

RESEARCH OBJECTIVE

Study: Examine Consumer Potential Demand for Genetically Modified Hemp Textile Products

➤ Purchase Intentions

1. Would You Buy Clothing/Sheets Made from a Crop You Know is Genetically Modified?
 2. What factors influences Consumers to buy genetically modified hemp textile products?
- Does: demographic variables, general trust, trust gaps (farmers, Textile manufacturers, researchers, Organizations/ Universities, Third party certification agencies, retailers, government and environmental organizations)

Natural Hemp Bed Sheet



<https://www.createandbarrel.ca/>

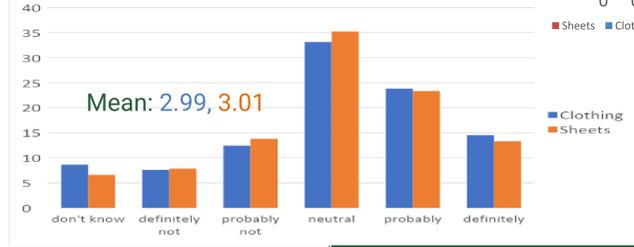
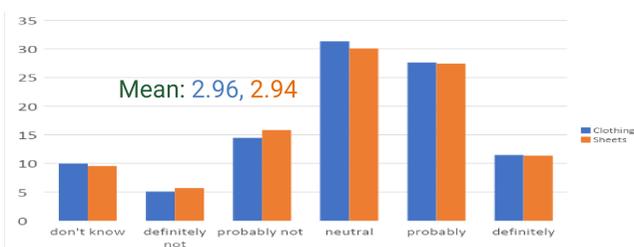
Methods and Data

- ❖ Public surveys – online, using market research panels
- ❖ TWO products – Jeans, Sheets (separate surveys)
- ❖ Canada : 1100 respondents each- February 2022
- ❖ US: 1000 respondents each – July 2022

CANADA

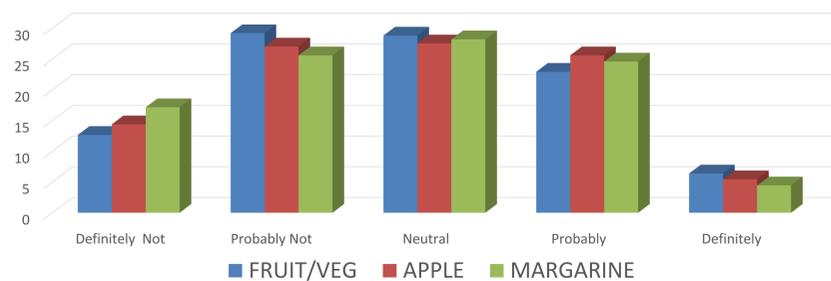
USA

➤ Would You Buy Hemp textile products(Jeans/Clothing) You Know is Genetically Modified? %



➤ Would You Buy Genetically Modified Food Products? % 2020

Mean: 2.81, 2.81, 2.74



(Goddard, (2019, updated)

DISCRIPTIVE STATISTICS

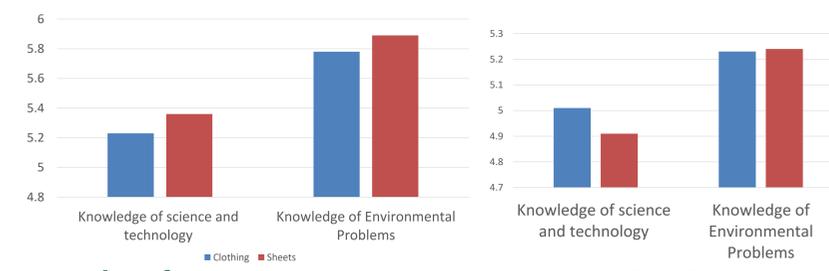
➤ Trust

How much trust do consumers have in the various groups or institutions regarding their responsibility for clothing and other textile production in both Countries?

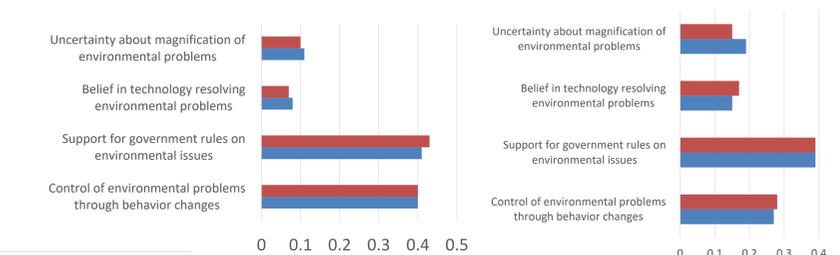


➤ Self Assessed Knowledge

1 means that "you have little knowledge", and 10 means that "you know a lot."



➤ Myths of Nature



Acknowledgements

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References

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DISCRIPTIVE STATISTICS

Table 1

Mean Score (SD)

Purchase Intention	CANADA		USA	
	JEANS	SHEETS	JEANS	SHEETS
FOOD PRODUCTS				
Willingness to buy fruits or Vegetables that are genetically modified	2.81 (1.12)		2.99 (1.42)	2.99 (1.42)
Willingness to buy fruits or Vegetables that are genetically modified	2.81 (1.13)		2.99 (1.42)	2.99 (1.42)
Willingness to buy fruits or Vegetables that are genetically modified	2.74 (1.14)		3.01 (1.35)	3.05 (1.35)
TEXTILE PRODUCTS				
Willingness to buy clothing made from genetically modified crops	2.96 (1.41)	2.93 (1.42)	2.99 (1.42)	2.99 (1.42)
Willingness to buy sheets made from genetically modified crops	2.94 (1.40)	2.93 (1.39)	3.01 (1.35)	3.05 (1.35)
Trust in Various Groups				
<i>General Trust</i>				
General Trust	0.40 (0.49)	0.40 (0.49)	0.25 (0.43)	0.23 (0.42)
<i>Farmers</i>				
Farmers	3.21 (0.98)	3.26 (0.99)	3.11 (1.09)	3.15 (1.20)
<i>Textile manufacturers</i>				
Textile manufacturers	2.66 (0.94)	2.70 (0.97)	2.74 (1.05)	2.70 (1.06)
<i>Research organizations/universities</i>				
Research organizations/universities	3.15 (0.98)	3.19 (1.00)	2.92 (1.07)	2.93 (1.06)
<i>Third party certification agencies (e.g. that certify Fairtrade, Certified Humane etc.)</i>				
Third party certification agencies (e.g. that certify Fairtrade, Certified Humane etc.)	3.01 (0.99)	3.03 (1.07)	2.76 (1.08)	2.71 (1.06)
<i>Government agencies/public authorities</i>				
Government agencies/public authorities	2.79 (1.04)	2.86 (0.97)	2.58 (1.12)	2.59 (1.13)
<i>Advocacy consumer organizations</i>				
Advocacy consumer organizations	2.91 (0.98)	2.97 (0.97)	2.80 (1.05)	2.82 (1.04)
<i>Advocacy environmental organizations</i>				
Advocacy environmental organizations	2.93 (1.02)	2.99 (1.02)	2.86 (1.10)	2.84 (1.07)
Retailers	2.65 (0.95)	2.67 (0.97)	2.73 (1.04)	2.75 (1.04)
Self Assessed Knowledge				
<i>Knowledge of science and technology</i>				
Knowledge of science and technology	5.23 (2.27)	5.36 (2.23)	5.01 (2.54)	4.91 (2.49)
<i>Views about science and technology</i>				
Views about science and technology	6.65 (2.17)	6.64 (2.20)	5.73 (2.56)	5.59 (2.51)
<i>Knowledge of Environmental Problems</i>				
Knowledge of Environmental Problems	5.78 (2.05)	5.89 (1.97)	5.23 (2.37)	5.24 (2.36)
Myths of Nature				
<i>Control of environmental problems through behavior changes</i>				
Control of environmental problems through behavior changes	0.40 (0.49)	0.4 (0.49)	0.27 (0.45)	0.28 (0.45)
<i>Support for government rules on environmental issues</i>				
Support for government rules on environmental issues	0.41 (0.49)	0.43 (0.47)	0.39 (0.49)	0.39 (0.48)
<i>Belief in technology resolving environmental problems</i>				
Belief in technology resolving environmental problems	0.08 (0.26)	0.07 (0.26)	0.15 (0.36)	0.17 (0.38)
<i>Uncertainty about magnification of environmental problems</i>				
Uncertainty about magnification of environmental problems	0.11 (0.31)	0.10 (0.30)	0.19 (0.39)	0.15 (0.36)
<i>Farm/Ranch Ownership</i>				
Farm/Ranch Ownership	0.14 (0.34)	0.14 (0.35)	0.21 (0.41)	0.26 (0.44)
Demographic Variables				
<i>Age</i>				
Age	53.68 (16.05)	52.55 (15.85)	41.92 (16.98)	39.28 (16.31)
<i>Education</i>				
Education	14.27 (2.09)	14.35 (2.04)	13.89 (2.13)	13.87 (2.12)
<i>City</i>				
City	0.66 (0.47)	0.67 (0.47)	0.41 (0.49)	0.40 (0.49)
<i>Town</i>				
Town	0.19 (0.39)	0.20 (0.40)	0.36 (0.48)	0.36 (0.48)
<i>Rural</i>				
Rural	0.14 (0.35)	0.13 (0.34)	0.24 (0.42)	0.24 (0.42)
<i>Income</i>				
Income	63.90 (33.96)	64.70 (34.58)	50.60 (30.95)	49.02 (29.88)
<i>Male</i>				
Male	0.44 (0.50)	0.43 (0.50)	0.23 (0.42)	0.22 (0.42)
<i>Sample Size</i>				
Sample Size	1100	1100	1000	1000

Notes: (SD) Standard deviations are in parentheses

ORDERED PROBIT ESTIMATE

Table 2

Ordered Probit Regression Estimates	Canada			USA		
	CLOTHESAM	SHEETSSAM	CLOTHESAM	SHEETSSAM	CLOTHESAM	SHEETSSAM
Constant	-	+	+	+	+	+
Trust						
<i>General Trust</i>						
General Trust	+	+	+	+	+	+
<i>Farmers</i>						
Farmers	-	-	-	+	+	+
<i>Textile manufacturers</i>						
Textile manufacturers	+	+	+	+	+	+
<i>Research organizations/universities</i>						
Research organizations/universities	-	-**	+	-	-	-
<i>Third party certification agencies</i>						
Third party certification agencies	-	-	-**	+	+	+
<i>Government agencies/public authorities</i>						
Government agencies/public authorities	+	+	**	+	+	+
<i>Advocacy consumer organizations</i>						
Advocacy consumer organizations	+	+	-	-	-	-
<i>Advocacy environmental organizations</i>						
Advocacy environmental organizations	+	+	-	-	-	-
Retailers	+	+	+	+	+	+
Self-Assessed Knowledge						
<i>Knowledge of science and technology</i>						
Knowledge of science and technology	+	+	+	+	+	+
<i>Knowledge of Environmental Problems</i>						
Knowledge of Environmental Problems	+	+	+	+	+	+
World better off						
World better off	-**	+	+	+	+	+
Myths of Nature						
<i>Control of environmental problems through behavior changes</i>						
Control of environmental problems through behavior changes	-**	-**	+	+	+	+
<i>Support for government rules on environmental issues</i>						
Support for government rules on environmental issues	+	-	+	+	+	+
<i>Belief in technology resolving environmental problems</i>						
Belief in technology resolving environmental problems	+	+	+	+	+	+
<i>Farm/Ranch Ownership</i>						
Farm/Ranch Ownership	+	+	+	+	+	+
Age						
Age	-	-	-**	-**	+	+
Education						
Education	+	-	+	+	+	+
City						
City	-	-	+	+	+	+
Town						
Town	-	-	+	+	+	+
Income						
Income	+	+	+	+	+	+
Male						
Male	+	+	+	+	+	+
Household size						
Household size	+	+	-	-	+	+
children						
children	+	+	+	+	+	+

Note: *Significant at the 10% significance level. ** Significant at the 5% significance level. ***Significant at the 1% significance level.

Conclusion:

- Respondents have more positive perception toward genetically modified hemp textile products compared to their sentiments towards genetically modified food items.
- Trust, knowledge, myths, and demographics specifically age, income, and being male play distinct roles in shaping consumer preferences towards sustainability in both Countries.
- The influence of trust, knowledge, and myths on purchase intentions varies between the two countries.