

The Ontario Wool Study: Phase 1

Assessing the Needs of Ontario Wool Producers and Processors

An Interim Report for the Ontario Sheep Farmers
Helen Knibb and Nicole Klenk

Executive Summary

The Ontario Wool Study

The first phase of the Ontario Wool Study consisted of a needs assessment of the Ontario wool industry to develop communication streams within the supply chain. This report, coming at the end of year one of a three-year study, presents findings based on interviews with fifty wool producers and processors.

The report draws distinctions between producer profiles and flock types and their common as well as distinct issues, needs and barriers in growing the wool market.

Emergent themes

Raising the profile and addressing the particular needs of small flock producers – a constituency that not only has significant growth potential, but specialised knowledge;

The need for directing quality fleeces to locally manufactured value added products in a scalable way to achieve maximum return on investments by individual farmers and the industry as a whole;

A coordinated wool marketing campaign beyond the individual farm, recognizing Ontario's not insignificant and distinct history of sheep, wool, and textile production and Ontario standards of sheep welfare;

Educational outreach on the properties and qualities of 'sustainable' wool for producers, consumers and the general public;

Agricultural and rural development policies that support the development of infrastructure and mill capacity from washing and scouring through carding and spinning, as well as production of batts, blankets and hosiery;

The need for a wool producer network to share know-how to improve the wool clip.

Similarities to the lamb supply chain

Our findings parallel observations made by Martin Gooch in his assessment of the Ontario lamb supply chain at the recent Ontario Sheep Convention. These include inconsistency of product, insufficient reward for a higher quality of product; a need for networks, knowledge exchange and market

information; a better connection between producers and consumers; more industry-specific research, and a need for efficiencies.

Should we invest in the local wool market?

The central question that emerged from our interviews is whether the sheep industry ought to invest in the wool market when the market is still small and uncertain. The business case for small-scale fibre flock expansion can, we believe, be demonstrated but there is a need to better understand the premium wool business as well as gather more accurate data on flock numbers and profiles. For larger flocks, wool is a by-product with the potential to make some gains. Demonstrating a useful return on investment on the wool clip will not be without challenge against the more easily quantifiable returns on lamb sales. Regardless, without improved infrastructure to support wool processing the scope and scalability of regional wool initiatives is limited.

Next Steps

On-going research to inform changes in practice includes: further investigation of policy and programs and their fit for wool producers; global innovation in business and social enterprise models in wool production and processing (their merits, limitations and capacity for adaptation to Ontario); some initiatives and possible collaborations in consumer education (some excellent fibre and producer resource guides have been prototyped elsewhere); training models and skill development in wool processing; new farmer supports; husbandry and breeding strategies for improved fibre quality; the branding of Ontario wool, and collaborative marketing initiatives. A priority is the development of an interactive, web-based directory of Ontario fibre producers and processors that will assist in linking breeders one-to-another, as well as providing a critical brokering service on the availability of wool, and wool products to consumers.

Interim Report

I. The Ontario Wool Project

Wool: it's local, it's sustainable, and it's already being produced by Ontario sheep farmers. It doesn't have the brand recognition of 'Ontario Lamb', but it could. Globally, it's become part of a much bigger discussion on emergent and growing consumer preferences for natural, 'climate-smart', regenerative, sustainably-produced fibre; the revitalisation of rural communities through small-scale manufacture and textile production, and carbon-neutral, agro-ecological practices.

Sponsored by the Ontario Sheep Farmers (OSF) and the Social Sciences and Humanities Research Council (SSHRC), this three-year project is about moving beyond the perception that wool is of little economic value, or as one producer put it, 'a bloody nuisance'. Rather, the question is 'how do we develop a market where there is more demand for Ontario wool and how do we diversify Ontario's wool production and marketing strategies?'

This interim report captures key findings from year one of the study, and assesses the contemporary landscape for wool growers and wool processors in the province. It explores the shifting concept of the wool value-chain; the method and outcomes of the first phase of the research, and identifies some key issues, barriers and needs that are seriously inhibiting the growth and vitality of the wool market. Where relevant, comparisons are made to efforts at regenerating the wool industry in other jurisdictions. Some next steps in the research are outlined, as well as references to some additional resources.

II. Method

Fifty sheep farmers (from small-scale fibre flocks, to large-scale commercial lamb producers), as well mill owner / operators, wool retailers, shearers, wool brokers, guild members¹ and fibre artists were interviewed, (late 2016-through 2017), representing a broad spectrum of the wool industry but with a focus on producers. Interview questions followed the same format as that used by wool marketing experts in the Lake District, England, so that results between the two jurisdictions could be compared. The interviews were conducted by Dr. Nicole Klenk, (University of Toronto), lead researcher on the project. Helen Knibb, Research Assistant, and doctoral student at Trent University, completed an analysis of themes and issues.

Data gathered focussed primarily on the producers and included farm and flock profiles, farm labour and husbandry practices, barriers to growing the wool business, markets and marketing strategies, the potential for co-operation and collaboration in growing the Ontario wool industry, and farm culture. The interview data was analysed for commonalities and differences in experience, especially between small and large flocks. The interviews were meant to elicit rich data to understand what producers, mill owners and other actors in the wool value-chain perceived as key issues in growing the wool industry in

¹ Drawn from various chapters of the *Guild of Spinners, Weavers and Dyers*.

Ontario. Our methodology is qualitative and therefore precludes making claims that the views expressed herein are representative of the hundreds of sheep producers in Ontario. Instead, we conducted interviews until we reached 'saturation', which means that we concluded the interview process when responses to our interview questions did not generate new insights. This report does not purport to provide an in-depth analysis of all of the interview data; it focuses instead on the issues that appear to be most important to participants.

III. The Wool Value Chain

The project parallels a number of similar international initiatives exploring the merits of a healthy, values-based, wool supply chain (the wool value chain). Scalable, innovative, and regionally specific, value chains can lead to improved farmer well-being and prosperity; social and economic benefits to processors, aggregators, retailers and consumers, and revitalisation of rural communities. In local food systems, value chains are noted for transparency, collaboration and the exchange of ideas and business 'know-how' among chain partners. They build on shared values, differentiated product and higher price point, increasing the demand for what's local and sustainably-grown (USDA, 2014, Sweitzer et al, 2008).

Of significance in this study, value chains can help to create legitimacy for small-to-mid-sized farms. Consumer concerns such as environmental and ecosystem protection as well as animal welfare are addressed. Value chains can help create new markets through product differentiation based on quality, processing, and provenance. Typically they function with low-cost, communication technology and social media, and the sharing and forming of alliances, collaborations or co-operatives - but without eliminating competition (USDA, 2014, Sweitzer et al, 2008).

Our snapshot of an emergent Ontario wool value chain suggests it has the potential to capitalise on many of these attributes, but is far from linear. Rather it's dynamic and changing, in fact more of a 'meshwork' of stakeholders, often carrying multiple roles. Based traditionally on three primary players - producers, (the sheep farmers); processors (the mills), and one primary aggregator (the Canadian Wool Growers), now there are new distribution channels, buyers and markets. These include aggregating sales of premium and specialty products (Upper Canada Fibre Shed and retail wool brokers); the prospect of fashion design houses seeking bulk purchase of premium fibre (Peggy Sue); wool broker / retailers sourcing specialty or premium yarns with known provenance (i.e. by farm and / or breed), and so-called 'ethical' consumers willing to pay a premium for sustainably-produced, breed-specific, or organic yarns. For farms that have a story to tell and quality product, there are consumers ready to buy.

Beyond the farm-gate sales there is an emergent and often vibrant interface developing between rural and urban, producer and consumer - from fibre festivals and fairs, to urban pop-up stores and on-line retail enterprises. There is an increased appreciation of Ontario's wool history including that of British native sheep breeds, and the growth of a textile industry, from the celebrated Ontario 'home-spun' to industrial-scale woollen mills. There is an articulate, passionate, and resourceful community of producers and processors, rich in 'know-how' and expertise, who see the future of wool and the possibilities for growth in Ontario.

IV. Interview Findings

Findings are synthesised into key themes in which there is a remarkable degree of consistency among producers with flocks of a similar type.

1. Producer Profiles

It could be said that there are three, if not four, Ontario producer profiles distinguished by their flock types and production values. There is significant overlap between these profiles, but the differences are helpful in examining issues, needs and barriers to growth.

The flock profiles are key to understanding what makes the Ontario wool culture distinct from any jurisdiction. For example, there is no one dominant ‘wool sheep’ breed, or localised flocks of familiar and distinct heritage breeds; there is no pastoral tradition, or annual sheep migration from lowland to highland and back (transhumance), nor is lamb a culinary mainstay of Ontario cuisine despite the production capacity. Yet sheep have *always* been important, if not vital, in the rural economy, both on a subsistence level and in mixed farming systems, as well as on a commercial scale.

Flock Type	Profile and Characteristics	Issues, Needs and Barriers
1. Small-Scale Producers Specialty² Fibre Flocks	Profile - Exact numbers unknown, but considered significant collectively ³ . - Further potential for growth in numbers with entry-level, young, and newly-retired farmers ⁴ . - Farms are usually small acreages, (5-25 acres), often marginal land unsuited to other livestock ⁵ . - Small flocks are often a reality of farm size. Most specialty fibre flocks are under 50 head. - Small-scale producers are not necessarily looking to grow their flock size substantively, but would grow incrementally if speed to market for processing improved. Breeds - Many specialising in pure-bred, ‘wool ⁶ ’ sheep breeds including ‘heritage ⁷ ’ breeds.	Flock owners feel they are not taken seriously as farmer-producers. As they don’t ‘fit’ within the norms and expectations of the industry, commodity group, and government agencies, their needs are often overlooked. Production and sales are limited significantly by mill capacity, and often, consumer demands can’t be met. - Maintaining genetic diversity in specialty flocks is a major issue for those with heritage and rare breeds. - Cross-border regulation has made access to new bloodlines challenging for

² ‘Specialty’ goods are considered those that consumers will make an extraordinary effort to locate and / or for which they are willing to pay a premium.

³ Assessing a more accurate number of these flocks is critical to understanding the depth and scope of premium fibre production in Ontario.

⁴ The absence of quota was identified as a significant attraction to new producers. Sheep are also relatively small in size and attractive for their presumed manageability for new farmers.

⁵ Some producers considered their reclamation and stewardship of small acreages and marginal land as well as rebuilding of farm infrastructure for stock-raising, an important contribution to the regional farm economy that deserved more recognition and support.

⁶ For the purposes of the report, ‘wool sheep’ refers to sheep that have been bred primarily for fibre, or where fibre quality has been a consideration in breeding.

Flock Type	Profile and Characteristics	Issues, Needs and Barriers
	<p>- There are a significant number of flocks with registered or registerable stock⁸.</p> <p>- Flock profiles include:</p> <ul style="list-style-type: none"> ▪ Heritage breeds native to the British Isles sheep such as Shetland, Romney, or Lincolns as well as more recent imports such as Gotland, Finn and Icelandic; ▪ Cross-breeds and mules (i.e. Blue-Faced Leicesters X Shetland); ▪ 'Composites' bred successively for the premium fibre market. <p>- Contrary to expectation, there is some evidence of Merino types such as the Rambouillet, being managed successfully on a small-scale.</p> <p>Values</p> <p>- Producers share a strong commitment to sustainable agriculture and environmental stewardship, rural revitalization and re-localization, animal welfare and preservation of genetic diversity.</p> <p>- Many self-identify as part of an informal 'movement' of like-minded wool producers.</p> <p>- Finding good help is a challenge. Independence, self-reliance and 'getting through' were common themes.</p> <p>- Small flock producers are deeply committed to public / consumer education and outreach, both on farm and in schools and other venues.</p> <p>- Some producers prioritise sales of breeding stock and fibre, and are conflicted over meat sales.</p> <p>Product</p> <p>- Most small flock producers are also 'wool-smiths' (spinners, weavers, dyers, felters, knitters, textile artists); most have basic, and sometimes expert knowledge of fibre quality, properties and characteristics.</p> <p>- Clarity of purpose around production goals and intended applications of the wool clip is critical to commercial success.</p> <p>- Of necessity, the focus is on development of 'value-add' wool products in order to 'get by' financially.</p> <p>- Producers make extensive and creative use of direct marketing: at the farm gate, on-line, via farmers' markets, fibre festivals, guild sales, etc.</p> <p>- Despite producer ambivalence, meat sales often</p>	<p>some breeds, limiting plans for flock improvements.</p> <p>- Preservation of minority breeds requires identifying specialty markets / applications for their wool.</p> <p>- Producers are also challenged in succession planning to preserve rare and valued blood lines.</p> <p>Farmers are challenged in balancing the needs of flock management against product processing, promotion and sales, as well as breed promotion and preservation (while often working 'off farm').</p> <p>Awareness of Upper Canada Fibreshed and the fibreshed concept was moderate to low among many interviewees.</p> <p>The need for improved access to professional development in fibre handling and production (basic through to advanced) was widely acknowledged.</p> <p>Building capacity for strategic and regional marketing of specialty and premium fleece and yarns as well as a distinct wool brand is critical to the growth and survival of small flocks.</p>

⁷ Heritage Sheep Breeds (HSBs) are 'genetically distinct' and adapted to their original environments. Traditionally these were farmed commercially, and played an important role in regional culture and rural economy. They were not in fact, 'rare'. <https://www.wur.nl/en/show/Heritage-sheep-breeds-1.htm>

⁸ Raising the profile of these flocks would be helpful to other wool producers seeking specific fibre qualities and facing limitations of choice in ram selection.

Flock Type	Profile and Characteristics	Issues, Needs and Barriers
	<p>offset production costs.</p> <p>- There is a concern among small-scale producers at finding the optimum flock size, beyond which there are diminishing returns based on need for hired labour, new infrastructure, and elevated feed costs.</p>	
<p>2. Small-Scale Producers</p> <p>Dual Purpose Breeds</p>	<p>Profile Despite a perception that producers have moved away from the ‘traditional’ dual-purpose breeds over the past decades, there is an apparent, though small, resurgence in interest among small flock producers. This was evident not so much in the actual numbers of flocks but in interviewee’s references to, and interest expressed in them.</p> <p>Breeds Traditionally includes British breeds such as the Lincoln and Cotswold and the New Zealand Corriedale. References were also made to the Polwarth, and Coopworth, as well as the Columbia, Columbia-Targhee and crosses and composites such as Cooperworth X Border Cheviot X Romanov (to ensure quality of carcass).</p> <p>More traditional ‘meat’ breeds (both downs and hill sheep) such as American Tunis, Shropshire, and Black Welsh Mountain and Scottish Black-Face are also being rehabilitated as dual-purpose as well as British Milk Sheep and East Friesians.</p>	<p>The majority of needs and barriers are similar to the specialty fibre flocks, but meat / dairy sales help bottom line. Focus is often on meat sales due to higher returns.</p> <p>Further investigation of these breed-types and their potential for growth in Ontario might be warranted.</p>
<p>2. Medium-to-Large Scale Producers</p> <p>Commercial flocks with established specialty wool sales</p>	<p>Profile There are a limited number of flocks in Ontario but it’s an important model in which commercial flocks are <i>managed</i> as dual purpose.</p> <p>Breeds Commercial flocks may include ‘downs breeds’, commonly underrated for fibre - both pure bred and crosses (e.g. Suffolks, Dorsets, Shropshires, and Southdowns) as well as Rideau-Arcott, Polypay, North Country Cheviot, Texels and cross-breeds with BFL, etc.</p> <p>Product Wool clip processed into ‘value add’ products such as household furnishings (blankets and bedding), and clothing / fashion accessories.</p> <p>Promotion and Sales Includes successful branding of the farm flock; use of web-based and social media, public outreach and education programs; direct sales at the farm gate, and via farmers’ markets and specialty fibre and wool</p>	<p>In at least one instance product sales were limited by a <i>shortage</i> of regional, quality fibre for bulk processing into value-add wool products (blankets, comforters, mattress pads, clothing, etc.).</p> <p>More research is required on commercial applications for these wool types.</p> <p>An important business model for further investigation.</p>

Flock Type	Profile and Characteristics	Issues, Needs and Barriers
	festivals (rural and urban).	
4. Medium-to-Large Scale Producers Commercial flocks with an interest in upgrading the quality of the wool clip	<ul style="list-style-type: none"> - Primary focus is production of lamb. - Potential interest in wool as a secondary product <i>if a credible business case can be proven.</i> - Breeds as above in Profile #3. Also recognised that some ‘meat’ breeds have a finer open fleece with potential for specialty markets <i>if</i> they could be easily and successfully diverted at shearing. <p>Sales</p> <ul style="list-style-type: none"> - Wool clip sent directly to the traditional aggregator, the <i>Canadian Wool Growers Co-operative.</i> - No apparent interest in direct marketing or value-add product development. 	<ul style="list-style-type: none"> - Farmers need to see a wool income to make changes – they won’t do it speculatively. - There is a need for more predictability in the wool market – i.e. a firm business case. <p>Transitioning practices might include:</p> <ul style="list-style-type: none"> - upgrading quality of the wool clip through crossing with quality fibre breeds - feeding for fibre - changing husbandry practices to reduce VM⁹ contamination in fleeces (i.e. bedding material and feeder design) - investing in skilled labour on shearing day (diverting premium fleeces, skirting fleeces adequately).

2. Research Outcomes - Challenges, Barriers, and Needs

Growing the Wool Value-Chain

Throughout the interviews a number of common themes were identified by producers and processors, but what was most apparent was the need to break the spiral of diminishing returns. In order to grow the wool market producers need a solid business case and greater predictability in wool prices. Producers need to know what kind of fibre market they are growing for. Without a quality, Ontario wool clip, investors and mill owners are reluctant to build infrastructure. Without predictable access to quality fibre, designers and fashion houses can’t source locally the large quantities needed for manufacture. Without product to market, consumers can’t easily access premium, specialty, or affordable wool products and aren’t educated as to the benefits of wool. Instead of a local fibre movement, there are end-buyers sourcing products at one-off, specialty stores and events. Except for some isolated initiatives there is little sense of an Ontario wool history or culture, an Ontario wool brand, or wool-based agri-tourism initiatives or systems that parallel those of local food. In a more integrated wool value-chain, all the stakeholders potentially have a voice in its development and refinement as well as benefits. As one producer noted – the ‘industry is not big enough for us all to operate independently’.

A Farmer Network for Small Flock Producers

Small-scale producers spoke at length of their isolation – from peer producers, other commodity farmers, and often from their local and regional, rural community. This was a limiting factor in sharing

⁹ Vegetative Matter (VM)

know-how and, more critically, locating appropriate breeding stock. There is potential for co-operative / networking initiatives in a number of areas, especially in marketing.

Policy and Programs

Interviewees identified a significant list of needs and barriers inhibiting farm specific, as well as industry growth. Few, if any, were identified as policy and program issues, yet many could be classified as such and resolved through a more systematic, and responsive approach, especially to small-farm differences and needs. Issues included everything from supports for entry-level sheep farmers, to recognition and respect for smallholders¹⁰.

The Wool-Informed Consumer

All producers and processors spoke of the need for consumer education on the properties and qualities of wool over synthetic fibres, and the production values associated with Ontario wool. Consumer engagement is critical to growth. This includes influencing consumer decision-making around fashion purchases and household furnishings and dispelling the image of wool as itchy, scratchy, and 'allergic'. Craft / fibre artists need advising on fibre selection and quality, (matching the fibre to the task), wool properties, care and storage. 'Real wool needs deep knowledge' remarked one producer; most knitters 'don't know what's running through their hands as long as it's a pretty colour'.

The 'real costs' of wool from sheep husbandry through processing to hand / machine crafting, and finished product to price point need explanation. Some spoke of the need to reclaim a language in which both 'wool' and 'fleece' have been appropriated in the promotion and sale of synthetic fabrics. 'Fibre', used more broadly to include plant-based materials, also needs careful definition.

Many, especially small flock producers, are already engaged in both public education and schools-based programs. There is potential for the more systematic development of targeted educational programs – both public and schools.

Wool and Welfare

Producers spoke of the need to educate consumers on the high standards of sheep welfare in Ontario and the true costs of ethical production and flock care, as compared to that of cheaper, imported wool products. Wool is an indicator of flock health. Sheep need quality and attentive husbandry to produce good wool.

Small-flock producers see themselves as the 'humane' face of the sheep industry and work hard to counter misinformation and public misperceptions of animal cruelty.

¹⁰ Traditionally considered those farming under twenty-five acres, and making what has been described as a 'small, country living'.

Promoting Our Wool

Producers expressed the need for high-profile, promotional events that have captured the public imagination elsewhere, such as the *Campaign for Wool* strategies in the United Kingdom. Unlike local food, the connection between rural producers and urban consumers of wool is tenuous. There is a need for an increased, and high profile, presence of wool producers in urban centres in order to access traditional markets (e.g. knitting yarn) as well as new, specialty markets such as those for felting wool, or wool batting. Fibre artists are increasingly adventurous and looking outside the country to import unusual premium fleeces. Hand-spinners, in particular, want to buy by breed and not by grade. We need, as one producer said, to ‘get the farm names out there and visible’ through some form of producer directory¹¹.

A greater challenge is that of developing and supplying with consistency, new markets for larger-scale manufacture and the industrial applications of lower grade and / or coarse wools. This would require the kind of incentives, investments, and rural infrastructure to bring product to market that is being leveraged in the United Kingdom and Europe.

Minding the Mill

The most significant and pressing issue for producers seeking to create value-add product for direct marketing was the lack of processing facilities and mills in Ontario, including both mini-mills and medium-sized mills with the capacity for larger-scale manufacture. Related issues include lack of processing capacity for large quantities from a single source, distance and proximity to mills and costs of shipping, and the crippling backlog and wait times (six months was not unusual, to as long as three years).

Processing capacity, such as a scouring facility and a combing mill for long wools, does not even exist in the province, necessitating shipping to Michigan. Others ship to New Brunswick and Prince Edward Island for large batch production of yarns and blankets.

Mill operators speak of prohibitive start-up costs, labour-intensive and highly-skilled work and long hours, and a significant time investment in educating producers as to the best application for their wool clip.

Producers described the need for processing facilities as ‘desperate’. There is a need to conduct an analysis of mill capacity and consumer-demand¹².

¹¹ On-line and /or tactile tools have been developed in California and New York State, helping to create a sense of a regional, wool culture and building brand identity, both individually and collectively, to fibre producers.

¹² While the Ontario Wool Study is developing a web-based searchable map of wool producers and mill owners, this tool is not designed to be a complete inventory. In addition, while the Ontario Wool Study will be conducting focus groups with consumers to discuss consumer demand in the third year of the study, a quantitative survey of consumer demand is outside the scope of this study. Clearly, there is further research required to address the needs of wool producers and mill owners.

Husbanding the Wool Clip

The Wool Growers Co-operative has noted a significant decline in the overall quality of the wool clip in recent years, to a micron count of 30-34. There are fewer fine wools, and there's cross-contamination from hair sheep, but the bigger issue is a lack of producer know-how. 'Everything goes in the wool bag' remarked one producer, 'good, bad, and belly wool'.

Many interviewees noted that farmers from all flock types, as well as shearers, could improve their wool handling and skirting skills. Producers pointed to the lack of incentives to remove contaminants from their fleeces, even though some simple changes in husbandry practice, (nutrition, feeding, and bedding systems), and in front-end handling and sorting would improve the quality of the clip, help better prepare the product for the mill, and reduce waste.

An Ontario Wool Culture and Tradition

'Wool is wool' commented one producer; there is 'nothing special' about Ontario wools. Others noted that Ontario lacks the tradition of recognised wool breeds, and a pride in local or native breeds. Here, it's not possible to emulate the 'wool cultures' of Australia, New Zealand and Great Britain. We are not a 'wool producing nation'; we don't 'value' wool, we don't have the manufacturing infrastructure.

Others made reference to Ontario's forgotten but impressive wool history and the production of coarse wools – which still comprise some of today's wool clip. Far from being worthless, these were the wools on which Ontario's textile industry was largely based throughout the 19C and early 20C. These are the wools which were weather resistant and hard wearing and used for manufacturing a product range that included fine tweeds and hosiery, to horse blankets. Producers spoke with enthusiasm about capitalising on regional wool histories as well as opportunities for 'artisanal', 'small- batch', local, and breed-specific branding.

Dispelling the Hobby Farm 'Myth'

Small-to-medium scale fibre-flock producers spoke frankly of feeling marginalised from the large-scale commodity producers in the Ontario sheep industry. Despite how hard they worked and their focus on exemplary husbandry practices they felt themselves viewed as 'hobbyists', 'not real farmers', and 'not seriously farming'. They spoke of not having a voice, as well as feeling pressured to 'go big' in order to fit in. Yet as one producer noted, anyone who has livestock is committed to those animals – by default you are a 'serious farmer'.

V. Research Outcomes – Next Steps

While there were many commonalities between flock types, it's the distinctions that need to be accounted for in designing programs and supports for wool producers. There is not a 'one-size' solution to growing the wool industry in Ontario.

There are three pressing issues limiting potential growth:

There is a need for more accurate data on the depth and breadth of the small-scale, fibre-flock community and wool sheep breeds. We believe the number of flocks to be significant and growing, and that their aggregate contribution to the Ontario wool industry has been underestimated. These producers have been the most responsive to emergent markets for local, sustainable, and ethically-produced wool and fibre and have been highly creative in direct marketing. It is a growth area, both in terms of flock development, niche markets and attracting new, entry-level wool producers. The small, fibre-flock producers need supports that meet *their* needs as distinct from those of commercial lamb producers.

Promotion of improved husbandry and wool handling practices on all farms, to enhance the overall quality of the wool clip is critical. The issue is not recent – it's been a major concern in Canada since the late 19C – so there is a need for new and convincing strategies in order to change practice¹³ and make Ontario wool more competitive and profitable. On-farm assistance from experienced wool graders on shearing day; diverting premium fleeces from the general wool clip of large commercial flocks, and development of a business case assessing the returns on improved production standards were some of the ideas generated.

The number of, access to, size and capacity of mills in Ontario is a primary limitation in the development of an Ontario wool industry. The backlog in processing compounds other issues such as reluctance to expand fibre flocks, lack of adequate on-farm storage for fleece, (and subsequent degradation while in storage), and delays and lack of predictability in bringing product to market.

A particular challenge, given limited resources, is whether the highest returns will come from working to increase the productivity of the large numbers of small-flock producers who have limited individual, but quality outputs, or small, incremental changes among large flock producers with a significantly higher output but of variable quality and consistency.

Other significant areas for on-going research include:

Policy

Although few interviewees made direct reference to policy per se, many of the issues and barriers to growth that were referenced with frequency relate to limitations and gaps in rural, agricultural, small business, and even cultural policies at all levels of government. These policies could be more helpful in supporting different types and scale of wool producer / processor start-ups, growth, and product innovation. Policy and programs need to be enablers not barriers to wool producers.

¹³ The CCWG's *A Guide for the Care and Handling of Your Wool Clip* might be further promoted.

There are significant parallels with local food systems and effective and emergent ‘next practices’ in regenerative agriculture, small-scale, non-capital intensive production, high animal welfare, and re-localisation might be considered in the context of wool.

New, Business and Collaborative Production / Processing Models

Co-operative and collaborative approaches to the promotion and sale of Ontario’s premium and specialty fleece through new business models and regional aggregators such as *FibreSheds*, as well as social enterprise models such as *Community Interest Companies*, and *Community Benefit Companies*, require further investigation. Such enterprises would better facilitate purchase and processing of regional, quality fleeces in commercial quantities, with greater benefits and returns to the farmer and rural communities. These models are being quickly adapted and developed with apparent success by wool producers / processors in other jurisdictions.

Consumer Education

Consumer education¹⁴ on the qualities, properties, and merits of natural, sustainable, wool including the development of resource materials and programs for use in schools and community groups is much needed. This may include capitalising on existing programs such as the *Campaign for Wool* as well as new initiatives such as curriculum-based programs and tactile teaching resources.

Skill Development in Wool Processing

Assessment of skills needs, and related training and education availability and potential for traditional and specialised technical skill development in wool handling, grading and sorting and textile manufacture and production is needed. It was noted that Ontario lacks the kind of training infrastructure that would support serious technical mastery and innovation. These are not obsolete skills but have been lost to off-shore manufacture. Efforts to retrain and ‘reshore’¹⁵ are gaining momentum in some industries.

New Farmer Supports

Entry-level wool producers need to be better connected to existing and /or additional programs, including mentoring. Also referenced was the need for expert sheep ‘brokering’, in order to ensure healthy, disease-free, start-up flocks with quality fibre traits. There seemed to be a lack of awareness of what programs were already available, as well as defined needs relating to wool production that are not being met.

¹⁴ Recent research in local food systems suggests that education alone does not necessarily change culture and buying habits but that experiential learning – that is some form of direct contact with the farm, farm work, or in this instance livestock - can be a change agent, though not easy to achieve on a larger scale (Carolan 2017).

¹⁵ Conceived by Harry Moser of *The Reshoring Initiative* and intended to counter the trend of ‘offshore’ labour and skill loss in manufacturing (Oppenheimer, 2016).

Flock Improvements

Further research on the possible economic benefits of breeding for improved wool quality, (without compromise to the carcass value), in large commercial flocks is needed to help build a business case. A longitudinal study assessing the ROI would be of interest.

Producers also expressed the need for better networking among flock producers in order to help source quality fibre sheep and new bloodlines as well as potential cost sharing on imports.

Branding and Marketing Ontario Wool

Suggested strategies include:

Developing innovative approaches to ‘place of origin’ branding of Ontario wool, and differentiated wool products, based on Ontario’s rich history of sheep breeds and breeders; home-based manufacture of woollens, and industrial-scale textile mills.

Promoting the concept of ‘high animal-welfare’, which many producers see as a key characteristic, if not a norm of Ontario sheep farming. This approach is already being leveraged in other jurisdictions through ‘value-add’ certifications, and in the branding and marketing of wool products.

Investigating and leveraging new markets and applications for Ontario’s wool clip including promoting to fashion houses, designers of household furnishings, and small-scale manufacturers, and capitalising on wool’s thermal and buffering properties in products such as insulation and packaging.

Collective marketing efforts promoting Ontario’s producers and specialty and premium yarns to help bridge the urban-rural gap. A web-based, interactive directory and map of producers and mills is proposed. A wool map or wool trail¹⁶ would identify and promote regional wool-related features including historic sites and contemporary resources and suppliers, as well as celebrating specific breeds, while protecting specific farm locations.

The leadership of the OSF’s newly formed Wool Committee will be important in helping to inform and prioritise some of these initiatives.

VI. Summary and Conclusion

Based on our interview findings, it can be said that the needs and barriers articulated by interviewees parallel the experiences of other jurisdictions, though there are significant differences in culture and context, policy and support, and overall awareness of the wool industry.

¹⁶ ‘Live’ maps or wool trails have been developed successfully elsewhere. For reasons of privacy / biosecurity such a tool would promote point of contact, not specific farm locations.

The findings also parallel observations made by Martin Gooch on the Ontario lamb supply chain. Not only is there inconsistency of product, but insufficient reward for those producing a higher quality of product; a need for networks and improved exchange of knowledge and market information; a better connection between producers and consumers; more industry-specific research, continuous quality improvement, and a need for efficiencies and bench-marking¹⁷.

The business case for small-scale fibre flock expansion can, we believe, be demonstrated but there is a need to better understand the premium wool business as well as gather more accurate data on flock numbers and profiles. Regardless, without improved infrastructure to support wool processing the scope and scalability of regional wool initiatives is limited.

For larger flocks, wool is a by-product with the potential to make some gains. Demonstrating a useful return on investment on the wool clip will not be easy against the more easily quantifiable returns on lamb sales. The question is whether some small, incremental changes in practice can result in a convincing outcome. Wool production has not been a priority for commercial producers. For them to fully engage more fully, the market needs to be bigger with more incentives, better infrastructure, better organised, and with access to expertise on wool and quality controls.

We are faced with the irony of an industry that is too small to compete with the large wool economies of Australia and New Zealand, and yet is not efficient enough to produce enough quality home-grown wool, with consistency, to supply emergent and growing wool manufacture.

In promoting wool, one is also promoting the sheep industry, but it has to be, as one farmer remarked, 'more than a warm, fuzzy thing.'

VII. Select, Additional Resources

The following links have been included as resources for reference and / or possible interest:

1. Promotional Directories

New York State Regional Farm Source Book, Volume I:

https://www.human.cornell.edu/sites/default/files/FSAD/Yarn/NYSourcebook_Cornell_FINAL_July30r.pdf

2. Feasibility Studies for Regional Woollen Mills in Canada

Although *Fibreshed* commissioned a mill feasibility study for California, (see:

<http://www.fibershed.com/wp-content/uploads/2016/10/Wool-Mill-Feasibility-Study-Feb2014.pdf>)

these are Canadian studies:

¹⁷ Martin Gooch, chief executive officer of Value Chain International, presented an analysis of the state of the sheep industry at the Ontario Sheep Farmers Convention, October, 26-27, 2017.

North Cariboo Fibre Mill Opportunities for Processing, 2012

<http://farmed.ca/wp-content/uploads/2015/06/Fibre-Mill-Study-Chris-Hartridge.pdf>

Northern Fibre: Options for Successful Fibre Processing in the Yukon, 2007

<http://www.yukonag.ca/resources/FibreMillReport.pdf>

3. New Applications for Wool

Feasibility Study on Production of Wool Insulation in Eastern Canada

<http://nsssheep.ca/wp-content/uploads/WVCDP-Final-Report-for-CCWG-14-01-2013.pdf>

VIII. References

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<http://www.ruralsupportpartners.com/docs/ValueChainBestPractices.pdf>

Project Lead

Dr. Klenk has over a decade of experience with social science quantitative and qualitative research methodologies in the field of Canadian environmental policy and community-engaged research in various natural resource and environmental sectors (e.g., forestry, biodiversity conservation, climate change). This project is part of Nicole's emerging research program on rural development and sustainable textiles economies.

Research Assistant

Helen Knibb is in her third year of the Canadian Studies Doctoral Program, Trent University. Her research focusses on the history and adaptation of British native sheep breeds and husbandry practices to Canada; the growth in nineteenth century wool manufacture, and the ways in which some of these historic models might be referenced in the revival and re-localization of wool production today. She has a professional background in post-secondary education, policy analysis, public history, and sustainability studies, as well as experience in sheep farming, flock management, and animal husbandry.