OPINION

Canada’s climate opportunity is where agtech and cleantech meet

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Canada stands to become a global leader in a growing multibillion-dollar economic sector via its innovation in agriculture technology, or 'agtech.'FRED LUM/THE GLOBE AND MAIL

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Agriculture technology, or agtech for short, can (and should) be a leading catalyst in Canada’s platform to combat climate change. As we look to seize this opportunity, Canada stands to become a global leader in a growing multibillion-dollar economic sector via its innovation in agtech.

Private and public funding has been flooding into Canada’s agtech sector, which promises to improve yields, increase profitability, and reduce the environmental impact of farming by shaking up the sector with cutting-edge technology. Agtech generally focuses on improving efficiency for the farmer by reducing the use of inputs such as fuel, fertilizer, and pesticides while improving yields. Agtech innovation can exist in the real, physical world (e.g., precision machinery, biologicals) and in the tradition “tech” or software world (e.g., recommendation engines powered by artificial intelligence or machine learning), both of which are critical to bringing value to our farmers. The focus of the innovation is

to improve the farmers' bottom-line, and the wonderful by product is the reduced impact the farm has on the environment.

The Canadian government clearly recognizes the potential of agtech, particularly as a method in helping drive our nation's goals concerning cleantech. The government has been funding agtech ventures through Sustainable Development Technology Canada, an arms-length foundation created by the Government of Canada that supports small to medium-sized companies and entrepreneurs developing sustainable clean technology.

SDTC currently has close to 40 agricultural-based businesses under its umbrella. These companies are looking to muscle their way into a global market that, according to Dentons, is worth US$495-billion as of 2021 and is expected to grow to an astonishing US$725-billion by 2023.

The SDTC's role in funding agtech as it relates to cleantech is expected to increase as Canada races to meet its emissions reduction targets. SDTC funds, along with other sources of public capital such as IRAP, are critical in providing capital during the validation and early commercialization phases, which are the most challenging hurdles start-ups face.

The private sector has also woken up to agtech's potential; the Canadian Venture Capital Association reported that in the first nine months of 2021, agtech has seen $162-million of investment across Canada and is set to surpass the $185-million record set in 2019.

Agtech will develop hand in hand with the cleantech sector as both will be critical in tackling climate change and guaranteeing a prosperous future for all of us. However, agtech has an edge over many traditional cleantech companies, particularly those focused on alternative energy production, owing to its business-orientated objectives and global scalability.

Traditional cleantech companies often focus exclusively on solving environmental problems, while industry-focused innovation (such as agtech) aims to solve business problems specific to the end user (e.g., the farmer), with positive cleantech implications an accretive side effect. As a result, agtech companies built to solve business problems will generally only depend on taxpayer money during the technological development phase (common for all Canadian tech companies) and will not become a permanent part of the government's operating budget. In contrast, cleantech companies that do not focus on business needs will require subsidization to encourage customers to use their technology. Consequently, agtech is less likely to face commercialization issues in the private sphere once (or if) government subsidies dry up.

In terms of scalability, Canadian agtech has the world at its fingertips as its services can be exported to farmers worldwide. It helps that Canadian agriculture as a whole enjoys a premier brand on the world stage, something we should all proudly embrace and leverage.

Canada need not look far for a reminder of just how quickly its tech companies can go global. Founded just 15 years ago, Shopify has already grown into Canada's most valuable company with a market capitalization of $218-billion and operates in more than 175 countries. Shopify's blistering growth is contrasted with how slowly traditional companies grow. Royal Bank of Canada, Canada's second-most valuable company, is 156 years old but is well behind Shopify with a market capitalization of $183-billion. The next Shopify could well be amongst the flurry of agtech start-ups currently finding their feet in the Canadian market.

Suppose Canada's agtech start-ups reach their true potential, and the country becomes a global leader in the market; this would mean we're not only going to see Canadian farming practices become more sustainable, but rather the entire world's farming practices become more sustainable thanks to the efforts of Canadian entrepreneurs. Countries worldwide will be able to showcase their climate-friendly approaches to farming, and the "Made in Canada" sticker will proudly be displayed on the technology that dragged global agriculture into the 21st century while adding generously to Canada's GDP by taking a slice of what could one day be a trillion-dollar market.