

Food Fraud and Consumer Risk Perception in Quebec (Canada)

INGRID PEIGNIER, ING., M.SC.A

NATHALIE DE MARCELLIS-WARIN, PH.D.

BAROMÈTRE CIRANO

A unique tool for identifying the
determinants of the social
acceptability of major societal
issues

Analyzing survey data for a better
understanding of Quebecer's current
concerns and risk perceptions

health
environment
industries
technological innovation
security
ISSUES
public projects
infrastructure
economy



About the « BAROMETRE CIRANO »



- **First BAROMETRE survey conducted in 2011**
- **Representative sample of the Quebec population selected by the quota method**
- **Data collection** : Online survey administrated by Léger
- **General surveys** (with the same issues each year) or specific/thematics surveys (depending on the issues under consideration)

General Surveys

Dates des sondages	
Baromètre 2011	du 22 au 27 juin 2011
Baromètre 2012	du 29 juin au 6 juillet 2012
Baromètre 2013	du 5 au 10 avril 2013
Baromètre 2016	du 18 au 23 octobre 2016

Thematic Surveys

Dates des sondages	
Enquête spécifique 4 thématiques (2013)	du 15 au 23 novembre 2013
Enquête spécifique Énergie et changements climatiques (2015)	du 16 au 20 avril 2015

Methodology

- **Sample** : 1008 persons selected according to the quota and stratum method
- **Data collection** : Online Survey from 18th to 23rd october, 2016 administrated by Leger
- **Weighting** : Raw data weighted by actual population distribution **by sex, age, mother tongue, education level, presence of minor child in household and region** based on 2011 census data of Statistics Canada.

Contextualization of results with current events in Quebec – October 2016

Plusieurs risques associés

Fraude alimentaire: les Canadiens pas préoccupés

TVA Nouvelles | Publié le 13 octobre 2016 à 05:19 - Mis à jour le 13 octobre 2016 à 05:23

LE JOURNAL DE MONTRÉAL

12 octobre 2016

Trop de fraude alimentaire à l'encontre des Canadiens, déplorent des spécialistes

Les Canadiens ne sont pas préoccupés par les risques associés aux tromperies de l'industrie

f 732

PARTAGEZ SUR FACEBOOK



PARTAGEZ SUR TWITTER

05 October 2016

Food scientists: We can detect much more food fraud

FOOD FRAUD Researchers from the Department of Food Science (FOOD) at the University of Copenhagen point out that “non-targeted” methods of analysis can reveal far more food fraud than we are currently detecting. The

Questions of the Barometre CIRANO survey (specific for food fraud)

- ☐ What are the **CONCERNS** of Quebeckers and their **PERCEPTIONS OF THE RISKS** associated with food fraud? How **CONFIDENT ARE QUEBECKERS IN THE GOVERNMENT'S MANAGEMENT** of food fraud and in the labeling of food products?
- ☐ How **PRESENT** is food fraud in Quebec ?
- ☐ How **WELL INFORMED** are Quebeckers regarding the risks surrounding food fraud ?
- ☐ What are, for Quebeckers, the **willingness to CHANGE THEIR PURCHASING BEHAVIOR** in case of a specific « Zero Food Fraud » certification?
- ☐ Which socio-demographic characteristics and **FACTORS INFLUENCE** their perceptions and confidence?

In order to ensure that the means being built to manage food fraud and also those planned are effective and receive all the trust needed from the public

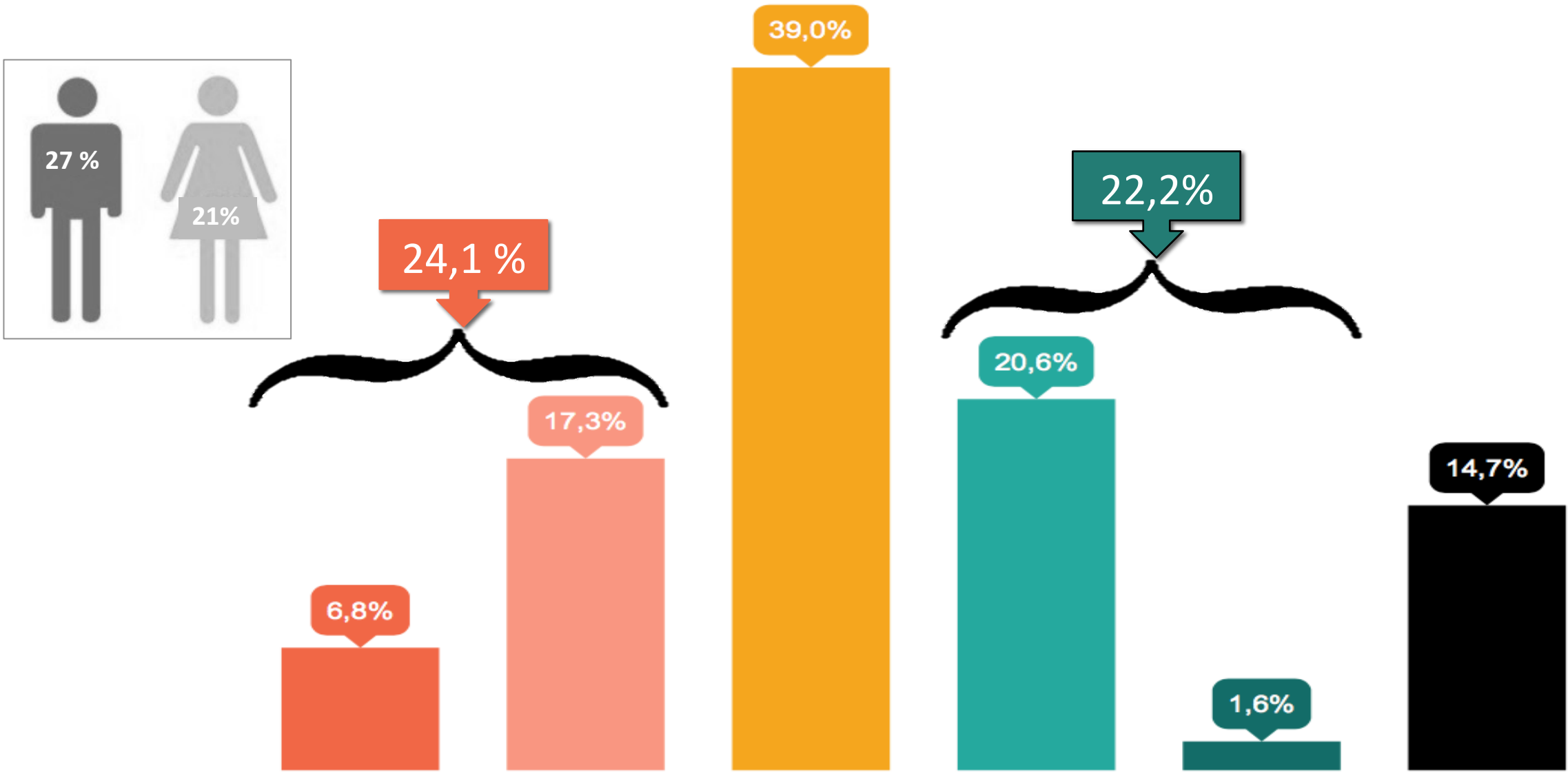
Food fraud

Definition given to respondents

Food fraud involves products that are intentionally and fraudulently marketed to consumers:

- *falsified labels,*
- *substitution with low-cost ingredients,*
- *addition of potentially dangerous products,*
- *trademark counterfeiting, etc.*

According to you, how present is food fraud in Quebec ?



Source : Baromètre CIRANO 2017

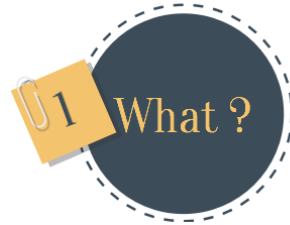
Examples of food fraud in Canada



Tomatoes, Peppers and Cucumbers



**November 2011
to January 2013**



Sale of vegetables imported from Mexico on the basis that they were products of Canada



Mucci, Ontario Company



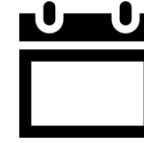
Convicted in June 2016

- Conviction to pay \$ 1.5 million in almonds
- 3-year probation period

Examples of food fraud in Canada



Olive oil



2015



Sale of so-called extra virgin olive oil, but altered



Tucom, Quebec company (Mirabel)



Convicted and sentenced to \$ 12,000 fine (2nd conviction)



Olive oil monitoring program of the CFIA (2005-2015) : 33% of the Agency's sample was either mixed with other vegetable oil (canola, sunflower, etc.) or mislabelled (Extra virgin when it was not the case), either rancid or outdated (without health hazard). Radio Canada, March 2017

If the product is not trafficked from the farm, it may be misrepresented or used as an ingredient in a truncated recipe along the way to the consumer's plate.



➤ Scandal in Brazil (March 2017)

➤ Scandal with ground beef in Quebec

The program Le Québec Matin tested in March 2017 at Environex Group's premises by purchasing four packages of ground beef from four supermarkets in the Province of Quebec. The results are astonishing: three out of four beef packages contain pork.

Source : <http://www.tvanouvelles.ca/2017/03/23/du-porc-cache-dans-votre-buf-hache>

➤ Fraud in retailers: use of counterfeit sticker

The TV show *l'Épicerie* surveyed 35 supermarkets in the Greater Montreal area, from neighborhood fruit to large brands. Result: 65% of the places visited display organic fruits and vegetables without certification, without indication, without proof. (La Presse, 28 September 2016)

In 2015, the CARTV (Conseil des appellations réservées et des termes valorisants) audited 820 sites throughout Quebec. 9 retailers are still under thorough investigation for non-compliance. 3 retailers were fined totaling \$ 5,502. In 2016, one retailer was fined \$ 25,216.

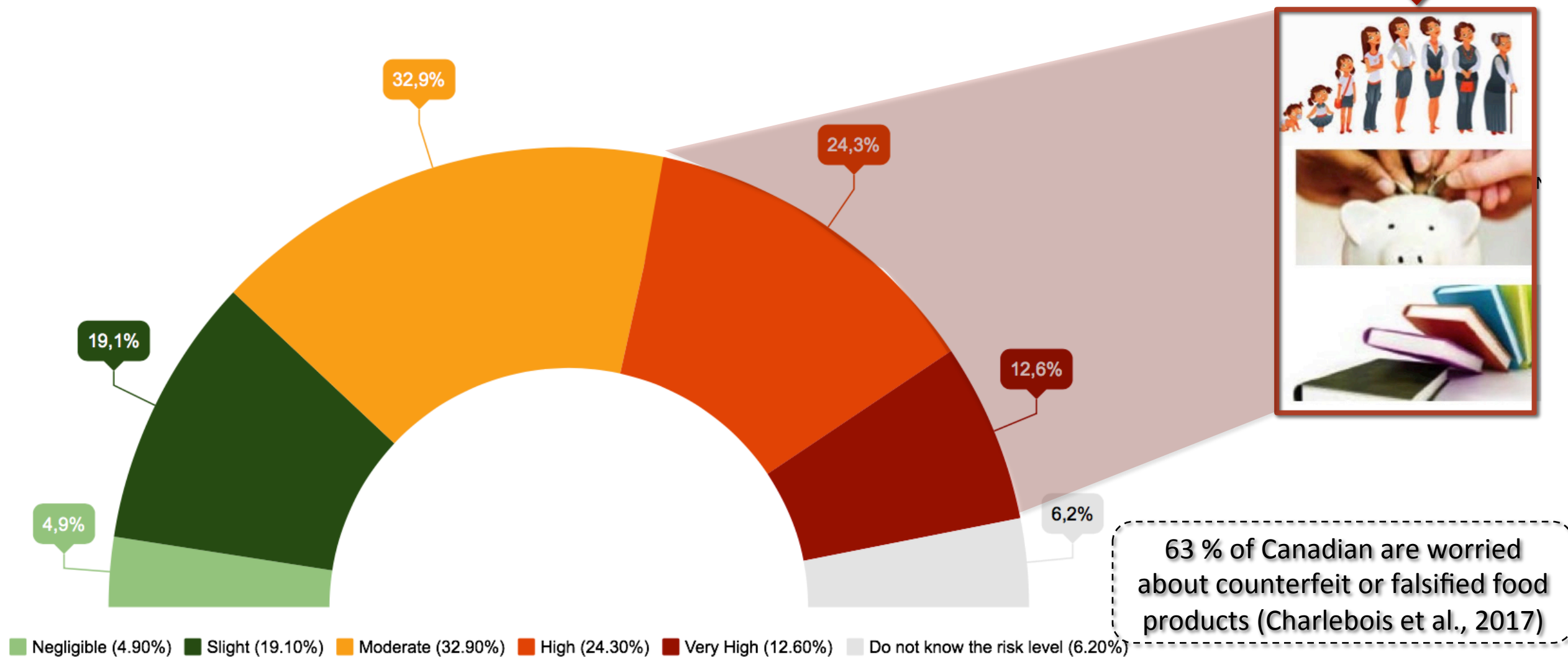
Are Quebeckers concerned by food fraud ?

Do Quebeckers see risks associated with food fraud?

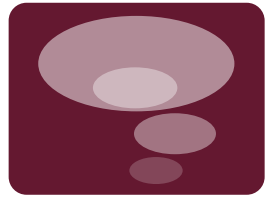
Consequences of food fraud...NOT ONLY ECONOMIC CONSEQUENCES

- **PUBLIC HEALTH** hazard, more specifically with people with allergy
- **ETHIC CONSEQUENCES** : Risk of being deceived, especially with people who have religion restrictions.
- **ECONOMIC CONSEQUENCES** : are we really getting what we paid for ?

Risk perception associated with food fraud



37% of Quebeckers consider a HIGH OR VERY HIGH RISK FOR FRAUD ... with differences according to certain socio-demographic characteristics



Risk ↗ with age

- 21 % of 18-34 years old
- **63 % of 75 years old and +** (P-value = 0,000)



Risk ↘ with education

- **41 % : High school diploma**
- **33 % : Bachelor's degree** (P-value = 0,05)
- **29 % : Master's degree and higher** (P-value = 0,033)



Risk ↘ with family income

- **43 % : income of less than 40 000 \$**
- **26 % : income of more than 80 000 \$** (P-value = 0,000)

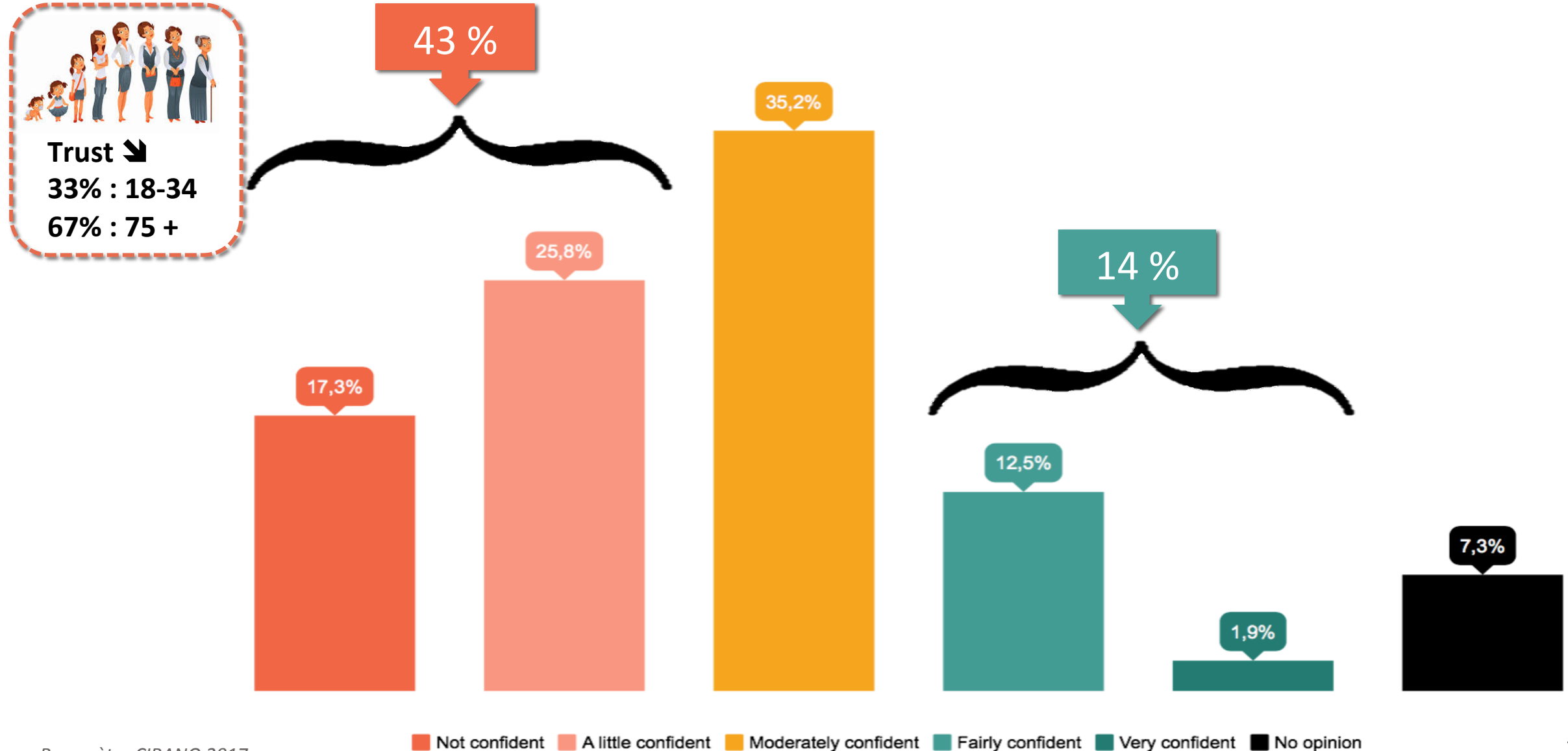


Level of trust

1) Confidence in the government's management

2) Confidence in the labeling of products

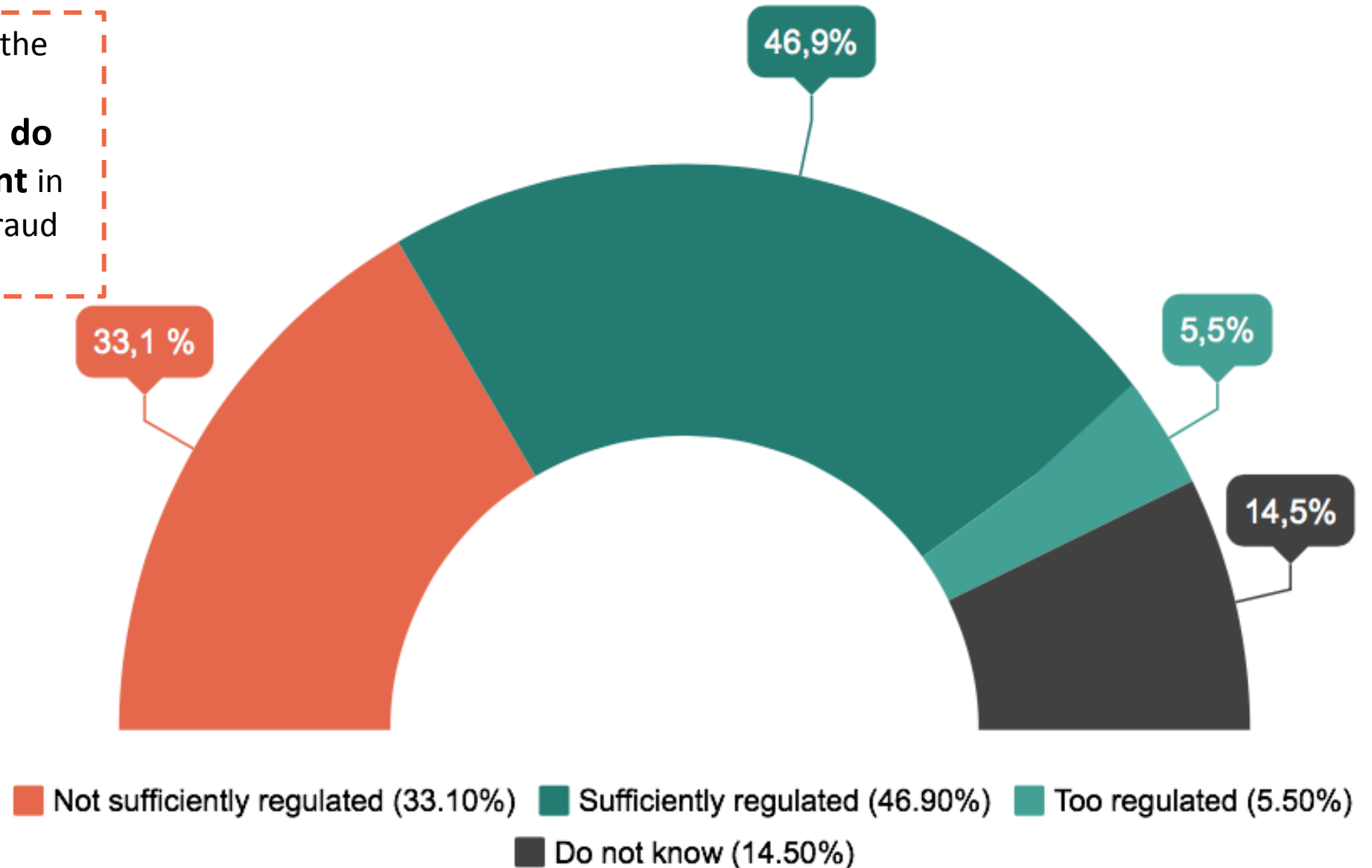
How confident you are in the government's management of food fraud ?



Is the Agri-food industry sufficiently regulated ?



Among those considering the agri-food industry as not sufficiently regulated **58 % do not trust the government** in the management of food fraud (vs 35% among the rest)



Confidence in the labeling of food products

PRODUCT INTEGRITY

List of ingredients

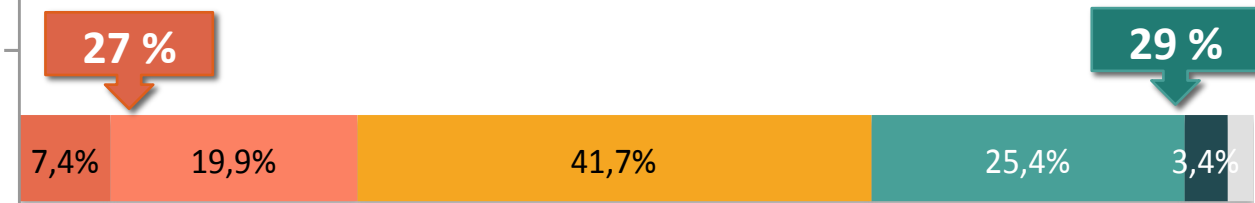


Indication of product's geographic origin

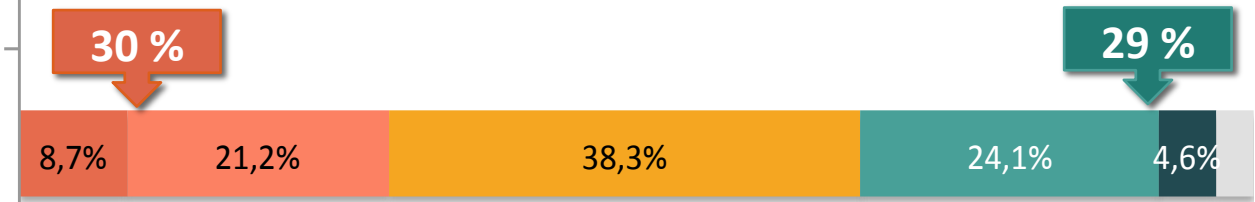


MARKETING / PACKAGING

Visual or descriptive representation on the product



Certifications or labels such as organic or fair-trade



■ Not confident
 ■ A little confident
 ■ Moderately confident
 ■ Fairly confident
 ■ Very confident
 ■ No opinion

Significant differences according to the language spoken

	FRENCH	ENGLISH	OTHER
Low trust in the List of ingredients	12%	25%	24%
Low trust in certification/ label	27%	41%	40%
Low trust in the visual representation	24%	37%	41%
Low trust in product's origin	14%	32%	28%

Relation between trust in the government and trust in the labeling of the product



NOT CONFIDENT OR A LITTLE CONFIDENT		No trust in government's management of food fraud
	List of ingredients	63%
	Indication of product's geographic origin	53%
	Certifications or labels such as organic or fair-trade	58%
	Visual or descriptive representation on the product	64%

Respondents who **do not trust product labeling** (ingredient list, certification, visual representation, and product origin) **have significantly more often low confidence in government's** management of food fraud



It seems to be more a
problem of **enforcement**
or **regulatory compliance**
monitoring

Confidence
in the
government

LAW

Confidence
in the
labeling

Perceived risk
for food fraud

Level of
regulation



Purchase Behavior and willingness to pay in Quebec

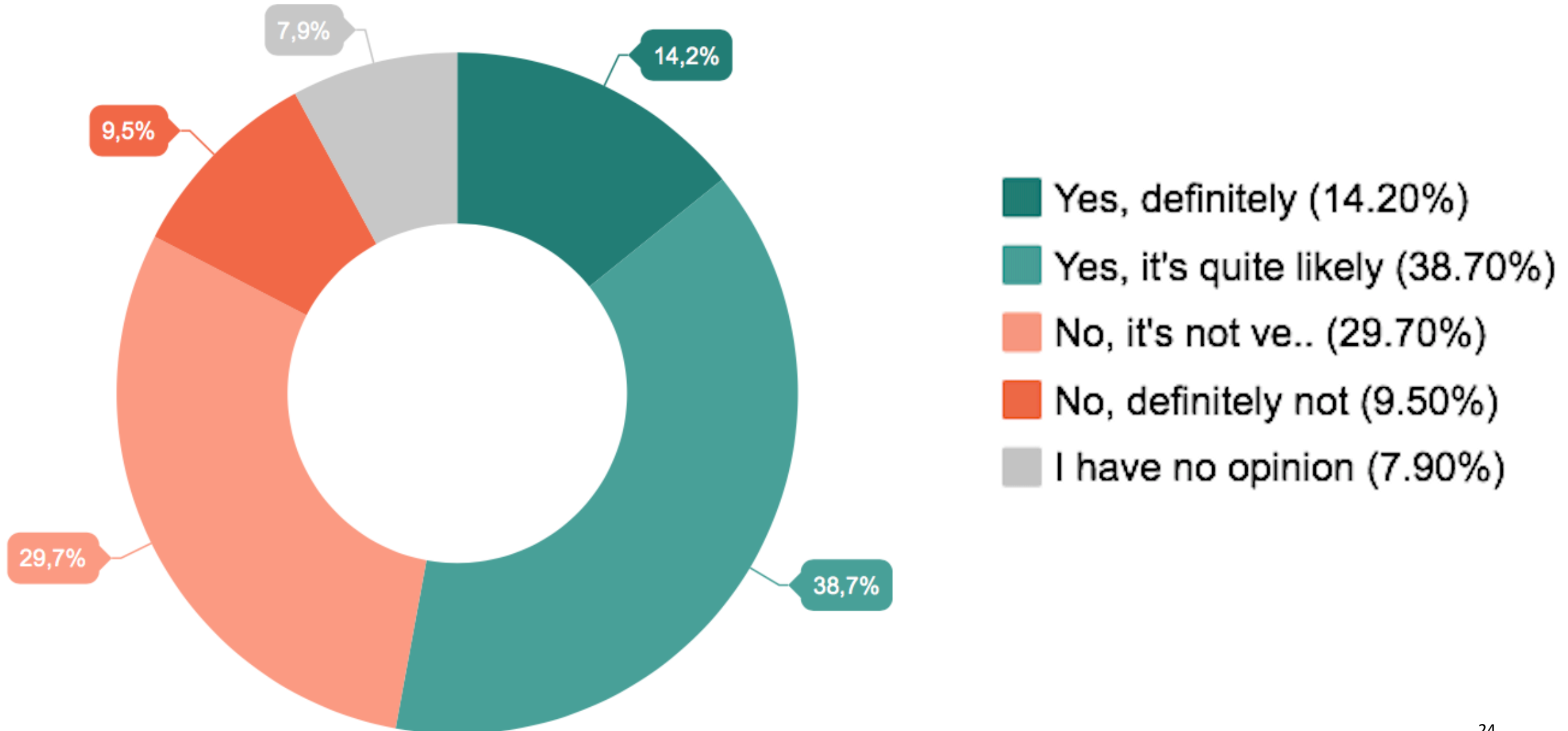


In march 2017, The Global Food Safety Initiative (GFSI), a global association of agro-food manufacturers, has released the expected version 7 of the GFSI Benchmarking Requirements.

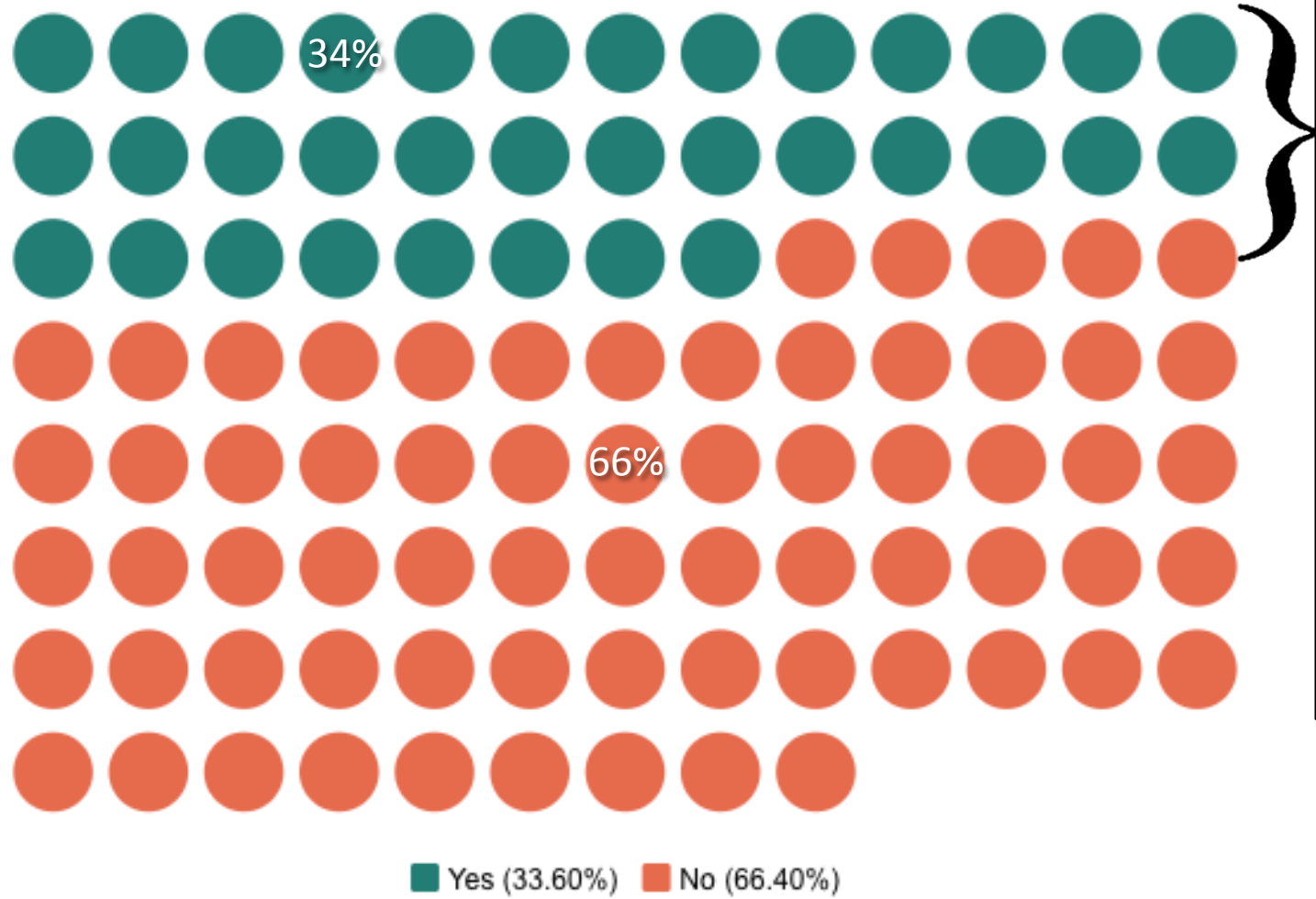
It includes new requirements to fight against food fraud that the recognized standards will have to include in the checklist of their audits.

- ① Would a specific "Zero Food Fraud" certification/label change your food purchasing behavior?
- ② Would you agree to pay more for "Zero Food Fraud" certified products?

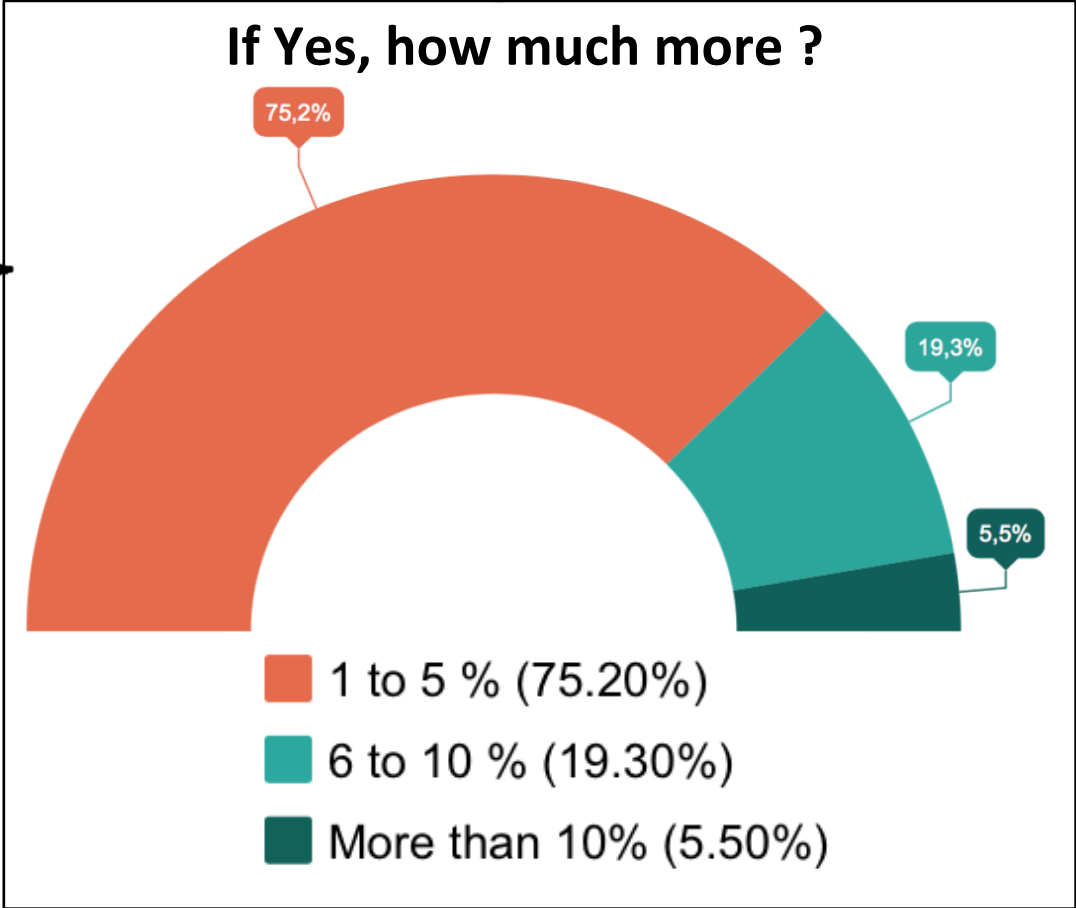
Would a specific "Zero Food Fraud" certification/label change your food purchasing behavior?



Would you agree to pay more for "ZERO FOOD FRAUD" certified products?



34%



INFORMATION

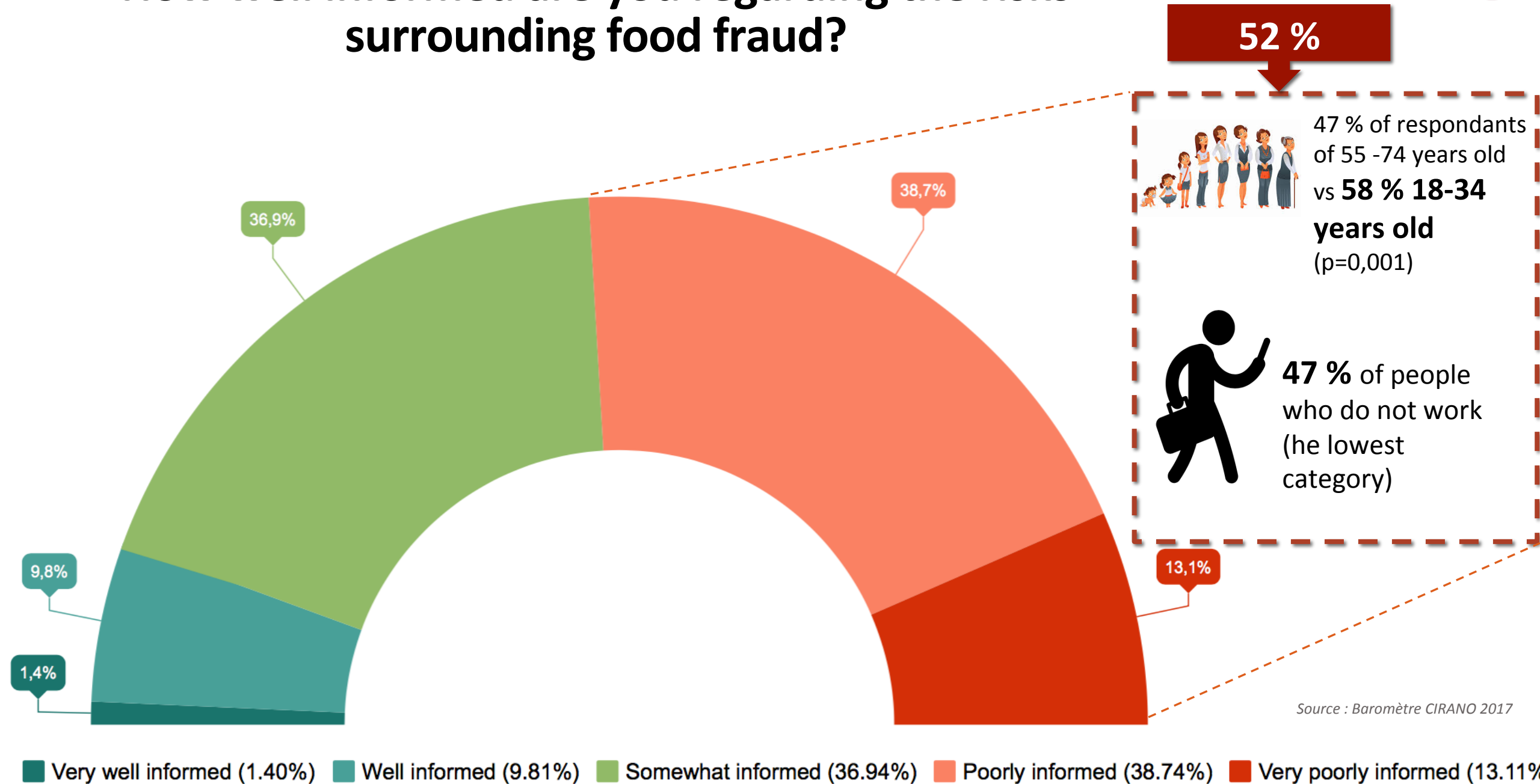
1) Are Quebeckers well informed about food fraud ?

2) Who are the actors they trust to inform them?

3) Are the actual sources of information about food fraud for Quebeckers influence their perception ?



How well informed are you regarding the risks surrounding food fraud?

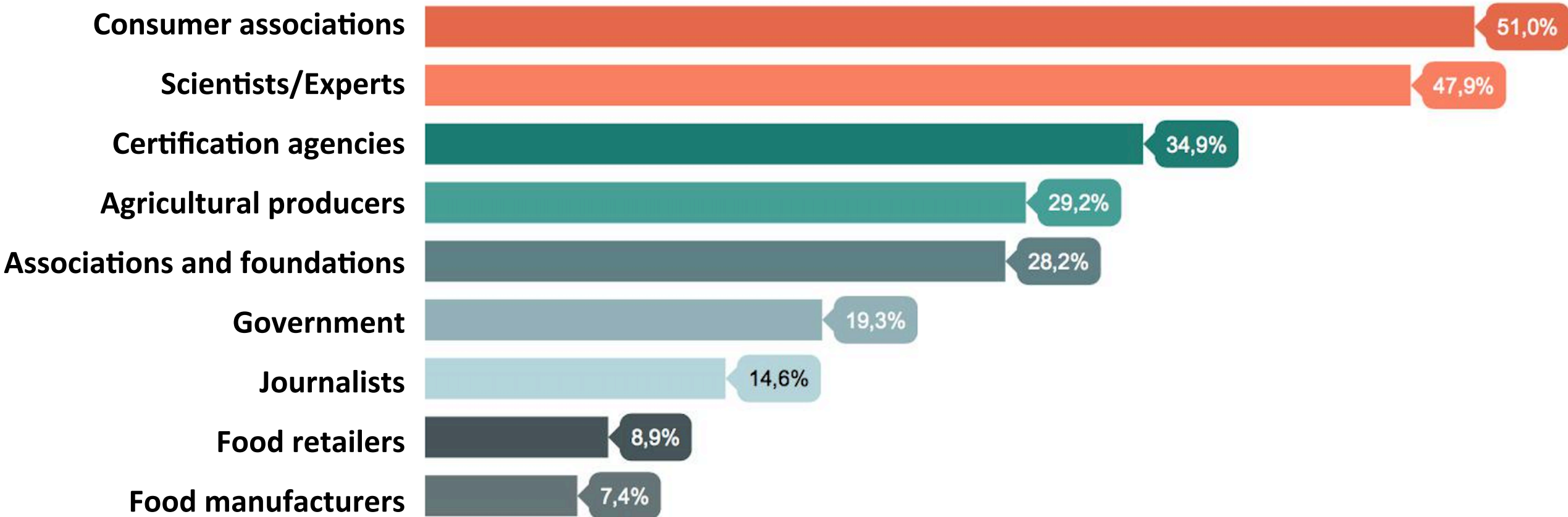


A desire to be better informed

78% of Quebeckers want to be better informed about the quality, provenance and composition of foods and how they are inspected by government authorities.

Sondage Léger, pour le ministère de l'Agriculture des Pêcheries et de l'Alimentation , Décembre 2016 (rendus publics dans le cadre des rencontres préparatoires au Sommet de l'alimentation)

Who would you trust most to provide you with information regarding the food sector?





Perceived risk

Real risk

42.9% of Canadians found that they had bought a counterfeit or falsified product through social media.

(Charlebois, Juhasz et Foti, 2017)

Importance of information

.....
— **social media**

Influence of information sources on perceptions and concerns



Social media : The 2017 Barometer data show no significant differences in the level of perceived risk or confidence in government when respondents use a lot social media as an information source.



Extensive use of Free and paid Newspapers

- Presence of food fraud ↗
- Better informed

Extensive use of Free Newspapers

- Perceived risk for food fraud ↗
- Trust in the government ↘

Influence of information sources on perceptions and concerns



HIGH USE OF ENVIRONMENTAL GROUP AS A SOURCE OF INFORMATION

- ↗ Presence of food fraud (2,70 vs 2,94, $p=0,03$)
- ↗ Perceived risk for food fraud (3,56 vs 3,19, $p=0,001$)
- ↗ **Willingness to change their purchase behavior in case of a Zero Fraud certif.**
- **51% are agree to pay more for "Zero Food Fraud" certified products vs 32 % who do not use a lot environmental group as a source of information ($p=0,000$)**



HIGH USE OF FRIENDS AND FAMILY AS A SOURCE OF INFORMATION

- ↗ Presence of food fraud (2,79 vs 2,84, $p=0,004$)
- ↗ Perceived risk for food fraud (3,36 vs 3,17, $p=0,0069$)
- ↗ **Willingness to change their purchase behavior in case of a Zero Fraud certif.**

Age is the sociodemographic variable with the most influence

	Millennial	Generation X	Baby-boomer	Silent Generation
	18-34 ans	35-54 ans	55-74 ans	75 ans et +
High risk perceived for food fraud	21%	39%	44%	63%
Low trust in the government	33%	42%	50%	67%
Low trust in certification/ label	28%	29%	31%	41%
High trust in product's origin	48%	40%	35%	38%
agri-food industry not sufficiently regulated	27%	31%	42%	27%
Poorly informed about FF	58%	53%	47%	45%
Willing to change food purchasing behavior	44%	53%	58%	74%



Risk



Confident



Industry not sufficiently regulated

BUT....



Poorly informed



Willing to change their behavior

Conclusion-

- ❑ Consumers feel they are not sufficiently informed
 - ❑ It's a problem when you want to manage food fraud because consumers are the main interlocutors of the agri-food industry (direct interaction)
 - ❑ Before choosing or implementing solutions, it is important to take account of consumer risk perception, their level of confidence and their level of knowledge
- ⇒ In order to ensure that the means being built to manage food fraud and also those planned are effective and receive all the trust needed from the public

Measures in place must not only be a expenditure / cost for industry but must also represent a value for the consumer

Thank you for your attention

Ingrid PEIGNIER
Directrice de projets, CIRANO
Ingrid.peignier@cirano.qc.ca



Website : barometre.cirano.qc.ca

All graphs of the presentation are

powered by



Some Icons in the presentation are created by [Freepik from www.flaticon.com](http://www.flaticon.com)