CityAge: Building Agritech Clusters



FOOD AND AGRICULTURE INSTITUTE

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Research Context and Objectives

- The agricultural dilemma (Newman, Fraser et al., forthcoming)
- COVID-19, food security concerns, and significant investment in agritech startups
- Canada's potential for being among agritech leaders (e.g., USA, Netherlands, Israel, Singapore)
- Accelerators and incubators have contributed to Canadian innovation and economy
- What are the opportunities and challenges around increasing agritech incubator and accelerator capacity in Canada?

CONVENTIONAL AGRICULTURE



EMERGING AGRICULTURAL TECHNOLOGY & INNOVATION



ALTERNATIVE

Incubators and Accelerators

	INCUBATORS	ACCELERATORS
Business stage	Early stages	Later stages
Key elements	Credibility, networking, subsidized rental space, collectively shared facilities, business assistance <i>Schwartz, 2013</i>	Mentorship, networking, investment, office space, branding, legitimization <i>Wise & Valliere, 2014</i>
Perspective/approach	Societal good (e.g., often not-for-profit)	Investment focused (e.g., seed money for equity)
Key benefits & functions	Networks, knowledge, set up (e.g., accounting, legal, gov. incentives)	Scaling up, funding, business case, target market

Methods

- Interviews Academics, advisors, investors, incubator/accelerators, start-ups
- **Open coding (inductive)** Economic development, GHG emissions, consumer market, value chain, industry engagement, mentorship, academia, international, etc.
- Selective coding (deductive) Opportunities, Success factors, Challenges, Actions

	OPPORTUNITIES	SUCCESS FACTORS	CHALLENGES	ACTIONS/APPROACHES
Incubators and accelerators				
Food systems				
Canada				

Opportunities

- **Contributing to sustainable and competitive food systems** Mission, vision, and criteria of incubators/accelerators guiding direction
 - Climate adaption and mitigation
 - Resource efficiency
 - Food security
 - Clean technology jobs
 - Economically viable of farms
- Harnessing creativity Modern student culture as conducive toward the development of start-ups
- Virtual engagement opportunities Potential to connect groups and organizations across geographically large areas
- Considering the value chain Developing networks, identifying roles within value chains, and assessing gaps and needs



Success Factors

- Network formation Connecting mentors, investors, industry, different companies in value chain
- **Types of mentorship and support** Providing mentorship (e.g., business, investors), and legal, business, and administrative support
- Advisory committee Including technical and scientific expertise, business expertise, (if included) multiple academic connections
- Alignment with policy Positioning for funding, and assessing the needs of the industry (e.g., GHG emissions reductions)
- Sufficient seed funding Developing an incubator of adequate size both in terms of physical space and activity
- Affiliation and visibility Increasing legitimacy and publicity
- Success metrics Successful businesses, value returned to sector



Challenges

- Venture capital culture Risk adverse in Canada, whereas agritech is expensive with long and unclear ROI
- Perspective on agriculture Agriculture perceived through a welfare (i.e., not wealth creator) and low-tech (i.e., not as dynamic tech) lens
- **University affiliation** Tied to a single university and its programs
- Attracting/retaining companies and talent Regulatory pathways in Canada, different provincial (dis)advantages (e.g., energy cost)
- **Silos** Geography (e.g., provinces), governance (e.g., departments)
- **Price, scale, and market** Affordable food, scaling-up requirements
- Diversity of agritech Specialized and expensive equipment, and different funding sources and technical expertise



Actions and Approaches

- **De-risking investment** Policies that open markets for agritech products (e.g., clean tech), and provide tax breaks and incentives
- Public (infrastructure) investment Reduce reliance on private capital
- Regulatory guidance Develop and promote resources on regulatory pathways from concept to market
- Network diversity Include multiple post-secondary institutions in incubator/accelerator networks, and involve a variety of mentors
- National hub Create a national hub for supporting agricultural research, connecting actors/networks, sharing knowledge, directing investment
- Program specialization Identify needs and supports for different areas of agri-food technology and innovation
- International networks Expand beyond domestic networks to broaden expertise and investment pools and explore export markets



www.ufv.ca/food-agriculture-institute

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