

Understanding the Climate Policy Implications for the agri-food sector

Amidst a worldwide push for more stringent climate change policies, there is increasing concern about the impacts of carbon pricing strategies on the competitiveness of domestic agri-food production. If left unaddressed, imports from countries with much less ambitious climate policies could flood the market, or worse, push domestic industries to take up production elsewhere. To level the playing field for domestic producers, some are considering imposing border carbon adjustments (BCA), but such policy is rife with complexities and unintended consequences for carbon leakage and food security. As a result, the global agri-food industry finds itself at a critical juncture – faced with the challenge of meeting our shared climate change goals while also ensuring trade flows can continue to feed a hungry world.

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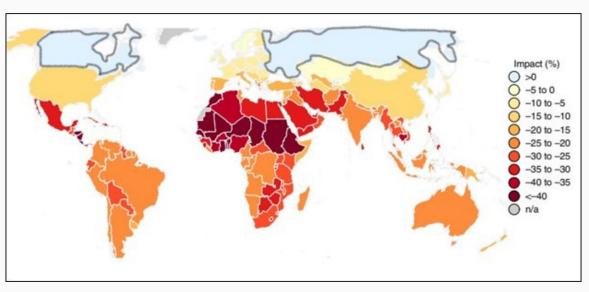
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One Great Graphic

Canada and Russia are two countries that have gained from anthropogenic climate change in terms of raising agricultural productivity growth. However, warmer countries such as Africa, Central America and Asia have been negatively affected. This reinforces the importance of addressing climate change and investing in innovation to continue to boost productivity growth.



Source: Ariel Ortiz-Bobea, T.R Ault, C.M. Carillo, R.G. Chambers and D.B. Lobell. "Anthropogenic climate change has slowed global agricultural productivity growth". Nature Climate Change. Vol 11. April 2021. pp 306-312.

What We're Reading

Based on dialogues CAPI has organized over the past year focused on how the Canadian agriculture and agri-food sector can be more resilient, sustainable and prosperous going forward as it strives to help feed the world's growing population while also addressing climate change, it has become increasingly evident just how instrumental productivity growth will be for future resilience.

To be able to produce more and better with less, Canadian agriculture must boost productivity growth above historical trends. However, as we see in this recent study published in Nature Climate Change, by Ortiz-Bobea et al (2021), anthropogenic climate change (ACC) has had a deleterious effect on agricultural productivity growth, particularly in those poorer countries from regions which are more dependent on agriculture and which tend to be warmer (e.g. Africa, S. America, Asia). This has happened despite the technological improvements that have been made.



In this study the authors estimated the effect of weather on global agricultural total factor productivity (TFP) by linking a statistical model of TFP in agriculture against weather models with and without ACC. They found that ACC has reduced global agricultural TFP by about 21% since 1961, a slowdown which is equivalent to having had TFP stop growing since 2013. They also found that global agriculture has grown more vulnerable to climate change, which reinforces the importance of country efforts to reduce emissions.

Spotlight on Dialogues on Trade and Climate Change



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This was the challenge that brought together experts from industry, government, NGOs, and academia from around the world at the Dialogues on Trade and Climate Change conference, hosted by the Canadian Agri-Food Policy Institute (CAPI) and U.S.-based Farm Foundation. The discussions centered around achieving a greater understanding of how trade rules, policies and agreements interact with domestic climate change policies, and ultimately, what the impact will be for agriculture and agri-food competitiveness, production, prices, and global food security.

Over the course of the conference, economists, policy experts and agri-food leaders discussed an alarming reality: while the world's largest emitters agree on the need to fight climate change, their individual plans, if not coordinated, run the risk of making matters worse. The most recent such proposal is the European Union's Green Deal, which looks to impose a BCA mechanism that would impose tariffs on imports from countries without comparable emission mitigation measures. The hope is to prevent carbon intensive imports from replacing more carbon efficient domestic products that have higher input and production costs, or production moving offshore to countries with less restrictive climate policies.

However, the development and accuracy of carbon intensity measurements of products complicates the implementation of BCAs, especially for the agriculture and agri-food sectors which are trade exposed and exhibit great regional variability. The introduction of BCAs also raise questions about the implications for food security, as well as the legality of such border measures and whether they would comply with World Trade Organization (WTO) rules.

Richard Heath, Executive Director of the Australian Farm Institute, agrees that measurement is an increasing concern. "We have traded for some time on our reputation of being clean and green, but reputation will no longer be good enough," says Heath. "There will need to be an evidence base, there will need to be data that you can use to demonstrate your environmental credentials." And that data will need to be transferable. It will need to describe things that are tradable, that can be clearly understood, defined using common terminology, so that we can operate in a global market."

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Meanwhile, the United States unveiled its own ambitious climate plan on April 22nd that aims to cut greenhouse gas emissions by 50-52% relative to 2005 levels, in support of its renewed pledge to become net-zero by 2050. In contrast, Canada proposes to cut emissions by 40-45% over the same period. While the exact details of both plans – including their direct implications for the agri-food sector – have yet to surface, both targets far exceed previous goals and open the door for enhanced North American co-operation on climate change down the line.

For Canada, a successful climate policy will inevitably factor in both American and Mexican concerns. Despite that the words "climate change" do not appear anywhere in Canada-US-Mexico Agreement (CUSMA), panelists saw promising developments in the document, on topics of gene modification to food safety to data sharing. Unlike its precursor, there is now a chapter that focuses on the environment, and it is one of the most advanced chapters in a trade agreement. Most importantly, it is subject to dispute settlement and institutionalizes structure for cooperation among the three countries.

Kenneth Smith-Ramos, Partner at Agon, argued that North American cooperation is more imperative now than ever before. "I think that one of the tasks – and the [CUSMA] helps towards this – is for the three governments to sit down and really start looking at our region as an economic bloc. It's a single production perimeter, whereby virtue of producing together all three countries, we reduce costs, we increase quality, and we're able to compete efficiently with the rest of the world."

Richard Heath went beyond regional implications to argue that the climate policy of one nation or economic bloc can impact the entire globe. Australia's reliance on market access to China and the expectation of future carbon restrictions are enough to enforce action, says Heath. "The China implication for what we're doing is just the anticipation that the requirements to be carbon neutral will be part of the ability to access China's markets in the future. It's just going to be the price of access to any market, really."

Other panelists called for significant research and development investments in the agri-food sector. David Blandford, Professor Emeritus at Penn State University, echoed predictions from the U.S. Department of Agriculture that more sophisticated emission-reducing technologies are needed to help the agri-food industry recoup significant losses from carbon prices. Blandford added that investment in productivity enhancing technologies today will have resounding effects long-term, improving soil and water quality, easing the carbon footprint, and making farms more profitable.

The international trading regime is trending toward a decarbonized market, and exporters from around the globe need to be ready. Without reliable, science-based measurements that are consistent across countries, products, and supply chains, it will be increasingly challenging to navigate climate policy and its trade implications. The resounding message of the conference? Continued dialogue between governments and industry is imperative if we are to achieve our global climate change commitments and maintain global trade flows.