlands and riparian areas as they contribute to overall water quality and retention.	Operation implements practices to maintain or enhance grasslands, tame pastures, wetlands and riparian areas in the interests of healthy ecosystems.	This indicator focuses on practices that occur on the landscape. The reference to native ecosystems is to help ensure these ecosystems are not compromised. The watershed health indicator includes wetlands and riparian areas; and there is an indicator that refers to carbon sequestration and emissions.
	Should say “maintain healthy ecosystems, and where possible, improve the health of grasslands etc...”	Operation implements practices to maintain healthy ecosystems, and where possible, improve the health of grasslands.	We kept the focus on grasslands, tame pastures and native ecosystems.
Indicator 6. Operation maintains or enhances habitat for wildlife			
	I do not agree with this statement. While not as problematic for primary producers, the tillage of land to grow cattle feed does not maintain or enhance habitat for wildlife. To the contrary it reduces or eliminates wildlife habitat and biodiversity. The current practices of ditch-to-ditch tillage of monoculture cereal crops to grow cattle feed and the application of herbicides and	This section should be eliminated. A high percentage of Sustainable beef production in Canada and North America is dependent to some degree on cereal crop production. There is no need or value in attempting to sell the value cereal crops have for wildlife habitat.	This indicator was included to support wildlife habitat and recognize that many operations manage important habitat. The CRSB has decided to keep the indicator. Brush encroachment on grasslands is an example where this may not apply.

	<p>fertilizers does not maintain or enhance wildlife habitat. It reduces or degrades it. In North America, accepted agricultural practices involve widespread tillage based crop production as the primary objective. It is coincidence some species of wildlife are able to co-exist with the tillage based crop production. While producers that exclusively use grasslands or pastures to raise calves (and this is probably a small percentage of producers) are more wildlife friendly than those who also feed cereal crops, will all producers be considered as meeting the objective of maintaining or enhancing habitat for wildlife simply by managing land in order to raise cattle? If so, environmental groups could easily challenge or discredit this objective and related indicators.</p>		
	<p>Does 'wildlife' mean 'biodiversity', or at least 'native species of plants and animals, both on land and in water'? To some, 'wildlife' is only the game birds or deer/elk that may use hedgerows, and so is much narrower in scope.</p>	<p>'Wildlife' can be used, if defined, and perhaps is less jargon-like than 'biodiversity'. Either way, a definition for Appendix 'A' referencing 'native species of plants and animals, both on land and in water' would clarify your intent and avoid confusion later.</p>	<p>The focus of this indicator is wildlife animals. The following definition for wildlife has been added: 'undomesticated animals present in the ecosystem'.</p> <p>Native ecosystems are addressed in another Natural Resources indicator.</p>
<p>Appendix A</p> <p>“There is currently no practical tool available to measure on-farm carbon balance. The indicator that addresses carbon and emissions was written in a way that supports education around practices that contribute to carbon sequestration and minimize emissions (e.g. keeping grasslands healthy, continuing to invest in production and feed efficiencies).”</p>			
	<p>What assurances can be given that participating farmers are improving their carbon efficiency over time and how will this progress be measured?</p>	<p>Suggest the development of a Canadian tool should be prioritized (as already exists in other regions).</p>	<p>The CRSB will pursue opportunities to collaborate with other stakeholders on the development of relevant tools through our projects pillar.</p>

PEOPLE AND THE COMMUNITY

General	It would seem logical to include a note on training	Point 3...All workers receive appropriate and timely training.	The CRSB believes that training is an important aspect of health and safety. Training will be one of the metrics included as part of the health and safe work environment indicator.
General	While the focus needs to be the ranch and factors within its control, there is no mention of consulting affected stakeholders (e.g., neighbours, First Nations, conservation areas).	A new indicator along the lines of “Key stakeholders are informed and consulted in advance of major proposals.”	There is legislation for stakeholder consultations for major proposals. The CRSB did not incorporate laws and regulations into the indicators, as compliance with all applicable laws is mandatory and a requirement to be in the program. The Verification Committee is currently drafting the process for confirming this in the verification.
General	Agree with not requiring community involvement but may be missing a major indicator at the industry level by not aggregating this information		An indicator on community involvement has been added.
General	There are no indicators for community.	Could have some indicator for supporting community initiatives, hosting ranch tours or workshops, volunteering, or being a part of groups like watershed groups, co-ops, or investing time into producer orgs.	
General	There is a significant opportunity for the CRSB to demonstrate leadership on a global basis. We recognize the following two issues may not be seen as critical to the Canadian beef community, however Canadian recognition and performance in this area can provide a point of differentiation in the global marketplace. (Reference GRSB Principle)	<ul style="list-style-type: none"> a. Operation has evidence of the right to use land for the purpose of beef production. (Yes or No) b. Operation can demonstrate how it protects and respects human rights and remedies any situations to the contrary (Yes/No) 	<p>The first comment (a.) is being shared with the Verification Committee to further explore how best to address land use.</p> <p>The treatment of workers (comment b.) is addressed through the indicator that covers equity and respect.</p>

General	Critical indicators – The inclusion of the following indicator is critical for the credibility of the CRSB. Its absence jeopardizes the ability of the CRSB indicator and verification process to help maintain and enhance the social license of the Canadian beef community to operate. (Reference GRSB Principle)	a. Operation follows applicable labor laws and regulations: employment status, hours worked, legal minimum wages, child labor laws, hiring practices, grievance, etc. (Yes or No)	The CRSB did not incorporate laws and regulations into the indicators, as compliance with all applicable laws is mandatory and a requirement to be in the program. The Verification Committee is currently drafting the process for confirming this in the verification.
Indicator 1. Operation ensures a safe and healthy work environment.			
	Number of work-related accidents This is a principle and is hard to measure		Metrics for this indicator will be included in the indicator interpretation guide. Further information on measurement and interpretation has been provided in the second public consultation materials.
	These items are regulated by Occupational Health and Safety Regulations; stating more generally could reduce possibly legal difficulties with verification	Operation can demonstrate a commitment to ensuring a safe and healthy work environment.	Thank you. This comment has been shared with the Verification Committee. This committee is currently developing the minimum requirements for each indicator. The CRSB will also be seeking legal counsel on how best to approach this.
	Most everyone strives for safe working conditions, those will vary depending on the situations & skill or experience involved, trying to dictate a “one size fits all” will never work in our industry. Try not to duplicate some of the simplistic conclusions that “Bill 6” adopted.		The CRSB recognizes there is variation across operations. This is one of the reasons the indicators are outcome-based—to allow for flexibility in meeting the outcomes. This comment will be shared with the CRSB’s Verification Committee, who is developing the specifics around how this indicator will be verified. Further information on measurement and interpretation has been provided in the second public consultation materials.

Indicator 2. All workers are treated with equity and respect.

	<p>These items are regulated by Occupational Health and Safety Regulations; stating more generally could reduce possibly legal difficulties with verification</p>	<p>Operation can demonstrate a commitment to treating workers with equity and respect</p>	<p>Thank you. This comment has been shared with the Verification Committee. This committee is currently developing the minimum requirements for each indicator. The CRSB will also seek legal counsel in this area.</p>
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ANIMAL HEALTH AND WELFARE

General	Fantastic that it references the Code of Practice document. Is training in this area included in efficiency?		Thank you. Yes, training is included in Efficiency and Innovation.
General	Glad to see an indicator for minimizing animal stress. I am especially interested in low stress handling.		Thank you.
General	Codes – the Indicators outlined are very high level and refer in many places to preexisting ‘Codes’. However, it is not clear the degree to which verification will actually be carried out against these codes and/ or what assurance can be given that these codes are complied with by participating producers. Again at this high level of detail it will be challenging to verify this on-farm in any consistent manner and furthermore to demonstrate any meaningful improvement.		The CRSB’s Verification Committee is currently developing the interpretation guide for the indicators. The guide will provide further details on how the indicators are linked to the Codes of Practice and ensure consistency across verifications. Further information on measurement and interpretation has been provided in the second public consultation materials.
Indicator 4. Operation can demonstrate the responsible use and disposal of animal health products according to label or veterinary prescription.			
	The contribution of the livestock sector to antibiotic resistance in human medicine is an increasingly documented and high profile issue and with just the reference to ‘responsible use’ it is not clear how the CRSB intends to make a meaningful contribution to this agenda.	Suggest this is revised.	The indicator highlights that animal health products should be used according to label or veterinary prescription. The Codes of Practice developed by the National Farm Animal Care Council will serve as the reference point for this indicator, as well as all the other indicators under this principle.

Indicator 5. Operation can demonstrate steps to mitigate/minimize animal pain.			
	Branding dehorning and castration will inflict pain on the animal. If you were to administer a systemic agent that would mitigate this pain to a slight degree, it would take at least 1 minute to have any affect. On a herd of 300, this would account for a delay in processing of 5 hours and the added stress of such a delay would outweigh any benefit derived from that administration. Any pretense of giving the injection immediately preceding the procedure is pure optics.		The CRSB understand the practical implications associated with this indicator. The Codes of Practice developed by the National Farm Animal Care Council will serve as the reference point for this indicator, as well as all the other indicators under this principle.
	The prevention of animal discomfort could be explicitly mentioned.	Operation can demonstrate steps to mitigate/minimize animal pain and discomfort.	The CRSB reached out to the National Farm Animal Care Council for suggested wording and has added 'distress' instead of 'discomfort' to the indicator based on their recommendations.
Indicator 6. Operation can demonstrate clear decision points for euthanasia and acceptable methods of euthanasia.			
	If I were to adhere to the Code of Practice for Beef cattle, I would not be in compliance in using my 22 for euthanasia that I have used successfully for 40 years. I agree that it may not be sufficient in the euthanasia of mature bulls.		The Code of Practice for the Handling and Care of Beef Cattle will serve as the reference point for this indicator, as well as all the other indicators under this principle. The CRSB's indicators are outcome-based, not prescriptive in terms of practices.
Indicator 7. Stocking density in feeding areas and pastures allows all cattle to express normal behavior including resting postures.			
	Other factors besides stocking density can affect "ability to express normal behaviour"	Feeding areas and pastures are designed to allow cattle to express normal behaviours.	Thank you. The reference to stocking density has been removed.

Indicator 8. Operation can demonstrate how it minimizes animal stress.

	<p>Technical problem with “minimize stress”: It is unnecessary, and possibly detrimental, to minimize stress below natural levels, especially if it reduces opportunities for natural behaviours (see additional comments and citations).”</p>	<p>Operation can demonstrate how it reduces stress to improve wellbeing. Operation can demonstrate how it minimizes unhealthy stress. Operation can demonstrate how it minimizes unnatural stress.</p>	<p>The CRSB reached out to the National Farm Animal Care Council for suggested wording and The CRSB reached out to the National Farm Animal Care Council for suggested wording and has added ‘unnecessary’ in front of ‘stress’ based on their recommendations.</p>
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FOOD

Indicator 1. Operation can demonstrate on-farm food safety procedures and contributes to the production of safe, quality beef.

	<p>Primary producers rarely are involved in the slaughter of animals to produce human food. Suggest it needs to be reworded.</p>	<p>Operation can demonstrate on-farm animal safety procedures and animal feed practices that contribute to the production of safe, quality beef.</p>	<p>The indicator specifically references on-farm food safety and acknowledges that the farm contributes to the production of safe, quality beef. It is recognized that other stakeholders in the supply chain play an important role. Indicators for processors are forthcoming; food safety is one topic that will be covered in that set of indicators as well. The indicator was kept as is.</p>
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Indicator 2. Operation shares verification-relevant information up and down the value chain to allow for aggregate reporting

<p>.</p>	<p>“shares verification-relevant information up and down the value chain to allow for aggregate reporting” does not seem consistent with the intention of proving that an individual farm/ranch is in fact meeting the definition of sustainable production as per expected buyer demand</p>	<p>Add at the end of existing sentence: “... aggregate reporting, and where the producer desires, demonstrate verified sustainable production to access and/or retain market options.”</p>	<p>Thank you for your comment. The CRSB included a reference to aggregate reporting to ensure producers’ privacy is protected further down the supply chain. Producers will receive a report following their verification with scores on each indicator to facilitate continuous improvement.</p> <p>This comment has been shared with the Verification Committee. This committee is working on chain of custody and information transfer along the supply chain.</p>
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EFFICIENCY AND INNOVATION

Indicator 4. Operation can demonstrate the safe and responsible use and disposal of crop products.

	“crop inputs” can be read as things like barley or silage	Change to “crop input products”... this is clarified in the appendix but simpler to do it in this table Operation can demonstrate the safe and responsible use and disposal of crop input products.	Thank you. Crop input products have been specified in the indicator.
	Change crop products to crop protection products	Operation can demonstrate the safe and responsible use and disposal of crop protection products.	

Indicator 7. Operation can demonstrate responsible dead stock management.

	What are the terms of reference for this term especially for range cattle. This can vary dramatically depending on regions and season.		Provincial guidelines will be the reference point for this indicator in the verification.
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APPENDICES

<p>2.6 Challenges to implementation</p>	<p>It is necessary to provide recognition in the document of potential tradeoffs between economic sustainability and some of the indicators, particularly enhanced ecological services. For example, long term economic studies show that native grassland provides the highest economic return when range scores Healthy with Problems as opposed to Healthy or Unhealthy. This may conflict with watershed health, soil health and carbon sequestration, all of which benefit most from Healthy grasslands.</p> <p>The document should also recognize that there are sometimes tradeoffs between indicators. For example, the provision of wildlife habitat that is 'appropriate' for a given area may be at odds with enhancing carbon sequestration or soil health. As another example, invasive species may require management techniques that are at odds with some ecological services.</p> <p>There is no panacea that will address ranch economics and enhancement of all natural resources.</p>	<p>Add a bullet: 9) tradeoffs between implementation of some indicators and economic sustainability; and potential conflicts between implementation of indicators.</p>	<p>Thank you. We have added the recommendation.</p>
<p>3. a lack of practical science-based tools to measure system processes accurately;</p>	<p>Don't try to measure processes. Measure results/outcomes instead.</p>		<p>Thank you. We have incorporated this suggestion into the text.</p>

<p>Appendix A</p>	<p>Riparian area is open to many interpretations</p>	<p>Add a definition: One possibility comes from the Ontario Best Management Practices book on Buffer Strips: “A riparian area has no definite boundaries, but is the larger transitional area between water surface and uplands.”</p>	<p>The following definition of riparian area has been added:</p> <p>Riparian areas are the lands adjacent to streams, rivers, lakes and wetlands, where the vegetation and soils are strongly influenced by the presence of water. The exact boundary of the riparian area is often difficult to determine because it is a zone of transition between the water body and the upland vegetation. A riparian management zone usually extends from the water's edge to the upland area. They link ecosystems within the landscape, circulate nutrients, help maintain water quality and moderate erosion and high river flow events³⁴.</p>
<p>Appendix A</p>	<p>Reference: please add the ACFA's Beneficial Management Practices – Environmental Manual for Feedlot Producers of Alberta, as an information resource</p>	<p>Reference: please add the ACFA's Beneficial Management Practices – Environmental Manual for Feedlot Producers of Alberta, as an information resource</p>	<p>Thank you. We have added this reference.</p>
	<p>Add these tools: http://aep.alberta.ca/lands-forests/grazing-range-management/documents/GrazingLeaseStewardshipCodePractice-2007.pdf http://esrd.alberta.ca/lands-forests/grazing-range-management/documents/BeneficialGrazing-SageGrouseSagebrush.pdf</p>		<p>Thank you. We have added these references.</p>

³ <http://www.agr.gc.ca/eng/science-and-innovation/agricultural-practices/soil-and-land/riparian-areas/riparian-area-management/?id=1187631191985>

⁴ <http://cowsandfish.org/riparian/riparian.html>

	http://aep.alberta.ca/fish-wildlife/species-at-risk/species-at-risk-publications-web-resources/birds/documents/SAR147-GreaterSageGrouse1968-2012SEaltaMonitoring-Mar2013.pdf		
	BC, AB and SK have science based (upland) range health assessment tools for public use which share many common indicators/concepts of health. Healthy rangelands can be linked to enhanced/maximized carbon storage and soil protection/health in both grasslands and forested rangelands.	Regarding range health: work with Provincial Specialists during the development of the verification process. Regarding carbon storage: complete a literature review and/or contact subject matter experts (e.g., Dr. Edward Bork, UofA)	Thank you. We will reach out to subject matter experts as we develop the verification process.
	Cows and Fish have riparian expertise and health tools which have had exposure and often acceptance, across Canada. These science based tools were developed keeping ease of understanding and use by producers in mind.	Work with Cows and Fish staff during the development of verification process.	A representative from Cows and Fish sits on the CRSB Verification Committee.
	Misleading wording. Native forests are not invasive species in the common use of the term “invasive species”. Encroachment of native woody plants is largely a function of climate and lack of fire. Assuming the intention is to manage invasive species (e.g., noxious weeds), as most provinces have legislation/regulation to do so, the reference to native forests is erroneous.	Delete the sentence on page 9 referring to native forests because, in the current context, it implies they are invasive species.	Thank you for flagging this. We have clarified this statement to reflect woody encroachment on native grasslands.
	Holos from AAFC should be considered for measuring “on-farm carbon balance” - http://www.agr.gc.ca/eng/science-and-innovation/results-of-agricultural-research/holos/?id=1349181297838	Addition and/or evaluation of tool	We have added Holos to the list of programs and tools for the natural resources indicators.
Appendix A page 8	Inconsistent/misleading wording first sentence	Should be “and ecosystem health to be	Thank you. ‘Maintained’ has been added to the

	on the Intent and Context section.	maintained or enhanced ”	text.
Appendix A intent and context	<p>It is important that the document recognize that there are potential conflicts when managing rangelands for the entire suite of ecological services. The complexities of ecological services mean management for those services is also complex, particularly on natural grasslands.</p> <p>It is of great concern to [us] that there is no mention of the complexities of enhancing wildlife habitat in the document. Wildlife enhancements should be region and even site specific. It is much simpler to enhance tame grassland for common wildlife species that exist in association with human development than it is to enhance habitat for species at risk on native prairie.</p>	<p>The complexities of ecological services mean management for those services is also complex, particularly on natural grasslands. For example, wildlife enhancements need to be region and even site specific. It is much simpler to enhance tame grassland for common wildlife species that exist in association with human development than it is to enhance habitat for species at risk on native prairie.</p>	<p>Thank you. We have added the recommended paragraph.</p>
Appendix C	<p>Reference: please add NCFA’s Canadian Feedlot Animal Care Assessment Program as a reference for verification of feedlot animal health and welfare practices</p>	<p>Addition: Reference: NCFA’s Canadian Feedlot Animal Care Assessment Program (PAACO Certified)</p>	<p>Thank you. We have included this reference.</p>
Appendix D	<p>Under Programs and Tools, the listing should be either tightened up to include only those systems that have been developed with industry wide support (BCRC, BIXS, VBP and CCIA) or opened to providers wishing to have their systems listed.</p>	<p>Documentation at the production level will be one of the most critical elements of success for the sustainability initiative. To raise awareness of all systems and tools available, the list should be opened up.</p>	<p>Thank you. The list now included just those systems with industry support.</p>
	<p>References: under food safety, a specific veterinary practice; Feedlot Health Management Services, is referenced as a guide for food safety verification. I am requesting that this private practice be removed as a reference since they</p>	<p>Delete Feedlot Health Management Services website link and reference because CRSB is showing favoritism to a single private business. Add information references of Livestock Medicine Course from ON and Cattle Medicine</p>	<p>Thank you. We have deleted the website link and reference and added the medicine course.</p>

	<p>are not the only veterinary practice in Canada that provides food safety training and verification for feedlots. For food safety training/information, additional resources are the Livestock Medicine Course from Ontario and the “Cattle Medicine - Responsible Use manual from Alberta.</p>	<p>– Responsible Use course from Alberta. Suggest that you replaced FHMS reference with the following reference: “Licensed Feedlot Veterinarians that are CFIA accredited” as a resource for animal health/welfare and food safety information/training and verification/certification of such practices.</p>	
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