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Introduction

Harris/Decima is pleased to present this report to Agriculture and Agri-Food Canada (AAFC) highlighting the research findings from the recently completed quantitative and qualitative research on Innovative Agricultural Technologies.

AAFC required comprehensive research to monitor Canadian consumer attitudes and perceptions towards numerous issues related to the domestic agriculture and agri-food system, and that can add detail to innovation-related program and policy considerations of the Growing Forward 1 and 2 frameworks.

The wind-up of the Canadian Biotechnology Strategy/Secretariat (CBS) in 2006 resulted in the discontinuation of more than a dozen consecutive "waves" of quantitative and qualitative public opinion research studies on Canadians' attitudes towards applications of biotechnology and other innovative technologies dating back to 1999, conducted by Harris/Decima. This longitudinal series was one of the most comprehensive conducted anywhere in the world on this particular subject.

Data from the previous waves has been used and cited in numerous national and international reviews and articles about consumer attitudes towards biotechnology.

The 2010-11 research was analyzed using the same analytical techniques employed in the previous waves. In addition, results from the new and previous surveys are compared to identify any changes in Canadians' confidence levels and attitudes, where possible.

More specifically, the objectives of the study were to:

- Refine survey questions used in previous waves to ensure departmental priorities are addressed in the 2010-11 research;
- Measure changes in consumer response to previous waves of research in key areas of attitudes towards applications of innovative agricultural technologies (including biotechnology) and confidence in the safety of Canada's food supply;
- Gauge awareness and support for other innovative agricultural technologies;
- Inform and shape related departmental, portfolio and industry policy, marketing, and promotion initiatives, based on the current state of consumer perceptions of innovation, food safety and food quality in Canada; and
- Examine and track the evolution of consumer segments identified in the previous surveys.

The information gained through this public opinion research will:

- be used to inform AAFC's innovation and market development, food safety, food quality, and agriculture-health policy agendas including Growing Forward by contributing to a better

understanding of the issues and priorities of Canadians towards innovation, food quality, food safety and providing opportunities to make the sector more competitive;

- provide invaluable intelligence to the Value Chain Round Tables;
- support the analytical agenda for innovation identified in AAFC's Future Scan process, namely "factors affecting attitudes towards new technologies, products and processes";
- under the 2009-2010 Program Activity Architecture, support and enhance a competitive agriculture, agri-food and agri-based products sector that proactively manages risk; and
- Enhance current departmental marketing, promotion and branding initiatives and strategies by expanding on existing work and identifying opportunities and challenges for the sectors.

With these objectives in mind, a quantitative and qualitative research program was developed. To begin, a telephone survey with 812 Canadians was conducted between January 31 and February 11, 2011. A sample of this size would be expected to be accurate to within plus or minus 3.4%, at the 95% confidence level. Additionally, an online survey with a sample of 200 online Canadians from Harris/Decima's proprietary online panel was conducted. As this was a non-probability sample, estimations of margin of error cannot be made.

The qualitative research phase consisted of five evenings of focus groups. Two focus groups were held in Toronto (March 10, 2011), Montreal (March 14, 2011, in French), Halifax (March 15, 2011), Calgary (March 16, 2011) and Vancouver (March 17, 2011). Twelve participants were recruited and eight to ten participated in each session. In each location, one focus group was held among the Canadian general adult population, while one was held among Harris/Decima's proprietary Involved Canadians segment of the population. A detailed description of the methodology used to complete this research is provided at the end of this report.

This report begins with an executive summary highlighting the key findings from the research, followed by a detailed analysis of the survey and focus groups results. Appended are the research instruments and detailed tabular tables (under separate cover).

Executive Summary

Research Objectives

AAFC required comprehensive research to monitor Canadian consumer attitudes and perceptions towards numerous issues related to the domestic agriculture and agri-food system, and that can add detail to innovation-related program and policy considerations of the Growing Forward 1 and 2 frameworks.

The wind-up of the Canadian Biotechnology Strategy/Secretariat (CBS) in 2006 resulted in the discontinuation of more than a dozen consecutive "waves" of quantitative and qualitative public opinion research studies on Canadians' attitudes towards applications of biotechnology and other innovative technologies dating back to 1999, conducted by Harris/Decima. This longitudinal series was one of the most comprehensive conducted anywhere in the world on this particular subject.

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More specifically, the objectives of the study were to:

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- Inform and shape related departmental, portfolio and industry policy, marketing, and promotion initiatives, based on the current state of consumer perceptions of innovation, food safety and food quality in Canada; and
- Examine and track the evolution of consumer segments identified in the previous surveys.

Key Findings

The following are the key findings from the research:

Canadians' orientation towards technology in general continues to be positive: a majority of Canadians continue to have a positive impression when they hear that word. Focus groups reveal that when thinking of technology, applications related to smart phones or computers are the most commonly associated applications. Further, the survey results indicate that Canadians believe these types of technologies are more likely to have a positive impact on their lives rather than a negative one.

Qualitatively, few raise biotechnology when thinking about new technologies. This may be related to the fact that the survey findings this year demonstrate fewer Canadians recall media coverage about biotechnology than in previous waves of the survey.

Claimed familiarity with biotechnology applications is consistent with levels observed in 2006. While marginal, the level of support for biotechnology continues to increase: this year, seven in ten Canadians support the use and development of products using biotechnology applications. The qualitative research suggests that this may be due to the perception that biotechnology is focused on health-related applications: When asking what participants thought of when they heard the word "biotechnology," in the focus groups, many pointed to (advanced) technologies in the health care field, and described those as positive developments. This association with health applications may be an indication that the overall field of biotechnology is profiting from a halo-effect. When asked to provide examples of biotechnology applications, most provide examples that they specifically see as improving the quality of life. Therefore, there may be a halo effect in that because there are largely positive views about the health applications, it increases the overall support for the sector in general.

As well, there appears to be a parallel trend: as recall of media attention declines, the level of opposition declines in step.

On an overall basis, the confidence in the regulatory and approval systems has eroded. However, focus groups suggest that there is very little knowledge about the regulatory process and the survey results show the same: a majority of Canadians have little (40% not very familiar) or no familiarity (42%) with the process by which biotechnology is regulated.

The survey also suggests that those with higher claimed familiarity overall are more likely to claim higher levels of familiarity with the regulatory systems in place, as well as **confidence** in these systems.

Looking at reactions to specific applications paints a slightly different picture. When looking at the specific applications tested, which were for the most part, not health related, support for each application was lower than overall support for biotechnology.

There continues to be an evaluation of applications on a case-by-case basis, between the types of applications, as well as within the same category (i.e. within bioproducts). Indeed, the results indicate that Canadians are reluctant to give a "carte blanche" approval or disapproval for biotechnology on the whole. Instead, they will evaluate the perceived benefits and risks of each application and then make an assessment. This suggests that disapproval in one sphere does not necessarily translate to the same view on other applications. Rather, Canadians will review the perceived merits and trade-offs and evaluate from that standpoint.

As noted, previous waves found a correlation between confidence in the regulatory processes and support for various applications and this relationship may explain in part the decline this year also noted in support for various applications.

Generally speaking, in focus groups, participants placed applications on a continuum relating to how close they were to being "human". The closer the applications came to living, breathing organisms the more resistance there was to the specific application.

With this in mind, the following conclusions can be drawn from this wave's research on the applications tested.

BioProducts

Support for bioproducts was the highest among the three groups of applications tested. Additionally, Canadians were the most confident in the regulatory system for these products. The key concern identified in this research is a clear resistance to the diversion of food crops for non-food purposes. Indeed, there is a sense that crops that can be used for food should be used only for that purpose. There was a sensitivity that any diversion may create a shortage in that particular crop Moreover, a majority was not supportive of planting crops specifically for the use of biotechnology applications. Instead, if more crops were planted, it was expected that they would be part of the food supply.

Therefore, the only way in which it was acceptable to use what was perceived as food crops is to use non-food components from the food production (e.g.. stalks from corn). This was largely because there was no diversion of food and it used parts that were perceived to otherwise go to waste. These findings point to a shift from 2006. At that time, support for the development of bioproducts was relatively high, and few raised issues about food diversion. Over the course of that time, there has been a much larger dialogue on implications of food diversion that may have changed Canadians' views on this topic.

As well, many focus group participants pointed out that they were quite supportive of using tobacco plants for biotechnology applications, as this would divert tobacco from its traditional, unhealthy use.

Focus group discussions clearly showed that participants were hopeful that Canada could play a leadership role and not fall behind other countries on

biotechnology. Moreover, this view was held irrespective of their impressions of the specific applications tested.

GM Fish

Familiarity with this application of biotechnology continues to be modest. Again, the evaluation of the applications tested demonstrates that Canadians will look at individual applications and then make an assessment. In the case of the two tested, there is a much higher level of agreement for developing GM fish to produce insulin to treat Type 1 diabetics than for developing GM Fish that grow faster, thereby reducing the production costs.

The degree of confidence that Canadians have in regulating GM fish has declined since 2006. This may explain the decline in the proportion of Canadians who approve of GM fish with the regular or tighter restrictions from the last survey.

GM Animals

Close to half of Canadians surveyed claimed to be at least somewhat familiar with GM animals. On balance, the perceived risks of GM animals outweigh their perceived benefits. The focus groups shed some light on the views surrounding GM animals. Specifically, while support was highest for applications relating to BSE prevention in cattle, qualitatively, participants provided some caveats surrounding this. While this application was viewed as positive, there was a preference for understanding the causes of a BSE outbreak before it occurs, rather than modifying animals to decrease their likelihood of contracting it. Therefore, while on the surface support may be relatively high for this type of application, there still are some reservations surrounding it.

Moreover, the number of Canadians who approve of GM animals has declined since 2006, with one in three who approve by default, with certain caveats. On balance, the approval of GM animals is specific to applications that have a clear outcome.

Overall, while Canadians have varying views about the specific applications tested, there is a sense of inevitability that these technologies will exist. In this vein, the focus groups and survey point to a view among Canadians that there is an important role for the Government of Canada to play in biotechnology. There is a high degree of agreement that Canada should be among the world's leaders in agriculture and food biotechnology research. Focus group discussions clearly showed that participants were hopeful that Canada could play a leadership role and not fall behind other countries on biotechnology. "

Methodology

A quantitative and qualitative research program was developed. To begin, a telephone survey with 812 Canadians was conducted between January 31 and February 11, 2011. A sample of this size would be expected to be accurate to within plus or minus 3.4%, at the 95% confidence level.

Additionally, an online survey with a sample of 200 online Canadians from Harris/Decima's proprietary online panel was conducted. Respondents for this survey were selected from among those who have volunteered to participate in and registered to participate in online surveys. The results of such surveys cannot be described as statistically representative of the target population. The data have been weighted to reflect the demographic composition of the Canadian population. Because the sample is based on those who initially self-selected for participation in the panel, no estimates of sampling error can be calculated.

The qualitative research phase consisted of five evenings of focus groups. Two focus groups were held in Toronto (March 10, 2011), Montreal (March 14, 2011, in French), Halifax (March 15, 2011), Calgary (March 16, 2011) and Vancouver (March 17, 2011). Twelve participants were recruited and eight to ten participated in each session. In each location, one focus group was held among the Canadian general adult population, while one was held among Harris/Decima's proprietary Involved Canadians segment of the population.

A full description of the methodology can be found in the detailed *Methodology* section.

Harris/Decima Inc. certifies that the final deliverables comply with the political neutrality requirement in section 6.2.4 of the revised Procedures for Planning and Contracting Public Opinion Research in the Government of Canada.

Doug Anderson, Senior Vice President, Harris/Decima

Résumé

Objectifs de la recherche

Agriculture et Agroalimentaire Canada a demandé une étude détaillée pour surveiller les attitudes et les perceptions des consommateurs canadiens à l'égard de nombreux enjeux liés à l'agriculture et au système agroalimentaire du pays, ce qui lui permettra également d'approfondir le programme d'innovation et les considérations politiques associés aux cadres stratégiques Cultivons l'avenir 1 et 2.

En 2006, la mise en veilleuse de la Stratégie canadienne en matière de biotechnologie (SCB)/du Secrétariat canadien de la biotechnologie (SecCB) a entraîné l'arrêt de plus d'une douzaine de « vagues » consécutives d'études quantitatives et qualitatives sur l'opinion publique. Ces études, menées par Harris/Décima, avaient commencé en 1999 et portaient sur les attitudes des Canadiens à l'égard des applications de la biotechnologie et d'autres technologies novatrices. Il s'agissait de l'une des recherches longitudinales les plus approfondies au monde en la matière.

Les données des vagues précédentes ont été utilisées et citées dans nombre de comptes-rendus et d'articles nationaux et internationaux sur les attitudes des consommateurs à l'égard de la biotechnologie.

La recherche 2010-2011 a été analysée avec les mêmes techniques analytiques que lors des vagues précédentes. De plus, les résultats du nouveau sondage et des sondages précédents ont fait l'objet d'une comparaison pour déceler, lorsque c'était possible, tout changement dans les niveaux de confiance et les attitudes des Canadiens.

Plus précisément, les objectifs de l'étude étaient de :

- Parfaire les questions utilisées dans les vagues précédentes du sondage pour s'assurer que la recherche 2010-2011 cible bien les priorités du ministère;
- Mesurer les changements dans les réponses des consommateurs à la lumière des vagues précédentes, à la fois concernant certaines attitudes clés envers les applications de technologies agricoles novatrices (incluant la biotechnologie) et concernant la confiance dans la sécurité de l'approvisionnement alimentaire du Canada;
- Évaluer les connaissances que les Canadiens ont d'autres technologies agricoles novatrices et mesurer leur appui;
- Orienter et façonner les politiques, le marketing et les initiatives promotionnelles du ministère, du portefeuille et de l'industrie d'après l'état actuel des perceptions des consommateurs quant à l'innovation, la salubrité et la qualité des aliments au Canada; et
- Étudier et suivre l'évolution des segments de consommateurs identifiés dans les sondages précédents.

Principaux résultats

Les principaux résultats de la recherche sont les suivants :

La position des Canadiens envers la technologie en général demeure positive : la majorité d'entre eux ont encore une réaction positive lorsqu'ils entendent le mot. Les groupes de discussions révèlent que lorsque les participants songent à la technologie, les applications qu'ils y associent le plus souvent sont en lien avec les téléphones intelligents ou les ordinateurs. En outre, les résultats du sondage indiquent que selon les Canadiens, ces types de technologies sont plus susceptibles d'avoir un effet positif que négatif sur leur vie.

Dans le volet qualitatif de la recherche, peu de participants mentionnent la biotechnologie lorsqu'ils pensent aux nouvelles technologies. Cette situation peut être attribuable au fait que d'après les résultats du sondage de cette année, les Canadiens sont moins nombreux à se souvenir de la couverture médiatique sur la biotechnologie que lors des vagues précédentes.

La prétendue connaissance des applications de la biotechnologie est compatible avec les résultats observés en 2006. Bien qu'il soit peu élevé, l'appui envers la biotechnologie augmente toujours : cette année, sept Canadiens sur dix sont pour l'utilisation et le développement de produits qui font appel à des applications de la biotechnologie. La recherche qualitative laisse entendre que c'est peut-être dû au fait que les gens perçoivent que la biotechnologie est axée sur des applications dans le domaine de la santé. En effet, dans les groupes de discussion, lorsque les participants doivent indiquer à quoi ils pensent lorsqu'ils entendent le mot « biotechnologie », nombre d'entre eux mentionnent les technologies (de pointe) en santé, qu'ils décrivent comme des progrès positifs. Cette association avec les applications dans le domaine de la santé indique peut-être que l'ensemble du secteur de la biotechnologie bénéficie d'un effet de halo. Lorsque les participants doivent fournir des exemples d'applications de la biotechnologie, la majorité d'entre eux mentionnent des applications qu'ils perçoivent tout particulièrement comme améliorant la qualité de vie. De fait, il y a peut-être un effet de halo ici, car les opinions sont très positives quant aux applications de la biotechnologie dans le domaine de la santé, ce qui entraîne une augmentation de l'appui global envers le secteur en général.

Par ailleurs, une tendance parallèle semble se dessiner : lorsque les gens se souviennent moins de l'attention médiatique, le niveau d'opposition suit la même courbe.

De manière générale, la confiance dans les systèmes d'approbation réglementaire s'est érodée. Cependant, les groupes de discussion laissent supposer que les participants connaissent très peu le processus de réglementation, ce qu'indiquent également les résultats du sondage : le processus de réglementation de la biotechnologie en vigueur est peu (40 % pas très familier) ou pas du tout familier (42 %) à la majorité des Canadiens.

Les résultats du sondage laissent également entendre que les répondants qui déclarent avoir une meilleure connaissance de la biotechnologie en général sont plus plus susceptibles de prétendre qu'ils ont une meilleure connaissance des systèmes de réglementation en vigueur et qu'ils font **confiance** à ces systèmes.

Les réactions envers certaines applications bien précises dressent un portrait légèrement différent. En examinant une à une les applications testées qui, dans la plupart des cas, n'ont aucun lien avec la santé, force est de constater que le niveau d'appui envers chacune des applications est inférieur au niveau d'appui global envers la biotechnologie.

L'évaluation des applications se fait encore au cas par cas, entre différents types d'applications ainsi qu'au sein de la même catégorie (p. ex. entre bioproduits). Effectivement, les résultats indiquent que les Canadiens sont réticents à dire qu'ils sont totalement pour ou totalement contre la biotechnologie de manière générale. Ils évaluent plutôt les avantages et les risques perçus de chaque application avant de se prononcer. Cette constatation semble indiquer que la désapprobation d'une application ne se répercute pas nécessairement sur d'autres applications. Les Canadiens examinent plutôt les mérites et les inconvénients perçus et font par la suite leur évaluation à partir de ces considérations.

Tel que déjà mentionné, des vagues précédentes ont démontré une corrélation entre la confiance dans les processus de réglementation et l'appui à l'égard de diverses applications. Ce lien pourrait expliquer en partie le déclin également observé cette année dans l'appui envers diverses applications.

De manière générale, lors des groupes de discussion, les participants évaluent les applications selon un continuum, plus particulièrement leur degré « humain ». Plus les applications se rapprochent d'organismes vivants qui respirent, plus la résistance à leur égard est forte.

À la lumière de ces données, il est possible de tirer les conclusions suivantes de la présente vague de recherche sur les applications évaluées.

Bioproduits

Des trois groupes d'applications évaluées, ce sont les bioproduits qui reçoivent le plus grand appui. De surcroît, c'est au système de réglementation de ces produits que les Canadiens font le plus confiance. Dans cette recherche, la préoccupation clé décelée est la résistance manifeste à l'utilisation de cultures à des fins non alimentaires. En effet, les gens pensent que les cultures qui peuvent servir à l'alimentation ne devraient être utilisées qu'à cette fin. Ils croient que tout détournement pourrait entraîner une pénurie de la culture en question. De plus, la majorité des répondants sont contre l'idée de cultiver des semences destinées précisément à des applications biotechnologiques. Au contraire, si plus de semences sont cultivées, ils s'attendent plutôt à ce qu'elles servent à l'alimentation.

Ainsi, la seule façon acceptable de se servir autrement de ce qui est perçu comme des cultures alimentaires est d'utiliser des parties non comestibles de

la production (p. ex. les tiges de maïs). Cette opinion s'explique en grande partie par le fait que cette technique n'entraîne aucun détournement de cultures et qu'elle exploite des matières qui, selon les répondants, seraient autrement jetées. Ces résultats sont révélateurs d'un changement par rapport à 2006. À cette époque, l'appui au développement de bioproduits était relativement élevé et peu de répondants soulevaient la question du détournement de cultures destinées à l'alimentation. Depuis, le nombre croissant des échanges sur les répercussions du détournement des cultures a peut-être eu comme effet d'altérer l'opinion des Canadiens à ce sujet.

En outre, de nombreux participants aux groupes de discussion soulèvent qu'ils sont plutôt en faveur de l'utilisation des plantes de tabac à des fins biotechnologiques puisque cette utilisation détournerait le tabac de son utilisation traditionnelle, qui est néfaste pour la santé.

Les groupes de discussion démontrent clairement que les participants espèrent que le Canada puisse jouer un rôle de leader et ne pas accuser de retard sur d'autres pays en matière de biotechnologie. Il faut également noter que cette opinion prévaut quelle que soit l'opinion des gens à l'égard des différentes applications évaluées.

Poissons génétiquement modifiés

La connaissance de cette application de la biotechnologie demeure modeste. L'évaluation des applications testées démontre une fois de plus que les Canadiens étudient les applications individuellement avant de s'en faire une idée. Dans le cas des deux applications testées, les répondants sont beaucoup plus favorables au développement de poissons génétiquement modifiés dans le but de produire de l'insuline pour traiter le diabète de type 1 qu'au développement de poissons génétiquement modifiés dont le taux de croissance serait plus rapide, réduisant ainsi les coûts de production.

Le niveau de confiance des Canadiens dans la réglementation des poissons génétiquement modifiés a diminué depuis 2006. Ceci pourrait expliquer la diminution, par rapport au dernier sondage, du pourcentage de Canadiens qui approuvent l'utilisation de poissons génétiquement modifiés dans la mesure où des contrôles réguliers ou plus sévères sont en place.

Animaux génétiquement modifiés

Près de la moitié des Canadiens sondés affirment que la modification génétique d'animaux leur est à tout le moins un peu familière. Globalement, pour ce qui est de la modification génétique d'animaux, les risques perçus l'emportent sur les avantages perçus. Les groupes de discussion ont permis de faire ressortir les points de vue sur les animaux génétiquement modifiés. Plus particulièrement, alors que les applications liées à la prévention d'une épidémie d'EBS chez les vaches reçoivent le taux d'appui le plus élevé, les participants apportent des nuances sur cette question dans le volet qualitatif. Bien qu'ils perçoivent cette application de façon positive, ils préféreraient comprendre les causes d'une épidémie d'EBS avant qu'elle ne se déclare plutôt que de modifier les animaux

pour réduire leurs risques de contracter la maladie. Par conséquent, même si ce type d'application récolte en apparence un taux d'appui élevé, les participants ont tout de même des réserves à cet égard.

En outre, le nombre de Canadiens en faveur de la modification génétique d'animaux a diminué depuis 2006. Plus précisément, un Canadien sur trois se dit en faveur par défaut, avec certaines réserves. Tout compte fait, les Canadiens sont en faveur d'applications de la modification génétique des animaux seulement lorsqu'elles engendrent certains résultats bien précis.

Dans l'ensemble, alors que l'opinion des Canadiens varie à l'égard des applications testées, ils ont l'impression que ces technologies devront forcément voir le jour. Dans cet esprit, les groupes de discussion et le sondage révèlent que les Canadiens croient que le gouvernement du Canada a un rôle important à jouer dans la biotechnologie. Un grand nombre d'entre eux s'entendent pour dire que le Canada devrait être parmi les chefs de file mondiaux dans la recherche en agriculture et en biotechnologie alimentaire. Les groupes de discussion démontrent clairement que les participants espèrent que le Canada puisse jouer un rôle de leader et ne pas accuser de retard par rapport à d'autres pays dans le domaine de la biotechnologie.

Méthodologie

Un programme de recherche quantitative et qualitative a été élaboré. Un sondage téléphonique a d'abord été mené auprès de 812 Canadiens entre le 31 janvier et le 11 février 2011. La marge d'erreur d'un échantillon de cette taille est précis à plus ou moins 3,4 %, à un intervalle de confiance de 95 %.

De plus, un sondage en ligne a été effectué auprès d'un échantillon de 200 Canadiens qui font partie du panel en ligne exclusif de Harris/Décima. Les répondants de ce sondage ont été choisis parmi ceux qui se sont portés volontaires pour participer à des sondages en ligne et qui se sont inscrits pour le faire. Les résultats de ces sondages ne peuvent être considérés comme étant statistiquement représentatifs de la population ciblée. Les données ont été pondérées pour refléter la composition démographique de la population canadienne. Puisque l'échantillon est composé de répondants qui ont eux-mêmes décidé de s'inscrire au panel, il est impossible de calculer l'erreur d'échantillonnage.

Le volet qualitatif s'est effectué sous forme de groupes de discussion qui se sont déroulés au cours de cinq soirées. Deux groupes de discussion ont eu lieu dans chacune des villes suivantes : Toronto (le 10 mars 2011), Montréal (le 14 mars 2011, en français), Halifax (le 15 mars 2011), Calgary (le 16 mars 2011) et Vancouver (le 17 mars 2011). Douze participants ont été recrutés pour chaque groupe de discussion, et lors de chaque séance, huit à dix participants se sont présentés. Dans chaque ville, un groupe de discussion a été mené auprès de Canadiens issus du grand public, tandis que l'autre a été mené auprès de Canadiens engagés, un échantillon exclusif à Harris/Décima.

Une description complète de la méthodologie utilisée figure dans la section *Méthodologie*.

Harris/Décima Inc. certifie que les produits livrables finals sont conformes à l'exigence de neutralité politique décrite à la disposition 6.2.4 de la Procédure de planification et d'attribution de marchés de services de recherche sur l'opinion publique au sein du gouvernement du Canada nouvellement amendée.

Doug Anderson, vice-président principal, Harris/Décima

Detailed Findings

This report is divided into six sections. The first highlights Canadians' orientation towards technology in general. This is followed by a discussion of Canadians' awareness and impressions of biotechnology. The next section explores the impressions of the regulatory and ethical aspects of biotechnology, which is followed by highlighting the findings on underlying attitudes towards biotechnology. The last two sections discuss attitudes towards various biotechnology issue modules: overall and individually.

Orientation Towards Technology

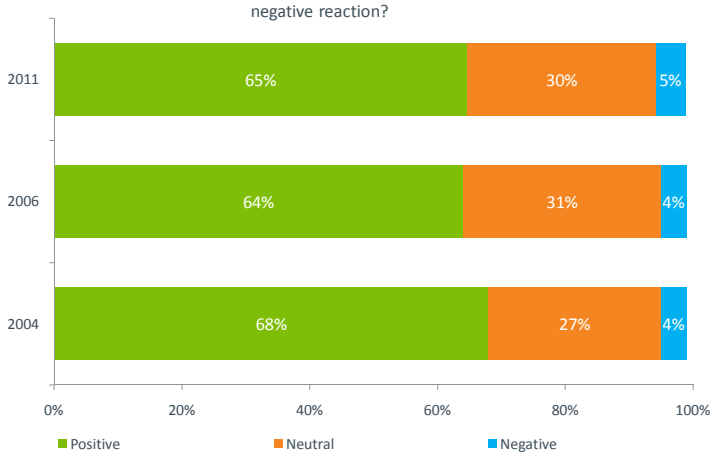
The following section frames the discussion about biotechnology by looking at opinions about technology in general and certain new technologies, including those in the biotechnology sphere, in particular.

Detailed Findings

A majority of Canadians continue to hold positive impressions when they hear the word technology. Indeed, consistent with previous waves of this research, two in three (65%) say their impression is positive. Conversely, five percent claim to have a negative reaction to the term. The remaining three in ten (30%) hold a neutral view.

Opinions of Technology

Q1. Generally, when you hear the word technology, do you have a positive reaction, neutral reaction, or a negative reaction?



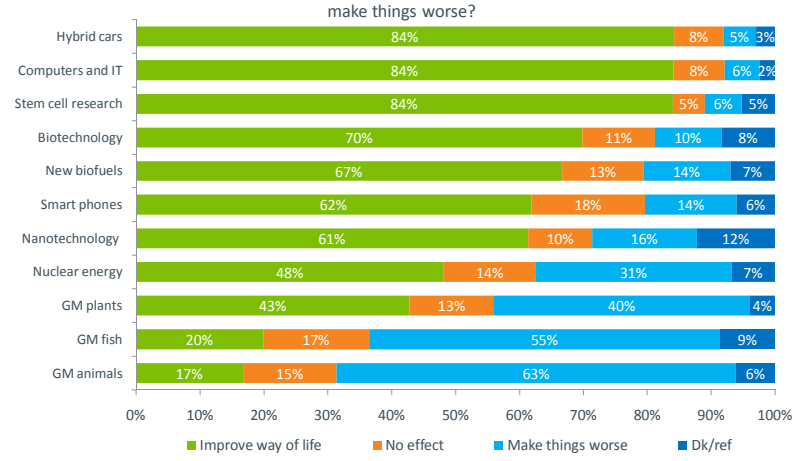
Base: All (n=812)

Opinion varies by the type of technology tested as to whether it will improve our life, have no effect, or make things worse. Canadians continue to believe that hybrid cars (84%) and computers (84%) will improve our lives. Views remain largely the same in comparison to previous research when thinking about biotechnology (70% saying this will improve way of life), nuclear energy (48%), GM fish (22%) and animals (21%).

The survey this year tested two new applications: smart phones and GM plants. The results indicate that six in ten Canadians think smart phones will improve our way of life. Results are split on the impact of GM plants on our lives. While 43% believe it will improve life, a similar proportion (40%) thinks it will make things worse. The remainder thinks it will have no effect (13%) or are unsure (4%).

Perceived Impact of New Technologies (2011)

Q9-19. I am going to read a list of areas in which new technologies are currently developing. For each of these areas, do you think it will improve our way of life in the next 20 years, it will have no effect, or it will make things worse?



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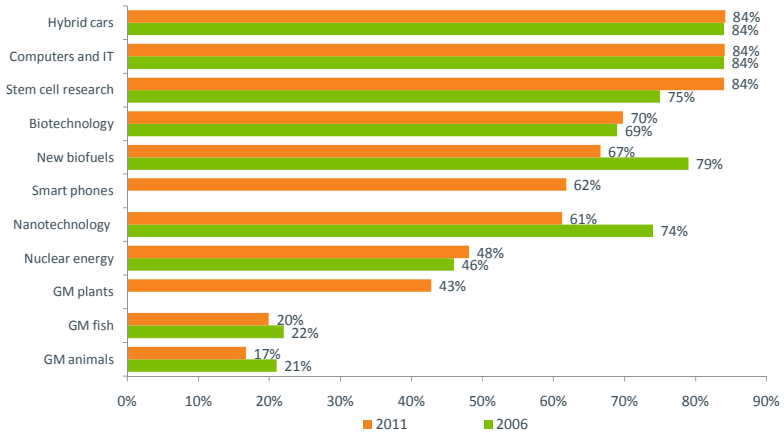
This year, three areas of new technology saw a change in the perception that it will improve our way of life. Impressions that nanotechnology (down 13 to 61%) and new biofuels (down 8 to 67%) will improve our way of life declined from the previous wave. Meanwhile, the view that stem cell research will improve our life increased from the last survey (up 9 to 84%).

Perceived Impact of New Technologies: Change Over Time



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Women are more hesitant towards technologies involving genetic modification than men, whether that be for GM plants, fish or animals. They are also less likely to feel that nanotechnology would improve way of life in the future.

	Improve way of life		Make things worse	
	Men	Women	Men	Women
Stem cell research	83%	85%	6%	5%
Nanotechnology	**72%**	**51%**	**12%**	**21%**
Biotechnology	72%	68%	10%	11%
New biofuels	68%	65%	13%	14%
GM plants	**47%**	**39%**	**36%**	**45%**
GM fish	**25%**	**15%**	**50%**	**60%**
GM animals	**23%**	**11%**	**55%**	**69%**

In sum, Canadians continue to have a positive orientation towards technology. There is a sense that these technologies will improve Canadians' lives. Having said that, there is some question among Canadians about how biotechnology applications such as genetically modified fish or animals will improve Canadian lives.

Awareness of and Support for Biotechnology

This section discusses Canadians' first impressions when hearing the word biotechnology, their familiarity with and support for it, as well as media coverage of the topic.

Detailed Findings

Canadians are most likely to have a neutral reaction when they hear the word biotechnology. Almost half (57%) of Canadians express this view. Meanwhile, close to four in ten (38%) say they have a positive impression and one in ten (12%) claim to have a negative reaction to the word biotechnology.

Focus group research also showed that the word "biotechnology" now tends to have a more positive halo around it, rather than negative. Throughout the focus groups, especially when asked top-of-mind what they thought of when hearing the term "biotechnology," positive connotations were expressed. The discussions often showed that this is connected almost entirely to health related applications, and the positive outcomes people see these to have currently and in the future. Past focus group research showed a higher focus on food biotechnology and the perceived dangers of genetically modified food (i.e. negative Monsanto news, etc.), as well as cloning, while mentions of this were significantly more in the background now. Therefore, it is our belief that this increased association with health-related applications may be increasing overall impressions of biotechnology.

When asked to complete a word-association exercise, many of the words participants thought of when asked about biotechnology were in fact related to health care and health applications. Examples are: Health, vaccines, medicine, fertility treatments, drugs, hospitals, disease resistance, drug development, gender selection.

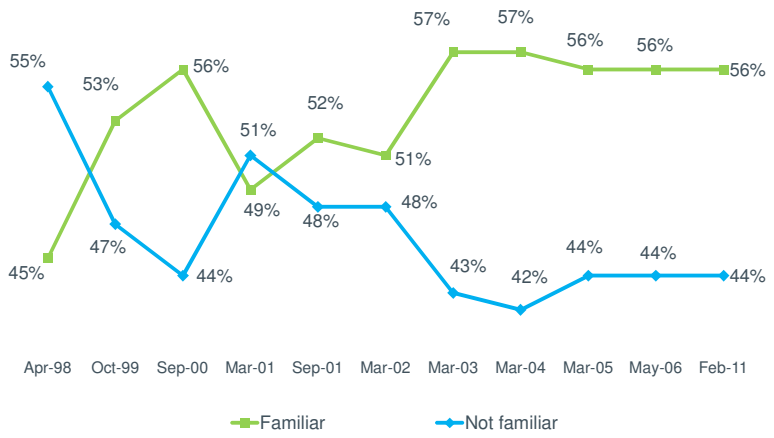
Familiarity with the broad topic of biotechnology and the science that surrounds it remains somewhat vague to many focus group participants, although there are some individuals who possess a detailed understanding of processes and fields of inquiry associated with biotechnology. From the focus groups, it appeared that the level of familiarity with the topic has not materially changed over the past five years.

This finding was validated by the quantitative research, which shows no change in familiarity in the past six years.

Harris/Decima has been tracking familiarity with biotechnology since 1998. The results from this wave of the research indicate that familiarity with biotechnology has remained consistent since 2003. This year, 56% of Canadians claim to be very (8%) or somewhat (48%) familiar with biotechnology. The remainder are not very (30%) or not at all (14%) familiar with it.

Familiarity - Tracking

Q4. Would you say you are very familiar, somewhat familiar, not very familiar, or not at all familiar with biotechnology?



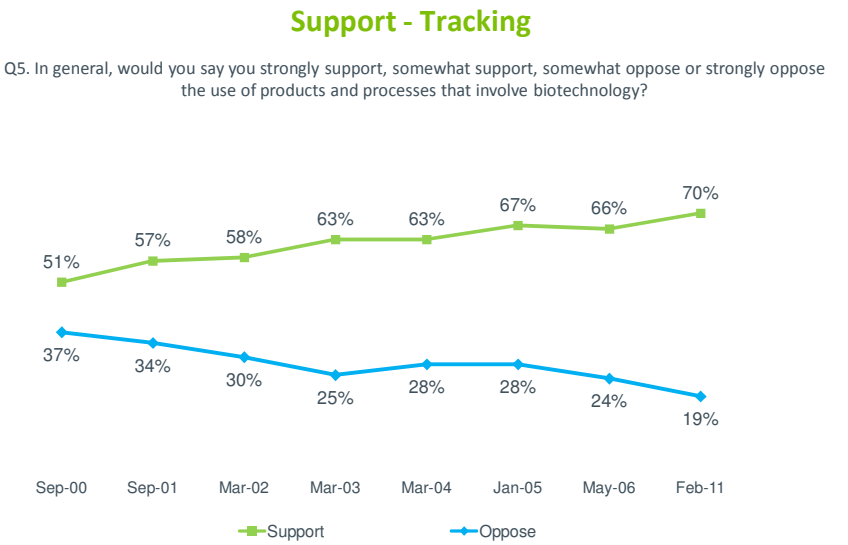
A few demographic differences are of note: Familiarity is higher among men (62%), residents of BC (74%), higher income earners (63%) and higher educated Canadians (66%). Moreover, Involved Canadians are far more likely to be familiar (68%) than the general population (49%).

Familiarity with Biotechnology

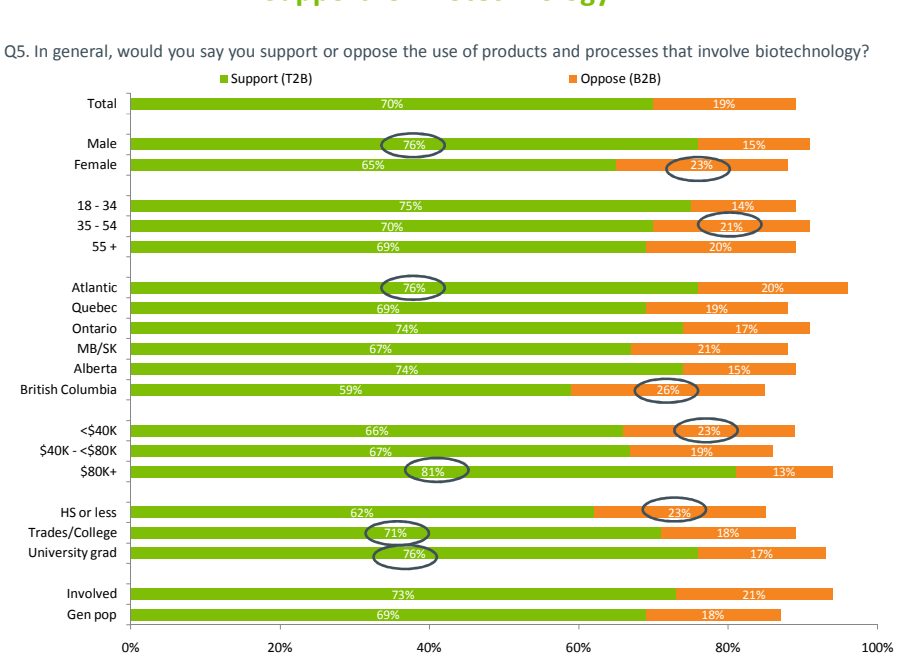
Q4. How familiar are you with biotechnology?

The data this year suggest a continuing trend of support for the use of products and processes that involve biotechnology. Indeed, seven in ten Canadians

strongly (15%) or somewhat (55%) support biotechnology. The remainder somewhat (14%) or strongly (5%) oppose this technology.



Again, there are a few demographic differences to note between men and women, regionally across the country and when looking at income and education levels, as demonstrated in the graph below:



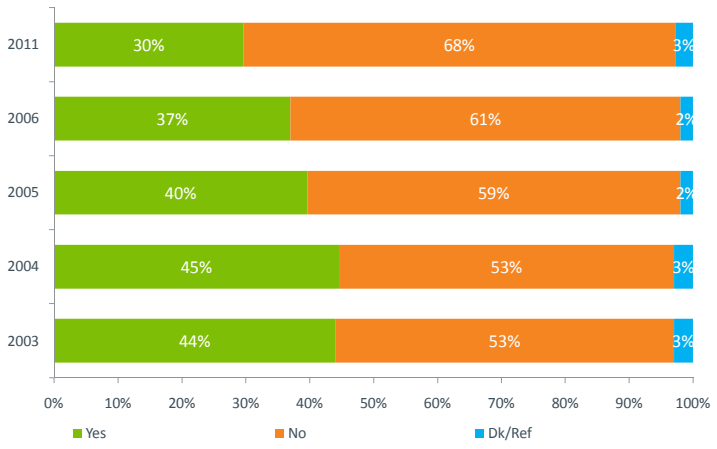
The findings from this year's research indicate a continuing decline in Canadians' awareness of stories or issues relating to biotechnology. This year, three in ten (30%) say they have seen something in the past three months and this is down from a high of 45% recorded in 2004.

Qualitative research validated this – many focus group participants were also hard-pressed to recall recent specific stories they had heard of that related to the issue.

Moreover, focus groups revealed that biotechnology is not a top-of-mind issue for most Canadians, and not something which triggers significant engagement or concern when first raised in conversation. Historically, research showed that it was never a significant top-of-mind issue, but currently it has seemed to have fallen below the radar altogether as a top-of mind issue. This appears to be the case chiefly because biotechnology is now defined primarily by its health-related applications, most of which are viewed as making a positive contribution to society. This was revealed in the opening discussion segment of the focus groups, where participants were asked what they associated biotechnology with. This came at a point where they had not yet discussed any particular applications, and can therefore seen as a "clean" top-of-mind opinion, as was previously explained.

Notice of Biotechnology Stories

Q3. Over the last three months, have you heard about any stories or issues involving biotechnology?



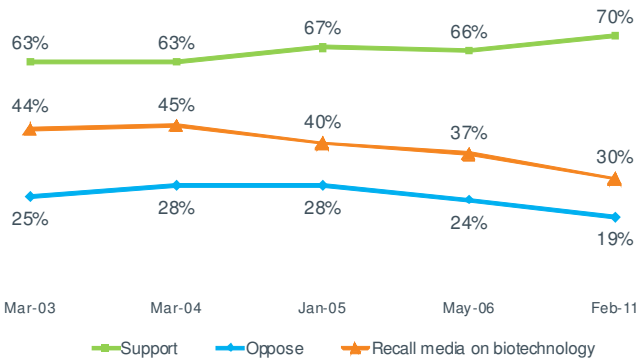
Base: All (n=812)

Further analysis reveals that while the recall of stories or issues involving biotechnology is lower this year, the opposition to products or processes involving biotechnology has declined as well.

Support for Biotechnology and Recall of Media Coverage

Q3. Over the last three months, have you heard about any stories or issues involving biotechnology?

Q5. In general, would you say you strongly support, somewhat support, somewhat oppose or strongly oppose the use of products and processes that involve biotechnology?



To conclude, the level of familiarity of biotechnology is steady from previous waves of surveying. Although small, the support for it has continued to increase from 2006. Meanwhile, there appears to be a correlation between the number of Canadians that recall media stories and the level of opposition for biotechnology: as recall decreases, so does opposition.

Regulations

The next section explores Canadians' ideas about the regulations pertaining to biotechnology in this country.

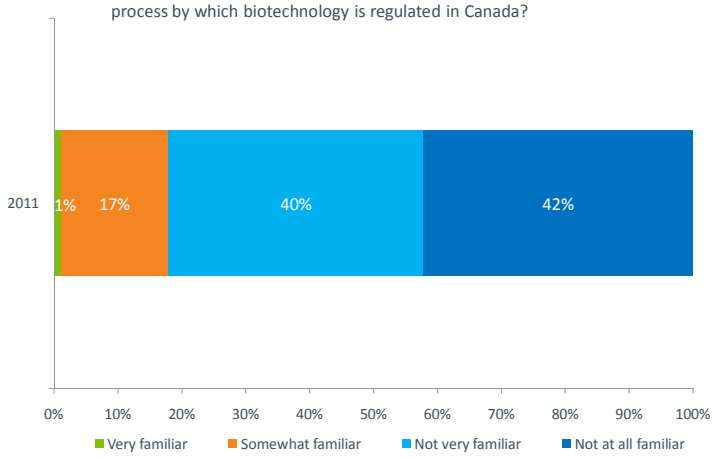
Detailed Findings

Our previous research in this area reveals a relationship between support/opposition for biotechnology applications and the perception of the regulatory and ethical oversight in place. As in previous waves, this relationship continues to exist at the general level, as well as with the specific applications, as presented later in this report.

To begin, a majority of Canadians have little (40% not very familiar) or no familiarity (42%) with the process by which biotechnology is regulated.

Familiarity with Biotechnology Regulations

Q6. Would you say that you're very familiar, somewhat familiar, not very familiar, or not at all familiar with the process by which biotechnology is regulated in Canada?



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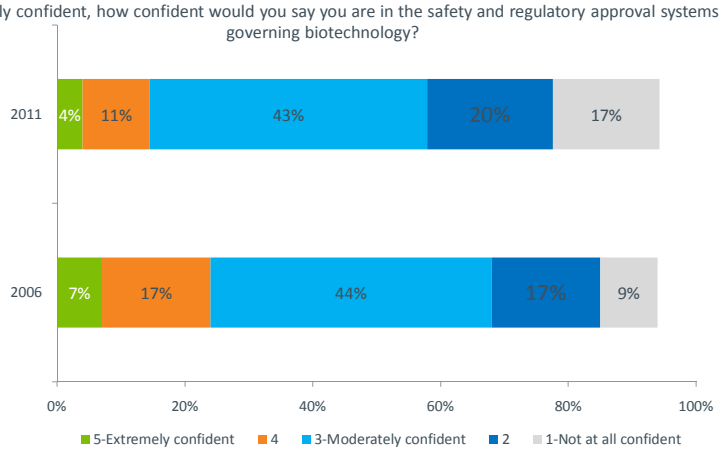
The plurality of Canadians (43%) is moderately confident in the regulatory approval systems governing biotechnology. Meanwhile, slightly fewer (37%) have less confidence in the regulatory system, including a sizeable number who are not at all confident (17%) in these systems. On the other end of the spectrum, 15% have higher levels of confidence, including four percent who are extremely confident in the safety and regulatory systems for biotechnology.

The results this year show that almost twice as many Canadians are not at all confident in the regulatory systems (9% in 2006 to 17% in 2011).

Biotechnology: Confidence in Regulatory System

Q7. On a scale of 1-5, where 1 is not at all confident and 5 is extremely confident, where the mid-point 3 is moderately confident, how confident would you say you are in the safety and regulatory approval systems governing biotechnology?



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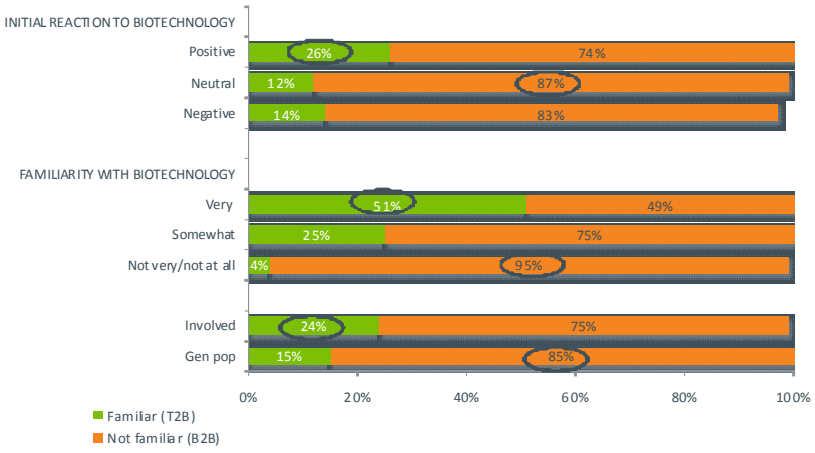
As the graph below indicates, while the survey cannot determine causality, it shows a relationship between familiarity with biotechnology and perceptions of regulations: those with higher degrees of familiarity with biotechnology are more positive in their reaction to it and are more likely to believe they are familiar with how it is regulated in Canada.

Familiarity with Biotechnology Regulations

Q6. How familiar are you with the process by which biotechnology is regulated in Canada?



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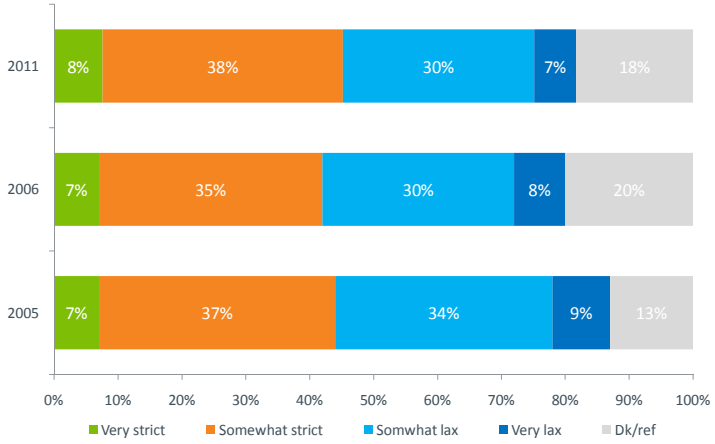
In terms of the approval process for biotechnology products, perceptions tend to lean towards it being strict. Indeed, almost half of Canadians think the

regulatory approval process is either very (8%) or somewhat (38%) strict. Meanwhile, slightly fewer believe the approval process is somewhat (30%) or very lax (7%). Perceptions on this measure have remained largely consistent from previous waves of research.

Biotechnology: Safety and Regulations

Q8. In terms of safety and regulatory approval processes for biotechnology products, do you tend to think that rules and systems in place here in Canada are very strict, somewhat strict, somewhat lax or very lax?



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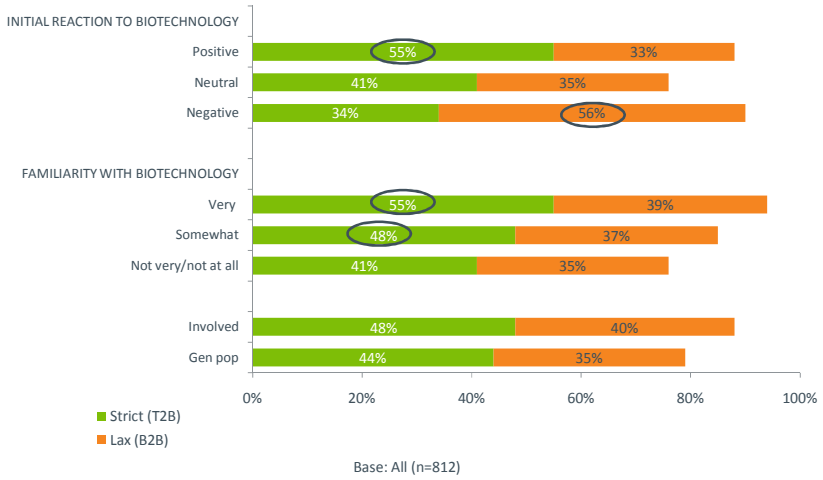
The data indicate a relationship between familiarity with the regulatory systems in place and the level of confidence in them as well as the perception of the strictness of them. Those with more familiarity with the regulations are generally more likely to believe they are strict, and are more likely to have confidence in the overarching system.

Biotechnology: Safety and Regulations

Q8. In terms of safety and regulatory approval processes for biotechnology products, do you tend to think that rules and systems in place here in Canada are very strict, somewhat strict, somewhat lax or very lax?



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To summarize, there is a large portion of Canadians who are not familiar with the regulatory system governing biotechnology applications. Moreover, this year there has been a decline in the proportion of Canadians who are confident in the regulatory system. There appears to be a relationship between familiarity with regulatory systems and confidence, in that as familiarity increases, so does confidence.

Biotechnology Issue Modules

The next part of the report focuses on biotechnology applications in general, and in particular on three modules about specific areas of biotechnology explored in the research:

- *Bioproducts*
- *GM Animals*
- *GM Fish*

Each module explored familiarity, support for various applications, and perceptions of the regulatory processes in place.

Detailed Findings

Focus groups revealed that the "positive halo" around the word biotechnology and its connection to health has virtually no impact on impressions of other biotechnology applications, whether they are in agriculture, aquaculture, or other areas outside health. In fact, this round of qualitative research found as much or perhaps more anxiety about other biotechnology applications than found in previous waves of research.

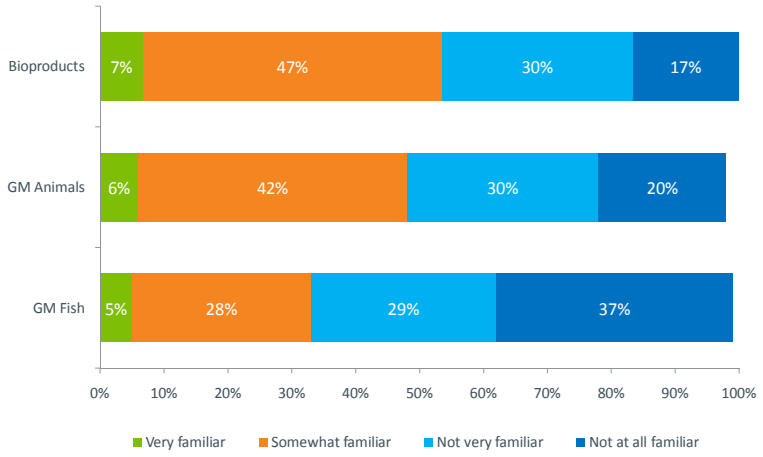
While specific biotechnology applications are not top of mind (not very many focus group participants accurately described current applications when asked), once they were introduced into the discussion, the conversation quickly turned to concern, and the potential negative environmental and health impacts associated with these (non-health related) applications.

Once discussion started in the focus groups, the discussion of risks tended to dominate the conversation, and very few of the benefits were really raised or discussed. This was the direct opposite of what happened when health applications were raised and discussed. What is notable is that these issues or concerns do not typically get raised unless prompted by specific applications.

While Canadians typically evaluated the merits of various applications of biotechnology on a case-by-case basis, there was more evidence revealed in discussions that their impressions of other applications within a given category (bioproducts, GM plants, GM fish, GM animals) influence their impression of other applications in that same category.

The survey showed that familiarity with the biotechnology applications tested varies. Canadians claim to have the most familiarity with bioproducts (53% very or somewhat familiar) and slightly fewer are at least somewhat familiar with GM animals. Canadians are the least familiar with the genetic modification of fish (33%).

Familiarity with Biotechnology Applications



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As was seen previously when looking at demographic differences, men are again more likely to be familiar with these applications than women. Regionally, British Columbians stand out as being more familiar.

Familiarity - Summary

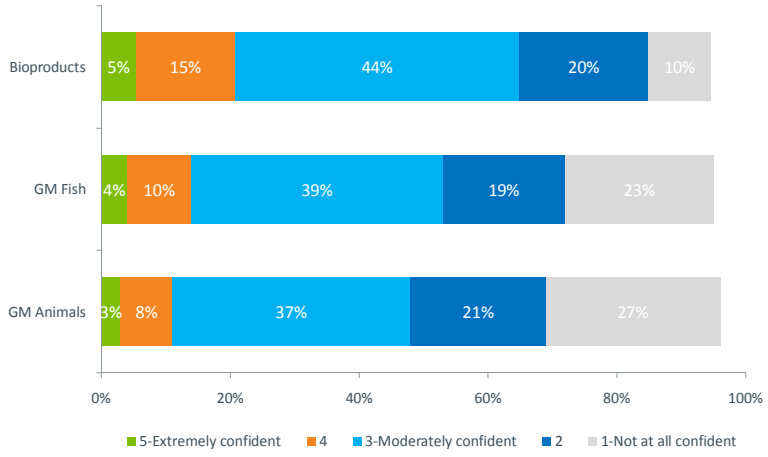
The degree to which Canadians have confidence in the regulatory system governing each application differs. Generally, Canadians place the most

confidence in the regulatory systems governing bioproducts and have the least amount of confidence in the processes regulating GM animals, with GM fish in the middle.

Confidence in the system was quite consistent throughout the country and across demographics, in particular with regards to bioproducts. The Atlantic provinces, Canada's fishery centre, proved to be more confident in GM fish regulations than other parts of the country, while on the west coast, confidence was the lowest.

When it comes to GM animals, men were much more likely to say they are confident in the regulatory system than women.

Biotechnology Applications: Confidence in Regulatory System



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Confidence in Regulatory System - Summary

Focus group discussions about regulations revealed that when asked why certain concerns prevail, in spite of 10-15 years of experience with some of these technologies, several issues rose to the fore, chief among them a basket of issues associated with the regulatory system:

1. Concerns about the capability of Canada's regulatory systems to keep up with these technologies. Importantly, most have no real sense of the capabilities of those involved in the regulatory structures associated with biotechnology – most were drawing upon their broad sense of how well or poorly they feel Canadian regulatory systems govern other areas (like the food system) when assessing the systems specific to biotechnology.

2. There was a prevailing belief that the gap between the current state of biotechnology and the capacity of government authorities to monitor and account for impacts was widening. Informing this belief was the global nature of most industries and trade, and how difficult it must be for individual countries (including Canada) to keep up.

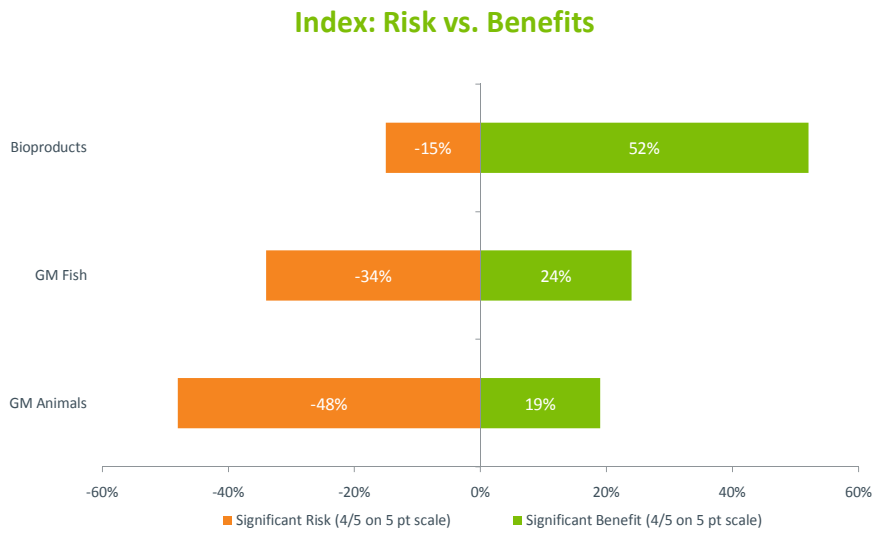
3. Coupled with this, many sensed that Canada's regulatory systems had not received the level of financial support/investment in technology and in expertise that would be required to even remain close to the pace at which technology is changing.

Compared to five years ago, our assessment is that there is a tendency to believe the "regulatory gap" in terms of biotechnology is widening. There is hope that there may be value in Canada continuing to invest in regulatory systems, more in concert with other (developed) countries than on its own,

and that in working collaboratively there may be an opportunity to at least keep the gap between technology and regulation at a reasonable level.

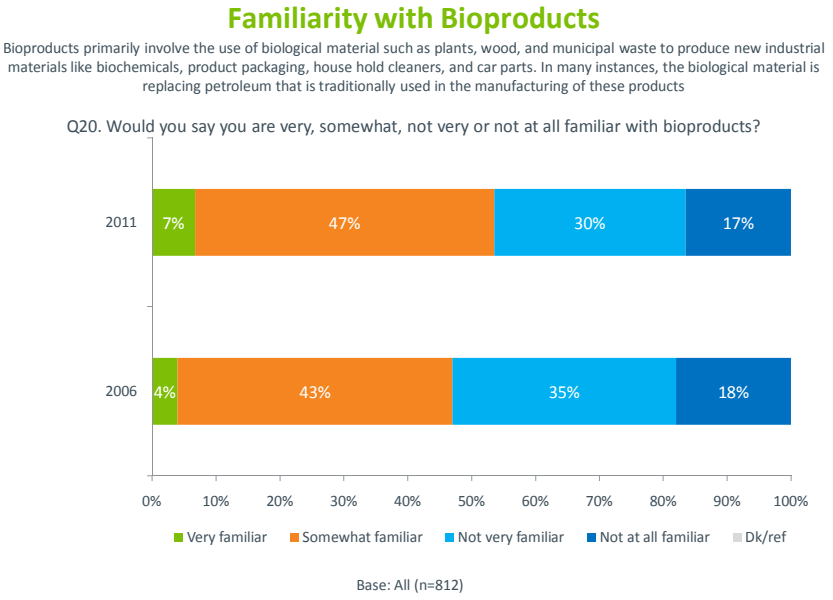
Consistent with the previous waves of research, an index was created to understand the perceived benefits and risks for each of the applications tested. This is a net score between the number of respondents that score a 4 or 5 on a five point scale on benefits, as well as the 4 or 5 score on risks. The "index" is essentially the difference between the number that rate the benefits high minus those who rate risks high.

The results reveal that Canadians generally see the benefits outweighing the drawbacks for bioproducts. However, when considering the genetic modification of animals, the perceived risks clearly outweigh benefits. New this year is the perception that the risks of GM fish outweigh their benefits as compared to a neutral score in 2006.



Bioproducts

The survey results indicate that there has been a slight increase in overall familiarity with bioproducts. Over half of Canadians claim to be very (7%) or somewhat (47%) familiar with this. This is an increase of seven percent from the previous wave conducted in 2006.



Overall, the results indicate that support for bioproduct applications is dependent on how they will be used. For instance, Canadians give the highest ratings for applications related to bioproducts used to generate electricity (94% strongly support or support). On the other end of the spectrum, opinion is split on the following two applications:

- **Biofuels** that are made using crops that are also a source of food (49% support versus 47% oppose)
- **Bioproducts** that are made using crops that are also a source of food (53% support versus 44% oppose)

When positioned against biofuels or bioproducts that are made using non-food crops because the land is too poor, or if they are made with the residue from food crops, support is much higher. This suggests that Canadians place them on a continuum, and any suggestion that food crops would be converted to crops for biofuels or bioproducts garners opposition.

The **focus groups** reflected these findings and also provided some additional insights into this: a concern that often coloured discussion of non-health applications was the diversion of crops from food use to energy applications. The essential point conveyed during groups is that if the advance of biotechnology applications in food crops for energy uses results in the diversion of crops from food, this is not something that is supported. In virtually every

group across the country, this same message was conveyed – and it had a material influence on the level of support for agricultural applications overall. Worth noting is that five years ago there was much more support for the idea of developing energy resources utilizing crops than there is today.

The topic of crop usage was most raised by participants in the discussion of using corn for fuel, which was the most familiar application in general. In most groups, some respondents mentioned in this context (unprompted) that they were afraid that food diversion was becoming, or would in the future become an issue. If, however, a non-edible part of the food crop (such as waste, leaves, etc.) would be used, there was more support for the application.

As well, many participants pointed out that they were quite supportive of using tobacco plants for biotechnology applications, as this would divert tobacco from its traditional, unhealthy use.

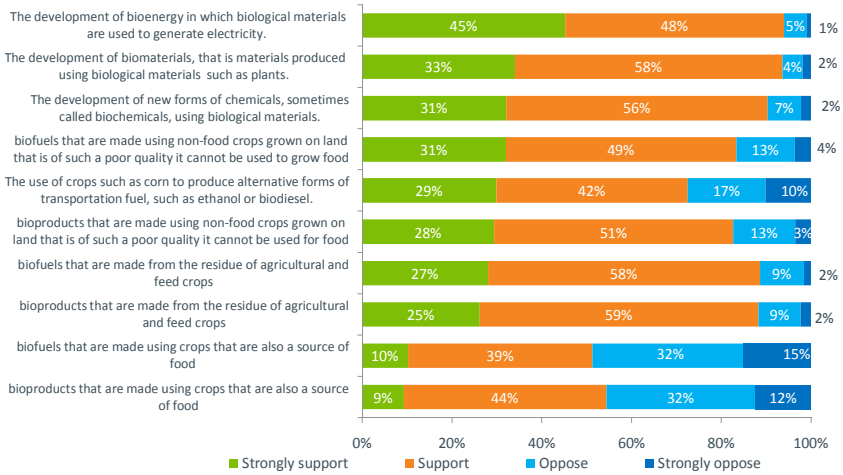
Edible vaccines were also discussed, but did not appear to resonate very well among most participants. Although it was a health application that on the surface many seemed to support, many questions about the concept and the rationale behind it were left to clear up before participants felt they could make up their minds.

It was very clear, once again, from the focus groups, that each application was evaluated on its own merits.

It must be pointed out that the survey data show a higher level of support for the use of “crops such as corn to produce alternative forms of transportation fuel such as ethanol or biodiesel,” than for “biofuels that are made using crops that are also a source for food.” Although these two descriptions could in essence point towards the same type of application, the specific description has an impact on the level of acceptance. This difference may suggest that in this case, the latter more blanket statement that clearly points out the link between fuel and food, raises more concerns than when framed more gently without linking the two as overtly. As well, by using the terms “such as” (suggesting it could be other crops) and “alternative forms of transportation fuel” (suggesting a link between reducing reliance on oil), perhaps Canadians could be lead into a more positive direction.

Support for Bioproduct Applications

Q21-25. There are numerous ways in which bioproducts can be used. Please tell me if you strongly support, support, oppose or strongly oppose the following potential applications of these technologies.

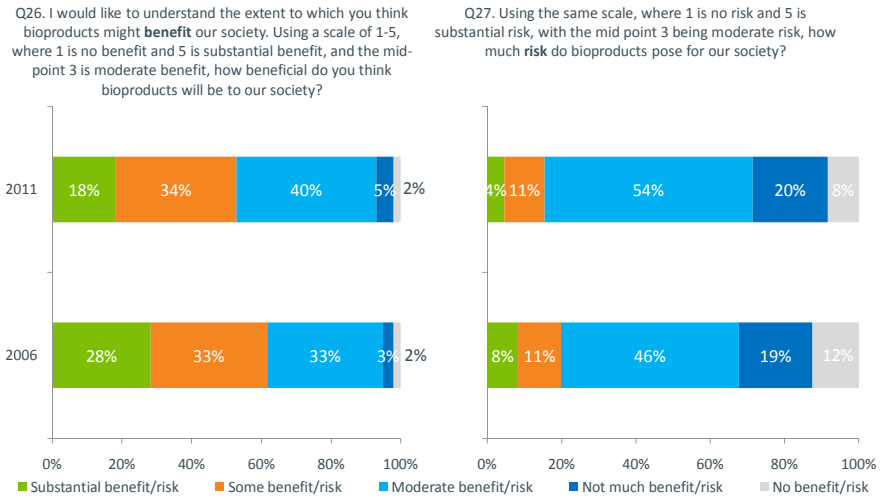


Base: All (n=812)

Canadians this year are more likely to consider bioproducts as moderately beneficial instead of substantially beneficial. Indeed, one in five Canadians believes that they have a substantial benefit as compared to 28% in the previous survey. Very few Canadians believe that there is no benefit to bioproducts (2%) and this is unchanged from 2006.

On the other hand, Canadians are most likely to believe that there are moderate risks with bioproducts and this has increased slightly from 2006 (up 8 to 54%).

Bioproducts – Benefit and Risk



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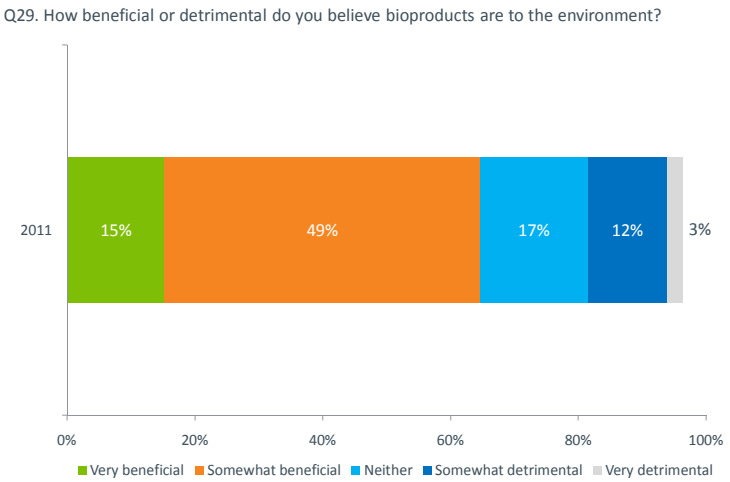
In terms of the perceived impact bioproducts have on the environment, a majority of Canadians think they are either very (15%) or somewhat (49%) beneficial to the environment. Fewer don't believe they are either beneficial or detrimental (17%), while the remainder thinks they have some detriment.

Bioproducts and the Environment



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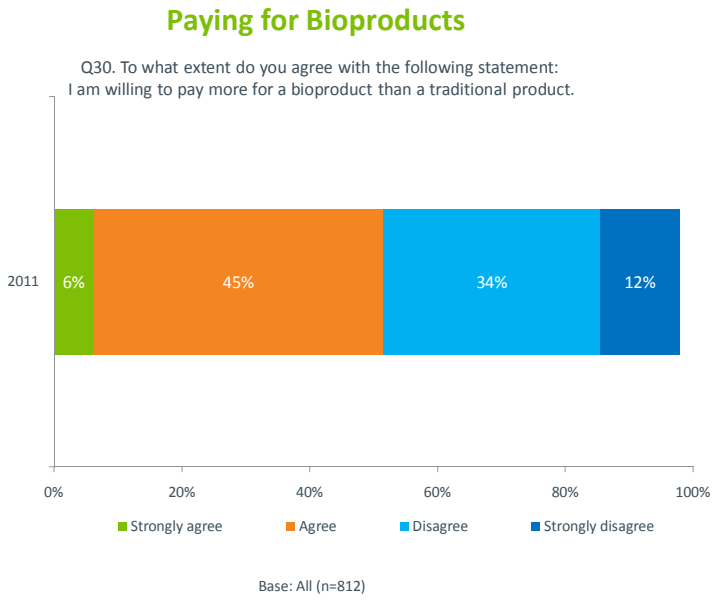
Canadians are split on whether they would pay more for a bioproduct than a traditional product. Indeed, just over half of Canadians say they strongly agree

(6%) or agree (45%) that they are willing to pay more. The balance (46%) disagrees with that statement, including 12% who strongly disagree.



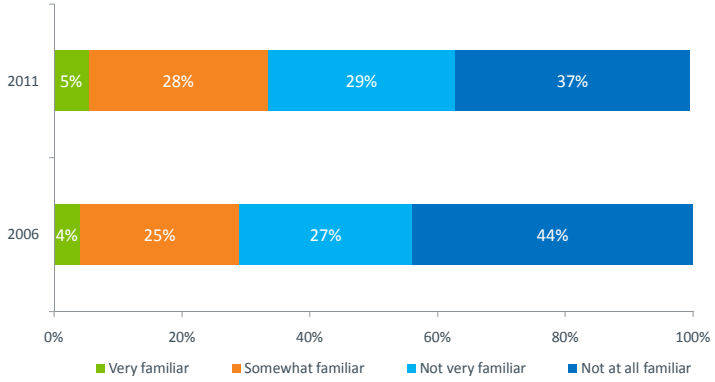
GM Fish

The next module tested was the genetic modification of fish. The findings indicate similar levels of familiarity in this wave as compared to 2006. One in three Canadians (33%) claims they are familiar with this application, including five percent who say they are very familiar. The remaining majority are not very (29%) or not at all familiar (37%) with genetically modifying fish.

Familiarity with GM Fish

Biotechnology applications are being explored in fish. Fish are being genetically modified for a number of reasons, such as to improve the growth rate of fish, or for production of drugs or cells for the treatment of human disease. These fish are created by taking DNA from one source – a different kind of fish, a different animal, a plant, or a bacterium – and putting it into a fish to give it a new characteristic or trait. In most cases, these applications are carried out in contained facilities or laboratories.

Q32. Would you say you are very, somewhat, not very or not at all familiar with genetic modification of fish?



Base: All (n=812)

It appears that Canadians' agreement with the genetic modification of fish will be on an application-by-application basis. The following two applications were tested in the survey and agreement with them varied.

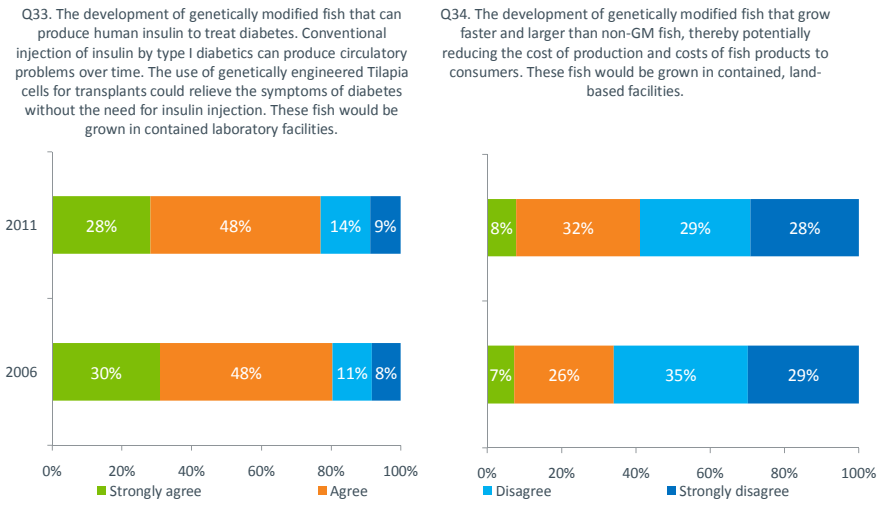
1. The development of genetically modified fish that can produce human insulin to treat diabetes. Conventional injection of insulin by type I diabetics can produce circulatory problems over time. The use of genetically engineered Tilapia cells for transplants could relieve the symptoms of diabetes without the need for insulin injection. These fish would be grown in contained laboratory facilities.

2. The development of genetically modified fish that grow faster and larger than non-GM fish, thereby potentially reducing the cost of production and costs of fish products to consumers. These fish would be grown in contained, land-based facilities.

By almost a two to one margin, Canadians are much more likely to agree with using genetically modified fish to help treat diabetes, than using them to reduce production costs of fish products. Indeed, three in four agree with GM fish for medical purposes versus four in ten for a cost-savings benefit (76% versus 40%).

When analyzing the results from the previous wave of research, there appears to be a slight increase in the percentage of Canadians who agree with using GM fish to reduce production costs.

GM Fish Applications – Agreement



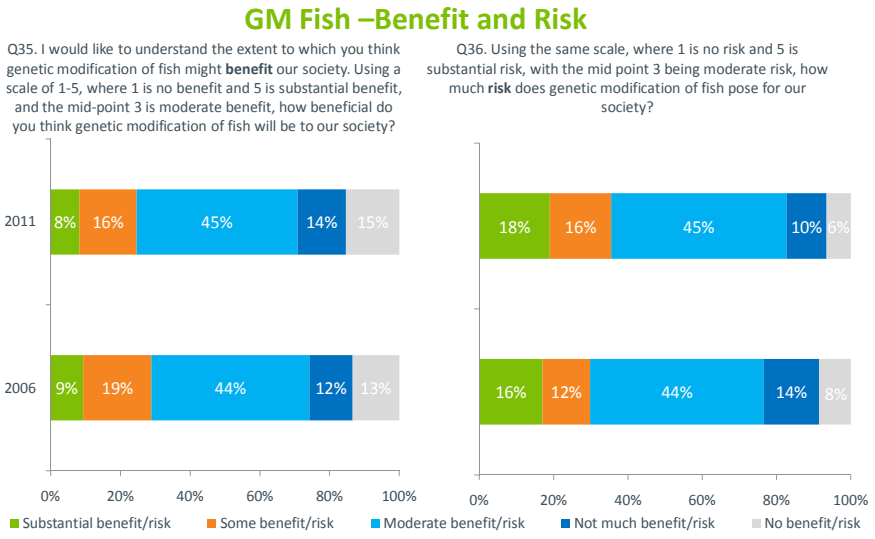
Base: Those half of respondents asked about GM Fish (n=407)

In the **focus groups**, participants were also asked to discuss various applications. The use of genetic modification in order to colour fish so they would be brighter in an aquarium was largely seen as frivolous and an ineffective use of this technology that could be put "to much better use."

In discussing research on GM fish in order to test how they would react in a natural habitat, focus group discussions in each city led quickly to concerns about containment. There was a clear lack of trust that GM fish could be contained and would not mingle with non-GM fish, and thus end up in the food chain. The few participants who pointed out that with the proper preventative measures this would not likely happen, did appear to be more positive about the idea that research was being done into this.

The survey showed that the perceived benefits and risks of GM fish are relatively moderate. Identical proportions believe the benefit of GM fish is moderate, as well as there being a moderate risk (both 45%). When thinking of the benefits, one in four Canadians thinks that GM fish will have a higher degree of benefit to society and a similar number thinks the benefits are limited, if any.

When looking at risks in particular, Canadians assign a higher degree of risk with GM fish this year. One in three (34%) considers it a substantial or some risk as compared to 28% in the previous survey.

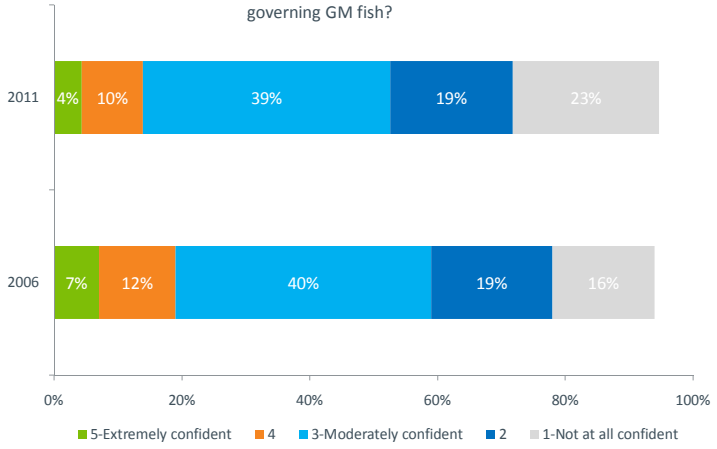


Base: Those half of respondents asked about GM Fish (n=407)

There has been some erosion in Canadians' confidence in the regulatory system governing GM fish. This year, close to one in four say they are not at all confident in regulating GM fish as compared to 16% in 2006. This shift appears to be from the higher degrees of confidence as the proportion who are extremely confident or a "4" out of "5" has decreased.

GM Fish: Confidence in Regulatory System

Q37. On a scale of 1-5, where 1 is not at all confident and 5 is extremely confident, where the mid-point 3 is moderately confident, how confident would you say you are in the safety and regulatory approval systems governing GM fish?

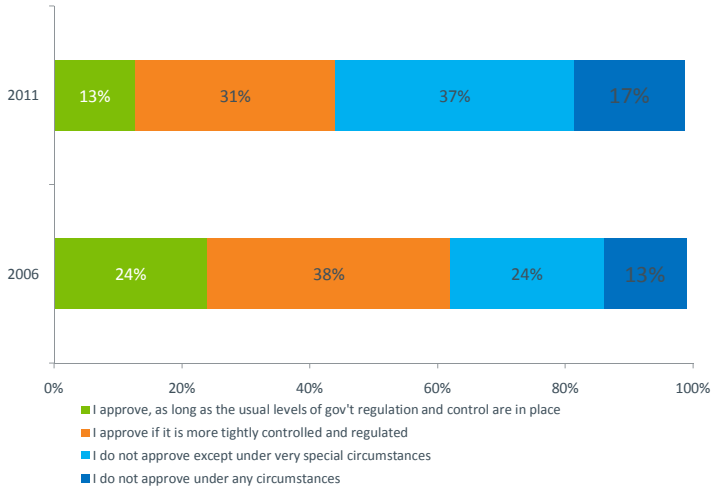


Base: Those half of respondents asked about GM Fish (n=407)

Canadians this year are more likely to not approve of GM fish unless under special circumstances (37% versus 24%) and less likely to approve assuming usual levels of regulation, or if it were more tightly regulated. This suggests that the perceptions Canadians have of the regulatory system may be impacting their overall view of the genetic modification of fish.

Approval of GM Fish

Q38. Overall, which of the following best captures your views about the genetic modification of fish:



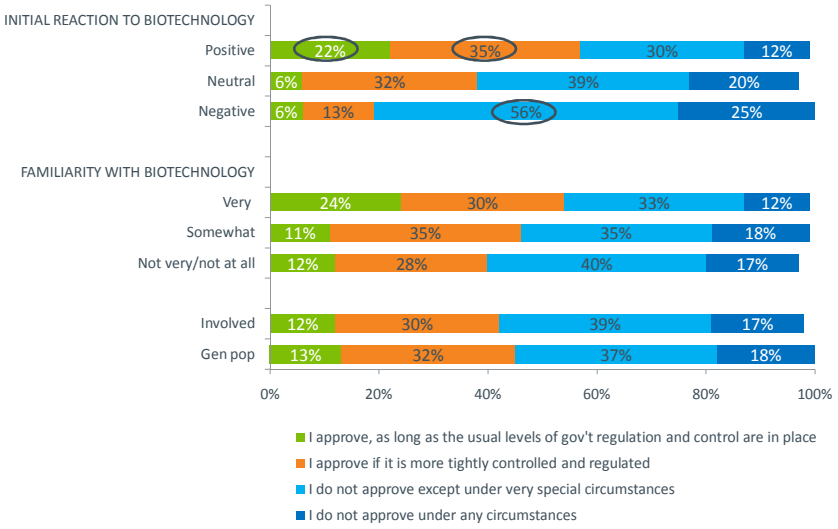
Base: Those half of respondents asked about GM Fish (n=407)

Those who are less confident in the regulatory system are less likely to approve of GM fish with the current conditions in place. Those with no confidence in the system are much more likely to not approve of this application under any circumstances.

As well, Canadians who have a positive view of biotechnology in general are more likely to be positive with the current levels of government regulations of GM fish.

Approval of GM Fish

Q38. Overall, which of the following best captures your views about the genetic modification of fish:



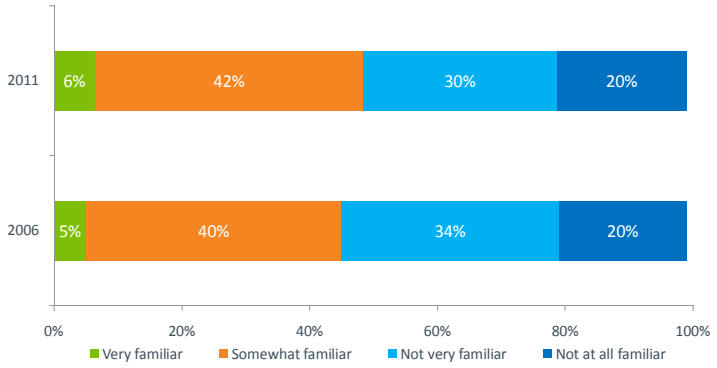
GM Animals

The final module tested in the survey and focus groups was the genetic modification of animals. Familiarity with GM animals is similar to that from previous years. Indeed, close to half of Canadians surveyed say they are either very (6%) or somewhat familiar (42%) with GM animals. The remainder is either not very (30%) or not at all (20%) familiar with this biotechnology application.

Familiarity with GM Animals

The next part of this survey focuses on another aspect of biotechnology, genetically modified animals. Biotechnology applications are being explored in animals for a range of purposes.

Q39. Would you say you are very, somewhat, not very or not at all familiar with genetic modification of animals?



Base: Those half of respondents asked about GM Animals (n=405)

Opinion greatly varies on the use of GM animals by application. In fact, only one use of GM animals garners a slim majority of support from Canadians: the development of GM cows to prevent an outbreak of BSE or mad cow disease.

Conversely, majorities **disagree** with the remaining GM animal applications tested:

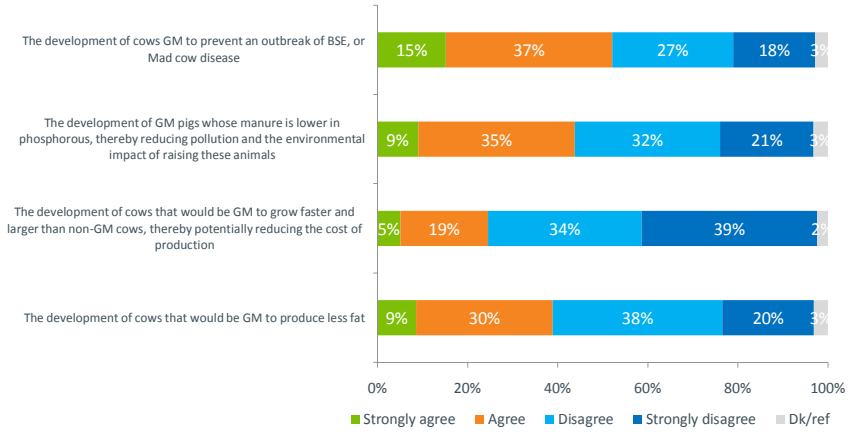
- Development of GM pigs whose manure is lower in phosphorus, thereby reducing pollution and the environmental impact of raising these animals (53%);
- Development of cows that would be genetically modified to produce less fat (58%); and
- Development of cows that would be genetically modified to grow faster and larger than non-GM cows, thereby reducing the cost of production (73%).

However, **focus group research** showed even more skepticism about these applications, even about the prevention of BSE. While on the surface many participants said it sounded good, the discussion quickly led down the road that finding a "cure," whether through genetic modification or not, should not be

the focus. Instead, prevention of outbreaks (regulation of food sources for cows, for instance was brought up) was often seen as more sensible.

GM Animals - Agreement

Q40-41.There are numerous ways in which genetic modification of animals can be used. Please tell me if you strongly agree, agree, disagree or strongly disagree with the following potential applications of these technologies

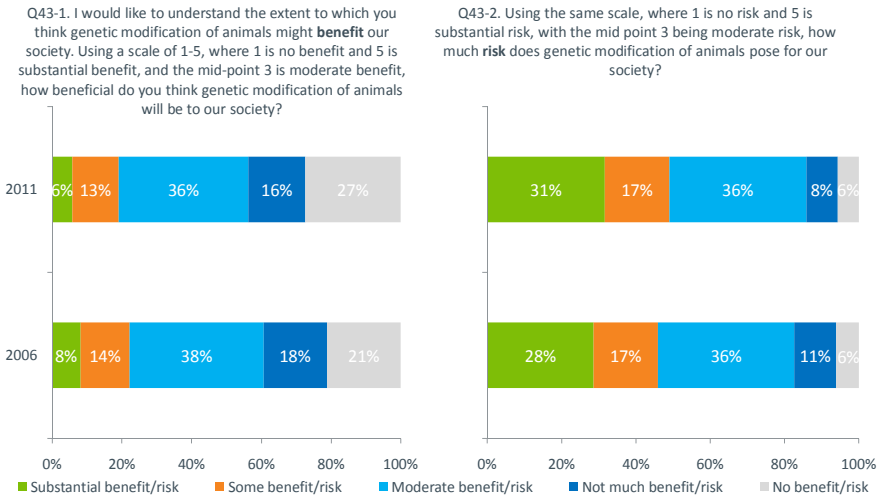


Base: Those half of respondents asked about GM Animals (n=405)

When balancing benefit and risk, Canadians err on the side of risk, and this is unchanged from 2006. Close to half believe there is substantial (31%) or some risk (17%) that the genetic modification of animals poses to society. One in three (36%) believe there is a moderate risk. Few Canadians consider the risks of GM animals as small (8% not much risk) or not present (6% no risk).

When considering the benefits, about one in five Canadians consider them substantial (6%) or having some benefit (13%). On the other end of the spectrum, fully one quarter (27%) believes there is no benefit to GM animals.

GM Animals –Benefit and Risk

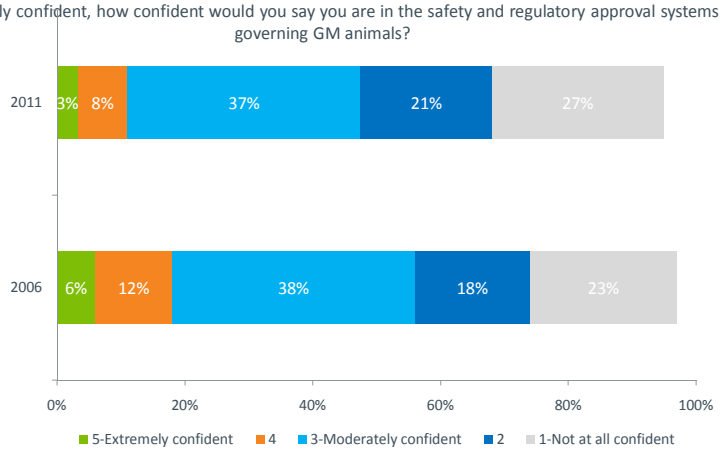


Base: Those half of respondents asked about GM Animals (n=405)

Consistent with the findings from the other applications tested, there has been a decline in the confidence in the safety and regulatory approval systems governing GM animals. One in ten Canadians have a high degree of confidence in these systems, with three percent saying they are extremely confident. Meanwhile, more than one in three (37%) claim to be moderately confident in the regulatory process. Close to half have lower levels of confidence; including one in four who say they have no confidence in the regulatory and approval systems (27%).

GM Animals: Confidence in Regulatory System

Q44. On a scale of 1-5, where 1 is not at all confident and 5 is extremely confident, where the mid-point 3 is moderately confident, how confident would you say you are in the safety and regulatory approval systems governing GM animals?

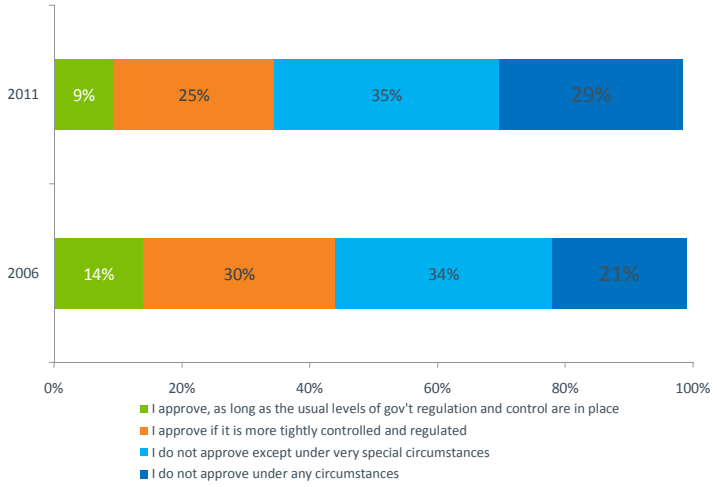


Base: Those half of respondents asked about GM Animals (n=405)

The proportion of Canadians who approve of this application has declined from 2006. This year, one in ten (9%) approve of using GM animals with the usual government oversight in place, and another one in four (25%) approve of their use if it were more tightly controlled and regulated. The majority however, do not approve of their use. One in three (35%) do not approve except under very special circumstances, while slightly fewer do not approve under any circumstances.

Approval of GM Animals

Q45. Overall, which of the following best captures your views about the genetic modification of animals:



Base: Those half of respondents asked about GM Animals (n=405)

As noted above with GM fish, there is a relationship between the perception of the current regulatory system monitoring this application and their views on GM animals. Those with less confidence in the regulatory systems governing these processes are more likely to not approve of GM animals in any circumstance.

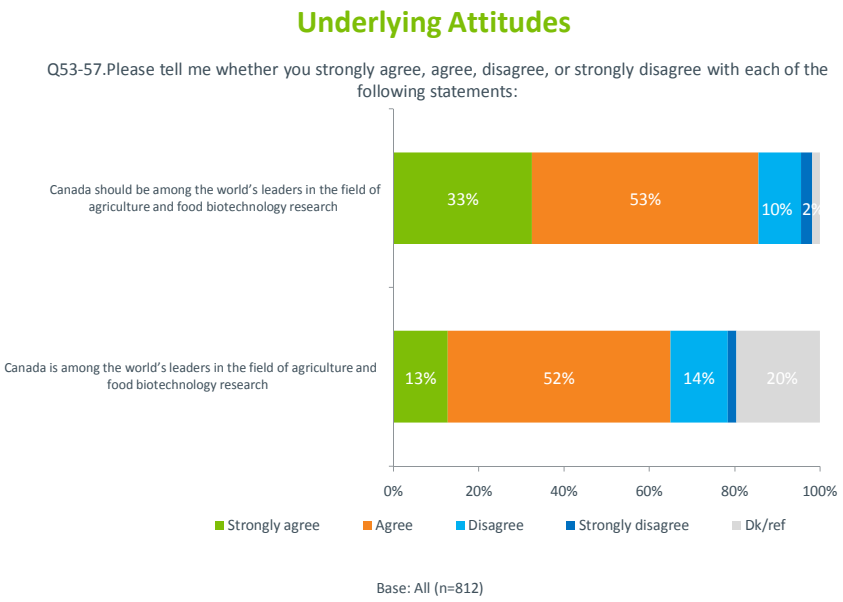
In sum, support for applications varies considerably. Canadians continue to evaluate the merits of each application instead of supporting biotechnology or different types of applications writ large. The data suggest that the confidence in the regulatory processes for the applications tested has decreased. Focus groups point to a sense that the technology is moving far quicker than the ability of the government to properly study and develop suitable regulations.

Underlying Attitudes

The following section serves to better understand Canadians' views on a variety of topics surrounding biotechnology: Canada's global role in the biotechnology sphere , safety, issues surrounding biotechnology applications and the food chain.

Detailed Findings

Canadians hold a variety of views related to biotechnology and Canada's role. To begin, there is a high degree of agreement that Canada should be among the world's leaders in agriculture and food biotechnology research. One in three strongly agrees and another 53% agree with this statement. Having said that, they are less likely to agree that Canada is currently a world leader in this type of research. Indeed, one in ten (13%) strongly agree with this view and an additional 52% agree. There is a sizeable group of Canadians that don't know if Canada is a world leader or not.



Irrespective of Canadians' views on biotechnology, there is a sense that these technologies should be developed in Canada.

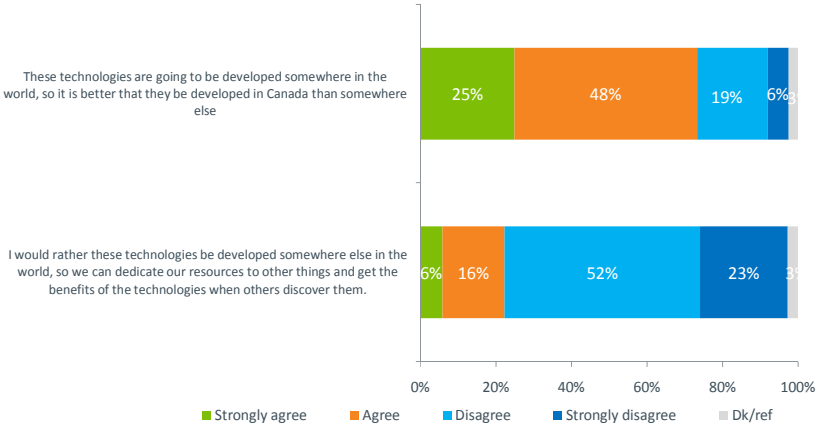
Focus group discussions clearly showed that participants were hopeful that Canada could play a leadership role and not fall behind other countries on biotechnology.

It was felt that the risk that "bad" or unregulated foreign imports would be too great.

Indeed, the survey showed that a majority of Canadians agree that it is inevitable that these technologies will be developed, so it is better that they are developed in Canada. What's more, few would rather these technologies be developed elsewhere in the world, allowing Canada to focus on other priorities and benefit from others' discoveries of them.

Underlying Attitudes

Q53-57.Please tell me whether you strongly agree, agree, disagree, or strongly disagree with each of the following statements:

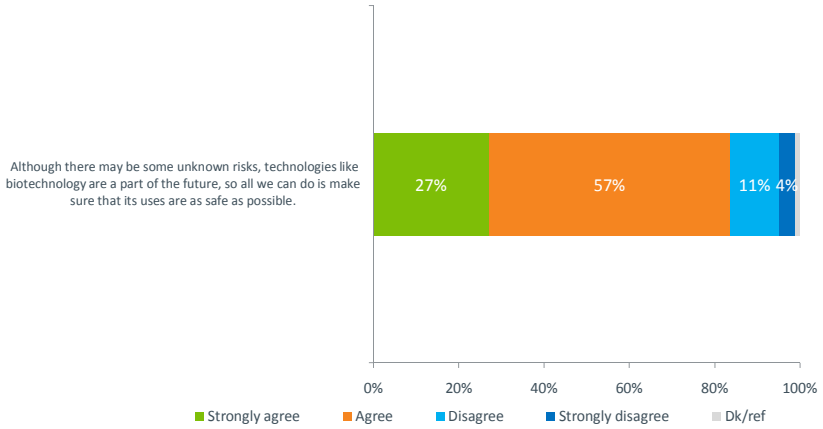


Base: All (n=812)

There is a sense of inevitability among Canadians that these technologies will be part of our future. Therefore, a majority believe that we should focus on making them as safe as possible. Indeed, more than one in four strongly agree (27%) and an additional 57% agree with this statement.

Underlying Attitudes

Q53-57.Please tell me whether you strongly agree, agree, disagree, or strongly disagree with each of the following statements:

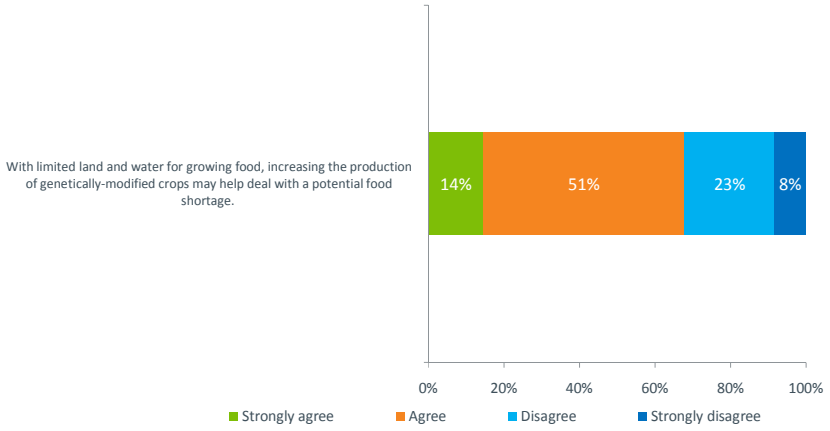


Base: All (n=812)

While the research points to concern among Canadians about developing biotechnology applications that divert from the food chain, there appear to be relatively high levels of agreement with using GM plants to increase the food supply. Specifically, two in three Canadians agree with using GM crops to help deal with potential food shortages, including 14% who strongly agree with this statement. The remaining three in ten strongly disagree with this statement.

Underlying Attitudes

Q53-57.Please tell me whether you strongly agree, agree, disagree, or strongly disagree with each of the following statements:



Base: All (n=812)

Online Surveying

The findings described in the previous sections are those from the telephone survey only and do not include the online completions. This was to ensure that the tracking data provided an "apple to apple" comparison over the years; past research had only been undertaken by telephone and mode differences had not yet been studied for this particular research.

In deciding whether to advise for or against transitioning a survey from a telephone to online mode, typically parallel surveys are undertaken and the differences and similarities in findings are analyzed. In this case, a small online panel survey of about 200 completes was undertaken, with the same questions as asked of telephone respondents. For both samples, demographic quotas were set (age, gender, region) and the same weighting method was applied.

While on many questions the online data finds the same results (defined as being statistically within the margin of error) as the telephone data, some notable differences were found. Note that:

- Confidence in regulations, whether on biotechnology in general or bioproducts or GM fish in particular, is higher among the online audience than among telephone respondents;
- Reported familiarity with bioproducts and GM animals is higher among telephone respondents than among online respondents;
- Support for certain bioproducts applications, such as developing biofuels (from non-food crops and residues) and developing bioproducts from residues, is stronger among online respondents than among telephone respondents;
- Also in the bioproducts realm, telephone respondents were more likely to say they are beneficial for the environment and more likely to say they are willing to pay more for these products than their online counterparts; and
- Telephone respondents were more likely in agreement that technologies should be developed in Canada, that Canada is a world-leader already, and that GM food may be beneficial in combating food shortages.

Although in some instances, we believe the anonymity of the online mode (compared to speaking to a live interviewer on the telephone) could account for panel respondents to be more frank could also lead to more "honesty" – for example in admitting to not being familiar with something – this does not necessarily explain other variances between the modes.

We feel that more in-depth analysis and research should be done into the potential mode biases regarding this topic in particular before advising AAFC to fully transition this survey from telephone to online.

Conclusions and Recommendations

One of the key dimensions of this work is the topic of communications and/or education regarding biotechnology applications. Two key questions to address are:

What is the appropriate terminology for describing these technologies to Canadians? Based on this work, “biotechnology” is the most appropriate terminology, as it is the word/phrase that most closely encompasses the broad range of applications across categories. However, “genetic modification” is also appreciated as a term, as it is often believed to be an accurate descriptor of the technology itself that is being used in these applications.

Another one of the issues at play is the value of doing more to communicate with or educate Canadians on these issues. In our view, there certainly are gaps in terms of understanding of the issues and realities in terms of regulations and governance. However, because of the high degree of sensitivity to these issues, and the evidence from focus groups about the depth of concern about key issues (like crop diversion, and regulatory capacity) it may be difficult for Canadian authorities alone to credibly convey some of the most important information that might assuage concern.

The focus group discussions did not allow for much in-depth discussion about credible sources of information. Generally, the tendency was to say that “independent” sources (such as academics or independent scientists) would be better received than those who were for example funded by pharmaceutical or agricultural companies. A repetition of the same type of information by a variety of sources would also be seen as more persuasive than if it came from one source – a consortium of international researchers and governments for example would be seen as quite credible.

Our belief is that there are two potential efforts that can make a contribution: first, to continue the process of making as much information about applications as well as regulations available to Canadians in a transparent and easy-to-understand manner; and second, to consider partnering with other countries and international organizations involved in these issues to educate about global efforts to bring technologies that benefit people, efforts to bridge the regulatory gap, and efforts to protect Canadians from unnecessary risks. That effort could be supplemented by a “Canadian-oriented” series of elements, to help “Canadianize” the overall effort.

Survey Methodology

1. Quantitative Survey

Background and Objectives

AAFC required comprehensive research to monitor Canadian consumer attitudes and perceptions towards numerous issues related to the domestic agriculture and agri-food system, and that can add detail to innovation-related program and policy considerations of the Growing Forward 1 and 2 frameworks.

The wind-up of the Canadian Biotechnology Strategy/Secretariat (CBS) in 2006 resulted in the discontinuation of more than a dozen consecutive "waves" of quantitative and qualitative public opinion research studies on Canadians' attitudes towards applications of biotechnology and other innovative technologies dating back to 1999, conducted by Harris/Decima. This longitudinal series was one of the most comprehensive conducted anywhere in the world on this particular subject.

Data from the previous waves has been used and cited in numerous national and international reviews and articles about consumer attitudes towards biotechnology.

The 2010-11 research was analyzed using the same analytical techniques employed in the previous waves. In addition, results from the new and previous surveys are compared to identify any changes in Canadians' confidence levels and attitudes, where possible.

More specifically, the objectives of the study were to:

- Refine survey questions used in previous waves to ensure departmental priorities are addressed in the 2010-11 research;
- Measure changes in consumer response to previous waves of research in key areas of attitudes towards applications of innovative agricultural technologies (including biotechnology) and confidence in the safety of Canada's food supply;
- Gauge awareness and support for other innovative agricultural technologies;
- Inform and shape related departmental, portfolio and industry policy, marketing, and promotion initiatives, based on the current state of consumer perceptions of innovation, food safety and food quality in Canada; and
- Examine and track the evolution of consumer segments identified in the previous surveys.

The information gained through this public opinion research will:

- be used to inform AAFC's innovation and market development, food safety, food quality, and agriculture-health policy agendas

including Growing Forward by contributing to a better understanding of the issues and priorities of Canadians towards innovation, food quality, food safety and providing opportunities to make the sector more competitive;

- provide invaluable intelligence to the Value Chain Round Tables;
- support the analytical agenda for innovation identified in AAFC's Future Scan process, namely "factors affecting attitudes towards new technologies, products and processes";
- under the 2009-2010 Program Activity Architecture, support and enhance a competitive agriculture, agri-food and agri-based products sector that proactively manages risk; and
- enhance current departmental marketing, promotion and branding initiatives and strategies by expanding on existing work and identifying opportunities and challenges for the sectors.

Sample

Target Population

The target population for this survey consisted of Canadian adults, 18 years of age and over.

Sample Size

The total sample size of this study was set out to be 1,000. Of those, 800 were to be conducted by telephone and 200 online. In order to ensure that the data were representative of the Canadian population, we set regional quotas, and within those regions to add "soft" quotas for age and gender. The "soft" quotas ensured an approximate number of completes which would in turn ensure that weighting factors stayed within the acceptable research standards. This was achieved.

The sample frame for the study was:

Telephone (N=800)

Age	Gender	Atlantic	QC	ON	MB/SK	AB	BC	Total
18-34	Male	10	26	36	11	13	14	**110**
	Female	10	27	37	11	13	14	**112**
35-54	Male	15	38	51	15	16	19	**155**
	Female	17	40	53	16	17	20	**162**
55+	Male	13	31	38	12	10	16	**121**
	Female	15	37	45	14	11	18	**140**
Total		**80**	**200**	**260**	**80**	**80**	**100**	**800**

Online (N=200)

Age	Gender	Atlantic	QC	ON	MB/SK	AB	BC	Total
18-34	Male	2	7	9	3	3	3	**27**
	Female	3	7	9	3	3	3	**28**
35-54	Male	4	10	13	4	4	5	**39**
	Female	4	10	13	4	4	5	**41**
55+	Male	3	8	10	3	3	4	**30**
	Female	4	9	11	4	3	4	**35**
Total		**20**	**50**	**65**	**20**	**20**	**25**	**200**

Sample Source and Sample Method

Harris/Decima used the most up-to-date and accurate telephone sample available from ASDE Inc, our sample provider, to maintain the high reliability of our sampling procedures.

The sample for the online research was from Harris/Decima's proprietary online panel.

Telephone

The sample of Canadians was generated through random digit dialling. Every Canadian household that has a telephone number will have had an equal chance of being selected for the study. Through a specified sampling plan and post-data collection weighting procedures, Harris/Decima has ensured that the subsamples reflect the breakdown of region, age, and gender, as reflected in the general Canadian adult population.

In addition, the beginning of the survey screened respondents to ensure their eligibility for the study, meaning they were Canadian adults of at least eighteen years old. Once a household is contacted, one individual was selected to be interviewed using the "most recent birthday" method. Meaning that in households with more than one eligible respondent, the person with the most recent birthday in the household is selected as the one to be interviewed. An appointment (call-back time) was booked if the selected respondent was not available. Over the past 20 years, this method has been shown to be the most effective in ensuring the selection of individuals within households is representative in terms of age and gender. We also included a screening question to ensure that respondents had not already completed the online version of the survey; if they had, the interviewer would have politely terminated the interview.

Sample was allocated in small segments and exhausted before new sample was substituted. All contact dispositions were tracked and recorded in the sample

database. In many instances, the system automatically allocated sample records in response to recorded disposition. For example, the system was programmed to automatically reschedule call-backs for "no answers" and "busy" dispositions in a pre-set pattern.

Online

Research has demonstrated that a well-crafted invitation can greatly improve response rates. Therefore an introductory email outlining the purpose of the research and identifying Harris/Decima Research as the neutral third party who will be conducting the research was emailed to all names on the sample list. This invitation also included a direct link to the survey. As our panel members are pre-profiled, invitations were sent proportionally to the desired number of completes per region/age/gender cell, as described above.

To complete the online survey, the respondent either "clicked" on or typed-in the URL that was included as part of the invitation or reminder email they received. This address took them directly to the Harris/Decima web location containing the survey. The location included a front page that provided information on the purpose of the study and encouraged participation. The survey web site was accessible 24 hours a day, seven days a week from any web-enabled computer, and the survey was kept "live" for the specified study period.

Sampling Limitations

RDD telephone studies do not include cell-only households. The sample for the online portion of the survey only included those who had previously elected to become a panel-member and who then chose to respond to the survey invite. Some self-selection is present when using this methodology.

Weighting

In conclusion of the data collection and cleaning, Harris/Decima has weighted the data by each stratum (in this case, region, age and gender) to reflect the actual proportions found in the population. This ensures the findings from the research can be extrapolated to the entire population with accuracy. Harris/Decima uses a standard procedure for calculating weighting factors, based on established methodological standards and extensive experience in sample weighting over literally hundreds of projects (including many for the Government of Canada).

a) This procedure involves calculating the actual population within each segment and the true proportion of the sample that would fall into each segment if the survey were conducted on strictly a random basis. Into this number is divided the actual segment sub-sample to produce a weighting factor that is then used to "weight" the data for that segment. While there are various ways of accomplishing this task, this procedure is the most straightforward and effective.

Non-probability Sampling (Online survey)- Rationale

As online panels become more prevalent, the Government of Canada is wise to collect data through both traditional modes (telephone) and emerging technologies, such as online panels. AAFC will now have some knowledge of whether or how online modes may produce varying results and can make informed decisions going forward with similar projects.

As one of the objectives of the research is to compare the findings to previous research, it was not advisable to switch completely to an online mode at this time. Due diligence was advised to ensure that the modes would be compatible before entertaining a change in methodology. By maintaining the traditional methodology for the majority of the survey, we believe this can be accomplished.

It is our experience that some Canadians are more predisposed to participating in surveys through one mode than the other and relying exclusively on one may reduce the likelihood that varying views between these kinds of people may be identified.

Moreover, landlines are being used less and less, particularly among young Canadians. This may not pose a significant issue at this junction and can be controlled for in this particular survey by setting the appropriate age quotas. It is likely that in the future, landline telephone surveys may not be the preferred method for reaching certain audiences, and as such, it is advisable to be pro-active in adjusting current methodologies so that a switch to another mode, in this case online surveying, will not be problematic going forward.

Data Collection

Fieldwork Dates

The survey was conducted between January 31 and February 11, 2011.

Survey Length and Range

The table below outlines the survey length and range for the telephone and online surveys.

# Minutes	Telephone	Online
Average length	19:03	11:33
Midpoint	18:43	9:52
Range	1.3-48:6	2:54-43:51

Quality Control

Quality Control and Procedures

Fieldwork Validation Methods and Procedures

The following validation has been undertaken as specified below, by means of checking the data records produced (e.g., questionnaires, data files) and/or respondent recontact (back checking) and/or monitoring.

Checking of data records includes, as appropriate:

- completeness of the data records,
- keeping to samples/quotas,
- consistency of responses and
- comparison of responses against normal data or between fieldworkers.

Respondent re-contact did include confirmation that the interview took place and that instructions were followed; the length of the interview; and responses to key questions including demographics.

Throughout each study, on-site professional supervision is provided on a continual basis. Harris/Decima uses a "two-team" structure:

i. A team of supervisors who manage the project logistics, training, quotas and day-to-day issues;

ii. A quality control team composed of dedicated monitors who work with the Field Manager to evaluate the interviewers and ensure high quality, accurate data collection.

Monitoring has been carried out on an ongoing basis, throughout the field period. Monitoring involves listening to interviews at the time they are being carried out, using appropriate equipment or listening to recordings of the interviews. Both interviewer and respondent are audible.

Interviewers are aware that any interview may be monitored but do not know whether a specific interview is being monitored. Where interviewing is multilingual, staff fluent in the relevant languages carry out monitoring.

Interviewers are centrally monitored by a trained team, thereby ensuring consistency and accuracy in all work conducted at Harris/Decima. The dedicated supervisory monitoring staff continually evaluates the quality of interviewing conducted for all projects. As a part of our standard quality control evaluation, the following measures are undertaken on a continual daily basis:

- Audio monitoring of calls (introductions, booking of call-backs, completed interviews/recruits, refusals, terminations);
- When conducting interviewing/recruiting using the CATI system, simultaneous visual monitoring of the interviewers' work by viewing the CATI screen and responses entered while conducting the audio monitoring of all calls;

- Regular evaluation of open-ended responses; and
- Feedback cycle with interviewers to evaluate their work and to acquire feedback on the survey process.

Harris/Decima randomly monitors a minimum of 15% of all responses and interviews, exceeding the 10% minimum standard set by the MRIA and the Government of Canada. At least 75% of the whole interview is monitored. At a minimum, the re-contact validation level is always 10% of the interviews.

Data Validity and Integrity Checks

Our custom system immediately identifies cases where the interview length is unrealistically short, contradicts established facts or presents patterns of response deserving attention. As a result, we can determine whether a case should be excluded from the final sample if necessary. All of these checks have been performed manually and cleaned out of the data in the back end of the project. Harris/Decima uses a checklist to ensure all data that is delivered to the client has gone through a rigorous quality control process.

Data Cleaning

Harris/Decima analysts have considerable experience in cleaning data files, conducting statistical routines, producing tabular output, and weighting data to provide an accurate measure of the population as a whole.

The following are the basic steps taken when cleaning data files:

- Combine all data files from multiple waves/methods (as required) ensuring that all data lines up correctly;
- Ensure that all coded questions have updated codes and multiple mentions do not have duplicate codes;
- Create all new variables as a result of CATI/CAWI programming;
- Confirm that all relevant variables are included in the data file;
- Final frequency check (for out-of-range values) and recodes created, including those for outliers;
- Verify that variable names and question numbers match the final version of the questionnaire;
- Create and verify new variable creations (against source variables) as outlined in the analysis plan and perform spell check on all variables.

In addition to these generic rules, project specific requirements are also taken into account. It is also noteworthy that because the CATI software controls the questionnaire flow and data entry, data are typically quite clean from the outset.

Results

Margin of Error

For the telephone survey, a sample of this size (812) would be expected to be accurate to within plus or minus 3.4%, at the 95% confidence level.

Additionally, an online survey with a sample of 200 online Canadians from Harris/Decima's proprietary online panel was conducted. As this was a non-probability sample, estimations of margin of error cannot be made, as respondents for this survey were selected from among those who have registered to participate in online surveys. The results of such surveys cannot be described as statistically representative of the target population. The data have been weighted to reflect the demographic composition of the Canadian adult population. Because the sample is based on those who initially self-selected for participation in the panel, no estimates of sampling error can be calculated.

Call Disposition – Telephone Survey

Disposition	Total
Total Numbers Attempted	48,106
Invalid	
NIS, fax/modem, business/non-res.	10,672
Unresolved	
Busy	575
No answer, answering machine	15,727
In-scope - non-responding (IS)	
Household refusal	5,797
Respondent refusal	9,511
Language problem	649
Illness, incapable	332
Selected respondent not available	3,443
Qualified respondent break-off	143
In-scope - Responding units (R)	
Language disqualify	0
No one 18+	0
Other disqualify	423
Completed interviews	834
Response Rate / Participation Rate = R/(U+IS+R)	**3.36%**

Disposition – Online Survey

Disposition	Total #
(a) Total number of sample units invited to participate	3389
(b) Invalid - Undelivered	0
(U) Unresolved	
(g) Did not respond	3105
(IS) In-scope - non-responding	
(e) Qualified respondent break-off	29
(R) In-scope - Responding units	
(f) Disqualified	0
(h) Quota filled	42
(d) Completed interviews	213
Completed interviews	
Contact Rate = (R+IS)/(U+IS+R)	**8.38%**
Response Rate = R/(U+IS+R)	**7.52%**
Participation Rate = R/(U+IS+R)	**7.52%**

2. Qualitative Phase

Harris/Decima has conducted focus groups in five locations across the country. In each location, one group was conducted with members of the Canadian adult general population, and one group with *Involved Canadians*, Harris/Decima's proprietary segment of opinion leaders. MRIA standards were adhered to for recruitment and conduct of focus groups.

The following table outlines the distribution of the groups in terms of location, language and target audience:

City	Language	General Population	Involved Canadians	TOTAL
Vancouver	English	1	1	2
Calgary	English	1	1	2
Toronto	English	1	1	2
Montreal	French	1	1	2
Halifax	English	1	1	2
Total	**--**	**5**	**5**	**10**

The focus groups were standard groups, two hours in length, with between eight (8) and ten (10) participants each. Wherever possible, remote online viewing of the groups was facilitated. All sessions were videotaped and audio taped.

Sessions began at 5:30pm and 7:30pm each evening, and participants were given an honorarium of $75 in appreciation for their time.

Research instruments

Harris/Decima designed the recruitment screeners and focus group moderation guides for this study in close consultation with the client project authority. Harris/Decima drew upon its extensive research experience to design instruments that elicit the information required to fulfill the research objectives of the study. All instruments have been drafted in English and translated into French, after being finalized and approved by the client.

The "recruitment screener" was the tool used during the process of contacting and recruiting potential participants. It is essentially a short questionnaire, which helps the recruiter explain the concept and purpose of the focus group. The screener also included questions that would ensure that individuals recruited meet the pre-established criteria for their target audience as described in the Statement of Work. Harris/Decima has taken the appropriate measures to ensure that participants are unaware of the focus group topic.

Harris/Decima designed the "moderation guide", which is the tool used by the moderator to ensure that the full range of research issues are covered in the

time allowed. The findings from the quantitative research largely guided the direction of the focus group discussions. We have incorporated our experience from conducting previous focus groups on the topic to best tailor the screener and moderation guide.

Recruitment

For all groups, we have ensured a good mix of respondents in terms of age, gender, education, and employment situation.

The recruitment process employs random sampling methodology, but may be supplemented by respondents previously recruited as potential focus group respondents, which we utilize our weekly omnibus survey for on an ongoing basis, particularly to develop sample of potential respondents in difficult to reach audiences.

All participants were screened during the recruitment process to confirm that they:

- Had not participated in a discussion group within the last six months;
- Had a sufficient command of English (or French for the Montreal group) to fully participate in the focus group sessions;
- They or their family are not employed in any of the following:
    - A marketing research firm;
    - A magazine or newspaper;
    - An advertising agency or graphic design firm;
    - A radio or television station;
    - A public relations company; or
    - Federal or provincial government.

Appendix A – Survey Questionnaire

English

Good afternoon/evening, the Government of Canada is conducting a research survey on some new technologies. My name is _____ of Harris/Decima Research, the company hired to do the survey. The survey takes about 20 minutes and is voluntary and completely confidential. Your answers will remain anonymous. May I continue? Would you prefer to do the survey in English or French?

This survey is registered with the National Survey Registration System

S2. In what year were you born? (RECORD YEAR - XXXX)

[IF REFUSED] Which of the following age groups do you fit into?

18-34	1
35-54	2
55+	3
Don't know/no answer (DO NOT READ)	9

S1. (For phone study, DO NOT READ, simply record) What is your gender?

Male	1
Female	2

Programmer note: If respondents refuse to provide their age, thank and terminate.

Note: dk is an available answer category on all questions but is unread.

1. Generally, when you hear the word technology, do you have a positive reaction, neutral reaction, or a negative reaction?

Positive	3
Neutral	2
Negative	1
Don't know/no answer (DO NOT READ)	9

2. And, when you hear the word biotechnology, do you have a positive reaction, neutral reaction, or negative reaction?

Positive	3
Neutral	2
Negative	1
Don't know/no answer (DO NOT READ)	9

3. Over the last three months, have you heard about any stories or issues involving biotechnology?

Yes	1
No	2
Don't know/no answer (DO NOT READ)	9

[Interviewer note: Please only define biotechnology if the respondent hasn't requested the definition yet.] Biotechnology is a term that encompasses a broad spectrum of scientific applications used in many sectors, such as health, natural resources, and agriculture. It involves the use of living organisms, or parts of living organisms, to provide new methods of production and make new products. Related to biotechnology are the areas of life sciences, genetic modification and genomics.

4. Would you say you are very familiar, somewhat familiar, not very familiar, or not at all familiar with biotechnology?

Very familiar	4
Somewhat familiar	3
Not very familiar	2
Not at all familiar	1
Don't know/no answer (DO NOT READ)	9

5. In general, would you say you strongly support, somewhat support, somewhat oppose or strongly oppose the use of products and processes that involve biotechnology?

Strongly support	4
Somewhat support	3
Somewhat oppose	2
Strongly oppose	1
Don't know/no answer (DO NOT READ)	9

6. Would you say that you're very familiar, somewhat familiar, not very familiar, or not at all familiar with the process by which biotechnology is regulated in Canada?

Very familiar	4
Somewhat familiar	3
Not very familiar	2
Not at all familiar	1
Don't know/no answer (DO NOT READ)	9

7. On a scale of 1-5, where 1 is not at all confident and 5 is extremely confident, where the mid-point 3 is moderately confident, how confident would you say you are in the safety and regulatory approval systems governing biotechnology?

Not at all confident	5
	4
Moderately confident	3
	2
Extremely confident	1
Don't know/no answer (DO NOT READ)	9

8. In terms of safety and regulatory approval processes for biotechnology products, do you tend to think that rules and systems in place here in Canada are very strict, somewhat strict, somewhat lax or very lax?

Very strict	4
Somewhat strict	3
Somewhat lax	2
Very lax	1
Don't know/no answer (DO NOT READ)	9

I am going to read a list of areas in which new technologies are currently developing. For each of these areas, do you think it will improve our way of life in the next 20 years, it will have no effect, or it will make things worse? (Randomize)

9. Hybrid car engine technologies
10. Computers and information technology
11. Biotechnology
12. Stem cell research
13. Nuclear energy
14. Smart phones
15. Nanotechnology (definition: creating new materials at the atomic scale)
16. Genetically modified plants, such as crops, fruits and vegetables
17. New "biofuels" like ethanol, or biomass energy

18. Genetically modified animals
19. Genetically modified fish

Improve way of life	3
No effect	2
Make things worse	1
Don't know/no answer (DO NOT READ)	9

The next part of this survey focuses on what are sometimes called bio-based products, or simply, bioproducts. Bioproducts primarily involve the use of biological material such as plants, wood, and municipal waste to produce new industrial materials like biochemicals, product packaging, house hold cleaners, and car parts. In many instances, the biological material is replacing petroleum that is traditionally used in the manufacturing of these products.

20. Would you say you are very, somewhat, not very or not at all familiar with bioproducts?

Very familiar	4
Somewhat familiar	3
Not very familiar	2
Not at all familiar	1
Don't know/no answer (DO NOT READ)	9

There are numerous ways in which bioproducts can be used. Please tell me if you strongly support, support, oppose or strongly oppose the following potential applications of these technologies. (Randomize)

Strongly support	4
support	3
oppose	2
Strongly oppose	1
Don't know/no answer (DO NOT READ)	9

21. The use of crops such as corn to produce alternative forms of transportation fuel, such as ethanol or biodiesel.

22. The development of biomaterials, that is, materials produced using biological materials such as plants. Examples of some materials now made using biological matter such as plants include food packaging, parts for cars and fibre glass.

23. The development of bioenergy in which biological materials such as trees, manure from farms and various waste products are used to generate electricity. For example, the manure from one farm can be mixed with cooking oils previously used in restaurants in order to generate electricity for hundreds of homes.

24. The development of new forms of chemicals, sometimes called biochemicals, using biological materials, such as plants, as a substitute for petroleum that is used in the production of chemicals, which create a variety of products such as plastics, solvents, clothing fibres and paints.

25. How supportive or opposed are you on the following issues: (Randomize)

Strongly support	4
support	3
oppose	2
Strongly oppose	1
Don't know/no answer (DO NOT READ)	9

a. bioproducts that are made using crops that are also a source of food?
b. biofuels that are made using crops that are also a source of food?
c. bioproducts that are made using non-food crops grown on land that is of such a poor quality it cannot be used to grow food?
d. biofuels that are made using non-food crops grown on land that is of such a poor quality it cannot be used to grow food?
e. bioproducts that are made from the residue of agricultural and feed crops?
f. biofuels that are made from the residue of agricultural and feed crops?

ROTATE THE NEXT TWO QUESTIONS, ON RISK AND BENEFIT – ALL NEED TO BE ASKED ABOUT BOTH

26. I would like to understand the extent to which you think bioproducts might benefit our society. Using a scale of 1-5, where 1 is no benefit and 5 is substantial benefit, and the mid-point 3 is moderate benefit, how beneficial do you think bioproducts will be to our society?

No benefit	1
	2
Moderate benefit	3
	4
Substantial benefit	5
Don't know/no answer (DO NOT READ)	9

27. Using the same scale, where 1 is no risk and 5 is substantial risk, with the midpoint 3 being moderate risk, how much risk do bioproducts pose for our society?

No risk	1
	2
Moderate risk	3
	4
Substantial risk	5
Don't know/no answer (DO NOT READ)	9

28. On a scale of 1-5, where 1 is not at all confident and 5 is extremely confident, where the mid-point 3 is moderately confident, how confident would you say you are in the safety and regulatory approval systems governing bioproducts?

Not at all confident	1
	2
Moderately confident	3
	4
Extremely confident	5
Don't know/no answer (DO NOT READ)	9

29. How beneficial or detrimental do you believe bioproducts are to the environment? [Interviewer note: READ LIST]

Very beneficial	5
Somewhat beneficial	4
Neither	3
Somewhat detrimental	2
Very detrimental	1
Don't know/no answer (DO NOT READ)	9

30. To what extent do you agree with the following statement: I am willing to pay more for a bioproduct than a traditional product. [Interviewer note: READ LIST]

Strongly agree	4
Agree	3
Disagree	2
Strongly disagree	1
Don't know/no answer (DO NOT READ)	9

(THE GM FISH/GM ANIMAL SECTIONS BELOW WILL BE SPLIT SAMPLE)

The next part of this survey focuses on another aspect of biotechnology, genetically modified fish.

31. Biotechnology applications are being explored in fish. Fish are being genetically modified for a number of reasons, such as to improve the growth rate of fish, or for production of drugs or cells for the treatment of human disease. These fish are created by taking DNA from one source – a different kind of fish, a different animal, a plant, or a bacterium – and putting it into a fish to give it a new characteristic or trait. In most cases, these applications are carried out in contained facilities or laboratories.

32. Would you say you are very, somewhat, not very or not at all familiar with genetic modification of fish?

Very familiar	4
Somewhat familiar	3
Not very familiar	2
Not at all familiar	1
Don't know/no answer (DO NOT READ)	9

There are numerous ways in which genetic modification of fish can be used. Please tell me if you strongly agree, agree, disagree or strongly disagree with the following potential applications of these technologies. (Randomize)

33. The development of genetically modified fish that can produce human insulin to treat diabetes. Conventional injection of insulin by type I diabetics can produce circulatory problems over time. The use of genetically engineered Tilapia cells for transplants could relieve the symptoms of diabetes without the need for insulin injection. These fish would be grown in contained laboratory facilities.

34. The development of genetically modified fish that grow faster and larger than non-GM fish, thereby potentially reducing the cost of production and costs of fish products to consumers. These fish would be grown in contained, land-based facilities.

[Interviewer note: GM is "genetically modified"]

Strongly agree	4

agree	3
disagree	2
Strongly disagree	1
Don't know/no answer (DO NOT READ)	9

ROTATE THE NEXT TWO QUESTIONS, ON RISK AND BENEFIT – ALL NEED TO BE ASKED ABOUT BOTH

35. I would like to understand the extent to which you think genetic modification of fish might benefit our society. Using a scale of 1-5, where 1 is no benefit and 5 is substantial benefit, and the mid-point 3 is moderate benefit, how beneficial do you think genetic modification of fish will be to our society?

No benefit	1
	2
Moderate benefit	3
	4
Substantial benefit	5
Don't know/no answer (DO NOT READ)	9

36. Using the same scale, where 1 is no risk and 5 is substantial risk, with the midpoint 3 being moderate risk, how much risk does genetic modification of fish pose for our society?

No risk	1
	2
Moderate risk	3
	4
Substantial risk	5
Don't know/no answer (DO NOT READ)	9

37. On a scale of 1-5, where 1 is not at all confident and 5 is extremely confident, where the mid-point 3 is moderately confident, how confident would you say you are in the safety and regulatory approval systems governing gm fish?
INTERVIEWER NOTE: GM is "genetically modified"

Not at all confident	1
	2
Moderately confident	3
	4
Extremely confident	5
Don't know/no answer (DO NOT READ)	9

38. Overall, which of the following best captures your views about the genetic modification of fish (READ LIST)
[Interviewer note: GM is "genetically modified"]

I approve the use of gm fish, as long as the usual levels of government regulation and control are in place	4
I approve of gm fish if they are more tightly controlled and regulated	3
I do not approve of gm fish except under very special circumstances	2
I do not approve of gm fish under any circumstances	1
(DO NOT READ) Don't know/Refused	9

(END OF RANDOMIZATION)

[GM ANIMALS]

The next part of this survey focuses on another aspect of biotechnology, genetically modified animals. Biotechnology applications are being explored in animals for a range of purposes.

39. Would you say you are very, somewhat, not very or not at all familiar with genetic modification of animals?

Very familiar	4
Somewhat familiar	3
Not very familiar	2
Not at all familiar	1
Don't know/no answer (DO NOT READ)	9

There are numerous ways in which genetic modification of animals can be used. Please tell me if you strongly agree, agree, disagree or strongly disagree with the following potential applications of these technologies. (Randomize)

Strongly agree	4
Agree	3
Disagree	2
Strongly disagree	1
Don't know/no answer (DO NOT READ)	9

40. (SPLIT) The development of cows that would be genetically modified to produce less fat, thereby reducing the negative health impacts of conventional beef products. / The development of cows that would be genetically modified to grow faster and larger than non-gm cows, thereby potentially reducing the cost of production for farmers and costs of meat products to consumers
[Interviewer note: GM is “genetically modified”]

41. The development of cows genetically modified to prevent an outbreak of BSE, or Mad Cow Disease

42. The development of genetically modified pigs whose manure is lower in phosphorous, thereby reducing pollution and the environmental impact of raising these animals

ROTATE THE NEXT TWO QUESTIONS, ON RISK AND BENEFIT – ALL NEED TO BE ASKED ABOUT BOTH

43. I would like to understand the extent to which you think genetic modification of animals might benefit our society/might put our society at risk. Using a scale of 1-5, where 1 is no benefit/no risk and 5 is substantial benefit/substantial risk, and the mid-point 3 is moderate benefit/moderate risk, how beneficial /how much risk do you think genetic modification of animals will be to our society?

No benefit/risk	1
	2
Moderate benefit/risk	3
	4
Substantial benefit/risk	5
Don’t know/no answer (DO NOT READ)	9

44. On a scale of 1-5, where 1 is not at all confident and 5 is extremely confident, where the mid-point 3 is moderately confident, how confident would you say you are in the safety and regulatory approval systems governing the genetic modification of animals?

Not at all confident	1
	2
Moderately confident	3
	4
Extremely confident	5
Don’t know/no answer (DO NOT READ)	9

45. Overall, which of the following best captures your views about the genetic modification of animals: [Interviewer note: GM = Genetically modified]

I approve the use of gm animals, as long as the existing levels of government regulations and controls are in place	4
I approve of gm animals if they are more tightly controlled and regulated	3
I do not approve of gm animals except under very special circumstances	2
I do not approve of gm animals under any circumstances	1
(DO NOT READ) Don't know/Refused	9

(END OF RANDOMIZATION)

Please tell me whether you strongly agree, agree, disagree, or strongly disagree with each of the following statements: (ROTATE)

53. Canada is among the world's leaders in the field of agriculture and food biotechnology research

54. Canada should be among the world's leaders in the field of agriculture and food biotechnology research

55. (SPLIT) These technologies are going to be developed somewhere in the world, so it is better that they be developed in Canada than somewhere else/I would rather these technologies be developed somewhere else in the world, so we can dedicate our resources to other things and get the benefits of the technologies when others discover them.

56. With limited land and water for growing food, increasing the production of genetically-modified crops may help deal with a potential food shortage.

57. Although there may be some unknown risks, technologies like biotechnology are a part of the future, so all we can do is make sure that its uses are as safe as possible.

Strongly agree	4
Agree	3
Disagree	2
Strongly disagree	1
Don't know/no answer (DO NOT READ)	9

(END OF ROTATION)

PHONE SURVEY DEMOGRAPHIC QUESTIONS

P1. I'd like to ask you some questions about your level of involvement in current issues, if you don't mind. For each of the following, I'd like you to tell me, with a yes or no response, whether you have done this in the last year. (Randomize)

		Yes	No
a)	Spoken at a public meeting	1	2
b)	Written an article for publication	1	2
c)	Served as an officer of a club or organization	1	2
d)	Written a letter to the editor	1	2
e)	Called a television or radio talk show	1	2
f)	Served as an officer of a non-governmental organization, such as a charity or foundation?	1	2
g)	Written to an elected representative?	1	2
h)	Been a member of or worked for a political party?	1	2
i)	Expressed your views on an important issue through a website or blog?	1	2
j)	Been a member of a community service organization	1	2

P2. Which of the following diplomas or degrees have you completed? (READ LIST)

None	1
High School diploma or equivalent	2
Registered Apprenticeship or other trades certificate or diploma	3
College, CEGEP or other non-university certificate or diploma	4
University degree, certificate or diploma	5
(DO NOT READ) Refused	9

P3. What language do you speak most often at home? [READ LIST - ACCEPT UP TO TWO RESPONSES]

English	1
French	2
Other [DO NOT SPECIFY])	8
[DO NOT READ] Don't know/ Refused	9

P4. Which of the following categories best describes your current employment status? Are you [READ LIST – ACCEPT ONE ANSWER ONLY]

Working full-time, that is, 35 or more hours per week	1
Working part-time, that is, less than 35 hours per week	2
Self-employed	3
Unemployed, but looking for work	4
A student attending school full-time	5
Retired	6
Not in the workforce [FULL-TIME HOMEMAKER, UNEMPLOYED, NOT LOOKING FOR WORK]	7
[DO NOT READ] [IF VOLUNTEERED: Other -- DO NOT SPECIFY]	8
(DO NOT READ) Refused	9

P5. Which of the following categories best describes your total household income? That is, the total income of all persons in your household combined, before taxes [READ LIST]?

Under $20,000	1
$20,000 to just under $ 40,000	2
$40,000 to just under $ 60,000	3
$60,000 to just under $ 80,000	4
$80,000 to just under $100,000	5
$100,000 to just under $150,000	6
$150,000 and above	7
(DO NOT READ) Refused	9

P6. Which of the following descriptions best describes your household:

One person, living alone	1
Married or common law, no children	2
Married or common law with children under 18 living at home	3
Married or common law with children that have moved out of the home	4
Living with a group of unrelated individuals	5
Other	8
Don’t know/No answer (DO NOT READ)	9

P7. What is your postal code?

_____	1
Don’t know/no answer (DO NOT READ)	9

P7a. [IF REFUSE] Would you be willing to provide the first 3 characters of your postal code?

_____	1
Don't know/no answer (DO NOT READ)	9

P8. Please indicate which of the following best describes where you live.

Near the center of a large city	1
In the suburbs of a large city	2
In a small city or large town	3
In a small town, or village	4
In a rural area, or remote village	5
Don't know / No answer	9

(Precode) Language of interview

ONLINE SURVEY DEMOGRAPHIC QUESTIONS

O1. For each of the following, please indicate, with a yes or no response, whether you have done this in the last year.

		Yes	**No**
a)	Spoken at a public meeting	1	2
b)	Written an article for publication	1	2
c)	Served as an officer of a club or organization	1	2
d)	Written a letter to the editor	1	2
e)	Called a television or radio talk show	1	2
f)	Served as an officer of a non-governmental organization, such as a charity or foundation?	1	2
g)	Written to an elected representative?	1	2
h)	Been a member of or worked for a political party?	1	2
i)	Expressed your views on an important issue through a website or blog?	1	2
j)	Been a member of a community service organization	1	2

O2. Which of the following diplomas or degrees have you completed?

None	1
High School diploma or equivalent	2
Registered Apprenticeship or other trades certificate or diploma	3
College, CEGEP or other non-university certificate or diploma	4

University degree, certificate or diploma	5
Don't know/Refused	9

O3. What language do you speak most often at home? [ACCEPT UP TO TWO RESPONSES]

English	1
French	2
Other [DO NOT SPECIFY])	8
Don't know/ Refused	9

O4. Which of the following categories best describes your current employment status? Are you [ACCEPT ONE ANSWER ONLY]

Working full-time, that is, 35 or more hours per week	1
Working part-time, that is, less than 35 hours per week	2
Self-employed	3
Unemployed, but looking for work	4
A student attending school full-time	5
Retired	6
Not in the workforce [FULL-TIME HOMEMAKER, UNEMPLOYED, NOT LOOKING FOR WORK]	7
Other [DO NOT SPECIFY]	8
Don't know/ Refused	9

O5. Which of the following categories best describes your total household income? That is, the total income of all persons in your household combined, before taxes [READ LIST]?

Under $20,000	1
$20,000 to just under $ 40,000	2
$40,000 to just under $ 60,000	3
$60,000 to just under $ 80,000	4
$80,000 to just under $100,000	5
$100,000 to just under $150,000	6
$150,000 and above	7
Don't know/ Refused	9

O6. Which of the following descriptions best describes your household:

One person, living alone	1
Married or common law, no children	2
Married or common law with children under 18 living at home	3
Married or common law with children that have moved out	4

of the home	
Living with a group of unrelated individuals	5
Don't know/No answer (DO NOT READ)	9

O7. What is your postal code?

_____	1
Don't know/no answer (DO NOT READ)	9

O7a. [IF REFUSE] Would you be willing to provide the first 3 characters of your postal code?

_____	1
Don't know/no answer (DO NOT READ)	9

O8. Please indicate which of the following best describes where you live.

Near the center of a large city	1
In the suburbs of a large city	2
In a small city or large town	3
In a small town, or village	4
In a rural area, or remote village	5
Don't know / No answer	9

(Precode) Language of interview

French

AAFC Biotechnology Survey

Winter 2011

Draft

Bonjour/Bonsoir. Le gouvernement du Canada effectue un sondage de recherche sur certaines nouvelles technologies. Je m'appelle _____ et je vous téléphone de Harris/Décima, l'entreprise mandatée pour mener le sondage. Le sondage est entièrement confidentiel et dure environ 20 minutes. Votre participation est volontaire et nous préserverons l'anonymat de vos réponses. Puis-je continuer? Préférez-vous répondre au sondage en français ou en anglais?

Le sondage est enregistré dans le système national d'enregistrement des sondages.

S2. Quelle est votre année de naissance? (INSCRIVEZ L'ANNÉE - XXXX)

[IF REFUSED] Auquel des groupes d'âge suivants appartenez-vous?

18-34		1
35-54		2
55+		3
Ne sait pas/Pas de réponse	[NE LISEZ PAS]	9

S1. (Pour le sondage téléphonique, NE LISEZ PAS, inscrivez tout simplement la réponse) Êtes-vous…?

Un homme	1
Une femme	2

Note : Le choix de réponses « Ne sait pas » est offert à toutes les questions, mais il ne faut pas lire ce choix.

1. De manière générale, lorsque vous entendez le mot technologie, avez-vous une réaction positive, neutre ou négative?

Positive		1
Neutre		2
Négative		3
Ne sait pas/Pas de réponse	[NE LISEZ PAS]	9

2. Et lorsque vous entendez le mot biotechnologie, avez-vous une réaction positive, neutre ou négative?

Positive		1
Neutre		2
Négative		3
Ne sait pas/Pas de réponse	[NE LISEZ PAS]	9

3. Au cours des trois derniers mois, avez-vous entendu des histoires ou quelque chose impliquant la biotechnologie?

Oui		1
Non		2
Ne sait pas/Pas de réponse	[NE LISEZ PAS]	9

Note à l'intervieweur : Donnez la définition de biotechnologie uniquement si le répondant ne vous l'a pas déjà demandée. La biotechnologie est un terme général qui couvre un large éventail d'applications scientifiques de plusieurs secteurs comme la santé, les ressources naturelles et l´agriculture. Elle implique l´utilisation d´organismes vivants, ou des parties d´organismes vivants, afin de fournir de nouvelles méthodes de production et de concevoir de nouveaux produits. La biotechnologie est généralement associée aux sciences de la vie, aux modifications génétiques et à la génomique.

4. Diriez-vous que la biotechnologie vous est très familière, plutôt familière, pas très familière ou pas du tout familière?

Très familière		4
Plutôt familière		3
Pas très familière		2
Pas du tout familière		1
Ne sait pas/Pas de réponse	[NE LISEZ PAS]	9

5. De manière générale, êtes-vous fortement pour, plutôt pour, plutôt contre ou fortement contre l'utilisation de produits ou de procédés qui font appel à la biotechnologie?

Fortement pour		4
Plutôt pour		3
Plutôt contre		2
Fortement contre		1
Ne sait pas/Pas de réponse	[NE LISEZ PAS]	9

6. Diriez-vous que le processus de réglementation de la biotechnologie en vigueur au Canada vous est très familier, plutôt familier, pas très familier ou pas du tout familier?

Très familier		4
Plutôt familier		3
Pas très familier		2
Pas du tout familier		1
Ne sait pas/Pas de réponse	[NE LISEZ PAS]	9

7. Sur une échelle de 1 à 5 où 1 correspond à « pas du tout confiance », 5 à « extrêmement confiance » et 3 à « plus ou moins confiance », quelle confiance avez-vous dans les systèmes d'approbation réglementaire et de sécurité auxquels est assujettie la biotechnologie?

Pas du tout confiance	5

		4
Plus ou moins confiance		3
		2
Extrêmement confiance		1
Ne sait pas/Pas de réponse	[NE LISEZ PAS]	9

8. Concernant les processus d'approbation réglementaire et de sécurité pour les produits issus de la biotechnologie, croyez-vous que, de manière générale, la réglementation et les systèmes en place au Canada sont très stricts, plutôt stricts, plutôt laxistes ou très laxistes?

Très stricts		4
Plutôt stricts		3
Plutôt laxistes		2
Très laxistes		1
Ne sait pas/Pas de réponse	[NE LISEZ PAS]	9

Je vais vous lire une liste de domaines dans lesquels on assiste à l'émergence de nouvelles technologies. Dans chacun de ces domaines, veuillez me dire si vous croyez que les technologies en émergence auront un effet positif, aucun effet ou un effet négatif sur notre mode de vie au cours des 20 prochaines années. (Présentez de façon aléatoire)

9. Les technologies de moteurs hybrides
10. L'informatique et les technologies de l'information
11. La biotechnologie
12. La recherche sur les cellules souches
13. L'énergie nucléaire
14. Les téléphones intelligents
15. La nanotechnologie (définition : création de nouveaux matériaux à l'échelle atomique)
16. Les végétaux génétiquement modifiés, par exemple les cultures, les fruits et les légumes
17. Les nouveaux « biocombustibles » comme l'éthanol et l'énergie de biomasse
18. Les animaux génétiquement modifiés
19. Les poissons génétiquement modifiés

Effet positif		3
Aucun effet		2
Effet négatif		1
Ne sait pas/Pas de réponse	[NE LISEZ PAS]	9

La prochaine partie du sondage porte sur ce qu'on appelle parfois produits bio-sourcés ou, tout simplement, bioproduits. Les bioproduits font principalement appel à des matières biologiques comme des végétaux, du bois et des déchets municipaux pour produire de nouveaux matériaux industriels tels que des produits biochimiques, des emballages de produits, des nettoyants domestiques et des pièces d'auto. Dans plusieurs cas, les matières biologiques remplacent le pétrole auquel on a traditionnellement recours pour fabriquer ces produits.

20. Diriez-vous que les bioproduits vous sont très familiers, plutôt familiers, pas très familiers ou pas du tout familiers?

Très familier		4
Plutôt familier		3
Pas très familier		2
Pas du tout familier		1
Ne sait pas/Pas de réponse	[NE LISEZ PAS]	9

Il existe de nombreux débouchés pour les bioproduits. Veuillez me dire si vous êtes fortement en accord, plutôt en accord, plutôt en désaccord ou fortement en désaccord avec ces utilisations éventuelles. (Présentez de façon aléatoire)

Fortement en accord		4
En accord		3
En désaccord		2
Fortement en désaccord		1
Ne sait pas/Pas de réponse	[NE LISEZ PAS]	9

21. L'utilisation de cultures comme le maïs pour produire de nouvelles formes de carburant de transport comme l'éthanol ou le biodiésel.

22. Le développement de biomatériaux, c'est-à-dire de matériaux produits à partir de matières biologiques comme les végétaux. Les emballages de produits alimentaires, les pièces d'auto et la fibre de verre sont quelques exemples de matériaux actuellement produits à partir de matières biologiques comme les végétaux.

23. Le développement de bioénergie où l'électricité est générée à partir de matières biologiques comme des arbres, du fumier de ferme et des déchets. Par exemple, du fumier agricole peut être mélangé à des huiles de cuisson récupérées dans des restaurants afin de générer de l'électricité pour des centaines d'habitations.

24. Le développement de nouvelles formes de produits chimiques, parfois appelés produits biochimiques, en utilisant des matières biologiques, comme des végétaux, pour remplacer le pétrole dans la production de produits chimiques. Cela permet de créer divers produits comme des plastiques, des solvants, des fibres textiles et des peintures.

25. Dans quelle mesure êtes-vous pour ou contre les développements suivants :

Fortement en accord		4
En accord		3
En désaccord		2
Fortement en désaccord		1
Ne sait pas/Pas de réponse	[NE LISEZ PAS]	9

a. les bioproduits fabriqués à partir de cultures qui sont également une source de nourriture?
b. les biocarburants fabriqués à partir de cultures qui sont également une source de nourriture?
c. les bioproduits fabriqués à partir de cultures non alimentaires cultivées sur des terres de si mauvaise qualité qu'elles ne peuvent servir à faire pousser des aliments?
d. les biocarburants fabriqués à partir de cultures non alimentaires qui sont cultivées sur des terres de si mauvaise qualité qu'elles ne peuvent servir à faire pousser des aliments?
e. les bioproduits fabriqués à partir des résidus de cultures agricoles et fourragères?
f. les biocarburants fabriqués à partir des résidus de cultures agricoles et fourragères?

ROTATE THE NEXT TWO QUESTIONS, ON RISK AND BENEFIT – ALL NEED TO BE ASKED ABOUT BOTH

26. J'aimerais savoir dans quelle mesure vous pensez que les bioproduits pourraient être avantageux/risqués pour notre société. Sur une échelle de 1 à 5 où 1 correspond à « aucun avantage/aucun risque », 5 à « un avantage considérable/un risque considérable » et 3 à « un avantage modéré/un risque modéré », dans quelle mesure, les bioproduits seront-ils avantageux/risqués pour notre société, selon vous?

Aucun avantage	1
	2
Un avantage modéré	3
	4
Un avantage considérable	5

Ne sait pas/Pas de réponse	[NE LISEZ PAS]	9

27. Sur la même échelle où 1 correspond à « aucun avantage/aucun risque », 5 à « un avantage considérable/un risque considérable » et 3 à « un avantage modéré/un risque modéré », dans quelle mesure les bioproduits comportent-ils des risques/des avantages pour notre société?

Aucun risque		1
		2
Un risque modéré		3
		4
Un risque considérable		5
Ne sait pas/Pas de réponse	[NE LISEZ PAS]	9

28. Sur une échelle de 1 à 5 où 1 correspond à « pas du tout confiance », 5 à « très confiance » et 3 à « plus ou moins confiance », quelle confiance avez-vous dans les systèmes d'approbation réglementaire et de sécurité auxquels sont assujettis les bioproduits?

Pas du tout confiance		1
		2
Plus ou moins confiance		3
		4
Extrêmement confiance		5
Ne sait pas/Pas de réponse	[NE LISEZ PAS]	9

29. Dans quelle mesure croyez-vous que les bioproduits sont bénéfiques ou dommageables pour l'environnement?

Très bénéfiques		5
Plutôt bénéfiques		4
Ni bénéfiques ni dommageables		3
Plutôt dommageables		2
Très dommageables		1
Ne sait pas/Pas de réponse	[NE LISEZ PAS]	9

30. Dans quelle mesure êtes-vous en accord avec l'énoncé suivant : Je suis prêt(e) à payer plus pour un bioproduit que pour un produit traditionnel. (LISEZ LA LISTE)

Fortement en accord	4
En accord	3
En désaccord	2
Fortement en désaccord	1

Ne sait pas/Pas de réponse	[NE LISEZ PAS]	9

(DIVISEZ L'ÉCHANTILLON ENTRE LES SECTIONS POISSONS GÉNÉTIQUEMENT MODIFIÉS ET ANIMAUX GÉNÉTIQUEMENT MODIFIÉS.)

La prochaine partie du sondage portera sur un autre aspect de la biotechnologie : le poisson génétiquement modifié.

31. La biotechnologie a de nombreuses applications possibles, notamment dans l'élevage de poissons. Il existe de nombreuses raisons pour génétiquement modifier les poissons, notamment l'amélioration du taux de croissance des poissons et la production de médicaments ou de cellules utilisés dans le traitement de maladies humaines. Ces poissons sont créés en insérant un gène d'une autre variété de poissons, d'un autre animal, d'une plante ou d'une bactérie dans l'ADN du poisson pour lui donner une nouvelle caractéristique ou un nouveau trait. Dans la plupart des cas, ces applications se déroulent en environnement contrôlé ou en laboratoire.

32. Diriez-vous que la modification génétique des poissons vous est très familière, plutôt familière, pas très familière ou pas du tout familière?

Très familière		4
Plutôt familière		3
Pas très familière		2
Pas du tout familière		1
Ne sait pas/Pas de réponse	[NE LISEZ PAS]	9

Il existe de nombreux débouchés pour la modification génétique de poissons. Veuillez me dire si vous êtes fortement en accord, plutôt en accord, plutôt en désaccord ou fortement en désaccord avec ces applications éventuelles. (Présentez de façon aléatoire)

33. Le développement de poissons génétiquement modifiés dans le but de produire de l'insuline pour traiter le diabète. L'injection conventionnelle d'insuline chez les personnes souffrant de diabète de type I peut entraîner des problèmes circulatoires. La transplantation de cellules de tilapia génétiquement modifiées pourrait contrôler les symptômes du diabète sans nécessiter l'injection d'insuline. Ces poissons seraient élevés en environnement contrôlé ou en laboratoire.

34. Le développement de poissons génétiquement modifiés dont le taux de croissance serait plus rapide et qui seraient plus gros que les poissons non génétiquement modifiés, ce qui pourrait éventuellement réduire les coûts de production et le coût du poisson pour le consommateur. Ces poissons seraient élevés dans des installations étanches sur la terre ferme.

Fortement en accord		4
En accord		3
En désaccord		2
Fortement en désaccord		1
Ne sait pas/Pas de réponse	[NE LISEZ PAS]	9

ROTATE THE NEXT TWO QUESTIONS, ON RISK AND BENEFIT – ALL NEED TO BE ASKED ABOUT BOTH

35. J'aimerais savoir dans quelle mesure vous pensez que la modification génétique des poissons pourrait être avantageuse/risquée pour notre société. Sur une échelle de 1 à 5 où 1 correspond à « aucun avantage/aucun risque », 5 à « un avantage considérable/un risque considérable » et 3 à « un avantage modéré/un risque modéré », dans quelle mesure, selon vous, la modification génétique des poissons serait-elle avantageuse/risquée pour notre société?

Aucun avantage		1
		2
Un avantage modéré		3
		4
Un avantage considérable		5
Ne sait pas/Pas de réponse	[NE LISEZ PAS]	9

36. Sur la même échelle où 1 correspond à « aucun avantage/aucun risque », 5 à « un avantage considérable/un risque considérable » et 3 à « un avantage modéré/un risque modéré », dans quelle mesure la modification génétique des poissons comporte-t-elle des risques/des avantages pour notre société?

Aucun risque		1
		2
Un risque modéré		3
		4
Un risque considérable		5
Ne sait pas/Pas de réponse	[NE LISEZ PAS]	9

37. Sur une échelle de 1 à 5 où 1 correspond à « pas du tout confiance », 5 à « extrêmement confiance » et 3 à « plus ou moins confiance », quelle confiance avez-vous dans les systèmes d'approbation réglementaire et de sécurité auxquels sont assujettis les poissons génétiquement modifiés?

Pas du tout confiance	1

		2
Plus ou moins confiance		3
		4
Extrêmement confiance		5
Ne sait pas/Pas de réponse	[NE LISEZ PAS]	9

38. Dans l'ensemble, lequel de ces énoncés correspond le mieux à votre point de vue à l'égard des poissons génétiquement modifiés?

J'approuve l'utilisation de poissons génétiquement modifiés, pourvu que la réglementation et les contrôles gouvernementaux usuels soient en place.		4
J'approuve la modification génétique des poissons, pourvu qu'elle soit mieux contrôlée et réglementée.		3
Je n'approuve pas la modification génétique des poissons à moins de circonstances très particulières.		2
Je n'approuve pas la modification génétique des poissons sous aucun prétexte.		1
Ne sait pas/Pas de réponse	[NE LISEZ PAS]	9

(FIN DE LA PRÉSENTATION ALÉATOIRE)

[ANIMAUX GÉNÉTIQUEMENT MODIFIÉS]

La prochaine section du sondage porte sur un autre aspect de la biotechnologie : les animaux génétiquement modifiés. La modification génétique d'animaux pourrait avoir de nombreuses applications.

39. Diriez-vous que la modification génétique d'animaux vous est très familière, plutôt familière, pas très familière ou pas du tout familière?

Très familière		1
Plutôt familière		2
Pas très familière		3
Pas du tout familière		4
Ne sait pas/Pas de réponse	[NE LISEZ PAS]	9

Il existe de nombreux débouchés pour la modification génétique d'animaux. Veuillez me dire si vous êtes fortement en accord, plutôt en accord, plutôt en désaccord ou fortement en désaccord avec ces applications éventuelles. (Présentez de façon aléatoire)

Fortement en accord	4

Plutôt en accord	3
Plutôt en désaccord	2
Fortement en désaccord	1
Don't know/no answer (DO NOT READ)	9

40. (DIVISEZ L'ÉCHANTILLON) Le développement de vaches génétiquement modifiées dont le taux de gras serait plus faible, réduisant ainsi l'impact négatif des produits du bœuf conventionnel sur la santé. /Le développement de vaches génétiquement modifiées dont le taux de croissance serait plus rapide et qui seraient plus grosses que les vaches non génétiquement modifiées, ce qui pourrait éventuellement réduire les coûts de production pour les agriculteurs et le coût de la viande pour le consommateur.

41. Le développement de vaches génétiquement modifiées pour prévenir une épidémie d'EBS ou maladie de la vache folle.

42. Le développement de cochons génétiquement modifiés dont le fumier contiendrait moins de phosphore, réduisant ainsi la pollution et l'impact environnemental de l'élevage de ces animaux.

ROTATE THE NEXT TWO QUESTIONS, ON RISK AND BENEFIT – ALL NEED TO BE ASKED ABOUT BOTH

43. J'aimerais savoir dans quelle mesure vous pensez que la modification génétique des animaux pourrait être avantageuse/risquée pour notre société. Sur une échelle de 1 à 5 où 1 correspond à « aucun avantage/aucun risque », 5 à « un avantage considérable/un risque considérable » et 3 à « un avantage modéré/un risque modéré », dans quelle mesure, selon vous, la modification génétique des animaux serait-elle avantageuse/risquée pour notre société?

Aucun avantage/Aucun risque	1
	2
Un avantage modéré/Un risque modéré	3
	4
Un avantage considérable/Un risque considérable	5
Ne sait pas/Pas de réponse [NE LISEZ PAS]	9

44. Sur une échelle de 1 à 5 où 1 correspond à « pas du tout confiance », 5 à « extrêmement confiance » et 3 à « plus ou moins confiance », quelle

confiance avez-vous dans les systèmes d'approbation réglementaire et de sécurité auxquels est assujettie la modification génétique des animaux?

Pas du tout confiance		1
		2
Plus ou moins confiance		3
		4
Extrêmement confiance		5
Ne sait pas/Pas de réponse	[NE LISEZ PAS]	9

45. Dans l'ensemble, lequel de ces énoncés correspond le mieux à votre point de vue à l'égard de la modification génétique des animaux?

J'approuve la modification génétique d'animaux, pourvu que la réglementation et les contrôles gouvernementaux usuels soient en place.	4
J'approuve la modification génétique d'animaux, pourvu qu'elle soit mieux contrôlée et réglementée.	3
Je n'approuve pas la modification génétique d'animaux à moins de circonstances très particulières.	2
Je n'approuve pas la modification génétique des animaux sous aucun prétexte.	1
(DO NOT READ) Don't know/Refused	9

(FIN DE LA PRÉSENTATION ALÉATOIRE)

Veuillez me dire si vous êtes fortement en accord, en accord, en désaccord ou fortement en désaccord avec les énoncés suivants : (PRÉSENTEZ DE FAÇON ALÉATOIRE)

53. Le Canada est parmi les chefs de file mondiaux dans le domaine de la recherche agricole et de la biotechnologie alimentaire

54. Le Canada devrait être parmi les chefs de file mondiaux dans le domaine de la recherche agricole et de la biotechnologie alimentaire

55. (DIVISEZ L'ÉCHANTILLON) Ces technologies seront développées quelque part dans le monde de toute façon, mieux vaut qu'elles le soient au Canada qu'ailleurs/J'aimerais mieux voir ces technologies développées ailleurs dans le monde afin que nous puissions consacrer nos ressources à chose et profiter de ces technologies une fois qu'elles auront été mises au point par d'autres.

56. Compte tenu de la disponibilité restreinte de terres cultivables et d'eau, l'augmentation de la production de cultures génétiquement modifiées pourrait aider à faire face à une pénurie alimentaire éventuelle.

57. Bien qu'elles comportent des risques inconnus, les technologies, comme la biotechnologie, font partie intégrante de l'avenir, alors tout ce que nous pouvons faire c'est de nous assurer que leur utilisation soit aussi sécuritaire que possible.

Fortement en accord		1
Plutôt en accord		2
Plutôt en désaccord		3
Fortement en désaccord		4
Ne sait pas/Pas de réponse	[NE LISEZ PAS]	9

(FIN DE LA PRÉSENTATION ALÉATOIRE)

PHONE SURVEY DEMOGRAPHIC QUESTIONS

P1. J'aimerais vous poser des questions à propos de votre degré d'implication dans les enjeux d'actualité. Pour chacune des activités suivantes, j'aimerais que vous me disiez, en répondant par oui ou non, si vous l'avez faite au cours de la dernière année.

	Oui	**Non**
a) Parlé lors d'une assemblée publique	1	2
b) Écrit un article pour publication	1	2
c) Été administrateur(trice) d'une association ou d'une organisation	1	2
d) Écrit une lettre à une tribune libre	1	2
e) Téléphoné lors d'une ligne ouverte à la télévision ou à la radio	1	2
f) Été administrateur(trice) d'une organisation non gouvernementale, par exemple un organisme de bienfaisance ou une fondation	1	2
g) Écrit à un(e) élu(e)	1	2
h) Été membre d'un parti politique ou travaillé pour un parti politique	1	2
i) Exprimé votre point de vue concernant des enjeux Importants sur un site Web ou un blogue	1	2
j) Été membre d'un organisme communautaire	1	2

P2. Lesquels des diplômes ou grades suivants avez-vous obtenus? (LISEZ LA LISTE)

Aucun	1
Diplôme ou attestation d'études secondaires	2
Apprenti enregistré ou autre certificat ou diplôme d'une école de métiers	3
Certificat ou diplôme d'un collège, d'un cégep ou d'un autre établissement non universitaire	4
Certificat ou diplôme d'un établissement universitaire	5
(NE LISEZ PAS) Refuse	9

P3. Quelle langue parlez-vous le plus souvent à la maison? [LISEZ LA LISTE – ACCEPTEZ JUSQU'À DEUX RÉPONSES]

Anglais	1
Français	2
Autre	3
[NE LISEZ PAS] Ne sait pas/Refuse	9

P4. Laquelle des catégories suivantes décrit le mieux votre situation d'emploi actuelle? Êtes-vous…? [LISEZ LA LISTE – ACCEPTEZ UNE RÉPONSE SEULEMENT]

Travailleur(euse) à temps plein, c'est-à-dire 35 heures ou plus par semaine	1
Travailleur(euse) à temps partiel, c'est-à-dire moins de 35 heures par semaine	2
Travailleur(euse) autonome	3
Sans emploi, mais à la recherche d'un emploi	4
Étudiant(e) à temps plein	5
Retraité(e)	6
Pas sur le marché du travail (PERSONNE À LA MAISON À TEMPS PLEIN, SANS EMPLOI ET PAS À LA RECHERCHE D'UN EMPLOI)	7
[NE LISEZ PAS] [SI DIT SPONTANÉMENT : Autre – NE PRÉCISEZ PAS]	8
(NE LISEZ PAS) Refuse	9

P5. Laquelle des catégories suivantes décrit le mieux le revenu total de votre ménage, c'est-à-dire le total des revenus avant impôts de toutes les personnes habitant sous votre toit [LISEZ LA LISTE]?

Moins de 20 000 $	1
De 20 000 $ à moins de 40 000 $	2

De 40 000 $ à moins de 60 000 $	3
De 60 000 $ à moins de 80 000 $	4
De 80 000 $ à moins de 100 000 $	5
De 100 000 $ à moins de 150 000 $	6
150 000 $ et plus	7
(NE LISEZ PAS) Refuse	9

P6. Laquelle des options suivantes décrit le mieux votre ménage : (Une personne vivant seule; Un couple marié ou en union libre, sans enfant; Un couple marié avec des enfants de moins de 18 ans à la maison; Un couple marié dont les enfants ont quitté la maison; Un groupe de personnes sans lien de parenté) Ne sait pas/Refuse

Une personne vivant seule	1
Un couple marié ou en union libre, sans enfant	2
Un couple marié ou en union libre avec des enfants de moins de 18 ans à la maison	3
Un couple marié ou en union libre dont les enfants ont quitté la maison	4
Un groupe de personnes sans lien de parenté	5
Autre	8
Ne sait pas/Refuse (NE LISEZ PAS)	9

P7. Quel est votre code postal?

_____	1
Ne sait pas/Refuse (NE LISEZ PAS)	9

P7a. Quels sont les 3 premiers caractères de votre code postal?

_____	1
Ne sait pas/Refuse (NE LISEZ PAS)	9

P8. Laquelle des options suivantes décrit le mieux l'endroit où vous habitez?

Près du centre d'une grande ville	1
Dans la banlieue d'une grande ville	2
Dans une ville ou un grand village	3
Dans une petite ville ou un village	4
Dans une région rurale ou une région éloignée	5
Je ne sais pas/Pas de réponse	9

(Precode) Langue du sondage

ONLINE SURVEY DEMOGRAPHIC QUESTIONS

O1. Veuillez indiquer si oui ou non vous avez fait chacune des activités suivantes au cours de la dernière année.

		Oui	Non
a)	Parlé lors d'une assemblée publique	1	2
b)	Écrit un article pour publication	1	2
c)	Été administrateur(trice) d'une association ou d'une organisation	1	2
d)	Écrit une lettre à une tribune libre	1	2
e)	Téléphoné lors d'une ligne ouverte à la télévision ou à la radio	1	2
f)	Été administrateur(trice) d'une organisation non gouvernementale, par exemple un organisme de bienfaisance ou une fondation	1	2
g)	Écrit à un(e) élu(e)	1	2
h)	Été membre d'un parti politique ou travaillé pour un parti politique	1	2
i)	Exprimé votre point de vue concernant des enjeux Importants sur un site Web ou un blogue	1	2
j)	Été membre d'un organisme communautaire	1	2

O2. Lesquels des diplômes ou grades suivants avez-vous obtenus?

Aucun	1
Diplôme ou attestation d'études secondaires	2
Apprenti enregistré ou autre certificat ou diplôme d'une école de métiers	3
Certificat ou diplôme d'un collège, d'un cégep ou d'un autre établissement non universitaire	4
Certificat ou diplôme d'un établissement universitaire	5
Refuse	9

O3. Quelle langue parlez-vous le plus souvent à la maison? [ACCEPTEZ JUSQU'À DEUX RÉPONSES]

Anglais	1
Français	2
Autre	3
Ne sait pas/Refuse	9

O4. Laquelle des catégories suivantes décrit le mieux votre situation d'emploi actuelle? Êtes-vous…? [ACCEPTEZ UNE RÉPONSE SEULEMENT]

Travailleur(euse) à temps plein, c'est-à-dire 35 heures ou plus par semaine	1
Travailleur(euse) à temps partiel, c'est-à-dire moins de 35 heures par semaine	2
Travailleur(euse) autonome	3
Sans emploi, mais à la recherche d'un emploi	4
Étudiant(e) à temps plein	5
Retraité(e)	6
Pas sur le marché du travail (PERSONNE À LA MAISON À TEMPS PLEIN, SANS EMPLOI ET PAS À LA RECHERCHE D'UN EMPLOI)	7
Autre [NE PRÉCISEZ PAS]	8
Refuse	9

O5. Laquelle des catégories suivantes décrit le mieux le revenu total de votre ménage, c'est-à-dire le total des revenus avant impôts de toutes les personnes habitant sous votre toit [LISEZ LA LISTE]?

Moins de 20 000 $	1
De 20 000 $ à moins de 40 000 $	2
De 40 000 $ à moins de 60 000 $	3
De 60 000 $ à moins de 80 000 $	4
De 80 000 $ à moins de 100 000 $	5
De 100 000 $ à moins de 150 000 $	6
150 000 $ et plus	7
Refuse	9

O6. Laquelle des options suivantes décrit le mieux votre ménage : (Une personne vivant seule; Un couple marié ou en union libre, sans enfant; Un couple marié avec des enfants de moins de 18 ans à la maison; Un couple marié dont les enfants ont quitté la maison; Un groupe de personnes sans lien de parenté) Je ne sais pas/Je préfère ne pas répondre

Une personne vivant seule	1
Un couple marié ou en union libre, sans enfant	2
Un couple marié ou en union libre avec des enfants de moins de 18 ans à la maison	3
Un couple marié ou en union libre dont les enfants ont quitté la maison	4
Un groupe de personnes sans lien de parenté	5
Autre	8
Ne sait pas/Refuse	9

O7. Quel est votre code postal?

O8. Laquelle des options suivantes décrit le mieux l'endroit où vous habitez?

Près du centre d'une grande ville	1
Dans la banlieue d'une grande ville	2
Dans une ville ou un grand village	3
Dans une petite ville ou un village	4
Dans une région rurale ou une région éloignée	5
Je ne sais pas/Pas de réponse	9

(Precode) Langue du sondage

Appendix B – Focus Group Moderator Guide

English

2011 Emerging Technologies Research

Focus Group Moderator's Guide

Final March 14 2011

Warm-up

5 MINUTES

The moderator will take a few minutes to go around the table and ask respondents to introduce themselves, and outline a few ground rules: want to ensure that people share their views openly, let everyone participate, want people to talk about their views, not "other people's views", ensure that we don't want people to "debate" each other – everyone's views are valid, there are no right or wrong answers.

The moderator will also point out that there is a one-way mirror, observers in the back, and audio and video taping, but ensure that all discussion is confidential.

Introduction

20 MINUTES

New technologies/Biotechnology

Tonight we are going to talk about new technologies.

- What are some of the newest technologies that are changing our world, the things we do, the treatments for our health, the products we use?
- Have you heard of the word biotechnology?
- Let's start with a little exercise. I'd like you to write down up to five words that you think of what you hear the word "biotechnology." Let's do this exercise first in silence. Then I'll ask you to share what you came up with.
- Why did you choose those words?
- What does it mean? What does it encompass?

- Is it a subject you know a lot about, a little about, or not much about?

Now I am going to read you the definition of biotechnology

Definition: Biotechnology is a term that encompasses a broad spectrum of scientific applications used in many sectors, such as health, natural resources, and agriculture. It involves the use of living organisms, or parts of living organisms, to provide new methods of production and make new products. Related to biotechnology are the areas of life sciences, genetic modification and genomics.

- Biotechnology has applications in a number of fields. Can you recall any that you have heard of?

Regulations

- Who do you think regulates biotechnology applications and products in Canada?
- How **knowledgeable** would you say you are in the safety and regulatory approval systems governing biotechnology? Why do you say that?
- How **confident** would you say you are in the safety and regulatory approval systems governing biotechnology? Why do you say that?
- Do you think our regulations for these applications and products are relatively stringent or relatively lax? Why do you say that?
- Do you feel that Canada is better, about the same, or worse than other countries in terms of the safety and regulatory approval systems? Why do you say that?

    - (Time permitting and if earlier answers seem to indicate this direction could be pursued): is confidence in the regulatory system lower or higher than in the past? and why?

Module: BioProducts
20 MINUTES

Non-food uses
I would like to talk to you for a few minutes about a topic called bioproducts.

- Have you heard of something called bioproducts? Bio-Environmental Products? As it relates to new forms of energy? What do you know about it?

Bioproducts primarily involve the use of plants for non-food uses, uses that range from development of new forms of energy, like ethanol and biodiesel, to biochemicals and biomaterials like bioplastic.

This kind of technology is evolving in many different ways.

- Would you say you are very, somewhat, not very or not at all familiar with bioproducts?

There are numerous ways in which bioproducts can be developed and used. Please tell me if you strongly agree, agree, disagree or strongly disagree with the following potential applications of these technologies, and why you express that point of view.

1. The use of biological materials, such as crops, to produce alternative forms of transportation fuel, such as ethanol or biodiesel and the use of trees, manure from farms, and municipal waste to produce bioenergy. For example, the manure from one farm can be mixed with cooking oils previously used in restaurants in order to generate electricity for hundreds of homes.

2. The development of biomaterials, that is materials produced using biological materials such as plants. Examples of some materials now made using biological matter such as plants include construction materials and parts for cars (note to moderator – biomaterials parts are generally used in car interiors).

3. The development of new forms of chemicals, sometimes called biochemicals, using biological materials, such as plants, as a substitute for petroleum that is used in the production of chemicals.

- I would like to understand the extent to which you think bioproducts might benefit our society. What are the benefits of this kind of research?
- And what do you see as the major risks involved, if any?
- How confident would you say you are in the safety and regulatory approval systems governing bioproducts in Canada? Why do you say that?
- Would you say it is a good thing or a bad thing for Canada to be a world leader in research into bioproduct applications?
- And would you say it is a good thing or a bad thing for the government of Canada to be involved in supporting this type of research?
- I'm going to give you a handout with a question I'd like you to answer first on paper before we discuss it.

  (HANDOUT)

  Overall, which of the following best captures your views about bioproducts?

a. ..... I approve the use of this kind of bioproducts, as long as the usual levels of government regulation and control are in place

b. ..... I approve of the development of bioproducts if it is more tightly controlled and regulated

c. ..... I do not approve of bioproducts except under very special circumstances.

d. ..... I do not approve of bioproducts under any circumstances

58. Discuss answers briefly if time permits.

Module: GM Plants/Plant Molecular Farming
20 MINUTES

Intro: Genetic Modification

- Have you heard of the term Genetic Modification
- What do you think it is?
- When you hear the term, do you feel positive, negative or have neutral feelings towards it?

GM Definition: An organism (plant, animal, and bacterium) is considered genetically modified if its genetic material has been altered through any method, including conventional breeding, resulting in a novel trait (ex. Insect resistance, modified nutritional content, etc.).

Plant Molecular Farming (Non-food)

We are going to talk about genetically modified plants first, and in particular, farming genetically modified plants to produce commercially valuable molecules. What is novel about the process is the nature of the *molecules* produced: they are compounds that are useful in medicine or industry. For example, in the medical realm, plants have been modified to produce vaccines and drugs to treat diseases such as diabetes, cancer and cystic fibrosis. On the industrial side, plants have produced raw materials for plastics, detergents and cosmetic products.

- PMF has a wide range of potential applications. Can you recall any that you have heard of?

There are numerous ways in which genetically modified plants can be used. Please tell me if you strongly agree, agree, disagree or strongly disagree with the following potential applications of these technologies, and why you express that point of view.

1. ***The genetic modification of tobacco plants to produce interleukin***, which is an enzyme used in health treatments for diseases like crohn's disease. Fast-growth plants like canola/tobacco are used to grow interleukin because that allows interleukin to be produced in high volumes.

2. ***The genetic modification of corn plants to produce bioplastics***, which are biodegradable plastic products that come from certain proteins in those plants, such as corn/safflower. This method is used to produce these bioplastic products on a scale to make it effective as a substitute for synthetic plastic products currently in use.

3. ***Edible vaccines***, such as Genetic modification of potatoes to produce a vaccine against the Norwalk virus (currently in human clinical trials). These could be of use in developing nations where refrigeration of vaccines and sterilization of needles makes it difficult to immunize all those who need it. It should be noted, however, that if edible vaccines come into general use, the whole potato will not be adminstered (the potato will be freeze dried to control for dose amounts and the dried powder will be administered orally).

- There are a number of different types of plants that might be used to produce these applications. In all cases, the plant would not be part of the food system in any way, it would be specifically used for molecular farming. Do you have concerns about this in general?

- Does it matter which type of plant would be used in this area? How about the use of….
    - Corn?
    - Rice?
    - Tobacco?
    - Safflower?

- I would like to understand the extent to which you think PMF might benefit our society. What are the benefits of this kind of research?

- And what do you see as the major risks involved, if any?

- In terms of the moral or ethical aspect of this research, what are your views? Do your moral concerns lead you to believe we should not go forward in this area of technology?

- How confident would you say you are in the safety and regulatory approval systems governing these technologies in Canada? Why do you say that?

- And what about in terms of the scientists who are involved in research of these technologies? How confident would you say you are that these applications are in safe hands? Why do you say that?

- Would you say it is a good thing or a bad thing for Canada to be a world leader in research in this area?

- And would you say it is a good thing or a bad thing for the government of Canada to be involved in supporting this type of research?

- I'm going to give you a handout with a question I'd like you to answer first on paper before we discuss it.

  (HANDOUT)

  Overall, which of the following best captures your views about PMF?

  a. ..... I approve the use of PMF, as long as the usual levels of government regulation and control are in place
  b. ..... I approve of PMF if it is more tightly controlled and regulated
  c. ..... I do not approve of PMF except under very special circumstances
  d. ..... I do not approve of PMF under any circumstances

59. Discuss answers briefly if time permits.

Module: GM Fish
20 MINUTES

I'd like to talk about an area of biotechnology you may or may not have heard of, genetically modified fish.

Biotechnology applications are being explored in fish using DNA technology.

Fish are being genetically engineered for a number of reasons, such as to improve the growth rate or disease resistance of animals and plants living in water, like fish and seaweed (aquaculture species), for use in medical research, or as decorative pets, such as tropical fish for aquariums. Fish are genetically engineered by taking DNA from one source – a different kind of fish, a different animal, a plant, or a bacterium – and putting it into a fish to give it a new characteristic or trait. These applications are carried out in contained facilities.

Fish engineered using this modern DNA technology remain at the research stage, no such genetically engineered fish have been approved for import or commercial production in Canada at this time.

- Do you have any familiarity with this area of work?
- In your view, what are there differences between these types of applications involving genetically modified fish?
- Would you say you are very, somewhat, not very or not at all familiar with genetic modification of fish?
- There are numerous ways in which genetically modified fish can be used. Please tell me if you strongly agree, agree, disagree or strongly disagree with the following potential applications of genetically modified fish, and why you express that point of view.

1. The development of genetically modified tropical fish for use in the aquarium and retail pet industry. *Zebra fish, genetically modified by adding a fluorescence gene so that the fish absorb light and then re-emit it, creating the perception that they are glowing. These fish would be developed in other countries and imported into Canada.*
2. The development of genetically modified Atlantic salmon, for the purpose of research to assess the potential environmental impact of GM fish on the aquatic ecosystem. *These fish would be kept in contained land-based research facilities, and would not be for commercial use or sale.*
3. The development of fish that would be genetically modified to grow faster and larger than non-gm fish, thereby potentially reducing the cost of production for farmers and costs of fish products to consumers

- I would like to understand the extent to which you think GM fish might benefit our society. What are the benefits of this kind of research?
- And what do you see as the major risks involved?
- In terms of the moral or ethical aspect of this research, what are your views? Do your moral concerns lead you to believe we should not go forward in this area of technology?

- How confident would you say you are in the safety and regulatory approval systems governing these technologies in Canada? Why do you say that?

    - (If time permits and if it seems to be appropriate given the responses of participants), what amount of time do you feel would be appropriate for regulators to spend assessing GE fish?

  (This piggybacks on a question about whether the 120 days provided for under CEPA was enough time to assess GE fish, which I believe was included in the 2007 "Canadian Perceptions of the Role of Government in the Regulation of Biotechnology Products" study done by H/Decima for DFO and AAFC.)

- And what about in terms of the scientists who are involved in research of these technologies? How confident would you say you are that these applications are in safe hands? Why do you say that?

- Would you say it is a good thing or a bad thing for Canada to be a world leader in research in this area?

- And would you say it is a good thing or a bad thing for the government of Canada to be involved in supporting this type of research?

- I'm going to give you a handout with a question I'd like you to answer first on paper before we discuss it.
  (HANDOUT)

  Overall, which of the following best captures your views about GM fish??

  a) I approve the use of GM fish, as long as the usual levels of government regulation and control are in place
  b) I approve of GM fish if it is more tightly controlled and regulated
  c) I do not approve of GM fish except under very special circumstances
  d) I do not approve of GM fish under any circumstances

- Discuss answers briefly if time permits

Module: GM Animals
20 MINUTES

Animals, other than fish, can also be genetically modified in much the same way as discussed about fish.

- Would you say you are very, somewhat, not very or not at all familiar with genetic modification of animals?

- There are numerous ways in which genetic modification of animals can be used. Please tell me if you strongly agree, agree, disagree or strongly disagree with the following potential applications of these technologies, and why you express that point of view.

1. The development of cows genetically modified to prevent an outbreak of BSE, or Mad Cow Disease

2. The development of genetically modified pigs whose manure is lower in phosphorous, thereby reducing pollution and the environmental impact of raising these animals

3. The development of cows that would be genetically modified to grow faster and larger than non-gm cows, thereby potentially reducing the cost of production for farmers and costs of meat products to consumers

- I would like to understand the extent to which you think GM animals might benefit our society. What are the benefits of this kind of research?

- And what do you see as the major risks involved, if any?

- In terms of the moral or ethical aspect of this research, what are your views? Do your moral concerns lead you to believe we should not go forward in this area of technology?

- How confident would you say you are in the safety and regulatory approval systems governing these technologies in Canada? Why do you say that?

- And what about in terms of the scientists who are involved in research of these technologies? How confident would you say you are that these applications are in safe hands? Why do you say that?

- Would you say it is a good thing or a bad thing for Canada to be a world leader in research in this area?

- And would you say it is a good thing or a bad thing for the government of Canada to be involved in supporting this type of research?

- I'm going to give you a handout with a question I'd like you to answer first on paper before we discuss it.
  (HANDOUT)

  Overall, which of the following best captures your views about GM animals?

  a. .. I approve the use of GM animals, as long as the usual levels of government regulation and control are in place
  b. .. I approve of GM animals if it is more tightly controlled and regulated
  c.... I do not approve of GM animals except under very special circumstances
  d. .. I do not approve of GM animals under any circumstances

- Discuss answers briefly

Module: Communications
10 MINUTES

- Who would be credible sources to receive information about biotechnology? Why is that?
- Which sources, if any, would be less credible? Why is that?
- Do you feel that information concerning biotechnology from the Government of Canada is credible? Do you trust them? Why / why not?
- Are there others who would be more/less credible in delivering these messages? Who are they?
- How much should the GoC communicate to Canadians about biotechnology?
- What should be the focus of the messages?
- What is the best way for the Government of Canada to communicate with you about biotechnology? What type of approach should the government have?
- Besides TV advertising and radio, what alternate methods should the GoC use?

- I'd like to do one last exercise before finishing off tonight. We've been talking about different technologies as well as how the Government of Canada could communicate about them. I'd like to understand what word(s) you are most comfortable with when talking about these technologies.

    - Genetically modified
    - GM
    - Biotechnology
    - DNA technology
    - Genetically engineered

- Are there any other words you think would be fitting? Please write them at the bottom of the list

Conclusion

5 MINUTES

Before wrapping up the group, the moderator will come back to the viewing room and check to see if there are any questions the client(s) would like to ask or explored further.

- Do you have any other further comments?

- Don't forget to pick up your incentive (please see the hostess when leaving)

- FIRST GROUP: Ask participants to not discuss the group since another group is waiting outside.

Thank you very much for your time and cooperation.

French

Recherche sur les technologies émergentes – 2011

Guide pour les groupes de discussion

Version définitive - le 14 mars

Réchauffement
5 MINUTES

Le modérateur prend quelques minutes pour faire un tour de table et demander aux participants de se présenter. Il explique par la suite quelques règles à suivre : faire en sorte que tous puissent exprimer leurs points de vue ouvertement, laisser la chance à tous de participer, tous doivent exprimer leur point de vue personnel et non celui « des autres », il ne s'agit pas d'un débat, tous les points de vue sont valables et il n'y a pas de bonne, ni de mauvaise réponse.

Le modérateur informe ensuite les participants qu'il y a un miroir d'observation derrière lequel se trouvent certaines personnes et que l'on fera un enregistrement audiovisuel de la discussion, mais il les assure également que toute la discussion demeurera confidentielle.

Introduction
20 MINUTES

Nouvelles technologies/Biotechnologie

Nous discuterons ce soir de nouvelles technologies.

- Quelles sont certaines des dernières technologies qui changent notre monde, ce que nous faisons, les traitements dans le domaine de la santé, les produits que nous utilisons?
- Avez-vous déjà entendu le mot « biotechnologie »?
- Commençons par un bref exercice. Je vous demanderais d'écrire jusqu'à cinq mots auxquels vous pensez lorsque vous entendez le mot « biotechnologie ». Faisons tout d'abord cet exercice en silence. Par la suite, je vous demanderai de nous faire part de ce que vous avez noté.
- Pourquoi avez-vous choisi ces mots?
- Qu'est-ce que ça signifie? Qu'est-ce que ça englobe?

- Est-ce un sujet que vous connaissez beaucoup, un peu ou pas tellement?

Je vais maintenant vous lire la définition de « biotechnologie » :

Définition : La biotechnologie est un terme général qui couvre un large éventail d'applications scientifiques de plusieurs secteurs comme la santé, les ressources naturelles et l´agriculture. Elle implique l´utilisation d´organismes vivants, ou des parties d´organismes vivants, afin de fournir de nouvelles méthodes de production et de concevoir de nouveaux produits. La biotechnologie est généralement associée aux sciences de la vie, aux modifications génétiques et à la génomique.

- La biotechnologie a des applications dans de nombreux domaines. Dans quels domaines avez-vous entendu dire qu'elle avait des applications?

Réglementation

- Selon vous, qui réglemente les applications et les produits de la biotechnologie au Canada?
- Dans quelle mesure **connaissez-vous** les systèmes d'approbation réglementaire et de sécurité auxquels est assujettie la biotechnologie? Pourquoi dites-vous cela?
- Quelle **confiance** avez-vous dans les systèmes d'approbation réglementaire et de sécurité auxquels est assujettie la biotechnologie? Pourquoi dites-vous cela?
- Selon vous, les règlements qui régissent ces applications et ces produits sont-ils plutôt stricts ou plutôt laxistes? Pourquoi dites-vous cela?
- Avez-vous l'impression que les systèmes d'approbation réglementaire et de sécurité en vigueur au Canada sont supérieurs, équivalents ou inférieurs à ceux en vigueur dans d'autres pays?

Module : Bioproduits
20 MINUTES

Utilisations non alimentaires
J'aimerais vous entretenir quelques minutes de ce qu'on appelle les bioproduits.

- Avez-vous entendu parler de quelque chose qu'on appelle les bioproduits? Des produits issus de ressources biologiques renouvelables? En avez-vous entendu parler à propos de nouvelles formes d'énergie? Que savez-vous à ce sujet?

Les bioproduits résultent principalement de l'utilisation de plantes à des fins non alimentaires, utilisation qui varie depuis le développement de nouvelles formes d'énergie comme l'éthanol et le biodiésel jusqu'au développement de produits biochimiques et de biomatériaux comme le bioplastique.

Ce type de technologie évolue de plusieurs façons différentes.

- Diriez-vous que les bioproduits vous sont très familiers, plutôt familiers, pas très familiers ou pas du tout familiers?

Les bioproduits peuvent être développés et utilisés de plusieurs façons. Veuillez me dire si vous êtes fortement en accord, en accord, en désaccord ou fortement en désaccord avec les utilisations éventuelles suivantes de ces technologies, et pourquoi vous êtes de cet avis.

4. L'utilisation de matières biologiques comme les cultures de maïs pour produire de nouvelles formes de carburant de transport comme l'éthanol ou le biodiésel et l'utilisation d'arbres, de fumier de ferme et de déchets pour générer de la bioénergie. Par exemple, du fumier agricole peut être mélangé à des huiles de cuisson récupérées dans des restaurants afin de générer de l'électricité pour des centaines d'habitations.

5. Le développement de biomatériaux, c'est-à-dire de matériaux produits à partir de matières biologiques comme les végétaux. Les matériaux de construction et les pièces d'auto sont quelques exemples de matériaux actuellement produits à partir de matières biologiques comme les végétaux.

6. Le développement de nouvelles formes de produits chimiques, parfois appelés produits biochimiques, en utilisant des matières biologiques, comme des végétaux, pour remplacer le pétrole dans la production de produits chimiques.

- J'aimerais savoir dans quelle mesure vous pensez que les bioproduits pourraient être avantageux pour notre société. Quels sont les avantages de ce type de recherche?
- Et selon vous, quels sont les principaux risques associés à ce type de recherche?
- Quelle confiance avez-vous dans les systèmes d'approbation réglementaire et de sécurité auxquels sont assujettis les bioproduits au Canada? Pourquoi dites-vous cela?
- Selon vous, est-ce une bonne chose ou une mauvaise chose pour le Canada d'être un chef de file mondial dans la recherche sur les applications des bioproduits?
- Et selon vous, est-ce une bonne chose ou une mauvaise chose pour le gouvernement du Canada de financer ce type de recherche?
- Je vais vous distribuer un document où se trouve une question à laquelle j'aimerais que vous répondiez sur papier avant que nous en discutions.

(DISTRIBUTION DU DOCUMENT)

Dans l'ensemble, laquelle des options suivantes reflète le mieux votre position à l'égard des bioproduits?

a. ..... J'approuve l'utilisation de ce type de bioproduits, pourvu que la réglementation et les contrôles gouvernementaux usuels soient en place

b. ..... J'approuve le développement de bioproduits, pourvu qu'il soit mieux contrôlé et réglementé

c. ..... Je n'approuve pas les bioproduits à moins de circonstances très particulières

d. ..... Je n'approuve pas les bioproduits sous aucun prétexte

60. Discutez brièvement des réponses si le temps le permet.

Module : Végétaux génétiquement modifiés/Moléculture végétale
20 MINUTES

Intro : Modification génétique

- Avez-vous déjà entendu le terme « modification génétique »?
- Et qu'est-ce que c'est selon vous?
- Lorsque vous entendez ce terme, cela suscite-t-il des sentiments positifs, négatifs ou neutres pour vous?

Définition de « modification génétique » : Un organisme (un végétal, un animal ou une bactérie) est dit génétiquement modifié si son matériel génétique a été altéré par quelque méthode que ce soit, y compris par la sélection classique, pour lui conférer de nouveaux traits (ex. résistance aux insectes, valeur nutritive modifiée, etc.).

Moléculture végétale (non alimentaire)

Nous allons tout d'abord discuter des végétaux génétiquement modifiés et, en particulier, de la culture de végétaux génétiquement modifiés de façon à produire des molécules qui ont une valeur commerciale. La nouveauté de ce processus est la nature des *molécules* produites : il s'agit de composés utiles pour la médecine et pour l'industrie. Par exemple, dans le domaine de la médecine, des végétaux ont été modifiés pour produire des vaccins et des médicaments afin de traiter des maladies comme le diabète, le cancer et la fibrose kystique. Dans l'industrie, les végétaux ont permis de produire des substances brutes utilisées dans la fabrication de plastiques, de détergents et de produits cosmétiques.

- Il existe un vaste éventail d'applications possibles pour la moléculture végétale (MV). Pouvez-vous nommer des applications dont vous avez déjà entendu parler?

Les végétaux génétiquement modifiés peuvent être utilisés de plusieurs façons. Veuillez me dire si vous êtes fortement en accord, en accord, en désaccord ou fortement en désaccord avec les utilisations éventuelles suivantes de ces technologies, et pourquoi vous êtes de cet avis.

4. ***La modification génétique du tabac pour produire de l'interleukine, une enzyme utilisée dans le traitement de certaines maladies comme la maladie de Crohn.*** Les végétaux à croissance rapide comme le canola/le tabac sont utilisés dans la production d'interleukine parce qu'ils permettent de produire de l'interkeuline en grande quantité.

5. ***La modification génétique du maïs pour produire des bioplastiques, c'est-à-dire des produits de plastique biodégradable issus de certaines protéines des végétaux comme le maïs et le carthame.*** Cette méthode est utilisée pour produire ces produits de bioplastique à grande échelle afin d'en faire une solution de rechange efficace aux produits de plastique synthétique qui sont présentement utilisés.

6. ***Les vaccins comestibles***, par exemple la modification génétique des pommes de terre pour produire un vaccin contre le virus Norwalk (actuellement en essai clinique chez les humains). Ces vaccins pourraient être utilisés dans les pays en développement, où la réfrigération des vaccins et la stérilisation des aiguilles rendent l'immunisation difficile pour tous ceux qui en ont besoin. Toutefois, il importe de noter que si les vaccins comestibles devenaient d'utilisation courante, la pomme de terre transgénique ne serait pas administrée en entier (la pomme de terre serait d'abord lyophilisée pour contrôler les doses et ensuite, la poudre séchée serait administrée par voie orale).

- Plusieurs types de végétaux pourraient être utilisés dans la production de telles applications. Dans ces cas-là, le végétal ne ferait aucunement partie de la production alimentaire, et il serait utilisé expressément pour la moléculture. De façon générale, avez-vous des inquiétudes à ce sujet?

- Le type de végétaux qui seraient utilisés dans ce domaine a-t-il de l'importance? Qu'en est-il de l'utilisation du….
    - Maïs?
    - Riz?
    - Tabac?
    - Carthame?

- J'aimerais savoir dans quelle mesure vous pensez que la moléculture végétale pourrait être avantageuse pour notre société. Quels sont les avantages de ce type de recherche?
- Et selon vous, quels sont les principaux risques associés à ce type de recherche?
- Que pensez-vous de l'aspect moral ou éthique de ce type de recherche? Vos préoccupations morales vous portent-elles à croire que nous ne devrions pas aller de l'avant dans ce domaine de la technologie?
- Quelle confiance avez-vous dans les systèmes d'approbation réglementaire et de sécurité auxquels sont assujetties ces technologies au Canada? Pourquoi dites-vous cela?
- Et qu'en est-il des scientifiques qui effectuent les recherches sur ces technologies? Dans quelle mesure croyez-vous que ces applications sont entre bonnes mains? Pourquoi dites-vous cela?
- Selon vous, est-ce une bonne chose ou une mauvaise chose pour le Canada d'être un chef de file mondial dans ce domaine de recherche?
- Et selon vous, est-ce une bonne chose ou une mauvaise chose pour le gouvernement du Canada de financer ce type de recherche?
- Je vais vous distribuer un document où se trouve une question à laquelle j'aimerais que vous répondiez sur papier avant que nous en discutions.

  (DISTRIBUTION DU DOCUMENT)

  Dans l'ensemble, laquelle des options suivantes reflète le mieux votre position à l'égard de la moléculture végétale (MV)?

  a. ..... J'approuve le recours à la moléculture végétale (MV), pourvu que la réglementation et les contrôles gouvernementaux usuels soient en place
  b. ..... J'approuve la moléculture végétale (MV), pourvu qu'elle soit mieux contrôlée et réglementée
  c. ..... Je n'approuve pas la moléculture végétale (MV) à moins de circonstances très particulières
  d. ..... Je n'approuve pas la moléculture végétale (MV) sous aucun prétexte

61. Discutez brièvement des réponses si le temps le permet.

Module : Poisson génétiquement modifié
20 MINUTES

J'aimerais que nous parlions d'un domaine de la biotechnologie dont vous avez peut-être ou peut-être pas entendu parler : le poisson génétiquement modifié.

La biotechnologie a de nombreuses applications possibles et les scientifiques se penchent sur l'utilisation de l'ADN du poisson.

Il existe de nombreuses raisons pour génétiquement modifier les poissons, notamment l'amélioration du taux de croissance des plantes et des algues (les espèces aquacoles), pour utilisation dans la recherche médicale, ou pour en faire des animaux décoratifs, par exemple des poissons d'aquarium. Ces poissons sont créés en insérant un gène d'une autre variété de poissons, d'un autre animal, d'une plante ou d'une bactérie dans l'ADN du poisson pour lui donner une nouvelle caractéristique ou un nouveau trait. Dans la plupart des cas, ces applications se déroulent en environnement contrôlé ou en laboratoire.

D'autres applications comprennent la sélection génétique, où les poissons qui présentent certains traits définis sont sélectionnés et se reproduisent par les techniques de reproduction traditionnelles.

Le travail dans ce domaine demeure à un stade précoce et, à ce jour, aucune application n'a été approuvée au Canada.

- Connaissez-vous à tout le moins un peu le travail qui se fait dans ce domaine?

- À votre avis, quelles sont les différences entre ces applications qui ont recours aux poissons génétiquement modifiés?

- Diriez-vous que la modification génétique des poissons vous est très familière, plutôt familière, pas très familière ou pas du tout familière?

- Il existe de nombreuses façons d'utiliser le poisson génétiquement modifié. Veuillez me dire si vous êtes fortement en accord, en accord, en désaccord ou fortement en désaccord avec les utilisations éventuelles suivantes du poisson génétiquement modifié, et pourquoi vous êtes de cet avis.

4. Le développement de poissons génétiquement modifiés dans le but de produire de l'insuline pour traiter le diabète. *L'injection conventionnelle d'insuline chez les personnes souffrant de diabète de type I peut entraîner des problèmes circulatoires. La transplantation de cellules de tilapia génétiquement modifiées pourrait contrôler les symptômes du diabète sans nécessiter l'injection d'insuline. Ces poissons seraient élevés en environnement contrôlé ou en laboratoire.*

5. Le développement de saumons de l'Atlantique génétiquement modifiés, aux fins de recherche, pour évaluer dans un écosystème clos l'impact environnemental potentiel de poissons génétiquement modifiés les uns sur les autres ainsi que sur l'eau. *Ces poissons seraient élevés dans des sites terrestres contrôlés et ne seraient ni utilisés à des fins commerciales, ni vendus.*

Explanation: research conducted (by Fisheries and Oceans Canada). We have developed genetically engineered fish in our labs and we conduct research using these fish to help us understand the possible ecological effects if these fish were to be accidentally or intentionally released. For example, the fish that we have genetically engineered have a growth hormone gene inserted into them. Consequently they grow very fast. They also have a voracious appetite so take more risks when feeding (ie. they do not school the same way as their non-GE counterparts) and consequently would likely be more susceptible to be predated. In addition, the rate at which they mature may be different so if they were to be released they may initiate migration to salt water sooner than their non-GE counterparts. Scientific knowledge generated through this research helps us to understand differences in behaviour and allows us make predictions on the types of ecological risks that GE fish may pose. This is useful to inform the appropriate regulation of GE fish

6. Le développement de poissons génétiquement modifiés dont le taux de croissance serait plus rapide et qui seraient plus gros que les poissons non génétiquement modifiés, ce qui pourrait éventuellement réduire les coûts de production pour les agriculteurs et le coût des produits du poisson pour le consommateur.

- J'aimerais savoir dans quelle mesure vous pensez que le poisson génétiquement modifié pourrait être avantageux pour notre société. Quels sont les avantages de ce type de recherche?
- Et quels sont les risques principaux que vous percevez?

- Que pensez-vous de l'aspect moral ou éthique de ce type de recherche? Vos préoccupations morales vous portent-elles à croire que nous ne devrions pas aller de l'avant dans ce domaine de la technologie?

- Quelle confiance avez-vous dans les systèmes d'approbation réglementaire et de sécurité auxquels sont assujetties ces technologies au Canada? Pourquoi dites-vous cela?

- Et qu'en est-il des scientifiques qui effectuent les recherches sur ces technologies? Dans quelle mesure croyez-vous que ces applications sont entre bonnes mains? Pourquoi dites-vous cela?

- Selon vous, est-ce une bonne chose ou une mauvaise chose pour le Canada d'être un chef de file mondial dans ce domaine de recherche?

- Et selon vous, est-ce une bonne chose ou une mauvaise chose pour le gouvernement du Canada de financer ce type de recherche?

- Je vais vous distribuer un document où se trouve une question à laquelle j'aimerais que vous répondiez sur papier avant que nous en discutions.

  (DISTRIBUTION DU DOCUMENT)

  Dans l'ensemble, laquelle des options suivantes reflète le mieux votre position à l'égard du poisson génétiquement modifié?

  a. ..... J'approuve l'utilisation de poissons génétiquement modifiés, pourvu que la réglementation et les contrôles gouvernementaux usuels soient en place
  b. ..... J'approuve le poisson génétiquement modifié, pourvu qu'il soit mieux contrôlé et réglementé
  c. ..... Je n'approuve pas le poisson génétiquement modifié à moins de circonstances très particulières
  d. ..... Je n'approuve pas le poisson génétiquement modifié sous aucun prétexte

- Discutez brièvement des réponses si le temps le permet.

Module : Animaux génétiquement modifiés
20 MINUTES

Outre les poissons, d'animaux peuvent également être génétiquement modifiés à peu près de la même façon que celle dont nous avons discuté pour les poissons.

- Diriez-vous que la modification génétique d'animaux vous est très familière, plutôt familière, pas très familière ou pas du tout familière?

- La modification génétique des animaux peut être utilisée de plusieurs façons. Veuillez me dire si vous êtes fortement en accord, en accord, en désaccord ou fortement en désaccord avec les utilisations éventuelles suivantes de ces technologies, et pourquoi vous êtes de cet avis.

4. Le développement de vaches génétiquement modifiées pour prévenir une épidémie d'EBS ou maladie de la vache folle.

5. Le développement de cochons génétiquement modifiés dont le fumier contiendrait moins de phosphore, réduisant ainsi la pollution et l'impact environnemental de l'élevage de ces animaux.

6. Le développement de vaches génétiquement modifiées dont le taux de croissance serait plus rapide et qui seraient plus grosses que les vaches non génétiquement modifiées, ce qui pourrait éventuellement réduire les coûts de production pour les agriculteurs et le coût de la viande pour le consommateur.

- J'aimerais savoir dans quelle mesure vous pensez que les animaux génétiquement modifiés pourraient être avantageux pour notre société. Quels sont les avantages de ce type de recherche?
- Et selon vous, quels sont les principaux risques associés à ce type de recherche?

- Que pensez-vous de l'aspect moral ou éthique de ce type de recherche? Vos préoccupations morales vous portent-elles à croire que nous ne devrions pas aller de l'avant dans ce domaine de la technologie?

- Quelle confiance avez-vous dans les systèmes d'approbation réglementaire et de sécurité auxquels sont assujetties ces technologies au Canada? Pourquoi dites-vous cela?

- Et qu'en est-il des scientifiques qui effectuent les recherches sur ces technologies? Dans quelle mesure croyez-vous que ces applications sont entre bonnes mains? Pourquoi dites-vous cela?

- Selon vous, est-ce une bonne chose ou une mauvaise chose pour le Canada d'être un chef de file mondial dans ce domaine de recherche?

- Et selon vous, est-ce une bonne chose ou une mauvaise chose pour le gouvernement du Canada de financer ce type de recherche?

- Je vais vous distribuer un document où se trouve une question à laquelle j'aimerais que vous répondiez sur papier avant que nous en discutions.

  (DISTRIBUTION DU DOCUMENT)

  Dans l'ensemble, laquelle des options suivantes reflète le mieux votre position à l'égard des animaux génétiquement modifiés?

  e. ..... J'approuve l'utilisation d'animaux génétiquement modifiés, pourvu que la réglementation et les contrôles gouvernementaux usuels soient en place

f. ..... J'approuve les animaux génétiquement modifiés, pourvu qu'ils soient mieux contrôlés et réglementés

g. ..... Je n'approuve pas les animaux génétiquement modifiés à moins de circonstances très particulières

h. ..... Je n'approuve pas les animaux génétiquement modifiés sous aucun prétexte

- Discutez brièvement des réponses.

DISCUSSION GÉNÉRALE :
Veuillez maintenant penser à toutes les technologies et les applications dont nous avons parlé : les bioproduits, la moléculture végétale (MV), les poissons génétiquement modifiés et les animaux génétiquement modifiés.

- De façon générale, quelles sont les principales différences/similitudes que vous voyez entre ces domaines? Êtes-vous plus susceptible/moins susceptible d'être à l'aise avec la recherche et les applications développées dans un de ces domaines, mais pas dans un autre?

- Et examinons les réponses que vous avez données dans les documents que je vous ai distribués. Y a-t-il des différences en fonction des technologies? Pourquoi?

- Pour ce qui est de l'information/des communications, aimeriez-vous en savoir plus à propos de certains des domaines dont nous avons discuté ce soir?

Module : Communications
10 MINUTES

- De quelles sources serait-il crédible de recevoir de l'information au sujet de la biotechnologie? Pourquoi?

- Le cas échéant, quelles sources seraient moins crédibles? Pourquoi?

- Avez-vous l'impression que l'information qui provient du gouvernement du Canada au sujet de la biotechnologie est crédible? Lui faites-vous confiance? Pourquoi/Pourquoi pas?

- Y a-t-il d'autres entités/organismes qui seraient plus crédibles/moins crédibles pour livrer de tels messages? Qui?

- Quelle quantité d'information le gouvernement du Canada devrait-il communiquer aux Canadiens au sujet de la biotechnologie?

- Sur quoi ces messages devraient-ils porter essentiellement?

- Quel est le meilleur moyen pour le gouvernement du Canada de communiquer avec vous au sujet de la biotechnologie? Quel type d'approche le gouvernement devrait-il adopter?

- Exception faite des publicités à la télévision et à la radio, quelles autres méthodes le gouvernement du Canada devrait-il utiliser?

- J'aimerais faire un tout dernier exercice avant de clore la séance. Nous avons parlé de différentes technologies de même que des façons dont le gouvernement du Canada pourrait communiquer à ce sujet. J'aimerais savoir quel(s) mot(s) vous mettent le plus à l'aise pour parler de ces technologies.

    - Génétiquement modifié
    - GM
    - Biotechnologie
    - Technologie de l'ADN
    - Modifié par génie génétique

  LE MODÉRATEUR DISTRIBUE UNE LISTE DE MOTS ET DEMANDE AUX PARTICIPANTS D'ÉVALUER (SUR UNE ÉCHELLE DE 1 À 5) DANS QUELLE MESURE ILS SONT À L'AISE AVEC CHACUN DE CES MOTS POUR COMMUNIQUER AU SUJET DE CES TECHNOLOGIES.

- Y a-t-il d'autres mots qui conviendraient selon vous? Veuillez inscrire ces mots au bas de la liste.

Conclusion

5 MINUTES

Avant de terminer, le modérateur ira dans la salle d'observation pour vérifier si les clients ont d'autres questions ou s'ils souhaitent approfondir certains points.

- Avez-vous d'autres commentaires?

- N'oubliez pas de récupérer votre prime (allez voir l'hôtesse avant de partir)

- PREMIER GROUPE : Demandez aux participants de ne pas discuter du groupe en sortant, car un autre groupe attend à l'extérieur de la salle.

Je vous remercie de votre collaboration et du temps que vous nous avez accordé.

Appendix C – Focus Group Recruitment Screener

English

Recruitment Screener
AAFC Biotechnology March 2011
Project # CD10972

Questionnaire #_____ **Date of Last Group_____**

# of previous groups_____

Toronto			
Thursday, March 10, 2011			
Group 1: Gen pop	@ 5:30 pm	$75	Recruit: 12 for 8 to 10 show per group
Group 2: Involved Can	@ 7:30 pm	$75	
Montreal (French)			Honorarium: **$75**
Monday, March 14, 2011			
Group 3: Gen pop	@ 5:30 pm	$75	
Group 4: Involved Can	@ 7:30 pm	$75	Study#: **###**
Halifax			
Tuesday, March 15, 2011			**Definitions:**
Group 5: Gen pop	@ 5:30 pm	$75	**Gen pop:**
Group 6: Involved Can	@ 7:30 pm	$75	"Yes" to less than 3 in S8
Calgary			
Wednesday, March 16, 2011			**Involved Canadian:**
Group 7: Gen pop	@ 5:30 pm	$75	"Yes" to 1 or more in S8
Group 8: Involved Can	@ 7:30 pm	$75	
Vancouver			

Thursday, March 17, 2011 Group 9: Gen pop @ 5:30 pm $75 Group 10: Involved Can @ 7:30 pm $75	
Respondent's name: _____ Respondent's phone #: _____ (home) Respondent's phone #: _____ (work) Respondent's fax #: _____ sent? _____ or Respondent's e-mail : _____ sent? _____ Sample source *(circle)*: panel random client referral	Interviewer: _____ Date: _____ Validated: _____ Quality Central: _____ On List: _____ On Quotas: _____

Hello, my name is _____. I'm calling from Harris/Decima, a national public opinion research firm. We're organizing a series of discussion groups to explore various issues of importance to the country.

Participation is voluntary. We are interested in hearing your opinions, no attempt will be made to sell you anything or change your point of view. The format is a "round table" discussion lead by a research professional. All opinions expressed will remain anonymous and views will be grouped together to ensure no particular individual can be identified.

EXPLAIN FOCUS GROUPS. About nine people like you will be taking part, all of them randomly recruited just like you. For their time, participants will receive an honorarium of $75. But before we invite you to attend, we need to ask you a few questions to ensure that we get a good mix and variety of people. May I ask you a few questions?

Yes **CONTINUE**

No **ASK IF ANYONE ELSE IN THE HOUSEHOLD MIGHT BE INTERESTED**

IF NOT THANK AND TERMINATE

READ TO ALL: "This call may be monitored or audio taped for quality control and evaluation purposes."

ADDITIONAL CLARIFICATION IF NEEDED:

- to ensure that I (the interviewer) am reading the questions correctly and collecting your answers accurately;
- to assess my (the interviewer) work for performance evaluation;
- to ensure that the questionnaire is accurate/correct (i.e. evaluation of CATI programming and methodology – we're asking the right questions to meet our clients' research requirements – kind of like pre-testing).
- If the call is audio taped, it is only for the purposes of playback to the interviewer for a performance evaluation immediately after the interview is conducted or it can be used by the Project Manager/client to evaluate the questionnaire if they were unavailable at the time of the interview – all audio tapes are destroyed after the evaluation.

S1) Do you or any member of your household work…

	Yes	No
For a marketing research firm	**1**	**2**
For a magazine or newspaper	**1**	**2**
For a radio or television station	**1**	**2**
For a public relations company	**1**	**2**
For the government, whether federal or provincial	**1**	**2**

IF "YES" TO ANY OF THE ABOVE, THANK AND TERMINATE

S2) Are you a Canadian citizen at least 18 years old?

Yes	1	**CONTINUE**
No	2	**THANK AND TERMINATE**

S3) **DO NOT ASK – NOTE GENDER (target a 50/50 split in all groups)**

Male 1

Female 2

S4) Have you ever attended a consumer group discussion, an interview or survey which was arranged in advance and for which you received a sum of money?

Yes	1	**MAX. ⅓ PER GROUP**
No	2	**GO TO Q1**

S5) How long ago was it? _____

TERMINATE IF IN THE PAST 6 MONTHS

S6) How many consumer discussion groups have you attended in the past 5 years?

_____

TERMINATE IF MORE THAN 4 DISCUSSION GROUPS

S7) How long have you lived in [CITY]?

_____

TERMINATE IF LESS THAN 2 YEARS

S8) I'd like to ask you some questions about your level of involvement in current issues, if you don't mind. For each of the following, I'd like you to tell me, with a yes or no response, whether you have done this in the last year.

			Yes	**No**
a)	Spoken at a public meeting		1	2
b)	Written an article for publication		1	2
c)	Served as an officer of a club or organization	1	2	
d)	Written a letter to the editor		1	2
e)	Called a television or radio talk show		1	2
f)	Served as an officer of a non-governmental organization?		1	2
g)	Written to an elected representative?		1	2
h)	Been a member of or worked for a political party?		1	2
i)	Expressed your views on an important issue through a website or blog?		1	2
j)	Been a member of a community service organization	1	2	

- **Involved Canadians will say yes to at least 3 of the nine questions**
- **Those who say yes to 1 or less are gen pop**
- **Those who say yes to 2 can be back-ups**

ASK ALL

Q1) Could you please tell me what age category you fall in to? Are you...

Under 18	0	**THANK AND TERMINATE**
18-24 years	1	**ENSURE GOOD MIX PER GROUP**
25-34 years	2	
35-44 years	3	
45-54 years	4	
55-64 years	5	
65+ years	6	
Refuse	9	

Q2) What is your current employment status?

Working full-time	1	**ENSURE GOOD MIX PER GROUP**
Working part-time	2	
Self-employed	3	
Retired	4	
Unemployed	5	
Student	6	
Other	7	
DK/RF	99	

Q3) Which of the following categories best describes your total household income? That is, the total income of all persons in your household combined, before taxes [READ LIST]?

Under $20,000	1

$20,000 to just under $ 40,000	2	**ENSURE GOOD MIX PER GROUP**
$40,000 to just under $ 60,000	3	
$60,000 to just under $ 80,000	4	
$80,000 to just under $100,000	5	
$100,000 to just under $150,000	6	
$150,000 and above	7	
DK/RF	99	

Q5) Could you please tell me what is the last level of education that you have completed?

Some high school only	1	**ENSURE GOOD MIX PER GROUP**
Completed high school	2	
Some College/University	3	
Completed College/University	4	
RF/DK	9	

Invitation

Q7) Great, you qualify for one of our focus group sessions. Would you be available to attend a focus group on **(DATE @ TIME)**? It will last approximately 2 hours.

Yes	1	**CONTINUE**
No	2	**THANK AND TERMINATE**
DK (do not read)	3	**ARRANGE CALLBACK**

Q8) Participants in group discussions are asked to voice their opinions and thoughts, how comfortable are you in voicing your opinions in front of others (IF APPROPRIATE: In English/French)? Are you (read list)

Very comfortable	1	**MINIMUM 4 PER GROUP**

Fairly comfortable	2		
Comfortable	3		
Not very comfortable **TERMINATE**	4	**THANK**	**AND**
Very uncomfortable **TERMINATE**	5	**THANK**	**AND**

Q9) ***Sometimes participants are also asked to write out their answers to a questionnaire, read or watch a TV commercial during the discussion. Is there any reason why you could not participate? [READ IF NEEDED: I can assure you that everything written or discussed in the groups will remain confidential]***

Yes	1	**THANK & TERMINATE**
No	2	

TERMINATE IF RESPONDENT OFFERS ANY REASON SUCH AS SIGHT OR HEARING PROBLEM, A WRITTEN OR VERBAL LANGUAGE PROBLEM, A CONCERN WITH NOT BEING ABLE TO COMMUNICATE EFFECTIVELY OR IF YOU HAVE A CONCERN.

As I mentioned earlier, the group discussion will take place the evening of, **DATE @ TIME for 2 hours** and participants will receive **$75** for their time. Would you be willing to attend?

Yes	1	**CONTINUE**
No	2	**THANK AND TERMINATE**

Toronto

Thursday, March 10, 2011

Group 1: Gen pop @ 5:30 pm

Group 2: Involved Can @ 7:30 pm

Montreal (French)

Monday, March 14, 2011

Group 3: Gen pop @ 5:30 pm

Group 4: Involved Can @ 7:30 pm

Halifax

Tuesday, March 15, 2011

Group 5: Gen pop @ 5:30 pm

Group 6: Involved Can @ 7:30 pm

Calgary

Wednesday, March 16, 2011

Group 7: Gen pop @ 5:30 pm

Group 8: Involved Can @ 7:30 pm

Vancouver

Thursday, March 17, 2011

Group 9: Gen pop @ 5:30 pm

Group 10: Involved Can @ 7:30 pm

Privacy Questions

Now I have a few questions that relate to privacy, your personal information and the research process. We will need your consent on a few issues that enable us to conduct our research. As I run through these questions, please feel free to ask me any questions you would like clarified.

P1) First, we will be providing the hosting facility and session moderator with a list of respondents' names and profiles (screener responses) so that they can sign you into the group. Do we have your permission to do this? I assure you it will be kept strictly confidential.

Yes	1	**GO TO P2**
No	2	**READ RESPONDENT INFO BELOW**

We need to provide the facility hosting the session and the moderator with the names and background of the people attending the focus group because only the individuals invited are allowed in the session and the facility and moderator must have this information for verification purposes. Please be assured that this information will be kept strictly confidential. **GO TO P1A**

P1a) Now that I've explained this, do I have your permission to provide your name and profile to the facility?

Yes	1	**GO TO P2**
No	2	**THANK & TERMINATE**

P2) An audio and/or video tape of the group session will be produced for research purposes. The tapes will be used only by the research professional to assist in preparing a report on the research findings and will be destroyed once the report is completed.

Do you agree to be audio and/or video taped for research purposes only?

Yes	1	**THANK & GO TO P3**
No	2	**READ RESPONDENT INFO BELOW**

It is necessary for the research process for us to audio/video tape the session as the researcher needs this material to complete the report. I

assure you it is kept strictly confidential and it will be destroyed as when the research is complete. **GO TO P2A**

P2a) Now that I've explained this, do I have your permission for audio/video taping?

Yes	1	**THANK & GO TO P3**
No	2	**THANK AND TERMINATE**

P3) Each month FocusSearch submits the names of individuals that have participated in our focus groups to the Marketing Research and Intelligence Association Qualitative Central system (www.mria-arim.ca). Qualitative Central serves as a centralized database to review participation in qualitative research and focus groups. You will not be contacted for any reason whatsoever as a result of being on this list.

Do we have your permission to submit your name and phone number to MRIA's Qualitative Central system?

Yes	1	**THANK & GO TO INVITATION**
No	2	**GO TO P3A**

P3a) To participate in this focus group we must have your permission to add your name to the Qualitative Central system as it is the only way for us to ensure the integrity of the research process and track participation in qualitative research. The system is maintained by the industry body, the Professional Marketing Research Society, and is solely used to track your participation in qualitative research (such as focus groups). You will not be contacted for any reason whatsoever as a result of being on this list.

Now that I've explained this do I have your permission to add your name to our qualitative central list?

Yes	1	**THANK & GO TO INVITATION**
No	2	**THANK & TERMINATE**

AS REQUIRED, ADDITIONAL INFO FOR THE INTERVIEWER:

Please be assured that this information is kept confidential and is strictly accessed and used by professional market research firm to review participation and prevent "professional respondents" from attending sessions. Research firms participating in MRIA's Qualitative Central require your consent to be

eligible to participate in the focus group - the system helps ensure the integrity of the research process.

AS REQUIRED, NOTE ABOUT MRIA:

The Marketing Research and Intelligence Association is a non-profit organization for marketing research professionals engaged in marketing, advertising, social, and political research. The Society's mission is to be the leader in promoting excellence in the practice of marketing and social research and in the value of market information.

Invitation:

Do you have a pen handy so that I can give you the address where the group will be held? It will be held at:

We ask that you arrive fifteen minutes early to be sure you find parking, locate the facility and have time to check-in with the hosts. The hosts may be checking respondents' identification prior to the group, so please be sure to bring some personal identification with you (for example, a driver's license). If you require glasses for reading make sure you bring them with you as well.

As we are only inviting a small number of people, your participation is very important to us. If for some reason you are unable to attend, please call us so that we may get someone to replace you. You can reach us at **[1-800 NUMBER]** at our office. Please ask for **[NAME].** Someone will call you the day before to remind you about the discussion.

So that we can call you to remind you about the focus group or contact you should there be any changes, Can you please confirm your name and contact information for me? **[READ INFO WE HAVE AND CHANGE AS NECESSARY.]**

First name_____

Last Name_____

Email_____

Day time phone number_____

Night time phone number_____

If the respondent refuses to give his/her first or last name or phone number please assure them that this information will be kept strictly confidential in accordance with the privacy law and that it is used strictly to contact them to confirm their attendance and to inform them of any changes to the focus group. If they still refuse THANK & TERMINATE.

French

AAFC Biotechnology
Projet n° CD10972

Questionnaire nº_____ **Date du dernier groupe_____**

Nombre de groupes antérieurs_____

			Recrutez 12 personnes par groupe pour que 8 à 10 d'entre elles se présentent
Montreal (French)			Prime : **75 $**
Monday, March 14, 2011			
Group 3: Gen pop	@ 5:30 pm	$75	Étude nº xxx
Group 4: Involved Can	@ 7:30 pm	$75	Code d'interurbain : **xxx**
			Définitions :
			Gen pop:
			Definitions:

	Gen pop: "Yes" to less than 3 in S8 **Involved Canadian:** "Yes" to 1 or more in S8
Nom du répondant : _____ Nº de téléphone du répondant : _____ (maison) Nº de téléphone du répondant : _____ (travail) Nº de télécopieur du répondant : _____ envoyé? ___ ou Courriel du répondant : _____ envoyé? _____ Source de l'échantillon *(encerclez)* : eVox aléatoire client référence	Intervieweur :_____ Date :_____ Validé : _____ Fichiers centraux : _____ Listes : _____ Quotas : _____

Bonjour, je m'appelle _____ et je vous téléphone de Harris/Decima, une firme nationale de recherche sur l'opinion publique. Nous organisons des groupes de discussion avec des résidents pour explorer divers enjeux d'importance pour le pays, dont l'évaluation de matériel créatif.

Votre participation est volontaire. Seule votre opinion compte pour nous. Nous ne tenterons pas de vous vendre quoi que ce soit ou de vous faire changer d'avis. La discussion se déroulera sous forme de table ronde et sera animée par un professionnel de la recherche.

EXPLIQUEZ LES GROUPES DE DISCUSSION. Environ neuf personnes, toutes sélectionnées au hasard comme vous, prendront part à la discussion. En guise de remerciement pour leur temps, les participants recevront une prime de 75 $. Toutefois, avant de vous inviter à vous joindre à nous, j'aimerais vous poser quelques questions pour m'assurer de la diversité des participants. Puis-je vous poser quelques questions?

Oui **CONTINUEZ**

Non **DEMANDEZ SI UNE AUTRE PERSONNE DU MÉNAGE POURRAIT ÊTRE INTÉRESSÉE**

SI NON, REMERCIEZ ET TERMINEZ

LISEZ À TOUS : « Cet appel peut être écouté ou enregistré à des fins d'évaluation ou de contrôle de la qualité. »

CLARIFICATIONS SUPPLÉMENTAIRES AU BESOIN :

- Pour s'assurer que je lise les questions correctement et que je recueille vos réponses avec précision;
- Pour évaluer mon rendement;
- Pour vérifier que le questionnaire est exact/correct (c.-à-d. évaluation de la programmation ITAO et de la méthodologie – s'assurer que nous posons les bonnes questions pour répondre aux exigences de nos clients en matière de recherche – comme un prétest);
- Si l'appel est enregistré, l'enregistrement sert uniquement à évaluer le travail de l'intervieweur et est écouté immédiatement après la fin de l'entrevue. S'ils étaient absents au moment de l'entrevue, le client et le gestionnaire de projet pourraient également écouter l'enregistrement.

S1) Est-ce que vous, ou quelqu'un d'autre de votre ménage, travaillez pour…?

Une firme de recherche marketing
1

Un magazine ou un journal
2

Une station de radio ou une chaîne de télévision
3

Une firme de relations publiques
4

Le gouvernement fédéral ou provincial
6

SI « OUI » À L'UNE DE CES OPTIONS, REMERCIEZ ET TERMINEZ

S2) Êtes-vous citoyen canadien et âgé d'au moins 18 ans?

Oui	1	**CONTINUEZ**
Non	2	**REMERCIEZ ET TERMINEZ**

S3) **NE PAS DEMANDER – NOTEZ LE SEXE (Ciblez un mélange de 50/50 pour tous les groupes.)**

Homme	1
Femme	2

S4) Avez-vous déjà participé à un groupe de discussion de consommateurs, à une entrevue ou à un sondage pour lequel vous avez été recruté(e) à l'avance et avez reçu une somme d'argent?

Oui	1	**MAXIMUM 1/3 PAR GROUPE**
Non	2	**PASSEZ À Q1**

S5) Il y a combien de temps? _____

TERMINEZ SI AU COURS DES 6 DERNIERS MOIS

S6) À combien de groupes de discussion de consommateurs avez-vous pris part au cours des cinq dernières années?

_____

TERMINEZ SI PLUS DE 4 GROUPES DE DISCUSSION

S7) Depuis combien d'années vivez-vous à [VILLE]?

TERMINEZ SI MOINS DE 2 ANS

S8) Si vous le permettez, j'aimerais vous poser quelques questions à propos de votre degré d'implication dans les enjeux actuels. Pour chacune des activités suivantes, j'aimerais que vous me disiez, en répondant par un oui ou par un non, si vous l'avez faite au cours de la dernière année.

	Oui	**Non**
a) Parlé lors d'une assemblée publique	1	2
b) Écrit un article pour publication	1	2
c) Été administrateur(trice) d'une association ou d'une organisation	1	2
d) Écrit une lettre à une tribune libre	1	2
e) Téléphoné lors d'une ligne ouverte à la télévision ou à la radio	1	2
f) Été administrateur(trice) d'une organisation non gouvernementale, par exemple un organisme de bienfaisance ou une fondation	1	2
g) Écrit à un(e) élu(e)	1	2
h) Été membre d'un parti politique ou travaillé pour un parti politique	1	2
i) Exprimé votre point de vue concernant des enjeux importants		

sur un site Web ou un blogue
1 2

j) Été membre d'un organisme communautaire
1 2

- **Les Canadien(ne)s impliqué(e) répondront oui à au moins 3 des 9 questions**
- **Ceux qui répondent oui à 1 question ou moins seront recrutés pour les groupes grand public**
- **Ceux qui répondent oui à 2 questions seront recrutés comme substituts (backups)**

POSEZ À TOUS

Q1) Pourriez-vous me dire auquel des groupes d'âge suivants vous appartenez? Avez-vous...?

Moins de 18 ans	0	**REMERCIEZ ET TERMINEZ**
18 à 24 ans	1	**BONNE DIVERSITÉ**
25 à 34 ans	2	
35 à 44 ans	3	
45 à 54 ans	4	
55 à 64 ans	5	
65 ans et plus	6	
Refuse	9	

Q2) Quelle est votre situation d'emploi actuelle?

Travailleur(euse) à temps plein	1	
Travailleur(euse) à temps partiel	2	**BONNE DIVERSITÉ**
Travailleur(euse) autonome	3	
Retraité(e)	4	
Sans emploi	5	
Étudiant(e)	6	

Autre	7
NSP/Refuse	99

Q3) Laquelle des catégories suivantes décrit le mieux le revenu total de votre ménage, c'est-à-dire le total des revenus avant impôts de toutes les personnes habitant sous votre toit [LISEZ LA LISTE]?

Moins de 20 000 $	1	
De 20 000 $ à moins de 40 000 $	2	
De 40 000 $ à moins de 60 000 $	3	**BONNE DIVERSITÉ**
De 60 000 $ à moins de 80 000 $	4	
De 80 000 $ à moins de 100 000 $	5	
De 100 000 $ à moins de 150 000 $	6	
150 000 $ et plus	7	
NSP/Refuse	99	

Q5) Quel est le plus haut niveau de scolarité que vous avez atteint?

Études secondaires non terminées	1	**BONNE DIVERSITÉ DANS CHAQUE GROUPE**
Études secondaires terminées	2	
Études collégiales/universitaires non terminées	3	
Études collégiales/universitaires terminées	4	
NSP/Refuse	9	

Invitation

Q7) Excellent, vous êtes admissible pour participer à l'un de nos groupes de discussion. Seriez-vous disponible pour participer à un groupe de discussion le **(DATE À HEURE)**? Il durera environ 2 heures.

Oui	1	**CONTINUEZ**
Non	2	**REMERCIEZ ET TERMINEZ**
NSP (ne lisez pas)	3	**FIXEZ UN RENDEZ-VOUS**

Q8) ***Nous demandons aux participants des groupes de discussion d'exprimer leurs opinions et de verbaliser leurs pensées. Dans quelle mesure êtes-vous à l'aise d'exprimer votre opinion (SI APPROPRIÉ : en anglais/en français) devant d'autres personnes? Êtes-vous…? (lisez la liste)***

Très à l'aise	1	**MINIMUM 4 PAR GROUPE**
Assez à l'aise	2	
À l'aise	3	
Pas très à l'aise	4	**REMERCIEZ ET TERMINEZ**
Très mal à l'aise	5	**REMERCIEZ ET TERMINEZ**

Q9) ***Les participants doivent parfois répondre par écrit à un questionnaire ou lire des documents au cours de la discussion. Y a-t-il une raison qui vous empêcherait de participer? [LISEZ AU BESOIN : Je peux vous assurer que tout ce que vous écrirez et tout ce qui sera discuté pendant les groupes demeurera confidentiel]***

Oui	1	**REMERCIEZ ET TERMINEZ**
Non	2	

TERMINEZ SI LE RÉPONDANT DONNE UNE RAISON COMME UN PROBLÈME DE LA VUE, DE L'OUÏE, D'ALPHABÉTISME, UNE PRÉOCCUPATION À NE PAS POUVOIR COMMUNIQUER EFFICACEMENT OU SI VOUS AVEZ UN DOUTE

Comme je vous l'ai mentionné plus tôt, le groupe de discussion aura lieu le **DATE À HEURE et durera 2 heures**. Les participants recevront une prime de **75 $** en guise de remerciement pour le temps qu'ils nous auront consacré. Accepteriez-vous d'y participer?

Oui	1	**CONTINUEZ**
Non	2	**REMERCIEZ ET TERMINEZ**

Montreal (French)		
Monday, March 14, 2011		
Group 3: Gen pop	@ 5:30 pm	$75
Group 4: Involved Can	@ 7:30 pm	$75

Enjeux relatifs à la confidentialité

J'aurais maintenant quelques questions à vous poser à propos de la confidentialité, de vos renseignements personnels et du déroulement de la recherche. Nous devrons obtenir votre permission par rapport à certains sujets pour pouvoir effectuer notre recherche. Lorsque je vous poserai ces questions, n'hésitez pas à me demander de les clarifier si vous en ressentez le besoin.

P1) Tout d'abord, nous fournirons une liste des noms et des profils (réponses au questionnaire) des participants aux hôtes et au modérateur, afin qu'ils puissent vous inscrire. Acceptez-vous que nous leur transmettions ces renseignements? Je peux vous assurer que ceux-ci demeureront strictement confidentiels

Oui	1	**PASSEZ À P2**
Non	2	**LISEZ L'INFORMATION SUIVANTE AU RÉPONDANT**

Nous devons donner votre nom et votre profil aux hôtes et au modérateur du groupe de discussion, puisque seuls les gens qui sont invités à participer peuvent prendre part à la séance. Les hôtes et le

modérateur ont besoin de ces renseignements à des fins de vérification uniquement. Soyez assuré(e) que ces renseignements demeureront strictement confidentiels. **PASSEZ À P1A**

P1a) Maintenant que je vous ai expliqué cela, acceptez-vous que nous transmettions votre nom et votre profil aux hôtes et au modérateur du groupe de discussion?

Oui	1	**PASSEZ À P2**
Non	2	**REMERCIEZ ET TERMINEZ**

P2) Il y aura un enregistrement audiovisuel de la séance et celui-ci servira uniquement à des fins de recherche. L'enregistrement sera uniquement utilisé par un professionnel de la recherche pour préparer le rapport sur les résultats de la recherche. L'enregistrement sera détruit lorsque le rapport sera terminé.

Acceptez-vous qu'un enregistrement audiovisuel de la séance soit effectué uniquement à des fins de recherche?

Oui	1	**REMERCIEZ ET PASSEZ À P3**
Non	2	**LISEZ L'INFORMATION SUIVANTE AU RÉPONDANT**

Nous devons faire un enregistrement audiovisuel de la séance puisque le professionnel de la recherche a besoin de ce matériel pour rédiger son rapport. Je peux vous assurer que cet enregistrement demeurera strictement confidentiel et qu'il sera détruit dès que le rapport sera terminé. **PASSEZ À P2A**

P2a) Maintenant que je vous ai expliqué cela, acceptez-vous que nous fassions un enregistrement audiovisuel de la séance?

Oui	1	**REMERCIEZ ET PASSEZ À P3**
Non	2	**REMERCIEZ ET TERMINEZ**

P3) Chaque mois, nous soumettons le nom des personnes qui ont participé à nos séances au Registre central de recherche qualitative de l'Association de la recherche et de l'intelligence marketing (www.mria-arim.ca). Le Registre central de recherche qualitative est une base de données centrale qui vérifie la participation aux entrevues de recherches qualitatives. Personne ne communiquera avec vous parce que votre nom se trouve sur cette liste.

Nous permettez-vous de soumettre votre nom et votre numéro de téléphone au Registre central de recherche qualitative de l'ARIM?

Oui	1	**REMERCIEZ ET PASSEZ À L'INVITATION**
Non	2	**PASSEZ À P3A**

P3a) Pour que vous puissiez participer à cette séance, nous devons avoir votre permission pour ajouter votre nom au Registre central de recherche qualitative puisqu'il s'agit du seul moyen qui nous permet d'assurer l'intégrité du processus de recherche et de faire le suivi de la participation aux recherches qualitatives. Le système est tenu à jour par l'Association de la recherche et de l'intelligence marketing et il est uniquement utilisé pour faire le suivi de votre participation aux recherches qualitatives (comme les groupes de discussion). Personne ne communiquera avec vous parce que votre nom se trouve sur cette liste.

Maintenant que je vous ai expliqué cela, acceptez-vous que nous ajoutions votre nom au Registre central de recherche qualitative?

Oui	1	**REMERCIEZ ET PASSEZ À L'INVITATION**
Non	2	**REMERCIEZ ET TERMINEZ**

AU BESOIN, RENSEIGNEMENTS SUPPLÉMENTAIRES POUR L'INTERVIEWEUR :

Soyez assuré(e) que cette information demeurera confidentielle et seules les firmes de recherche marketing professionnelles pourront y accéder et l'utiliser pour vérifier la participation et empêcher les « répondants professionnels » de participer aux séances. Les firmes de recherche qui participent au Registre central de recherche qualitative de l'ARIM ont besoin de votre autorisation avant que vous ne soyez admissible à participer au groupe. Cette procédure contribue à assurer l'intégrité du processus de recherche.

AU BESOIN, NOTE À PROPOS DE L'ARIM :

L'Association de la recherche et de l'intelligence marketing est un organisme à but non lucratif qui regroupe des professionnels de la recherche marketing impliqués dans le marketing, la publicité, les recherches sociales et politiques. La mission de l'Association est d'être le leader dans la promotion de l'excellence dans la pratique du marketing et des recherches sociales ainsi que dans la valeur de l'information sur les marchés.

Invitation :

Avez-vous un crayon à portée de la main pour prendre en note l'adresse de l'endroit où se tiendra le groupe? Il aura lieu à : (AJOUTEZ LES ADRESSES)

Montreal:

Opinion Search Inc.

1080 Côte du Beaver Hall, 4th Floor Montréal, QC H2Z 1S8

Entry Instructions to Building:
When entering the building, please take the elevator to the fourth floor;
Directions:

3 blocks down St Catherine,
Intersection: Belmont and Beaver Hall.
Metro: Square Victoria
Parking:
Street, attached, and municipal parking
Directions from Airport:
From PE-Trudeau du Montréal Airport:
Autoroute 520 O towards AUT-20 / Montréal / Centre-Ville / Toronto.
3rd exit onto Montréal-Toronto HWY / Boulevard Montréal-Toronto.
Take Autoroute 20 E. (which becomes Autoroute Ville-Marie which then becomes Autoroute 720 E)
Take Exit 3 towards Montréal / Centre-Ville / Rue Guy.
Right on Boulevard René-Lévesque O.
Right onto Côte Du Beaver-Hall

Nous vous demandons d'arriver quinze minutes avant l'heure prévue pour vous permettre de stationner votre voiture, de trouver l'endroit et de vous présenter à nos hôtes. Il est possible qu'on vous demande de vous identifier avant la tenue de la séance. Par conséquent, assurez-vous d'avoir une pièce d'identité (par exemple, un permis de conduire) sur vous. De plus, si vous avez besoin de lunettes pour lire, veuillez les apporter.

Comme nous n'invitons qu'un petit nombre de personnes, votre participation est très importante pour nous. Si, pour une raison ou une autre vous ne pouvez pas vous présenter, veuillez nous en aviser pour que nous puissions vous remplacer. Vous pouvez nous joindre au **1 800 363-4229, poste 5068**. Demandez à parler à **Carol Smith**. Quelqu'un communiquera avec vous la veille du groupe de discussion pour confirmer votre présence.

Afin que nous puissions vous appeler pour confirmer votre présence ou pour vous informer si des changements survenaient, pourriez-vous me confirmer votre nom et vos coordonnées? **[LISEZ LES COORDONNÉES QUE NOUS AVONS ET MODIFIEZ-LES AU BESOIN.]**

Prénom_____

Nom de famille_____

Courriel_____

Nº de téléphone le jour_____

Nº de téléphone le soir_____

Si le répondant refuse de donner son prénom, son nom ou son numéro de téléphone, dites-lui que ces renseignements demeureront strictement confidentiels en vertu de la loi sur le respect de la vie privée et que ceux-ci seront uniquement utilisés pour le contacter afin de confirmer sa présence et pour l'informer de tout changement concernant le groupe de discussion. S'il refuse toujours, REMERCIEZ ET TERMINEZ.